

## INTRODUCTORY STATEMENT

These Material Safety Data Sheets are being provided pursuant to requirements of the Fed/OSHA (29 CFR 1910.1200) Final Hazard Communication Standard. The health hazards information on these sheets is based on data believed by Columbia Paint Company to be accurate; however, we do not assume any liability for the accuracy of this information. We neither suggest nor guarantee that any hazards mentioned are the only ones that exist. Anyone intending to rely on any recommendation, or to use any technique, equipment, or material mentioned, should also satisfy himself that he can meet all applicable safety and health standards.

As permitted by OSHA, a Material Safety Data Sheet (MSDS) may apply to a class of products which have similar hazards and contents; refer to the index to locate the correct MSDS for any particular product. To obtain MSDS for Columbia Paint products not in this book, contact your Columbia Paint store or Columbia Paint sales representative.

Please read the proper MSDS and the product label before using one of our products.

**IN THE EVENT OF A MEDICAL EMERGENCY, HAVE THE ATTENDING PHYSICIAN CONTACT THE POISON CONTROL CENTER FOR YOUR AREA.**

Spokane, Washington: Call the Spokane Poison Control Center at (509) 747-1077.

Washington: (excluding Spokane): Call the Spokane Poison Control Center toll free at 1-800-572-5842.

Idaho and Oregon: Call the Poison Control Center toll free at 1-800-541-5624.

Montana: Call the Poison Control Center toll free at 1-800-525-5042.

North Dakota: Call the Poison Control Center toll free at 1-800-732-2200.

South Dakota: Call the Poison Control Center toll free at 1-800-232-2562. In Rapid City you can also call (605) 341-3333.

Utah: Call the Poison Control Center toll free at 1-800-456-7707. In Salt Lake City you can also call (801) 581-7504.

MSDS INDEX BY PRODUCT NUMBER

<u>Product Number</u>	<u>Product Description</u>	<u>Page Number</u>
00-015-PP	PRIMECOAT ALKYD WOOD PRIMER	21 - 22
00-021-PP	EXTERIOR OIL BASE PRIMER-WHITE	19 - 20
00-047-Series*	EXTERIOR ALKYD FLAT HOUSE PAINT	19 - 20
00-070-Series*	EPOCRETE MASONRY COATING	21 - 22
00-072-Series*	EPOCRETE MASONRY COATING - SPRAY VERSION	21 - 22
00-715-PP	EXTERIOR ALKYD PRIMER	19 - 20
01-002-Series*	MASTERPIECE INT/EXT ACRYLIC VELVET	13 - 14
01-044-WB	HIGH BUILD INT/EXT LATEX BLOCK FILLER / SPRAYABLE	13 - 14
01-234-Series*	EXTERIOR ACRYLIC LATEX	13 - 14
01-236-Series*	EXTRA EXTERIOR ACRYLIC FLAT	13 - 14
01-727-PP	EXTERIOR ACRYLIC LATEX PRIMER	13 - 14
02-001-Series*	MASTERPIECE INTERIOR ACRYLIC VELVET FINISH	11 - 12
02-040-WB	MASTERPIECE INT/EXT ACRYLIC EGGSHELL	11 - 12
02-042-Series*	MASTERPIECE INT/EXT ACRYLIC SEMI-GLOSS	11 - 12
02-230-Series*	INTERIOR LATEX FLAT	11 - 12
02-260-Series*	ACRY-SHIELD/ACRYLIC GLOSS ENAMEL	11 - 12
02-262-Series*	ACRY-SHIELD SEMI-GLOSS ENAMEL	11 - 12
02-265-Series*	ACRY-SHIELD ACRYLIC EGGSHELL ENAMEL	11 - 12
02-266-Series*	ACRY-SHIELD EGGSHELL STIPPLE	11 - 12
02-711-10	FLAT LATEX DRYFALL	35 - 36
02-725-PP	VAPOR SHIELD LATEX UNDERCOATER	11 - 12
02-730-PP	PVA DRYWALL SEALER	11 - 12
02-735-PP	INTERIOR LATEX ENAMEL UNDERCOATER	11 - 12
02-737-Series*	INTERIOR LATEX FLAT	13 - 14
02-750-Series*	PAINTERS MASTERPIECE INTERIOR LATEX FLAT	13 - 14
02-752-Series*	LATEX SEMI-GLOSS	11 - 12
02-755-Series*	LATEX EGGSHELL ENAMEL	11 - 12
02-756-Series*	PAINTERS VELVET ENAMEL	13 - 14
02-765-Series*	PAINTERS INTERIOR SATIN LATEX ENAMEL	11 - 12
02-766-WB	LATEX STIPPLE EGGSHELL	11 - 12
02-770-WB	ACRY-FILL LATEX FLAT	41 - 42
02-772-Series*	ACRY-FILL LATEX HIGH BUILD INT/EXT EGGSHELL	11 - 12
02-777-Series*	PROTECH	13 - 14
02-781-Series*	FLAT INTERIOR LATEX	13 - 14
02-782-Series*	INTERIOR LATEX SEMI-GLOSS	11 - 12
03-241-Series*	ALKYD INT/EXT SEMI-GLOSS ENAMEL	19 - 20
03-700-Series*	INTERIOR FLAT ALKYD ENAMEL	21 - 22
03-721-PP	INTERIOR ALKYD ENAMEL UNDERCOATER	19 - 20
03-740-Series*	ALKYD INT/EXT EGGSHELL ENAMEL	19 - 20
03-786-WB	ALKYD STIPPLE EGGSHELL ENAMEL	19 - 20
04-022-PP	RED OXIDE ZINC PHOSPHATE METAL PRIMER	19 - 20
04-101-CC	POLYURETHANE ENAMEL LIQUID ALUMINUM FINISH	29 - 30
04-400-01	POLYURETHANE ENAMEL WARM GRAY	19 - 20
04-400-04	POLYURETHANE ENAMEL DARK GRAY	19 - 20
04-400-12	POLYURETHANE ENAMEL PERSIAN ORANGE	19 - 20

\*Series - denotes a product line for which one MSDS contains source information applicable to all products within the series. (The last 2 digits of the 7 digit product number represents the product's color or tint base, e.g. in the 7 digit number 01-002-WB the WB denotes *White Base*.)

MSDS INDEX BY PRODUCT NUMBER

Product Number	Product Description	Page Number
04-400-21	POLYURETHANE ENAMEL DEEP BLUE	21 - 22
04-400-25	POLYURETHANE ENAMEL EMERALD GREEN	19 - 20
04-400-27	POLYURETHANE ENAMEL RICH BROWN	19 - 20
04-400-28	POLYURETHANE ENAMEL BLACK	19 - 20
04-400-33	POLYURETHANE ENAMEL FLAT BLACK	21 - 22
04-400-43	POLYURETHANE ENAMEL CAT YELLOW	19 - 20
04-400-47	POLYURETHANE ENAMEL CHAMPION GREEN	23 - 24
04-400-61	POLYURETHANE ENAMEL OSHA FLAME RED	19 - 20
04-400-62	POLYURETHANE ENAMEL OSHA YELLOW	19 - 20
04-400-63	POLYURETHANE ENAMEL OSHA ORANGE	19 - 20
04-400-65	POLYURETHANE ENAMEL OSHA BLUE	19 - 20
04-400-AB	POLYURETHANE ENAMEL ACCENT BASE	19 - 20
04-400-DB	POLYURETHANE ENAMEL DEEP BASE	19 - 20
04-400-MB	POLYURETHANE ENAMEL MEDIUM BASE	19 - 20
04-400-WB	POLYURETHANE ENAMEL WHITE BASE	19 - 20
04-400-XX	POLYURETHANE ENAMEL CLEAR BASE	19 - 20
04-718-PP	ZIP SEAL QUICK DRY ALKYD PRIMER - WHITE	17 - 18
04-761-Series*	ALKYD INT/EXT GLOSS ENAMEL	19 - 20
05-058-Series*	CHEM CLAD INDUSTRIAL ACRYLIC VELVET	13 - 14
05-200-PP	ACRY-PRIME STAIN BLOCKING PRIMER	13 - 14
05-280-WB	INT/EXT ACRYLIC URETHANE ENAMEL GLOSS	37 - 38
05-405-CC	LATEX ELASTOMERIC WALL COATING	41 - 42
05-410-CC	SEAL-A-FLEX ELASTOMERIC COATING	41 - 42
05-420-CC	ELASTROCRYL WR ELASTOMERIC COATING	11 - 12
05-900-Series*	TWO COMPONENT WATER-BASED EPOXY	39 - 40
06-045-XX	CLEAR WATER REPELLENT SEALER	25 - 26
06-062-XX	ACRYSEAL 5% CLEAR CONCRETE SEALER	27 - 28
06-066-XX	ACRYSEAL 10% CLEAR CONCRETE SEALER	27 - 28
06-067-XX	ACRYSEAL 20% CLEAR CONCRETE SEALER	27 - 28
06-590-XX	MASTER SPAR SEMI-GLOSS VARNISH	19 - 20
06-600-Series*	MASTER SPAR GLOSS VARNISH	19 - 20
06-610-XX	POLYURETHANE GLOSS VARNISH	19 - 20
06-643-XX	INTERIOR SEMI-GLOSS CATALYZED VARNISH-PART A	53 - 54
06-645-XX	INTERIOR EGGHELL CATALYZED VARNISH-PART A	53 - 54
06-650-XX	POLYURETHANE SATIN VARNISH	19 - 20
06-800-XX	GOLDEN-GLO WOOD VARNISH	19 - 20
07-006-PP	WHITE ZINC PHOSPHATE METAL PRIMER	17 - 18
07-073-10	SPEED SET ENAMEL SATIN BLACK	15 - 16
07-073-28	SPEED SET ENAMEL GLOSS BLACK	17 - 18
07-073-40	SPEED SET ENAMEL LAMPSON BLACK	17 - 18
07-073-43	SPEED SET ENAMEL CAT YELLOW	17 - 18
07-073-44	SPEED SET ENAMEL OSHA SAFETY YELLOW	15 - 16
07-073-45	SPEED SET ENAMEL OSHA SAFETY ORANGE	15 - 16
07-073-61	SPEED SET ENAMEL OSHA FLAME RED	17 - 18
07-073-62	SPEED SET ENAMEL OSHA YELLOW	15 - 16

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MSDS INDEX BY PRODUCT NUMBER

<u>Product Number</u>	<u>Product Description</u>	<u>Page Number</u>
07-073-63	SPEED SET ENAMEL OSHA ORANGE	15 - 16
07-073-65	SPEED SET ENAMEL OSHA BLUE	17 - 18
07-073-70	SPEED SET ENAMEL RICH BROWN	17 - 18
07-073-DB	SPEED SET ENAMEL DEEP BASE	17 - 18
07-073-MB	SPEED SET ENAMEL MEDIUM BASE	17 - 18
07-073-WB	SPEED SET ENAMEL WHITE AND LIGHT TINTS	17 - 18
07-073-XX	SPEED SET ENAMEL CLEAR BASE	17 - 18
07-426-PP	LEAD FREE GRAY PRIMER	17 - 18
07-428-PP	CORRO-GUARD FAST DRY RED PRIMER	15 - 16
07-437-PP	HIGH BUILD LEAD FREE FAST DRY PRIMER	17 - 18
07-440-PP	URETHANE ALUMINUM PRIMER	43 - 44
07-441-PP	CORRO-GUARD FAST DRY RED PRIMER	15 - 16
07-480-WW	TRAFFIC PAINT - WHITE	17 - 18
07-490-CC	TRAFFIC PAINT - YELLOW	15 - 16
07-551-PP	UNIVERSAL FAST DRY RED PRIMER	15 - 16
07-580-00	WHITE TRAFFIC PAINT	17 - 18
07-580-10	YELLOW TRAFFIC PAINT	15 - 16
07-590-Series*	SILICONE ALKYD ENAMEL	17 - 18
07-675-55	RED OXIDE SHOPCOAT PRIMER	17 - 18
07-999-PP	ECONO-PRIME FAST DRY RED PRIMER	15 - 16
08-200-Series*	WOOD PROTEKT WATER REPELLENT STAIN	19 - 20
08-201-Series*	WOOD PROTEKT WATER REPELLENT STAIN	19 - 20
08-300-Series*	HEAVY BODIED OIL STAIN	21 - 22
08-400-Series*	HEAVY BODIED OIL STAIN (MILDEW)	21 - 22
09-300-WB	EXTERIOR ACRYLIC FINISH	13 - 14
11-800-XX	URETHANE HARDNER - INDUSTRIAL ENAMELS	43 - 44
11-892-XX	BOILED LINSEED OIL	25 - 26
11-905-XX	SPEED SET THINNER	47 - 48
11-906-XX	LACQUER THINNER	49 - 50
88-019-Series*	EXTERIOR FLAT TT-P-19D	11 - 12
88-086-02	RED LEAD PRIMER/TT-P-86 TYPE II	31 - 32
88-195-CC	YELLOW TRAFFIC PAINT-WATER EMULSION	51 - 52
88-195-WW	WHITE TRAFFIC PAINT-WATER EMULSION	13 - 14
88-529-Series*	ALKYD SEMI-GLOSS ENAMEL	23 - 24
88-615-02	LEAD CHROMATE PRIMER	23 - 24
88-641-02	ZINC DUST OXIDE PRIMER/TT-P-641 TYPE II	33 - 34
88-645-02	ZINC CHROMATE PRIMER/TT-P-645	45 - 46

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## MSDS INDEX BY PRODUCT NAME

<u>Product Description</u>	<u>Product Number</u>	<u>Page Number</u>
ACRY-FILL LATEX FLAT	02-770-WB	41 - 42
ACRY-FILL LATEX HIGH BUILD INT/EXT EGGSHELL	02-772-Series*	11 - 12
ACRY-PRIME STAIN BLOCKING PRIMER	05-200-PP	13 - 14
ACRY-SHIELD EGGSHELL STIPPLE	02-266-Series*	11 - 12
ACRY-SHIELD ACRYLIC EGGSHELL ENAMEL	02-265-Series*	11 - 12
ACRY-SHIELD SEMI-GLOSS ENAMEL	02-262-Series*	11 - 12
ACRY-SHIELD/ACRYLIC GLOSS ENAMEL	02-260-Series*	11 - 12
ACRYSEAL 10% CLEAR CONCRETE SEALER	06-066-XX	27 - 28
ACRYSEAL 20% CLEAR CONCRETE SEALER	06-067-XX	27 - 28
ACRYSEAL 5% CLEAR CONCRETE SEALER	06-062-XX	27 - 28
ALKYD INT/EXT EGGSHELL ENAMEL	03-740-Series*	19 - 20
ALKYD INT/EXT GLOSS ENAMEL	04-761-Series*	19 - 20
ALKYD INT/EXT SEMI-GLOSS ENAMEL	03-241-Series*	19 - 20
ALKYD SEMI-GLOSS ENAMEL	88-529-Series*	23 - 24
ALKYD STIPPLE EGGSHELL ENAMEL	03-786-WB	19 - 20
BOILED LINSEED OIL	11-892-XX	25 - 26
CHEM CLAD INDUSTRIAL ACRYLIC VELVET	05-058-Series*	13 - 14
CLEAR WATER REPELLENT SEALER	06-045-XX	25 - 26
CORRO-GUARD FAST DRY RED PRIMER	07-428-PP	15 - 16
CORRO-GUARD FAST DRY RED PRIMER	07-441-PP	15 - 16
ECONO-PRIME FAST DRY RED PRIMER	07-999-PP	15 - 16
ELASTROCRYL WR ELASTOMERIC COATING	05-420-CC	11 - 12
EPOCRETE MASONRY COATING	00-070-Series*	21 - 22
EPOCRETE MASONRY COATING - SPRAY VERSION	00-072-Series*	21 - 22
EXTERIOR ACRYLIC FINISH	09-300-WB	13 - 14
EXTERIOR ACRYLIC LATEX	01-234-Series*	13 - 14
EXTERIOR ACRYLIC LATEX PRIMER	01-727-PP	13 - 14
EXTERIOR ALKYD FLAT HOUSE PAINT	00-047-Series*	19 - 20
EXTERIOR ALKYD PRIMER	00-715-PP	19 - 20
EXTERIOR FLAT TT-P-19D	88-019-Series*	11 - 12
EXTERIOR OIL BASE PRIMER-WHITE	00-021-PP	19 - 20
EXTRA EXTERIOR ACRYLIC FLAT	01-236-Series*	13 - 14
FLAT INTERIOR LATEX	02-781-Series*	13 - 14
FLAT LATEX DRYFALL	02-711-10	35 - 36
GOLDEN-GLO WOOD VARNISH	06-800-XX	19 - 20
HEAVY BODIED OIL STAIN	08-300-Series*	21 - 22
HEAVY BODIED OIL STAIN (MILDEW)	08-400-Series*	21 - 22
HIGH BUILD INT/EXT LATEX BLOCK FILLER / SPRAYABLE	01-044-WB	13 - 14
HIGH BUILD LEAD FREE FAST DRY PRIMER	07-437-PP	17 - 18
INT/EXT ACRYLIC URETHANE ENAMEL GLOSS	05-280-WB	37 - 38
INTERIOR ALKYD ENAMEL UNDERCOATER	03-721-PP	19 - 20
INTERIOR EGGSHELL CATALYZED VARNISH-PART A	06-645-XX	53 - 54
INTERIOR FLAT ALKYD ENAMEL	03-700-Series*	21 - 22
INTERIOR LATEX ENAMEL UNDERCOATER	02-735-PP	11 - 12
INTERIOR LATEX FLAT	02-230-Series*	11 - 12

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MSDS INDEX BY PRODUCT NAME

<u>Product Description</u>	<u>Product Number</u>	<u>Page Number</u>
INTERIOR LATEX FLAT	02-737-Series*	13 - 14
INTERIOR LATEX SEMI-GLOSS	02-782-Series*	11 - 12
INTERIOR SEMI-GLOSS CATALYZED VARNISH-PART B	06-043-XX	53 - 54
LACQUER THINNER	11-906-XX	49 - 50
LATEX EGGSHELL ENAMEL	02-755-Series*	11 - 12
LATEX ELASTOMERIC WALL COATING	05-405-CC	41 - 42
LATEX SEMI-GLOSS	02-752-Series*	11 - 12
LATEX STIPPLE EGGSHELL	02-766-WB	11 - 12
LEAD CHROMATE PRIMER	88-615-02	23 - 24
LEAD FREE GRAY PRIMER	07-426-PP	17 - 18
MASTER SPAR GLOSS VARNISH	06-600-Series*	19 - 20
MASTER SPAR SEMI-GLOSS VARNISH	06-590-XX	19 - 20
MASTERPIECE INT/EXT ACRYLIC EGGSHELL	02-040-WB	11 - 12
MASTERPIECE INT/EXT ACRYLIC SEMI-GLOSS	02-042-Series*	11 - 12
MASTERPIECE INT/EXT ACRYLIC VELVET	01-002-Series*	13 - 14
MASTERPIECE INTERIOR ACRYLIC VELVET FINISH	02-001-Series*	11 - 12
PAINTERS INTERIOR SATIN LATEX ENAMEL	02-765-Series*	11 - 12
PAINTERS MASTERPIECE INTERIOR LATEX FLAT	02-750-Series*	13 - 14
PAINTERS VELVET ENAMEL	02-756-Series*	13 - 14
POLYURETHANE ENAMEL RICH BROWN	04-400-27	19 - 20
POLYURETHANE ENAMEL ACCENT BASE	04-400-AB	19 - 20
POLYURETHANE ENAMEL BLACK	04-400-28	19 - 20
POLYURETHANE ENAMEL CAT YELLOW	04-400-43	19 - 20
POLYURETHANE ENAMEL CHAMPION GREEN	04-400-47	23 - 24
POLYURETHANE ENAMEL CLEAR BASE	04-400-XX	19 - 20
POLYURETHANE ENAMEL DARK GRAY	04-400-04	19 - 20
POLYURETHANE ENAMEL DEEP BASE	04-400-DB	19 - 20
POLYURETHANE ENAMEL DEEP BLUE	04-400-21	21 - 22
POLYURETHANE ENAMEL EMERALD GREEN	04-400-25	19 - 20
POLYURETHANE ENAMEL FLAT BLACK	04-400-33	21 - 22
POLYURETHANE ENAMEL LIQUID ALUMINUM FINISH	04-101-CC	29 - 30
POLYURETHANE ENAMEL MEDIUM BASE	04-400-MB	19 - 20
POLYURETHANE ENAMEL OSHA BLUE	04-400-65	19 - 20
POLYURETHANE ENAMEL OSHA FLAME RED	04-400-61	19 - 20
POLYURETHANE ENAMEL OSHA ORANGE	04-400-63	19 - 20
POLYURETHANE ENAMEL OSHA YELLOW	04-400-62	19 - 20
POLYURETHANE ENAMEL PERSIAN ORANGE	04-400-12	19 - 20
POLYURETHANE ENAMEL WARM GRAY	04-400-01	19 - 20
POLYURETHANE ENAMEL WHITE BASE	04-400-WB	19 - 20
POLYURETHANE GLOSS VARNISH	06-610-XX	19 - 20
POLYURETHANE SATIN VARNISH	06-650-XX	19 - 20
PRIMECOAT ALKYD WOOD PRIMER	00-015-PP	21 - 22
PROTECH	02-777-Series*	13 - 14
PVA DRYWALL SEALER	02-730-PP	11 - 12
RED LEAD PRIMER/TT-P-86 TYPE II	88-086-02	31 - 32

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MSDS INDEX BY PRODUCT NAME

<u>Product Description</u>	<u>Product Number</u>	<u>Page Number</u>
RED OXIDE SHOPCOAT PRIMER	07-675-55	17 - 18
RED OXIDE ZINC PHOSPHATE METAL PRIMER	04-022-PP	19 - 20
SEAL-A-FLEX ELASTOMERIC COATING	05-410-CC	41 - 42
SILICONE ALKYD ENAMEL	07-590-Series*	17 - 18
SPEED SET ENAMEL CAT YELLOW	07-073-43	17 - 18
SPEED SET ENAMEL CLEAR BASE	07-073-XX	17 - 18
SPEED SET ENAMEL DEEP BASE	07-073-DB	17 - 18
SPEED SET ENAMEL GLOSS BLACK	07-073-28	17 - 18
SPEED SET ENAMEL LAMPSON BLACK	07-073-40	17 - 18
SPEED SET ENAMEL MEDIUM BASE	07-073-MB	17 - 18
SPEED SET ENAMEL OSHA BLUE	07-073-65	17 - 18
SPEED SET ENAMEL OSHA FLAME RED	07-073-61	17 - 18
SPEED SET ENAMEL OSHA ORANGE	07-073-63	15 - 16
SPEED SET ENAMEL OSHA SAFETY ORANGE	07-073-45	15 - 16
SPEED SET ENAMEL OSHA SAFETY YELLOW	07-073-44	15 - 16
SPEED SET ENAMEL OSHA YELLOW	07-073-62	15 - 16
SPEED SET ENAMEL RICH BROWN	07-073-70	17 - 18
SPEED SET ENAMEL SATIN BLACK	07-073-10	15 - 16
SPEED SET ENAMEL WHITE AND LIGHT TINTS	07-073-WB	17 - 18
SPEED SET THINNER	11-905-XX	47 - 48
TRAFFIC PAINT - WHITE	07-480-WW	17 - 18
TRAFFIC PAINT - YELLOW	07-490-CC	15 - 16
TWO COMPONENT WATER-BASED EPOXY	05-900-Series*	39 - 40
UNIVERSAL FAST DRY RED PRIMER	07-551-PP	15 - 16
URETHANE ALUMINUM PRIMER	07-440-PP	43 - 44
URETHANE HARDNER - INDUSTRIAL ENAMELS	11-800-XX	43 - 44
VAPOR SHIELD LATEX UNDERCOATER	02-725-PP	11 - 12
WHITE TRAFFIC PAINT	07-580-00	17 - 18
WHITE TRAFFIC PAINT-WATER EMULSION	88-195-WW	13 - 14
WHITE ZINC PHOSPHATE METAL PRIMER	07-006-PP	17 - 18
WOOD PROTEKT WATER REPELLENT STAIN	08-200-Series*	19 - 20
WOOD PROTEKT WATER REPELLENT STAIN	08-201-Series*	19 - 20
YELLOW TRAFFIC PAINT	07-580-10	15 - 16
YELLOW TRAFFIC PAINT-WATER EMULSION	88-195-CC	51 - 52
ZINC CHROMATE PRIMER/TT-P-645	88-645-02	45 - 46
ZINC DUST OXIDE PRIMER/TT-P-641 TYPE II	88-641-02	33 - 34
ZIP SEAL QUICK DRY ALKYD PRIMER - WHITE	04-718-PP	17 - 18

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# HAZARDOUS MATERIALS IDENTIFICATION SYSTEM<sup>®</sup>

## OVERVIEW

Each of the classifications, HEALTH, FLAMMABILITY, REACTIVITY, stand for a specific kind of hazard. PERSONAL PROTECTION indicates the necessary protective equipment to be worn when working with the product. The hazard index indicates the degree of the hazard. The following chart describes the severity of the different hazard classifications. The personal protection index is on the following page.

HEALTH HAZARD RATING	FLAMMABILITY HAZARD RATING	REACTIVITY HAZARD RATING
<p><b>0 MINIMAL HAZARD</b> no significant risk to health.</p> <p><b>1 SLIGHT HAZARD</b> irritation or minor reversible injury possible.</p> <p><b>2 MODERATE HAZARD</b> temporary or minor injury may occur.</p> <p><b>3 SERIOUS HAZARD</b> major injury likely unless prompt action is taken and medical treatment is given.</p> <p><b>4 SEVERE HAZARD</b> life threatening major or permanent damage may result from single or repeated exposures.</p>	<p><b>0 MINIMAL HAZARD</b> materials which are normally stable and will not burn unless heated.</p> <p><b>1 SLIGHT HAZARD</b> materials that must be preheated before ignition will occur. Flammable liquids in this category will have flash points (the lowest temperature at which ignition will occur) at or above 200°F. (NFPA CLASS IIIB)</p> <p><b>2 MODERATE HAZARD</b> material which must be moderately heated before ignition will occur, including flammable liquids with flash points at or above 100°F and below 200°F. (NFPA Class II and Class IIIA)</p> <p><b>3 SERIOUS HAZARD</b> materials capable of ignition under almost all normal temperature conditions, including flammable liquids with flash points below 73°F and boiling points above 100°F as well as liquids with flash points between 73°F. (NFPA Classes IB and IC)</p> <p><b>4 SEVERE HAZARD</b> very flammable gasses or very volatile flammable liquids with flash points below 73°F and boiling points below 100°F. (NFPA Class IA)</p>	<p><b>0 MINIMAL HAZARD</b> materials which are normally stable, even under fire conditions, and which will not react with water.</p> <p><b>1 SLIGHT HAZARD</b> materials which are normally stable, but can become unstable at high temperatures and pressures. These materials may react with water, but will not release energy violently.</p> <p><b>2 MODERATE HAZARD</b> materials which in themselves are normally stable and will readily undergo violent chemical change, but will not detonate. These materials may also react violently with water.</p> <p><b>3 SERIOUS HAZARD</b> materials which are capable of detonation or explosive reaction, but require a strong initiating source, or must be heated under confinement before initiation, or materials which react explosively with water.</p> <p><b>4 SEVERE HAZARD</b> these materials are readily capable of detonation or explosive decomposition at normal temperatures and pressures.</p>

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# Hazardous Materials Identification System

## HAZARD INDEX

- 4 Severe Hazard
- 3 Serious Hazard
- 2 Moderate Hazard
- 1 Slight Hazard
- 0 Minimal Hazard

<b>H</b>	HEALTH	
<b>F</b>	FLAMMABILITY	
<b>R</b>	REACTIVITY	
	PERSONAL PROTECTION	

## PERSONAL PROTECTION INDEX

<b>A</b>	
<b>B</b>	
<b>C</b>	
<b>D</b>	
<b>E</b>	
<b>F</b>	
<b>G</b>	
<b>X</b>	Ask your supervisor for guidance.

**MATERIAL SAFETY DATA SHEET GROUP 1 -**

includes the following:

02-001-WB  
02-040-WB  
02-042-WB  
02-230-WB

02-260-WB  
02-262-WB  
02-265-WB  
02-266-WB

02-725-PP  
02-730-PP  
02-735-PP  
02-752-WB

02-755-WB  
02-765-WB  
02-772-WB  
02-766-WB

02-782-WB  
05-420-CC  
88-019-01

**FOR COATINGS, RESINS, AND RELATED MATERIALS**

DATE OF PREPARATION - 11/1/91

MANUFACTURER'S NAME: COLUMBIA PAINT COMPANY  
ADDRESS: NORTH 112 HAVEN STREET  
ADDRESS: P. O. BOX 4569  
CITY, STATE: SPOKANE, WA 99202

EMERGENCY TELEPHONE NO.  
INFORMATION TELEPHONE NO.

DAY: 509-535-9741  
DAY: 509-535-9741

NIGHT: 1-800-424-9300  
NIGHT: 1-800-424-9300

**SECTION I — PRODUCT IDENTIFICATION**

MANUFACTURER'S CODE IDENTIFICATION: SEE ABOVE  
PRODUCT CLASS: VINYL-ACRYLIC LATEX RESIN COATING  
TRADE NAME: SEE TABLE OF CONTENTS  
HMIS INFORMATION\*\* HEALTH - 1  
REACTIVITY - 1

FLAMMABILITY - 0  
PERSONAL PROTECTIVE EQUIPMENT - B

**SECTION II — HAZARDOUS INGREDIENTS**

INGREDIENT MATERIAL DESCRIPTION	CAS #	% BY WEIGHT	TLV - (TWA) PPM	(TWA) MG/M3	LEL	VAPOR PRESS MMHG	DEG F.
MAGNESIUM SILICATE (TALC)	*14807-966	<1.0-9.50*	Not Est*	2.00*	Unk.*		Unknown
ETHYLENE GLYCOL	*107-21-1	1.07-6.06*	50.00*	125.00*	3.2*	08 @	68.0
2,2,4 TRIMETHYL PENTANE DIOL-1,3 MONOISOBUTYRATE	*25265774	<1.0-3.33*	Not Est*	Not Est*	Unk.*	1.00 @	189.0
TITANIUM DIOXIDE	*13463-67-7	6.00-22.55*	Not Est*	10.00*	Unk.*		Unknown

THIS PRODUCT CONTAINS HAZARDOUS COMPONENTS WHICH MAY BECOME AIRBORNE AND RESULT IN EXPOSURE WHEN REMOVED BY ABRASIVE BLASTING, SANDING, OR GRINDING. VENTILATE AND AVOID BREATHING DUSTS.

**SECTION III — PHYSICAL DATA**

BOILING RANGE: HIGH 471.0 DF LOW 212.0 DF  
VAPOR PRESSURE: SEE SECTION II  
VAPOR DENSITY: LIGHTER THAN AIR  
EVAPORATION RATE: SLOWER THAN BUTYL ACETATE  
WEIGHT PER GALLON: 9.9 - 11.7  
% VOLATILE BY VOLUME: 42.4 - 80.4  
% VOLATILE BY WEIGHT: 27.9 - 67.8  
APPEARANCE - ODOR: WHITE LIQUID, AMMONIA ODOR  
PH - SOLUBILITY: 8.5 - 9.5, DILUTABLE IN WATER

**SECTION IV — FIRE AND EXPLOSION HAZARD DATA**

FLAMMABILITY CLASSIFICATION OSHA-CLASS III-B DOT - NOT REGULATED  
LOWEST FLASHPOINT T.C.C. 200.0 DF LOWER EXPLOSION LEVEL (LEL) N/A  
EXTINGUISHING MEDIA: ( ) FOAM ( ) CO2  
( ) DRY CHEMICAL (X) WATER FOG ( ) OTHER

UNUSUAL FIRE AND EXPLOSION HAZARDS: MATERIALS WILL NOT SUSTAIN COMBUSTION UNLESS WATER HAS EVAPORATED. CLOSED CONTAINERS MAY EXPLODE FROM STEAM PRESSURE WHEN EXPOSED TO EXTREME HEAT.  
SPECIAL FIRE FIGHTING PROCEDURES: FIREFIGHTERS SHOULD WEAR SELF-CONTAINED BREATHING APPARATUS AS PROTECTION FROM HAZARDOUS COMBUSTION PRODUCTS.

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**SECTION V — HEALTH HAZARD DATA**

EFFECTS OF OVEREXPOSURE: EXCESS INHALATION OF VOLATILIZED AMMONIA MAY PRODUCE HEADACHE, NAUSEA, IRRITATION TO RESPIRATORY TRACT. SKIN CONTACT MAY PRODUCE IRRITATION DUE TO SLIGHT ALKALINITY. PRESENCE OF VOLATILIZED AMMONIA COULD IRRITATE EYES. EXCESS INHALATION OF VOLATILIZED ETHYLENE GLYCOL MAY CAUSE IRRITATION OF THE NOSE AND THROAT WITH HEADACHE, NAUSEA, AND VOMITING. ETHYLENE GLYCOL CAN BE HARMFUL OR FATAL IF SWALLOWED. SEVERE KIDNEY DAMAGE FOLLOWS THE SWALLOWING OF LARGE AMOUNTS OF ETHYLENE GLYCOL LIQUID, VAPOR, AND MIST MAY CAUSE EYE IRRITATION. RATS EXPOSED TO TITANIUM DIOXIDE DUST AT 250 MG/M<sup>3</sup> DEVELOPED LUNG CANCER; HOWEVER, SUCH EXPOSURE LEVELS ARE NOT ATTAINABLE IN THE WORK PLACE. LONG TERM EXCESSIVE EXPOSURE TO TALC DUST MAY CAUSE TALCOSIS, A PULMONARY FIBROSIS, WHICH IN TURN MAY LEAD TO SEVERE AND PERMANENT DAMAGE TO THE LUNG.  
PRIMARY ROUTE(S) OF EXPOSURE: (X) DERMAL (X) INHALATION ( ) INGESTION  
EMERGENCY AND FIRST AID PROCEDURES: FOR IRRITATION DUE TO INHALATION, REMOVE TO FRESH AIR. FOR EYE CONTACT, FLUSH WITH LARGE AMOUNTS OF WATER FOR 15 MINUTES. IN CASE OF INGESTION, DRINK 1-2 GLASSES OF WATER TO DILUTE. DO NOT INDUCE VOMITING. CONSULT PHYSICIAN OR POISON CONTROL CENTER IMMEDIATELY.  
MEDICAL CONDITIONS PRONE TO AGGRAVATION BY EXPOSURE: ETHYLENE GLYCOL MAY AGGRAVATE EXISTING KIDNEY DISEASE.  
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**SECTION VI — REACTIVITY DATA**

STABILITY: ( ) UNSTABLE (X) STABLE  
HAZARDOUS POLYMERIZATION ( ) MAY OCCUR (X) WILL NOT OCCUR  
HAZARDOUS DECOMPOSITION PRODUCTS: THE DRY PAINT FILM CAN BURN AND PRODUCE ONE OR MORE OF THE FOLLOWING: CARBON DIOXIDE, CARBON MONOXIDE, HYDROGEN CHLORIDE, AND/OR OXIDES OF NITROGEN.  
CONDITIONS TO AVOID: EXCESSIVE HEAT.  
INCOMPATIBILITY (MATERIALS TO AVOID): NONE REASONABLY FORESEEABLE.  
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**SECTION VII — SPILL OR LEAK PROCEDURES**

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED: WEARING PROTECTIVE GLOVES, WIPE UP LIQUID MATERIAL WITH ABSORBENT CLOTH.  
WASTE DISPOSAL METHOD: DISPOSE OF IN ACCORDANCE WITH LOCAL, STATE, AND FEDERAL REGULATIONS.  
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**SECTION VIII — SAFE HANDLING AND USE INFORMATION**

RESPIRATORY PROTECTION: IN RESTRICTED VENTILATION AREAS - APPROVED CHEMICAL/MECHANICAL FILTERS DESIGNED TO REMOVE PARTICULATES AND VAPOR. VENTILATION: PROVIDE AIR MOVEMENT TO REMOVE EXCESS VAPORS.  
PROTECTIVE GLOVES: REQUIRED FOR PROLONGED OR REPEATED CONTACT.  
EYE PROTECTION: SAFETY GLASSES.  
OTHER PROTECTIVE EQUIPMENT: NONE.  
HYGIENIC PRACTICES: WASH HANDS BEFORE EATING OR USING WASHROOM.  
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**SECTION IX — SPECIAL PRECAUTIONS**

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORING: DO NOT STORE IN EXCESSIVE HEAT (ABOVE 120 DF). USE WITH ADEQUATE VENTILATION.  
OTHER PRECAUTIONS: AVOID CONTACT WITH EYES.  
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**SECTION X — REGULATORY INFORMATION**

SARA TITLE III SECTION 313 SUPPLIER NOTIFICATION: THIS PRODUCT CONTAINS THE FOLLOWING TOXIC CHEMICALS SUBJECT TO THE REPORTING REQUIREMENTS OF SECTION 313 OF THE EMERGENCY PLANNING AND COMMUNITY RIGHT-TO-KNOW ACT OF 1986 AND OF 40 CFR 372:

CAS#	CHEMICAL NAME	PERCENT BY WEIGHT
107-21-1	ETHYLENE GLYCOL	1.07 - 6.06%

THIS INFORMATION MUST BE INCLUDED IN ALL MSDS'S THAT ARE COPIED AND DISTRIBUTED FOR THIS MATERIAL.

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MATERIAL SAFETY DATA SHEET GROUP 2

includes the following:

01-002-WB 01-727-PP 02-750-WB 02-781-WB 05-200-PP
01-044-PP 02-737-WB 02-777-WB 05-058-WB 09-300-WB
01-234-WB 01-236-WB 02-756-WB 88-195-WW

FOR COATINGS, RESINS, AND RELATED MATERIALS
DATE OF PREPARATION - 11/1/91

MANUFACTURER'S NAME: COLUMBIA PAINT COMPANY
ADDRESS: NORTH 112 HAVEN STREET
ADDRESS: P. O. BOX 4569
CITY, STATE: SPOKANE, WA 99202

EMERGENCY TELEPHONE NO. DAY: 509-535-9741 NIGHT: 1-800-424-9300
INFORMATION TELEPHONE NO. DAY: 509-535-9741 NIGHT: 1-800-424-9300

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SECTION I - PRODUCT IDENTIFICATION

MANUFACTURER'S CODE IDENTIFICATION: SEE ABOVE
PRODUCT CLASS: VINYL - ACRYLIC LATEX RESIN COATING
TRADE NAME: SEE TABLE OF CONTENTS
HMIS INFORMATION\*\* HEALTH - 1 FLAMMABILITY - 0
REACTIVITY - 1 PERSONAL PROTECTIVE EQUIPMENT - E

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SECTION II - HAZARDOUS INGREDIENTS

Table with 8 columns: INGREDIENT, MATERIAL DESCRIPTION, CAS #, % BY WEIGHT, TLV - (TWA) PPM, TLV - (TWA) MG/M3, LEL, VAPOR PRESS MMHG, DEG F. Rows include Ethylene Glycol, 2,2,4 Trimethyl Pentane Diol-1,3 Monoisobutyrate, Crystalline Silica, Siliceous Muscovite Mica, and Titanium Dioxide.

THIS PRODUCT CONTAINS HAZARDOUS COMPONENTS WHICH MAY BECOME AIRBORNE AND RESULT IN EXPOSURE WHEN REMOVED BY ABRASIVE BLASTING, SANDING, OR GRINDING. VENTILATE AND AVOID BREATHING DUSTS.

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SECTION III - PHYSICAL DATA

BOILING RANGE: HIGH 471.0 DF LOW 212.0 DF
VAPOR PRESSURE: SEE SECTION II
VAPOR DENSITY: LIGHTER THAN AIR
EVAPORATION RATE: SLOWER THAN BUTYL ACETATE
WEIGHT PER GALLON: 10.2 - 13.7
% VOLATILE BY VOLUME: 50.8 - 74.7
% VOLATILE BY WEIGHT: 30.1 - 58.9
APPEARANCE - ODOR: WHITE LIQUID, AMMONIA ODOR
PH - SOLUBILITY: 8.5 - 9.5, DILUTABLE IN WATER

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SECTION IV - FIRE AND EXPLOSION HAZARD DATA

FLAMMABILITY CLASSIFICATION OSHA-CLASS III-B DOT - NOT REGULATED
LOWEST FLASHPOINT T.C.C. 200.0 DF LOWER EXPLOSION LEVEL (LEL) N/A
EXTINGUISHING MEDIA: ( ) FOAM ( ) CO2
( ) DRY CHEMICAL (X) WATER FOG ( ) OTHER
UNUSUAL FIRE AND EXPLOSION HAZARDS: MATERIALS WILL NOT SUSTAIN COMBUSTION UNLESS WATER HAS EVAPORATED. CLOSED CONTAINERS MAY EXPLODE FROM STEAM PRESSURE WHEN EXPOSED TO EXTREME HEAT.
SPECIAL FIRE FIGHTING PROCEDURES: FIREFIGHTERS SHOULD WEAR SELF-CONTAINED BREATHING APPARATUS AS PROTECTION FROM HAZARDOUS COMBUSTION PRODUCTS.

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**SECTION V — HEALTH HAZARD DATA**

EFFECTS OF OVEREXPOSURE: EXCESS INHALATION OF VOLATILIZED AMMONIA MAY PRODUCE HEADACHE, NAUSEA, IRRITATION TO RESPIRATORY TRACT. SKIN CONTACT MAY PRODUCE IRRITATION DUE TO SLIGHT ALKALINITY. PRESENCE OF VOLATILIZED AMMONIA COULD IRRITATE EYES. EXCESS INHALATION OF VOLATILIZED ETHYLENE GLYCOL MAY CAUSE IRRITATION OF THE NOSE AND THROAT WITH HEADACHE, NAUSEA, AND VOMITING. ETHYLENE GLYCOL CAN BE HARMFUL OR FATAL IF SWALLOWED. SEVERE KIDNEY DAMAGE FOLLOWS THE SWALLOWING OF LARGE AMOUNTS OF ETHYLENE GLYCOL. LIQUID, VAPOR, AND MIST MAY CAUSE EYE IRRITATION. CRYSTALLINE SILICA DUST CAN CAUSE UPPER RESPIRATORY IRRITATION AND IRRITATION TO EYES. PROLONGED OVEREXPOSURE TO SILICA DUST BY INHALATION MAY CAUSE DELAYED LUNG INJURY/DISEASE (SILICOSIS). ON THE BASIS OF INITIAL EXPERIMENTAL TESTS IN ANIMALS AND LIMITED EPIDEMIOLOGICAL STUDIES IN HUMAN POPULATIONS, THE INTERNATIONAL AGENCY FOR RESEARCH ON CANCER (IARC) HAS CONCLUDED THAT THERE IS LIMITED EVIDENCE FOR THE CARCINOGENICITY OF CRYSTALLINE SILICA TO HUMANS. RATS EXPOSED TO TITANIUM DIOXIDE DUST AT 250 MG/M<sup>3</sup> DEVELOPED LUNG CANCER; HOWEVER, SUCH EXPOSURE LEVELS ARE NOT ATTAINABLE IN THE WORK PLACE.

PRIMARY ROUTE(S) OF EXPOSURE: (X) DERMAL (X) INHALATION ( ) INGESTION  
EMERGENCY AND FIRST AID PROCEDURES: FOR IRRITATION DUE TO INHALATION, REMOVE TO FRESH AIR. FOR EYE CONTACT, FLUSH WITH LARGE AMOUNTS OF WATER FOR 15 MINUTES. IN CASE OF INGESTION, DRINK 1-2 GLASSES OF WATER TO DILUTE. DO NOT INDUCE VOMITING. CONSULT PHYSICIAN OR POISON CONTROL CENTER IMMEDIATELY.  
MEDICAL CONDITIONS PRONE TO AGGRAVATION BY EXPOSURE: ETHYLENE GLYCOL MAY AGGRAVATE EXISTING KIDNEY DISEASE. INDIVIDUALS WITH PULMONARY AND/OR RESPIRATORY DISEASE INCLUDING, BUT NOT LIMITED TO, ASTHMA AND BRONCHITIS SHOULD NOT BE EXPOSED TO SILICA DUSTS.  
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**SECTION VI — REACTIVITY DATA**

STABILITY: ( ) UNSTABLE (X) STABLE  
HAZARDOUS POLYMERIZATION ( ) MAY OCCUR (X) WILL NOT OCCUR  
HAZARDOUS DECOMPOSITION PRODUCTS: THE DRY PAINT FILM CAN BURN AND PRODUCE ONE OR MORE OF THE FOLLOWING: CARBON DIOXIDE, CARBON MONOXIDE, HYDROGEN CHLORIDE, AND/OR OXIDES OF NITROGEN.  
CONDITIONS TO AVOID: EXCESSIVE HEAT.  
INCOMPATIBILITY (MATERIALS TO AVOID): NONE REASONABLY FORESEEABLE.  
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**SECTION VII — SPILL OR LEAK PROCEDURES**

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED: WEARING PROTECTIVE GLOVES, WIPE UP LIQUID MATERIAL WITH ABSORBENT CLOTH.  
WASTE DISPOSAL METHOD: DISPOSE OF IN ACCORDANCE WITH LOCAL, STATE, AND FEDERAL REGULATIONS.  
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**SECTION VIII — SAFE HANDLING AND USE INFORMATION**

RESPIRATORY PROTECTION: IN RESTRICTED VENTILATION AREAS - APPROVED CHEMICAL/MECHANICAL FILTERS DESIGNED TO REMOVE PARTICULATES AND VAPOR.  
VENTILATION: PROVIDE AIR MOVEMENT TO REMOVE EXCESS VAPORS.  
PROTECTIVE GLOVES: REQUIRED FOR PROLONGED OR REPEATED CONTACT.  
EYE PROTECTION: SAFETY GLASSES.  
OTHER PROTECTIVE EQUIPMENT: NONE.  
HYGIENIC PRACTICES: WASH HANDS BEFORE EATING OR USING WASHROOM.  
\*\*\*\*\*

**SECTION IX — SPECIAL PRECAUTIONS**

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORING: DO NOT STORE IN EXCESSIVE HEAT (ABOVE 120 DF). USE WITH ADEQUATE VENTILATION.  
OTHER PRECAUTIONS: AVOID CONTACT WITH EYES.  
\*\*\*\*\*

**SECTION X — REGULATORY INFORMATION**

SARA TITLE III SECTION 313 SUPPLIER NOTIFICATION: THIS PRODUCT CONTAINS THE FOLLOWING TOXIC CHEMICALS SUBJECT TO THE REPORTING REQUIREMENTS OF SECTION 313 OF THE EMERGENCY PLANNING AND COMMUNITY RIGHT-TO-KNOW ACT OF 1986 AND OF 40 CFR 372:

CAS#	CHEMICAL NAME	PERCENT BY WEIGHT
107-21-1	ETHYLENE GLYCOL	<1.00 - 2.75%

THIS INFORMATION MUST BE INCLUDED IN ALL MSDS'S THAT ARE COPIED AND DISTRIBUTED FOR THIS MATERIAL.

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MATERIAL SAFETY DATA SHEET GROUP 3

includes the following:

07-073-10 07-073-62 07-428-PP 07-490-CC 07-580-10
07-073-44 07-073-63 07-441-PP 07-551-PP 07-999-PP
07-073-45

FOR COATINGS, RESINS, AND RELATED MATERIALS
DATE OF PREPARATION - 11/1/91

MANUFACTURER'S NAME: COLUMBIA PAINT COMPANY
ADDRESS: NORTH 112 HAVEN STREET
ADDRESS: P. O. BOX 4569
CITY, STATE: SPOKANE, WA 99202

EMERGENCY TELEPHONE NO. DAY: 509-535-9741 NIGHT: 1-800-424-9300
INFORMATION TELEPHONE NO. DAY: 509-535-9741 NIGHT: 1-800-424-9300

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SECTION I - PRODUCT IDENTIFICATION

MANUFACTURER'S CODE IDENTIFICATION: SEE ABOVE
PRODUCT CLASS: SYNTHETIC ALKYD RESIN COATING
TRADE NAME: SEE TABLE OF CONTENTS
HMIS INFORMATION\*\* HEALTH - 2 FLAMMABILITY - 3
REACTIVITY - 1 PERSONAL PROTECTIVE EQUIPMENT - J

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SECTION II - HAZARDOUS INGREDIENTS

Table with 8 columns: INGREDIENT, MATERIAL DESCRIPTION, CAS #, % BY WEIGHT, TLV - (TWA) PPM, TLV - (TWA) MG/M3, LEL, VAPOR PRESS MMHG, DEG F. Rows include VM&P NAPTHA, ISOPROPANOL, XYLENE (MIXED ISOMERS), ETHYL BENZENE, LEAD AS IN LEAD CHROMATE, CHROMIUM AS CR (VI), CARBON BLACK, MAGNESIUM SILICATE (TALC), CRYSTALLINE SILICA, LEAD, AS IN LEAD DRIER, TOLUENE, HEXANE, CRYSTALLINE SILICA.

THIS PRODUCT CONTAINS HAZARDOUS COMPONENTS WHICH MAY BECOME AIRBORNE AND RESULT IN EXPOSURE WHEN REMOVED BY ABRASIVE BLASTING, SANDING, OR GRINDING. VENTILATE AND AVOID BREATHING DUSTS.

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SECTION III - PHYSICAL DATA

BOILING RANGE: HIGH 306.0 - 399.0 DF LOW 180.0 - 277.0 DF
VAPOR PRESSURE: SEE SECTION II
VAPOR DENSITY: HEAVIER THAN AIR
EVAPORATION RATE: SLOWER THAN BUTYL ACETATE
WEIGHT PER GALLON: 9.4 - 12.3
% VOLATILE BY VOLUME: 51.2 - 67.7
% VOLATILE BY WEIGHT: 27.4 - 49.1

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SECTION IV - FIRE AND EXPLOSION HAZARD DATA

FLAMMABILITY CLASSIFICATION OSHA-CLASS IB-IC DOT - FLAMMABLE LIQUID
LOWEST FLASHPOINT T.C.C. 50.0 - 77.0 DF LOWER EXPLOSION LEVEL (LEL) 1.0%
EXTINGUISHING MEDIA (X) FOAM ( ) ALCOHOL FOAM (X) CO2
(X) DRY CHEMICAL ( ) WATER FOG ( ) OTHER

UNUSUAL FIRE AND EXPLOSION HAZARDS: KEEP AWAY FROM HEAT, SPARKS, AND FLAME. VAPORS MAY IGNITE EXPLOSIVELY. VAPORS MAY SPREAD LONG DISTANCES. PREVENT BUILD-UP OF VAPORS. EXTINGUISH ALL PILOT LIGHTS AND TURN OFF HEATERS, NON-EXPLOSION PROOF ELECTRICAL EQUIPMENT, AND ALL OTHER SOURCES OF IGNITION UNTIL VAPORS ARE GONE. IN CLOSED CONTAINERS, PRESSURE BUILDUP MAY OCCUR DUE TO HEAT EXPOSURE. DURING EMERGENCY CONDITIONS, OVEREX-

EXPOSURE TO DECOMPOSITION PRODUCTS MAY CAUSE A HEALTH HAZARD. SYMPTOMS MAY NOT BE IMMEDIATELY APPARENT. OBTAIN MEDICAL ATTENTION. (SEE SECTION VI).  
SPECIAL FIRE FIGHTING PROCEDURES: WATER SPRAY MAY BE INEFFECTIVE. HOWEVER, WATER MAY BE USED TO COOL CLOSED CONTAINERS TO PREVENT PRESSURE BUILDUP. FULL PROTECTIVE EQUIPMENT RECOMMENDED, INCLUDING SELF-CONTAINED BREATHING APPARATUS, TO PROTECT FIREFIGHTERS FROM HAZARDOUS COMBUSTION PRODUCTS.

### SECTION V — HEALTH HAZARD DATA

EFFECTS OF OVEREXPOSURE: OVEREXPOSURE VIA INHALATION CAN CAUSE CENTRAL NERVOUS SYSTEM DEPRESSION WITH SYMPTOMS RANGING FROM HEADACHES, DIZZINESS, LOSS OF COORDINATION, TO UNCONSCIOUSNESS. DELIBERATELY BREATHING CONCENTRATED SOLVENT VAPOR (GLUE SNIFFING) CAN RESULT IN PERMANENT BRAIN AND NERVOUS SYSTEM DAMAGE OR DEATH. INGESTION MAY RESULT IN GASTROINTESTINAL IRRITATION, NAUSEA, VOMITING, AND/OR DIARRHEA. EYE CONTACT CAN CAUSE SEVERE IRRITATION, REDNESS, TEARING, AND BLURRED VISION. PROLONGED OR REPEATED SKIN CONTACT WILL DRY AND DEFAT THE SKIN, LEADING TO IRRITATION AND DERMATITIS. CRYSTALLINE SILICA DUST CAN CAUSE UPPER RESPIRATORY IRRITATION AND IRRITATION TO EYES. PROLONGED OVER-EXPOSURE TO SILICA DUST BY INHALATION MAY CAUSE DELAYED LUNG INJURY/ DISEASE (SILICOSIS). ON THE BASIS OF INITIAL EXPERIMENTAL TESTS IN ANIMALS AND LIMITED EPIDEMIOLOGICAL STUDIES IN HUMAN POPULATIONS, THE INTERNATIONAL AGENCY FOR RESEARCH ON CANCER (IARC) HAS CONCLUDED THAT THERE IS LIMITED EVIDENCE FOR THE CARCINOGENICITY OF CRYSTALLINE SILICA TO HUMANS. <CHRONIC EFFECTS> REPEATED OVEREXPOSURE TO SOLVENT VAPORS MAY RESULT IN ONE OR MORE OF THE FOLLOWING: CENTRAL NERVOUS SYSTEM, BLOOD, LIVER, AND/OR KIDNEY INJURY, HEARING LOSS. LEAD IS A CUMULATIVE POISON. CHRONIC OVEREXPOSURE TO LEAD VIA INHALATION OR INGESTION MAY RESULT IN SEVERE DAMAGE TO BLOOD-FORMING, CENTRAL NERVOUS, URINARY, AND REPRODUCTIVE SYSTEMS. LEAD CROSSES THE PLACENTAL BARRIER AND POSES RISKS TO DEVELOPING FETUSES. SYMPTOMS OF OVEREXPOSURE TO LEAD INCLUDE ANEMIA, ABDOMINAL DISCOMFORT, METALLIC TASTE, LOSS OF APPETITE, HEADACHE, INSOMNIA, MUSCLE PAIN AND WEAKNESS, FINE TREMORS, NUMBNESS, NERVOUS IRRITABILITY. LEAD CHROMATE IS A SUSPECTED HUMAN CARCINOGEN. LONG TERM EXCESSIVE EXPOSURE TO TALC DUST MAY CAUSE TALCOSIS, A PULMONARY FIBROSIS, WHICH IN TURN MAY LEAD TO SEVERE AND PERMANENT DAMAGE TO THE LUNG.

EMERGENCY AND FIRST AID PROCEDURES: IF OVERCOME BY VAPOR, REMOVE FROM EXPOSURE IMMEDIATELY; CALL A PHYSICIAN. IF BREATHING IS IRREGULAR OR STOPPED, START RESUSCITATION, ADMINISTER OXYGEN. IF INGESTED, DO NOT INDUCE VOMITING; CALL THE POISON CONTROL CENTER IMMEDIATELY. IF SPLASHED INTO THE EYES, FLUSH EYES WITH CLEAR WATER FOR 15 MINUTES OR UNTIL IRRITATION SUBSIDES; CONSULT A PHYSICIAN AS MAY BE REQUIRED. IN CASE OF SKIN CONTACT, REMOVE ANY CONTAMINATED CLOTHING AND WASH SKIN WITH SOAP AND WARM WATER.

PRIMARY ROUTES OF EXPOSURE: (X) - DERMAL (X) - INHALATION ( ) - INGESTION

MEDICAL CONDITIONS PRONE TO AGGRAVATION BY EXPOSURE: PRE-EXISTING SKIN DISORDERS, CHRONIC RESPIRATORY DISEASES. INDIVIDUALS WITH PULMONARY AND/OR RESPIRATORY DISEASE INCLUDING, BUT NOT LIMITED TO, ASTHMA AND BRONCHITIS SHOULD NOT BE EXPOSED TO SILICA DUSTS.

### SECTION VI — REACTIVITY DATA

STABILITY: ( ) - UNSTABLE (X) - UNSTABLE  
HAZARDOUS POLYMERIZATION ( ) - MAY OCCUR (X) - WILL NOT OCCUR  
HAZARDOUS DECOMPOSITION PRODUCTS: FUMES PRODUCED WHEN HEATED TO DECOMPOSITION, SUCH AS IN WELDING, MAY INCLUDE ONE OR MORE OF THE FOLLOWING: CARBON DIOXIDE, CARBON MONOXIDE, ACROLEIN, HYDROGEN CHLORIDE, OXIDES OF NITROGEN, LEAD AND CHROMIUM OXIDES.  
CONDITIONS TO AVOID: HIGH TEMPERATURES OR DIRECT HEATING.  
INCOMPATIBILITY (MATERIALS TO AVOID): OXYGEN AND STRONG OXIDANTS, STRONG ACIDS, STRONG BASES, AND AMINES. WILL DISSOLVE OR SOFTEN SOME PLASTICS AND RUBBER.

### SECTION VII — SPILL OR LEAK PROCEDURES

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED: REMOVE ALL SOURCES OF IGNITION (FLAME, HOT SURFACES, AND ELECTRICAL, STATIC, OR FRICTIONAL SPARKS). VENTILATE AREA, CONTAIN AND REMOVE WITH INERT ABSORBENT AND NON-SPARKING TOOLS. REFER TO OTHER HAZARD CAUTIONS CONTAINED ON THIS SHEET BEFORE ATTEMPTING CLEAN-UP.  
WASTE DISPOSAL METHOD: DISPOSE OF IN ACCORDANCE WITH LOCAL, STATE, AND FEDERAL REGULATIONS. DO NOT INCINERATE CLOSED CONTAINERS.

### SECTION VIII — SAFE HANDLING AND USE INFORMATION

RESPIRATORY PROTECTION: IN OUTDOOR, OPEN AREAS OR IN RESTRICTED VENTILATION AREAS, USE APPROVED CHEMICAL/MECHANICAL FILTERS DESIGNED TO REMOVE A COMBINATION OF PARTICULATE GAS AND VAPOR. TLV'S MUST NOT BE EXCEEDED. IN CONFINED AREAS, USE APPROVED AIR LINE TYPE RESPIRATORS OR HOODS.  
VENTILATION: ALL APPLICATION AREAS SHOULD BE VENTILATED IN ACCORDANCE WITH OSHA REGULATIONS. POCKETS OF HEAVY AND/OR FLAMMABLE VAPOR MUST NOT BE PERMITTED TO FORM. VENTILATION AND RESPIRATORY PROTECTION MUST BE ADEQUATE TO PREVENT THE TLV'S OF HAZARDOUS INGREDIENTS FROM BEING EXCEEDED.  
PROTECTIVE GLOVES: REQUIRED FOR PROLONGED OR REPEATED CONTACT.  
EYE PROTECTION: USE SAFETY EYEWEAR WITH SPLASH GUARDS OR SIDE SHIELDS.  
OTHER PROTECTIVE EQUIPMENT: USE PROTECTIVE APRON AND CLOTHING.  
HYGIENIC PRACTICES: WASH HANDS BEFORE EATING OR USING WASHROOM. SMOKE IN SMOKING AREAS ONLY.

### SECTION IX — SPECIAL PRECAUTIONS

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORING: DO NOT STORE OR USE NEAR HEAT, SPARKS, OR FLAME. NO SMOKING OR OPEN LIGHTS.  
OTHER PRECAUTIONS: AVOID CONTACT WITH EYES. AVOID PROLONGED OR REPEATED CONTACT WITH SKIN. AVOID PROLONGED OR REPEATED BREATHING OF VAPORS. STORE IN SEALED CONTAINERS AWAY FROM SPACE HEATING EQUIPMENT. CONTAINS LEAD CHROMATE.

### SECTION X — REGULATORY INFORMATION

SARA TITLE III SECTION 313 SUPPLIER NOTIFICATION: THIS PRODUCT CONTAINS THE FOLLOWING TOXIC CHEMICALS SUBJECT TO THE REPORTING REQUIREMENTS OF SECTION 313 OF THE EMERGENCY PLANNING AND COMMUNITY RIGHT-TO-KNOW ACT OF 1986 AND OF 40 CFR 372:

CAS#	CHEMICAL NAME	PERCENT BY WEIGHT
1330-20-7	XYLENE (MIXED ISOMERS)	<1.0 - 40.49%
100-41-4	ETHYL BENZENE	<1.0 - 8.29%
7439-92-1	LEAD	<.10 - 14.71%
7440-47-3	CHROMIUM	<.10 - 3.11%
108-88-3	TOLUENE	<.10 - 9.31%

THIS INFORMATION MUST BE INCLUDED IN ALL MSDS'S THAT ARE COPIED AND DISTRIBUTED FOR THIS MATERIAL.

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**MATERIAL SAFETY DATA SHEET GROUP 4**

04-718-PP      07-073-MB      07-073-28      includes the following:      07-426-PP      07-580-00  
 07-006-PP      07-073-WB      07-073-40      07-073-61      07-437-PP      07-590-WB  
 07-073-DB      07-073-XX      07-073-43      07-073-65      07-480-WW      07-675-55  
 07-073-70

**FOR COATINGS, RESINS, AND RELATED MATERIALS**  
**DATE OF PREPARATION - 11/1/91**

MANUFACTURER'S NAME: COLUMBIA PAINT COMPANY  
 ADDRESS: NORTH 112 HAVEN STREET  
 ADDRESS: P. O. BOX 4569  
 CITY, STATE: SPOKANE, WA 99202

EMERGENCY TELEPHONE NO. DAY: 509-535-9741 NIGHT: 1-800-424-9300  
 INFORMATION TELEPHONE NO. DAY: 509-535-9741 NIGHT: 1-800-424-9300

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**SECTION I — PRODUCT IDENTIFICATION**

MANUFACTURER'S CODE IDENTIFICATION: SEE ABOVE  
 PRODUCT CLASS: SYNTHETIC ALKYD RESIN COATING  
 TRADE NAME: SEE TABLE OF CONTENTS  
 HMIS INFORMATION\*\*      HEALTH - 2      FLAMMABILITY - 3  
    REACTIVITY - 1      PERSONAL PROTECTIVE EQUIPMENT - J

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**SECTION II — HAZARDOUS INGREDIENTS**

INGREDIENT MATERIAL DESCRIPTION	CAS #	% BY WEIGHT	TLV - (TWA) PPM	MG/M3	LEL	VAPOR PRESS MMHG	DEG
CARBON BLACK	*1333864	<1.0-3.40*	Not Est*	3.50*	Unk.*	Unknown	
VM&P NAPHTHA	*8030306	<1.0-28.01*	300.00*	1350.00*	1.0*	26.00 @	77.0
XYLENE (MIXED ISOMERS)	*1330-20-7	<1.0-44.95*	100.00*	434.00*	1.0*	6.00 @	68.0
ETHYL BENZENE	*100414	<1.0-9.21*	100.00*	435.00*	1.2*	10.00 @	78.6
MINERAL SPIRITS	*8052-41-3	<1.0-30.01*	100.00*	Not Est*	1.0*	2.00 @	68.0
MAGNESIUM SILICATE (TALC)	*14807-96-6	<1.0-27.73*	Not Est*	2.00*	Unk.*	Unknown	
TOLUENE	*108883	<1.0-13.60*	100.00*	375.00*	1.2*	22.00 @	68.0
2-BUTOXY ETHANOL -exposure contrb via skin	*111762	<1.0-1.43*	25.00*	120.00*	1.1*	.60 @	68.0
TITANIUM DIOXIDE	*13463-67-7	0.00-25.31*	Not Est*	10.00	Unk.*	Unknown	
HEXANE	*110543	>1.0-7.63*	50.00*	180.00*	1.0*	125.00 @	68.0
ISOPROPANOL	*67630	>1.0-5.09*	400.00*	980.00*	25.0*	33.00 @	68.0
CRYSTALLINE SILICA -suspected carcinogen	*14808-60-7	<.10-15.11*	Not Est*	10*	Unk.*	Unknown	
CRYSTALLINE SILICA -suspected carcinogen	*14464-46-1	>.10-6.35*	Not Est*	05*	Unk.*	Unknown	

THIS PRODUCT CONTAINS HAZARDOUS COMPONENTS WHICH MAY BECOME AIRBORNE AND RESULT IN EXPOSURE WHEN REMOVED ABRASIVE BLASTING, SANDING, OR GRINDING. VENTILATE AND AVOID BREATHING DUSTS.

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**SECTION III — PHYSICAL DATA**

BOILING RANGE: HIGH 306.0 - 399.0 DF LOW 148.0 - 277.0 DF  
 VAPOR PRESSURE: SEE SECTION II  
 VAPOR DENSITY: HEAVIER THAN AIR  
 EVAPORATION RATE: SLOWER THAN BUTYL ACETATE  
 WEIGHT PER GALLON: 7.8 - 12.0  
 % VOLATILE BY VOLUME: 51.0 - 66.6  
 % VOLATILE BY WEIGHT: 27.6 - 59.5

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**SECTION IV — FIRE AND EXPLOSION HAZARD DATA**

FLAMMABILITY CLASSIFICATION OSHA-CLASS IB-IC DOT - FLAMMABLE LIQUID  
 LOWEST FLASHPOINT T.C.C. 50.0 - 98.0 DF LOWER EXPLOSION LEVEL (LEL) 1.0%  
 EXTINGUISHING MEDIA: (X) FOAM ( ) ALCOHOL FOAM (X) CO2  
    (X) DRY CHEMICAL ( ) WATER FOG ( ) OTHER

UNUSUAL FIRE AND EXPLOSION HAZARDS: KEEP AWAY FROM HEAT, SPARKS, AND FLAME. VAPORS MAY IGNITE EXPLOSIVELY. VAPORS MAY SPREAD LONG DISTANCES. PREVENT BUILD-UP OF VAPORS. EXTINGUISH ALL PILOT LIGHTS AND TURN OFF HEATERS, NON-EXPLOSION PROOF ELECTRICAL EQUIPMENT, AND ALL OTHER SOURCES OF IGNITION UNTIL VAPORS ARE GONE. IN



CLOSED CONTAINERS, PRESSURE BUILDUP MAY OCCUR DUE TO HEAT EXPOSURE. DURING EMERGENCY CONDITIONS, OVEREXPOSURE TO DECOMPOSITION PRODUCTS MAY CAUSE A HEALTH HAZARD. SYMPTOMS MAY NOT BE IMMEDIATELY APPARENT. OBTAIN MEDICAL ATTENTION. (SEE SECTION VI).  
SPECIAL FIRE FIGHTING PROCEDURES: WATER SPRAY MAY BE INEFFECTIVE. HOWEVER, WATER MAY BE USED TO COOL CLOSED CONTAINERS TO PREVENT PRESSURE BUILDUP. FULL PROTECTIVE EQUIPMENT RECOMMENDED, INCLUDING SELF-CONTAINED BREATHING APPARATUS, TO PROTECT FIREFIGHTERS FROM HAZARDOUS COMBUSTION PRODUCTS.

### SECTION V — HEALTH HAZARD DATA

EFFECTS OF OVEREXPOSURE: OVEREXPOSURE VIA INHALATION CAN CAUSE CENTRAL NERVOUS SYSTEM DEPRESSION WITH SYMPTOMS RANGING FROM HEADACHES, DIZZINESS, LOSS OF COORDINATION, TO UNCONSCIOUSNESS. DELIBERATELY BREATHING CONCENTRATED SOLVENT VAPOR (GLUE SNIFFING) CAN RESULT IN PERMANENT BRAIN AND NERVOUS SYSTEM DAMAGE OR DEATH. INGESTION MAY RESULT IN GASTROINTESTINAL IRRITATION, NAUSEA, VOMITING, AND/OR DIARRHEA. EYE CONTACT CAN CAUSE SEVERE IRRITATION, REDNESS, TEARING, AND BLURRED VISION. PROLONGED OR REPEATED SKIN CONTACT WILL DRY AND DEFAT THE SKIN, LEADING TO IRRITATION AND DERMATITIS. CRYSTALLINE SILICA DUST CAN CAUSE UPPER RESPIRATORY IRRITATION AND IRRITATION TO EYES. PROLONGED OVER-EXPOSURE TO SILICA DUST BY INHALATION MAY CAUSE DELAYED LUNG INJURY/DISEASE (SILICOSIS). ON THE BASIS OF INITIAL EXPERIMENTAL TESTS IN ANIMALS AND LIMITED EPIDEMIOLOGICAL STUDIES IN HUMAN POPULATIONS, THE INTERNATIONAL AGENCY FOR RESEARCH ON CANCER (IARC) HAS CONCLUDED THAT THERE IS LIMITED EVIDENCE FOR THE CARCINOGENICITY OF CRYSTALLINE SILICA TO HUMANS. <CHRONIC EFFECTS> REPEATED OVEREXPOSURE TO SOLVENT VAPORS MAY RESULT IN ONE OR MORE OF THE FOLLOWING: CENTRAL NERVOUS SYSTEM; BLOOD, LIVER, AND/OR KIDNEY INJURY, HEARING LOSS. RATS EXPOSED TO TITANIUM DIOXIDE DUST AT 250 MG/M<sup>3</sup> DEVELOPED LUNG CANCER; HOWEVER, SUCH EXPOSURE LEVELS ARE NOT ATTAINABLE IN THE WORK PLACE. LONG TERM EXCESSIVE EXPOSURE TO TALC DUST MAY CAUSE TALCOSIS, A PULMONARY FIBROSIS, WHICH IN TURN MAY LEAD TO SEVERE AND PERMANENT DAMAGE TO THE LUNG.

PRIMARY ROUTES OF ENTRY: (X) - DERMAL (X) - INHALATION ( ) - INGESTION  
EMERGENCY AND FIRST AID PROCEDURES: IF OVERCOME BY VAPOR, REMOVE FROM EXPOSURE IMMEDIATELY; CALL A PHYSICIAN. IF BREATHING IS IRREGULAR OR STOPPED, START RESUSCITATION, ADMINISTER OXYGEN. IF INGESTED, DO NOT INDUCE VOMITING; CALL A PHYSICIAN. IF SPLASHED INTO THE EYES, FLUSH EYES WITH CLEAR WATER FOR 15 MINUTES OR UNTIL IRRITATION SUBSIDES; CONSULT A PHYSICIAN AS MAY BE REQUIRED. IN CASE OF SKIN CONTACT, REMOVE ANY CONTAMINATED CLOTHING AND WASH SKIN WITH SOAP AND WARM WATER.

MEDICAL CONDITIONS PRONE TO AGGRAVATION BY EXPOSURE: PRE-EXISTING SKIN DISORDERS, CHRONIC RESPIRATORY DISEASES.

### SECTION VI — REACTIVITY DATA

STABILITY: ( ) - UNSTABLE (X) - STABLE  
HAZARDOUS POLYMERIZATION ( ) - MAY OCCUR (X) - WILL NOT OCCUR  
HAZARDOUS DECOMPOSITION PRODUCTS: FUMES PRODUCED WHEN HEATED TO DECOMPOSITION, SUCH AS IN WELDING, MAY INCLUDE ONE OR MORE OF THE FOLLOWING: CARBON DIOXIDE, CARBON MONOXIDE, ACROLEIN, HYDROGEN CHLORIDE, OXIDES OF NITROGEN.

CONDITIONS TO AVOID: HIGH TEMPERATURES OR DIRECT HEATING.  
INCOMPATIBILITY (MATERIALS TO AVOID): OXYGEN AND STRONG OXIDANTS, STRONG ACIDS, STRONG BASES, AND AMINES. WILL DISSOLVE OR SOFTEN SOME PLASTICS AND RUBBER.

### SECTION VII — SPILL OR LEAK PROCEDURES

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED: REMOVE ALL SOURCES OF IGNITION (FLAME, HOT SURFACES, AND ELECTRICAL, STATIC, OR FRICTIONAL SPARKS), VENTILATE AREA, CONTAIN AND REMOVE WITH INERT ABSORBENT AND NON-SPARKING TOOLS. REFER TO OTHER HAZARD CAUTIONS CONTAINED ON THIS SHEET BEFORE ATTEMPTING CLEAN-UP.  
WASTE DISPOSAL METHOD: DISPOSE OF IN ACCORDANCE WITH LOCAL, STATE, AND FEDERAL REGULATIONS. DO NOT INCINERATE CLOSED CONTAINERS.

### SECTION VIII — SAFE HANDLING AND USE INFORMATION

RESPIRATORY PROTECTION: IN OUTDOOR, OPEN AREAS OR IN RESTRICTED VENTILATION AREAS, USE APPROVED CHEMICAL/MECHANICAL FILTERS DESIGNED TO REMOVE A COMBINATION OF PARTICULATE GAS AND VAPOR. TLV'S MUST NOT BE EXCEEDED. IN CONFINED AREAS, USE APPROVED AIR LINE TYPE RESPIRATORS OR HOODS.

VENTILATION: ALL APPLICATION AREAS SHOULD BE VENTILATED IN ACCORDANCE WITH OSHA REGULATIONS. POCKETS OF HEAVY AND/OR FLAMMABLE VAPOR MUST NOT BE PERMITTED TO FORM. VENTILATION AND RESPIRATORY PROTECTION MUST BE ADEQUATE TO PREVENT THE TLV'S OF HAZARDOUS INGREDIENTS FROM BEING EXCEEDED.

PROTECTIVE GLOVES: REQUIRED FOR PROLONGED OR REPEATED CONTACT.

EYE PROTECTION: USE SAFETY EYEWEAR WITH SPLASH GUARDS OR SIDE SHIELDS.

OTHER PROTECTIVE EQUIPMENT: USE PROTECTIVE APRON AND CLOTHING.

HYGIENIC PRACTICES: WASH HANDS BEFORE EATING OR USING WASHROOM. SMOKE IN SMOKING AREAS ONLY.

### SECTION IX — SPECIAL PRECAUTIONS

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORING: DO NOT STORE OR USE NEAR HEAT, SPARKS, OR FLAME. NO SMOKING OR OPEN LIGHTS.

OTHER PRECAUTIONS: AVOID CONTACT WITH EYES. AVOID PROLONGED OR REPEATED CONTACT WITH SKIN. AVOID PROLONGED OR REPEATED BREATHING OF VAPORS. STORE IN SEALED CONTAINERS AWAY FROM SPACE HEATING EQUIPMENT.

### SECTION X — REGULATORY INFORMATION

SARA TITLE III SECTION 313 SUPPLIER NOTIFICATION: THIS PRODUCT CONTAINS THE FOLLOWING TOXIC CHEMICALS SUBJECT TO THE REPORTING REQUIREMENTS OF SECTION 313 OF THE EMERGENCY PLANNING AND COMMUNITY RIGHT-TO-KNOW ACT OF 1986 AND OF 40 CFR 372:

CAS#	CHEMICAL NAME	PERCENT BY WEIGHT
1330-20-7	XYLENE (MIXED ISOMERS)	<1.0 - 44.98%
100-41-4	ETHYL BENZENE	<1.0 - 9.21%
	ZINC COMPOUNDS	<1.0 - 7.16%
108-88-3	TOLUENE	<1.0 - 13.60%
	GLYCOL ETHERS	<1.0 - 1.43%

THIS INFORMATION MUST BE INCLUDED IN ALL MSDS'S THAT ARE COPIED AND DISTRIBUTED FOR THIS MATERIAL.

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### MATERIAL SAFETY DATA SHEET GROUP 5

includes the following:

04-400-MB	04-400-12	04-400-61	06-590-XX	08-200-XX
04-400-WB	04-400-25	04-400-62	06-600-XX	08-201-XX
04-400-XX	04-400-27	04-400-63	06-610-XX	
04-400-01	04-400-28	04-400-65	06-650-XX	
04-400-04	04-400-43	04-761-WB	06-800-XX	

FOR COATINGS, RESINS, AND RELATED MATERIALS  
DATE OF PREPARATION - 11/1/91

COLUMBIA PAINT COMPANY  
NORTH 112 HAVEN STREET  
P. O. BOX 4569  
SPOKANE, WA 99202

TELEPHONE NO.  
FACILITY TELEPHONE NO.

DAY: 509-535-9741  
DAY: 509-535-9741

NIGHT: 1-800-424-9300  
NIGHT: 1-800-424-9300

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### SECTION I — PRODUCT IDENTIFICATION

MANUFACTURER'S CODE IDENTIFICATION: SEE ABOVE

PRODUCT CLASS: SYNTHETIC ALKYD RESIN COATING

TRADE NAME: SEE TABLE OF CONTENTS

HMIS INFORMATION\*\*

HEALTH - 2  
REACTIVITY - 1

FLAMMABILITY - 2

PERSONAL PROTECTIVE EQUIPMENT - H

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### SECTION II — HAZARDOUS INGREDIENTS

INGREDIENT MATERIAL DESCRIPTION	CAS #	% BY WEIGHT	TLV - (TWA) PPM	MG/M3	LEL	VAPOR PRESS MMHG	DEG F.
MAGNESIUM SILICATE (TALC)	*14807-966	<1.0-26.42*	Not Est*	2.00*	Unk.*		Unknown
SILICEOUS MUSCOVITE MICA -suspected carcinogen	*1318-94-1	<1.0-4.85*	Not Est*	3.00*	Unk.*		Unknown
MINERAL SPIRITS	*8052-41-3	<1.0-77.06*	100.00*	Not Est*	1.0*	2.00 @	68.0
HIGH FLASH ALIPHATIC HYDROCARBON	*64742-88-7	<1.0-31.26*	100.00*	Not Est*	1.0*	1.00 @	68.0
XYLENE (MIXED ISOMERS)	*1330-20-7	<1.0-1.17*	100.00*	434.00*	1.0*	6.00 @	68.0
HIGH-BOILING AROMATIC HYDROCARBON	*64742-95-6	<1.0-4.01*	80.00*	Not Est*	1.0*	5.00 @	100.0
2-ETHOXYETHANOL (EGEE)	*110-80-5	<1.0-13*	5.00*	18.00*	Unk.*		Unknown
CARBON BLACK	*1333864	0-3.24*	Not Est*	3.50*	Unk.*		Unknown
TITANIUM DIOXIDE	*13463-67-7	0.00-28.82*	Not Est*	10.00	Unk.*		Unknown

THIS PRODUCT CONTAINS HAZARDOUS COMPONENTS WHICH MAY BECOME AIRBORNE AND RESULT IN EXPOSURE WHEN REMOVED BY ABRASIVE BLASTING, SANDING, OR GRINDING. VENTILATE AND AVOID BREATHING DUSTS.

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### SECTION III — PHYSICAL DATA

BOILING RANGE: HIGH 399.0 - 475.0 DF LOW 148.0 - 305.0 DF  
 VAPOR PRESSURE: SEE SECTION II  
 VAPOR DENSITY: HEAVIER THAN AIR  
 EVAPORATION RATE: SLOWER THAN BUTYL ACETATE  
 WEIGHT PER GALLON: 6.9 - 12.3  
 % VOLATILE BY VOLUME: 32.9 - 80.6  
 % VOLATILE BY WEIGHT: 17.8 - 77.6

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### SECTION IV — FIRE AND EXPLOSION HAZARD DATA

FLAMMABILITY CLASSIFICATION OSHA-CLASS II DOT - COMBUSTIBLE LIQUID  
 LOWEST FLASHPOINT T.C.C. 104.0 - 136.0 DF LOWER EXPLOSION LEVEL (LEL) 1.0%  
 EXTINGUISHING MEDIA: (X) FOAM ( ) ALCOHOL FOAM (X) CO2  
 (X) DRY CHEMICAL ( ) WATER FOG ( ) OTHER

UNUSUAL FIRE AND EXPLOSION HAZARDS: ISOLATE FROM HEAT, SPARKS, ELECTRICAL EQUIPMENT, AND OPEN FLAME. IN CLOSED CONTAINERS, PRESSURE BUILDUP MAY OCCUR DUE TO HEAT EXPOSURE. DURING EMERGENCY CONDITIONS, OVEREXPOSURE TO DECOMPOSITION PRODUCTS MAY CAUSE A HEALTH HAZARD. SYMPTOMS MAY NOT BE IMMEDIATELY APPARENT. OBTAIN MEDICAL ATTENTION. (SEE SECTION VI)

SPECIAL FIRE FIGHTING PROCEDURES: WATER SPRAY MAY BE INEFFECTIVE. HOWEVER, WATER MAY BE USED TO COOL CLOSED CONTAINERS TO PREVENT PRESSURE BUILDUP. FULL PROTECTIVE EQUIPMENT RECOMMENDED, INCLUDING SELF-CONTAINED BREATHING APPARATUS, TO PROTECT FIREFIGHTERS FROM HAZARDOUS COMBUSTION PRODUCTS.

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**SECTION V — HEALTH HAZARD DATA**

EFFECTS OF OVEREXPOSURE: OVEREXPOSURE VIA INHALATION CAN CAUSE CENTRAL NERVOUS SYSTEM DEPRESSION WITH SYMPTOMS RANGING FROM HEADACHES, DIZZINESS, LOSS OF COORDINATION, TO UNCONSCIOUSNESS. DELIBERATELY BREATHING CONCENTRATED SOLVENT VAPOR (GLUE SNIFFING) CAN RESULT IN PERMANENT BRAIN AND NERVOUS SYSTEM DAMAGE OR DEATH. INGESTION MAY RESULT IN GASTROINTESTINAL IRRITATION, NAUSEA, VOMITING, AND/OR DIARRHEA. EYE CONTACT CAN CAUSE SEVERE IRRITATION, REDNESS, TEARING, AND BLURRED VISION. PROLONGED OR REPEATED SKIN CONTACT WILL DRY AND DEBATE THE SKIN, LEADING TO IRRITATION AND DERMATITIS. CRYSTALLINE SILICA DUST CAN CAUSE UPPER RESPIRATORY IRRITATION AND IRRITATION TO EYES. PROLONGED OVER-EXPOSURE TO SILICA DUST BY INHALATION MAY CAUSE DELAYED LUNG INJURY/DISEASE (SILICOSIS). ON THE BASIS OF INITIAL EXPERIMENTAL TESTS IN ANIMALS AND LIMITED EPIDEMIOLOGICAL STUDIES IN HUMAN POPULATIONS, THE INTERNATIONAL AGENCY FOR RESEARCH ON CANCER (IARC) HAS CONCLUDED THAT THERE IS LIMITED EVIDENCE FOR THE CARCINOGENICITY OF CRYSTALLINE SILICA TO HUMANS. <CHRONIC EFFECTS> REPEATED OVEREXPOSURE TO SOLVENT VAPORS MAY RESULT IN ONE OR MORE OF THE FOLLOWING: CENTRAL NERVOUS SYSTEM, BLOOD, LIVER, AND/OR KIDNEY INJURY, HEARING LOSS. RATS EXPOSED TO TITANIUM DIOXIDE DUST AT 250 MG/M<sup>3</sup> DEVELOPED LUNG CANCER; HOWEVER, SUCH EXPOSURE LEVELS ARE NOT ATTAINABLE IN THE WORK PLACE. LONG TERM EXCESSIVE EXPOSURE TO TALC DUST MAY CAUSE TALCOSIS, A PULMONARY FIBROSIS, WHICH IN TURN MAY LEAD TO SEVERE AND PERMANENT DAMAGE TO THE LUNG.

PRIMARY ROUTES OF ENTRY: (X) - DERMAL (X) - INHALATION ( ) - INGESTION

EMERGENCY AND FIRST AID PROCEDURES: IF OVERCOME BY VAPOR, REMOVE FROM EXPOSURE IMMEDIATELY; CALL A PHYSICIAN. IF BREATHING IS IRREGULAR OR STOPPED, START RESUSCITATION, ADMINISTER OXYGEN. IF INGESTED, DO NOT INDUCE VOMITING; CALL A PHYSICIAN. IF SPLASHED INTO THE EYES, FLUSH EYES WITH CLEAR WATER FOR 15 MINUTES OR UNTIL IRRITATION SUBSIDES; CONSULT A PHYSICIAN AS MAY BE REQUIRED. IN CASE OF SKIN CONTACT, REMOVE ANY CONTAMINATED CLOTHING AND WASH SKIN WITH SOAP AND WARM WATER.

MEDICAL CONDITIONS PRONE TO AGGRAVATION BY EXPOSURE: PRE-EXISTING SKIN DISORDERS, CHRONIC RESPIRATORY DISEASES. INDIVIDUALS WITH PULMONARY AND/OR RESPIRATORY DISEASE INCLUDING, BUT NOT LIMITED TO, ASTHMA AND BRONCHITIS SHOULD NOT BE EXPOSED TO SILICA DUSTS.  
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**SECTION VI — REACTIVITY DATA**

STABILITY: ( ) - UNSTABLE (X) - STABLE  
HAZARDOUS POLYMERIZATION ( ) - MAY OCCUR (X) - WILL NOT OCCUR

HAZARDOUS DECOMPOSITION PRODUCTS: FUMES PRODUCED WHEN HEATED TO DECOMPOSITION, SUCH AS IN WELDING, MAY INCLUDE ONE OR MORE OF THE FOLLOWING: CARBON DIOXIDE, CARBON MONOXIDE, ACROLEIN, HYDROGEN CHLORIDE, OXIDES OF NITROGEN.

CONDITIONS TO AVOID: HIGH TEMPERATURES OR DIRECT HEATING.

INCOMPATIBILITY (MATERIALS TO AVOID): OXYGEN AND STRONG OXIDANTS, STRONG ACIDS, STRONG BASES, AND AMINES. WILL DISSOLVE OR SOFTEN SOME PLASTICS AND RUBBER.  
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**SECTION VII — SPILL OR LEAK PROCEDURES**

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED: REMOVE ALL SOURCES OF IGNITION (FLAME, HOT SURFACES, AND ELECTRICAL, STATIC, OR FRICTIONAL SPARKS), VENTILATE AREA, CONTAIN AND REMOVE WITH INERT ABSORBENT AND NON-SPARKING TOOLS. REFER TO OTHER HAZARD CAUTIONS CONTAINED ON THIS SHEET BEFORE ATTEMPTING CLEAN-UP.  
WASTE DISPOSAL METHOD: DISPOSE OF IN ACCORDANCE WITH LOCAL, STATE, AND FEDERAL REGULATIONS. DO NOT INCINERATE CLOSED CONTAINERS.  
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**SECTION VIII — SAFE HANDLING AND USE INFORMATION**

RESPIRATORY PROTECTION: IN OUTDOOR, OPEN AREAS OR IN RESTRICTED VENTILATION AREAS, USE APPROVED CHEMICAL/MECHANICAL FILTERS DESIGNED TO REMOVE A COMBINATION OF PARTICULATE GAS AND VAPOR. TLV'S MUST NOT BE EXCEEDED. IN CONFINED AREAS, USE APPROVED AIR LINE TYPE RESPIRATORS OR HOODS.

VENTILATION: ALL APPLICATION AREAS SHOULD BE VENTILATED IN ACCORDANCE WITH OSHA REGULATIONS. POCKETS OF HEAVY AND/OR FLAMMABLE VAPOR MUST NOT BE PERMITTED TO FORM. VENTILATION AND RESPIRATORY PROTECTION MUST BE ADEQUATE TO PREVENT THE TLV'S OF HAZARDOUS INGREDIENTS FROM BEING EXCEEDED.

PROTECTIVE GLOVES: REQUIRED FOR PROLONGED OR REPEATED CONTACT.

EYE PROTECTION: USE SAFETY EYEWEAR WITH SPLASH GUARDS OR SIDE SHIELDS.

OTHER PROTECTIVE EQUIPMENT: USE PROTECTIVE APRON AND CLOTHING.

HYGIENIC PRACTICES: WASH HANDS BEFORE EATING OR USING WASHROOM. SMOKE IN SMOKING AREAS ONLY.  
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**SECTION IX — SPECIAL PRECAUTIONS**

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORING: DO NOT STORE OR USE NEAR HEAT, SPARKS, OR FLAME. NO SMOKING OR OPEN LIGHTS.

OTHER PRECAUTIONS: AVOID CONTACT WITH EYES. AVOID PROLONGED OR REPEATED CONTACT WITH SKIN. AVOID PROLONGED OR REPEATED BREATHING OF VAPORS. STORE IN SEALED CONTAINERS AWAY FROM SPACE HEATING EQUIPMENT.  
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**SECTION X — REGULATORY INFORMATION**

SARA TITLE III SECTION 313 SUPPLIER NOTIFICATION: THIS PRODUCT CONTAINS THE FOLLOWING TOXIC CHEMICALS SUBJECT TO THE REPORTING REQUIREMENTS OF SECTION 313 OF THE EMERGENCY PLANNING AND COMMUNITY RIGHT-TO-KNOW ACT OF 1986 AND OF 40 CFR 372:

CAS#	CHEMICAL NAME	PERCENT BY WEIGHT
1330-20-7	XYLENE (MIXED ISOMERS)	<1.0 - 1.24%

THIS INFORMATION MUST BE INCLUDED IN ALL MSDS'S THAT ARE COPIED AND DISTRIBUTED FOR THIS MATERIAL.

**MATERIAL SAFETY DATA SHEET GROUP 6**

includes the following:  
 00-015-PP    00-070-MB    00-072-MB    03-700-WB    04-400-21    04-400-33    08-300-WB    08-400-WB

**FOR COATINGS, RESINS, AND RELATED MATERIALS**  
**DATE OF PREPARATION -11/1/91**

MANUFACTURER'S NAME: COLUMBIA PAINT COMPANY  
 ADDRESS: NORTH 112 HAVEN STREET  
 ADDRESS: P. O. BOX 4569  
 CITY, STATE: SPOKANE, WA 99202

EMERGENCY TELEPHONE NO. DAY: 509-535-9741 NIGHT: 1-800-424-9300  
 INFORMATION TELEPHONE NO. DAY: 509-535-9741 NIGHT: 1-800-424-9300

**SECTION I — PRODUCT IDENTIFICATION**

MANUFACTURER'S CODE IDENTIFICATION: SEE ABOVE  
 PRODUCT CLASS: SYNTHETIC ALKYD RESIN COATING  
 TRADE NAME: SEE TABLE OF CONTENTS  
 HMIS INFORMATION\*\*    HEALTH - 2    FLAMMABILITY - 2  
    REACTIVITY - 1    PERSONAL PROTECTIVE EQUIPMENT - J

**SECTION II — HAZARDOUS INGREDIENTS**

INGREDIENT MATERIAL DESCRIPTION	CAS #	% BY WEIGHT	TLV - (TWA) PPM	MG/M3	LEL	VAPOR PRESS MMHG	DEG F.
MINERAL SPIRITS	*8052-41-3	<1.0-45.64*	100.00*	Not Est*	1.0*	2.00 @	68.0
MAGNESIUM SILICATE (TALC)	*14807-96-6	<1.0-24.84*	Not Est*	2.00*	Unk.*		Unknown
CRYSTALLINE SILICA -suspected carcinogen	*14808-60-7	<.10-19.52*	Not Est*	.10*	Unk.*		Unknown
SILICEOUS MUSCOVITE MICA -suspected carcinogen	*1318-94-1	<1.0-2.5	Not Est*	3.00*	Unk.*		Unknown
HIGH-BOILING AROMATIC HYDROCARBON	*64742-95-6	<1.0-1.70*	80.00*	Not Est*	1.0*	5.00 @	100.0
HIGH FLASH ALIPHATIC HYDROCARBON	*64742-88-7	<1.0-16.80*	100.00*	Not Est*	1.0*	1.00 @	68.0
XYLENE (MIXED ISOMERS)	*1330-20-7	<1.0-1.07*	100.00*	434.00*	1.0*	6.00 @	68.0
CARBON BLACK	*1333864	0-2.07*	Not Est*	3.50*	Unk.*		Unknown
TITANIUM DIOXIDE	*13463-67-7	0.00-14.48*	Not Est*	10.00	Unk.*		Unknown

THIS PRODUCT CONTAINS HAZARDOUS COMPONENTS WHICH MAY BECOME AIRBORNE AND RESULT IN EXPOSURE WHEN REMOVED BY ABRASIVE BLASTING, SANDING, OR GRINDING. VENTILATE AND AVOID BREATHING DUSTS.

**SECTION III — PHYSICAL DATA**

BOILING RANGE: HIGH 399.0 - 410.0 DF    LOW 148.0 - 305.0 DF  
 VAPOR PRESSURE: SEE SECTION II  
 VAPOR DENSITY: HEAVIER THAN AIR  
 EVAPORATION RATE: SLOWER THAN BUTYL ACETATE  
 WEIGHT PER GALLON: 8.4 - 13.0  
 % VOLATILE BY VOLUME: 42.5 - 58.6  
 % VOLATILE BY WEIGHT: 22.8 - 46.5

**SECTION IV — FIRE AND EXPLOSION HAZARD DATA**

FLAMMABILITY CLASSIFICATION: OSHA-CLASS II    DOT - COMBUSTIBLE LIQUID  
 LOWEST FLASHPOINT T.C.C. 106.0 DF    LOWER EXPLOSION LEVEL (LEL) 1.0%  
 EXTINGUISHING MEDIA: (X) FOAM    ( ) ALCOHOL FOAM    (X) CO2  
    (X) DRY CHEMICAL    ( ) WATER FOG    ( ) OTHER  
 UNUSUAL FIRE AND EXPLOSION HAZARDS: ISOLATE FROM HEAT, SPARKS, ELECTRICAL EQUIPMENT, AND OPEN FLAME. IN CLOSED CONTAINERS, PRESSURE BUILDUP MAY OCCUR DUE TO HEAT EXPOSURE. DURING EMERGENCY CONDITIONS, OVEREXPOSURE TO DECOMPOSITION PRODUCTS MAY CAUSE A HEALTH HAZARD. SYMPTOMS MAY NOT BE IMMEDIATELY APPARENT. OBTAIN MEDICAL ATTENTION. (SEE SECTION VI).  
 SPECIAL FIRE FIGHTING PROCEDURES: WATER SPRAY MAY BE INEFFECTIVE. HOWEVER, WATER MAY BE USED TO COOL CLOSED CONTAINERS TO PREVENT PRESSURE BUILDUP. FULL PROTECTIVE EQUIPMENT RECOMMENDED, INCLUDING SELF-CONTAINED BREATHING APPARATUS, TO PROTECT FIREFIGHTERS FROM HAZARDOUS COMBUSTION PRODUCTS.

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**SECTION V — HEALTH HAZARD DATA**

EFFECTS OF OVEREXPOSURE: OVEREXPOSURE VIA INHALATION CAN CAUSE CENTRAL NERVOUS SYSTEM DEPRESSION WITH SYMPTOMS RANGING FROM HEADACHES, DIZZINESS, LOSS OF COORDINATION, TO UNCONSCIOUSNESS. DELIBERATELY BREATHING CONCENTRATED SOLVENT VAPOR (GLUE SNIFFING) CAN RESULT IN PERMANENT BRAIN AND NERVOUS SYSTEM DAMAGE OR DEATH. INGESTION MAY RESULT IN GASTROINTESTINAL IRRITATION, NAUSEA, VOMITING, AND/OR DIARRHEA. EYE CONTACT CAN CAUSE SEVERE IRRITATION, REDNESS, TEARING, AND BLURRED VISION. PROLONGED OR REPEATED SKIN CONTACT WILL DRY AND DEFAIT THE SKIN, LEADING TO IRRITATION AND DERMATITIS. <CHRONIC EFFECTS> REPEATED OVEREXPOSURE TO SOLVENT VAPORS MAY RESULT IN ONE OR MORE OF THE FOLLOWING: CENTRAL NERVOUS SYSTEM, BLOOD, LIVER, AND/OR KIDNEY INJURY, HEARING LOSS. CRYSTALLINE SILICA DUST CAN CAUSE UPPER RESPIRATORY IRRITATION AND IRRITATION TO EYES. PROLONGED OVER-EXPOSURE TO SILICA DUST BY INHALATION MAY CAUSE DELAYED LUNG INJURY/DISEASE (SILICOSIS). ON THE BASIS OF INITIAL EXPERIMENTAL TESTS IN ANIMALS AND LIMITED EPIDEMIOLOGICAL STUDIES IN HUMAN POPULATIONS, THE INTERNATIONAL AGENCY FOR RESEARCH ON CANCER (IARC) HAS CONCLUDED THAT THERE IS LIMITED EVIDENCE FOR THE CARCINOGENICITY OF CRYSTALLINE SILICA TO HUMANS. RATS EXPOSED TO TITANIUM DIOXIDE DUST AT 250 MG/M<sup>3</sup> DEVELOPED LUNG CANCER; HOWEVER, SUCH EXPOSURE LEVELS ARE NOT ATTAINABLE IN THE WORK PLACE. LONG TERM EXCESSIVE EXPOSURES TO TALC DUST MAY CAUSE TALCOSIS, A PULMONARY FIBROSIS, WHICH IN TURN MAY LEAD TO SEVERE AND PERMANENT DAMAGE TO THE LUNG.

PRIMARY ROUTES OF ENTRY: (X) - DERMAL (X) - INHALATION ( ) - INGESTION  
EMERGENCY AND FIRST AID PROCEDURES: IF OVERCOME BY VAPOR, REMOVE FROM EXPOSURE IMMEDIATELY; CALL A PHYSICIAN. IF BREATHING IS IRREGULAR OR STOPPED, START RESUSCITATION, ADMINISTER OXYGEN. IF INGESTED, DO NOT INDUCE VOMITING; CALL A PHYSICIAN. IF SPLASHED INTO THE EYES, FLUSH EYES WITH CLEAR WATER FOR 15 MINUTES OR UNTIL IRRITATION SUBSIDES; CONSULT A PHYSICIAN AS MAY BE REQUIRED. IN CASE OF SKIN CONTACT, REMOVE ANY CONTAMINATED CLOTHING AND WASH SKIN WITH SOAP AND WARM WATER.  
MEDICAL CONDITIONS PRONE TO AGGRAVATION BY EXPOSURE: PRE-EXISTING SKIN DISORDERS, CHRONIC RESPIRATORY DISEASES. INDIVIDUALS WITH PULMONARY AND/OR RESPIRATORY DISEASE INCLUDING, BUT NOT LIMITED TO, ASTHMA AND BRONCHITIS SHOULD NOT BE EXPOSED TO SILICA DUSTS.  
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**SECTION VI — REACTIVITY DATA**

STABILITY: ( ) - UNSTABLE (X) - STABLE  
HAZARDOUS POLYMERIZATION ( ) - MAY OCCUR (X) - WILL NOT OCCUR  
HAZARDOUS DECOMPOSITION PRODUCTS: FUMES PRODUCED WHEN HEATED TO DECOMPOSITION, SUCH AS IN WELDING, MAY INCLUDE ONE OR MORE OF THE FOLLOWING: CARBON DIOXIDE, CARBON MONOXIDE, ACROLEIN, HYDROGEN CHLORIDE, OXIDES OF NITROGEN.  
CONDITIONS TO AVOID: HIGH TEMPERATURES OR DIRECT HEATING.  
INCOMPATIBILITY (MATERIALS TO AVOID): OXYGEN AND STRONG OXIDANTS, STRONG ACIDS, STRONG BASES, AND AMINES. WILL DISSOLVE OR SOFTEN SOME PLASTICS AND RUBBER.  
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**SECTION VII — SPILL OR LEAK PROCEDURES**

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED: REMOVE ALL SOURCES OF IGNITION (FLAME, HOT SURFACES, AND ELECTRICAL STATIC, OR FRICTIONAL SPARKS), VENTILATE AREA, CONTAIN AND REMOVE WITH INERT ABSORBENT AND NON-SPARKING TOOLS. REFER TO OTHER HAZARD CAUTIONS CONTAINED ON THIS SHEET BEFORE ATTEMPTING CLEAN-UP.  
WASTE DISPOSAL METHOD: DISPOSE OF IN ACCORDANCE WITH LOCAL, STATE, AND FEDERAL REGULATIONS. DO NOT INCINERATE CLOSED CONTAINERS.  
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**SECTION VIII — SAFE HANDLING AND USE INFORMATION**

RESPIRATORY PROTECTION: IN OUTDOOR, OPEN AREAS OR IN RESTRICTED VENTILATION AREAS, USE APPROVED CHEMICAL/MECHANICAL FILTERS DESIGNED TO REMOVE A COMBINATION OF PARTICULATE GAS AND VAPOR. TLV'S MUST NOT BE EXCEEDED. IN CONFINED AREAS, USE APPROVED AIR LINE TYPE RESPIRATORS OR HOODS.  
VENTILATION: ALL APPLICATION AREAS SHOULD BE VENTILATED IN ACCORDANCE WITH OSHA REGULATIONS. POCKETS OF HEAVY AND/OR FLAMMABLE VAPOR MUST NOT BE PERMITTED TO FORM. VENTILATION AND RESPIRATORY PROTECTION MUST BE ADEQUATE TO PREVENT THE TLV'S OF HAZARDOUS INGREDIENTS FROM BEING EXCEEDED.  
PROTECTIVE GLOVES: REQUIRED FOR PROLONGED OR REPEATED CONTACT.  
EYE PROTECTION: USE SAFETY EYEWEAR WITH SPLASH GUARDS OR SIDE SHIELDS.  
OTHER PROTECTIVE EQUIPMENT: USE PROTECTIVE APRON AND CLOTHING.  
HYGIENIC PRACTICES: WASH HANDS BEFORE EATING OR USING WASHROOM. SMOKE IN SMOKING AREAS ONLY.  
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**SECTION IX — SPECIAL PRECAUTIONS**

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORING: DO NOT STORE OR USE NEAR HEAT, SPARKS, OR FLAME. NO SMOKING OR OPEN LIGHTS.  
OTHER PRECAUTIONS: AVOID CONTACT WITH EYES. AVOID PROLONGED OR REPEATED CONTACT WITH SKIN. AVOID PROLONGED OR REPEATED BREATHING OF VAPORS. STORE IN SEALED CONTAINERS AWAY FROM SPACE HEATING EQUIPMENT.  
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**SECTION X — REGULATORY INFORMATION**

SARA TITLE III SECTION 313 SUPPLIER NOTIFICATION: THIS PRODUCT CONTAINS THE FOLLOWING TOXIC CHEMICALS SUBJECT TO THE REPORTING REQUIREMENTS OF SECTION 313 OF THE EMERGENCY PLANNING AND COMMUNITY RIGHT-TO-KNOW ACT OF 1986 AND OF 40 CFR 372:

CAS#	CHEMICAL NAME	PERCENT BY WEIGHT
1330-20-7	XYLENE (MIXED ISOMERS)	0 - 1.07%

THIS INFORMATION MUST BE INCLUDED IN ALL MSDS'S THAT ARE COPIED AND DISTRIBUTED FOR THIS MATERIAL.

MATERIAL SAFETY DATA SHEET GROUP 7

includes the following:
04-400-47 88-529-CO 88-615-02

FOR COATINGS, RESINS, AND RELATED MATERIALS
DATE OF PREPARATION - 11/1/91

MANUFACTURER'S NAME: COLUMBIA PAINT COMPANY
ADDRESS: NORTH 112 HAVEN STREET
ADDRESS: P. O. BOX 4569
CITY, STATE: SPOKANE, WA 99202

EMERGENCY TELEPHONE NO. DAY: 509-535-9741 NIGHT: 1-800-424-9300
INFORMATION TELEPHONE NO. DAY: 509-535-9741 NIGHT: 1-800-424-9300

SECTION I - PRODUCT IDENTIFICATION

MANUFACTURER'S CODE IDENTIFICATION: SEE ABOVE
PRODUCT CLASS: SYNTHETIC ALKYD RESIN COATING
TRADE NAME: SEE TABLE OF CONTENTS
HMIS INFORMATION\*\* HEALTH - 2 FLAMMABILITY - 2
REACTIVITY - 1 PERSONAL PROTECTIVE EQUIPMENT - J

SECTION II - HAZARDOUS INGREDIENTS

Table with columns: INGREDIENT, MATERIAL DESCRIPTION, CAS #, % BY WEIGHT, TLV - (TWA) PPM, MG/M3, LEL, VAPOR PRESS MMHG, DEG.F. Rows include MINERAL SPIRITS, LEAD AS IN LEAD CHROMATE, CHROMIUM AS CR (VI), CRYSTALLINE SILICA, TITANIUM DIOXIDE.

THIS PRODUCT CONTAINS HAZARDOUS COMPONENTS WHICH MAY BECOME AIRBORNE AND RESULT IN EXPOSURE WHEN REMOVED ABRASIVE BLASTING, SANDING, OR GRINDING. VENTILATE AND AVOID BREATHING DUSTS.

SECTION III - PHYSICAL DATA

BOILING RANGE: HIGH 399.0 DF LOW 148.0 - 286.0 DF
VAPOR PRESSURE: SEE SECTION II
VAPOR DENSITY: HEAVIER THAN AIR
EVAPORATION RATE: SLOWER THAN BUTYL ACETATE
WEIGHT PER GALLON: 8.3 - 14.1
% VOLATILE BY VOLUME: 37.9 - 60.1
% VOLATILE BY WEIGHT: 17.9 - 49.0

SECTION IV - FIRE AND EXPLOSION HAZARD DATA

FLAMMABILITY CLASSIFICATION: OSHA-CLASS II DOT - COMBUSTIBLE LIQUID
LOWEST FLASHPOINT T.C.C. 106.0 DF LOWER EXPLOSION LEVEL (LEL) 1.0%
EXTINGUISHING MEDIA: (X) FOAM ( ) ALCOHOL FOAM (X) CO2
(X) DRY CHEMICAL ( ) WATER FOG ( ) OTHER
UNUSUAL FIRE AND EXPLOSION HAZARDS: ISOLATE FROM HEAT, SPARKS, ELECTRICAL EQUIPMENT, AND OPEN FLAME. IN CLOSED CONTAINERS, PRESSURE BUILDUP MAY OCCUR DUE TO HEAT EXPOSURE. DURING EMERGENCY CONDITIONS, OVEREXPOSURE, DECOMPOSITION PRODUCTS MAY CAUSE A HEALTH HAZARD. SYMPTOMS MAY NOT BE IMMEDIATELY APPARENT. OBTAIN MEDICAL ATTENTION. (SEE SECTION VI).
SPECIAL FIRE FIGHTING PROCEDURES: WATER SPRAY MAY BE INEFFECTIVE. HOWEVER, WATER MAY BE USED TO COOL CLOSED CONTAINERS TO PREVENT PRESSURE BUILDUP. FULL PROTECTIVE EQUIPMENT RECOMMENDED, INCLUDING SELF-CONTAINED BREATHING APPARATUS, TO PROTECT FIREFIGHTERS FROM HAZARDOUS COMBUSTION PRODUCTS.

SECTION V - HEALTH HAZARD DATA

EFFECTS OF OVEREXPOSURE: OVEREXPOSURE VIA INHALATION CAN CAUSE CENTRAL NERVOUS SYSTEM DEPRESSION WITH SYMPTOMS RANGING FROM HEADACHES, DIZZINESS, LOSS OF COORDINATION, TO UNCONSCIOUSNESS. DELIBERATELY BREATHING CONCENTRATED SOLVENT VAPOR (GLUE SNIFFING) CAN RESULT IN PERMANENT BRAIN AND NERVOUS SYSTEM DAMAGE OR DEATH. INGESTION MAY RESULT IN GASTROINTESTINAL IRRITATION, NAUSEA, VOMITING, AND/OR DIARRHEA. EYE CONTACT CAN CAUSE SEVERE IRRITATION, REDNESS, TEARING, AND BLURRED VISION. PROLONGED OR REPEATED SKIN CONTACT WILL DRY AND DEFAAT THE SKIN, LEADING TO IRRITATION AND DERMATITIS. CRYSTALLINE SILICA DUST CAN CAUSE UPPER RESPIRATORY IRRITATION AND IRRITATION TO EYES. PROLONGED OVER-EXPOSURE TO SILICA DUST BY INHALATION MAY CAUSE DELAYED LUNG INJURY/DISEASE (SILICOSIS). ON THE BASIS OF INITIAL EXPERIMENTAL TESTS IN ANIMALS AND LIMITED EPIDEMIOLOGICAL STUDII

IN HUMAN POPULATIONS, THE INTERNATIONAL AGENCY FOR RESEARCH ON CANCER (IARC) HAS CONCLUDED THAT THERE IS LIMITED EVIDENCE FOR THE CARCINOGENICITY OF CRYSTALLINE SILICA TO HUMANS. <CHRONIC EFFECTS> REPEATED OVEREXPOSURE TO SOLVENT VAPORS MAY RESULT IN ONE OR MORE OF THE FOLLOWING: CENTRAL NERVOUS SYSTEM, BLOOD, LIVER, AND/OR KIDNEY INJURY, HEARING LOSS. LEAD IS A CUMULATIVE POISON. CHRONIC OVEREXPOSURE TO LEAD VIA INHALATION OR INGESTION MAY RESULT IN SEVERE DAMAGE TO BLOOD-FORMING, CENTRAL NERVOUS, URINARY, AND REPRODUCTIVE SYSTEMS. LEAD CROSSES THE PLACENTAL BARRIER AND POSES RISKS TO DEVELOPING FETUSES. SYMPTOMS OF OVEREXPOSURE TO LEAD INCLUDE ANEMIA, ABDOMINAL DISCOMFORT, METALLIC TASTE, LOSS OF APPETITE, HEADACHE, INSOMNIA, MUSCLE PAIN AND WEAKNESS, FINE TREMORS, NUMBNESS, NERVOUS IRRITABILITY. LEAD CHROMATE IS A SUSPECTED HUMAN CARCINOGEN. RATS EXPOSED TO TITANIUM DIOXIDE DUST AT 250 MG/M<sup>3</sup> DEVELOPED LUNG CANCER; HOWEVER, SUCH EXPOSURE LEVELS ARE NOT ATTAINABLE IN THE WORK PLACE.

EMERGENCY AND FIRST AID PROCEDURES: IF OVERCOME BY VAPOR, REMOVE FROM EXPOSURE IMMEDIATELY; CALL A PHYSICIAN. IF BREATHING IS IRREGULAR OR STOPPED, START RESUSCITATION, ADMINISTER OXYGEN. IF INGESTED, DO NOT INDUCE VOMITING; CALL THE POISON CONTROL CENTER IMMEDIATELY. IF SPLASHED INTO THE EYES, FLUSH EYES WITH CLEAR WATER FOR 15 MINUTES OR UNTIL IRRITATION SUBSIDES; CONSULT A PHYSICIAN AS MAY BE REQUIRED. IN CASE OF SKIN CONTACT, REMOVE ANY CONTAMINATED CLOTHING AND WASH SKIN WITH SOAP AND WARM WATER.

PRIMARY ROUTES OF EXPOSURE: (X) - DERMAL (X) - INHALATION ( ) - INGESTION

MEDICAL CONDITIONS PRONE TO AGGRAVATION BY EXPOSURE: PRE-EXISTING SKIN DISORDERS, CHRONIC RESPIRATORY DISEASES.  
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**SECTION VI — REACTIVITY DATA**

STABILITY: ( ) - UNSTABLE (X) - STABLE

HAZARDOUS POLYMERIZATION ( ) - MAY OCCUR (X) - WILL NOT OCCUR

HAZARDOUS DECOMPOSITION PRODUCTS: FUMES PRODUCED WHEN HEATED TO DECOMPOSITION, SUCH AS IN WELDING, MAY INCLUDE ONE OR MORE OF THE FOLLOWING: CARBON DIOXIDE, CARBON MONOXIDE, ACROLEIN, HYDROGEN CHLORIDE, OXIDES OF NITROGEN, LEAD AND CHROMIUM OXIDES.

CONDITIONS TO AVOID: HIGH TEMPERATURES OR DIRECT HEATING.

INCOMPATIBILITY (MATERIALS TO AVOID): OXYGEN AND STRONG OXIDANTS, STRONG ACIDS, STRONG BASES, AND AMINES. WILL DISSOLVE OR SOFTEN SOME PLASTICS AND RUBBER.  
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**SECTION VII — SPILL OR LEAK PROCEDURES**

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED: REMOVE ALL SOURCES OF IGNITION (FLAME, HOT SURFACES, AND ELECTRICAL, STATIC, OR FRICTIONAL SPARKS), VENTILATE AREA, CONTAIN AND REMOVE WITH INERT ABSORBENT AND NON-SPARKING TOOLS. REFER TO OTHER HAZARD CAUTIONS CONTAINED ON THIS SHEET BEFORE ATTEMPTING CLEAN-UP.

WASTE DISPOSAL METHOD: DISPOSE OF IN ACCORDANCE WITH LOCAL, STATE, AND FEDERAL REGULATIONS. DO NOT INCINERATE CLOSED CONTAINERS.  
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**SECTION VIII — SAFE HANDLING AND USE INFORMATION**

RESPIRATORY PROTECTION: IN OUTDOOR, OPEN AREAS OR IN RESTRICTED VENTILATION AREAS, USE APPROVED CHEMICAL/MECHANICAL FILTERS DESIGNED TO REMOVE A COMBINATION OF PARTICULATE GAS AND VAPOR. TLV'S MUST NOT BE EXCEEDED. IN CONFINED AREAS, USE APPROVED AIR LINE TYPE RESPIRATORS OR HOODS.

VENTILATION: ALL APPLICATION AREAS SHOULD BE VENTILATED IN ACCORDANCE WITH OSHA REGULATIONS. POCKETS OF HEAVY AND/OR FLAMMABLE VAPOR MUST NOT BE PERMITTED TO FORM. VENTILATION AND RESPIRATORY PROTECTION MUST BE ADEQUATE TO PREVENT THE TLV'S OF HAZARDOUS INGREDIENTS FROM BEING EXCEEDED.

PROTECTIVE GLOVES: REQUIRED FOR PROLONGED OR REPEATED CONTACT.

EYE PROTECTION: USE SAFETY EYEWEAR WITH SPLASH GUARDS OR SIDE SHIELDS.

OTHER PROTECTIVE EQUIPMENT: USE PROTECTIVE APRON AND CLOTHING.

HYGIENIC PRACTICES: WASH HANDS BEFORE EATING OR USING WASHROOM. SMOKE IN SMOKING AREAS ONLY.  
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**SECTION IX — SPECIAL PRECAUTIONS**

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORING: DO NOT STORE OR USE NEAR HEAT, SPARKS, OR FLAME. NO SMOKING OR OPEN LIGHTS.

OTHER PRECAUTIONS: AVOID CONTACT WITH EYES. AVOID PROLONGED OR REPEATED CONTACT WITH SKIN. AVOID PROLONGED OR REPEATED BREATHING OF VAPORS. STORE IN SEALED CONTAINERS AWAY FROM SPACE HEATING EQUIPMENT. CONTAINS LEAD CHROMATE.  
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**SECTION X — REGULATORY INFORMATION**

SARA TITLE III SECTION 313 SUPPLIER NOTIFICATION: THIS PRODUCT CONTAINS THE FOLLOWING TOXIC CHEMICALS SUBJECT TO THE REPORTING REQUIREMENTS OF SECTION 313 OF THE EMERGENCY PLANNING AND COMMUNITY RIGHT-TO-KNOW ACT OF 1986 AND OF 40 CFR 372:

CAS#	CHEMICAL NAME	PERCENT BY WEIGHT
1330-20-7	XYLENE (MIXED ISOMERS)	<1.0 - 1.09%
7439-92-1	LEAD	2.04 - 25.94%
7440-47-3	CHROMIUM	.40 - 2.03%

THIS INFORMATION MUST BE INCLUDED IN ALL MSDS'S THAT ARE COPIED AND DISTRIBUTED FOR THIS MATERIAL.

MATERIAL SAFETY DATA SHEET GROUP 8

includes the following:
06-045-XX 11-892-XX

FOR COATINGS, RESINS, AND RELATED MATERIALS
DATE OF PREPARATION - 11/1/91

MANUFACTURER'S NAME: COLUMBIA PAINT COMPANY
ADDRESS: NORTH 112 HAVEN STREET
ADDRESS: P. O. BOX 4569
CITY, STATE: SPOKANE, WA 99202

EMERGENCY TELEPHONE NO. DAY: 509-535-9741 NIGHT: 1-800-424-9300
INFORMATION TELEPHONE NO. DAY: 509-535-9741 NIGHT: 1-800-424-9300

SECTION I - PRODUCT IDENTIFICATION

MANUFACTURER'S CODE IDENTIFICATION: SEE ABOVE
PRODUCT CLASS: SOLUTION ACRYLIC RESIN COATING
TRADE NAME: SEE TABLE OF CONTENTS
HMIS INFORMATION\*\* HEALTH - 2 FLAMMABILITY - 2
REACTIVITY - 1 PERSONAL PROTECTIVE EQUIPMENT - H

SECTION II - HAZARDOUS INGREDIENTS

Table with 9 columns: INGREDIENT, MATERIAL DESCRIPTION, CAS #, % BY WEIGHT, TLV - (TWA) PPM, MG/M3, LEL, VAPOR PRESS MMHG, DEG F. Row 1: MINERAL SPIRITS, \*8052-41-3, >1.0-93.53\*, 100.00\*, Not Est\*, 1.0\*, 2.00 @, 68.0

SECTION III - PHYSICAL DATA

BOILING RANGE: HIGH 399.0 DF. LOW 315.0 DF
VAPOR PRESSURE: SEE SECTION II
VAPOR DENSITY: HEAVIER THAN AIR
EVAPORATION RATE: SLOWER THAN BUTYL ACETATE
WEIGHT PER GALLON: 6.7 - 7.73
% VOLATILE BY VOLUME: .20 - 95.0
% VOLATILE BY WEIGHT: .20 - 93.5

SECTION IV - FIRE AND EXPLOSION HAZARD DATA

FLAMMABILITY CLASSIFICATION OSHA-CLASS II DOT - COMBUSTIBLE LIQUID
LOWEST FLASHPOINT T.C.C. 106.0 DF LOWER EXPLOSION LEVEL (LEL) 1.0%
EXTINGUISHING MEDIA: (X) FOAM ( ) ALCOHOL FOAM (X) CO2
(X) DRY CHEMICAL ( ) WATER FOG ( ) OTHER

UNUSUAL FIRE AND EXPLOSION HAZARDS: ISOLATE FROM HEAT, SPARKS, ELECTRICAL EQUIPMENT, AND OPEN FLAME. IN CLOSED CONTAINERS, PRESSURE BUILDUP MAY OCCUR DUE TO HEAT EXPOSURE. DURING EMERGENCY CONDITIONS, OVEREXPOSURE TO DECOMPOSITION PRODUCTS MAY CAUSE A HEALTH HAZARD. SYMPTOMS MAY NOT BE IMMEDIATELY APPARENT. OBTAIN MEDICAL ATTENTION. (SEE SECTION VI).

SPECIAL FIRE FIGHTING PROCEDURES: WATER SPRAY MAY BE INEFFECTIVE. HOWEVER, WATER MAY BE USED TO COOL CLOSED CONTAINERS TO PREVENT PRESSURE BUILDUP. FULL PROTECTIVE EQUIPMENT RECOMMENDED, INCLUDING SELF-CONTAINED BREATHING APPARATUS, TO PROTECT FIREFIGHTERS FROM HAZARDOUS COMBUSTION PRODUCTS.

SECTION V - HEALTH HAZARD DATA

EFFECTS OF OVEREXPOSURE: OVEREXPOSURE VIA INHALATION CAN CAUSE CENTRAL NERVOUS SYSTEM DEPRESSION WITH SYMPTOMS RANGING FROM HEADACHES, DIZZINESS, LOSS OF COORDINATION, TO UNCONSCIOUSNESS. DELIBERATELY BREATHING CONCENTRATED SOLVENT VAPOR (GLUE SNIFFING) CAN RESULT IN PERMANENT BRAIN AND NERVOUS SYSTEM DAMAGE OR DEATH. INGESTION MAY RESULT IN GASTROINTESTINAL IRRITATION, NAUSEA, VOMITING, AND/OR DIARRHEA. EYE CONTACT CAN CAUSE SEVERE IRRITATION, REDNESS, TEARING, AND BLURRED VISION. PROLONGED OR REPEATED SKIN CONTACT WILL DRY AND DEFAAT THE SKIN, LEADING TO IRRITATION AND DERMATITIS. <CHRONIC EFFECTS> REPEATED OVEREXPOSURE TO SOLVENT VAPORS MAY RESULT IN ONE OR MORE OF THE FOLLOWING: CENTRAL NERVOUS SYSTEM, BLOOD, LIVER, AND/OR KIDNEY INJURY, HEARING LOSS.

PRIMARY ROUTES OF ENTRY: (X) - DERMAL (X) - INHALATION ( ) - INGESTION

EMERGENCY AND FIRST AID PROCEDURES: IF OVERCOME BY VAPOR, REMOVE FROM EXPOSURE IMMEDIATELY; CALL A PHYSICIAN. IF BREATHING IS IRREGULAR OR STOPPED, START RESUSCITATION, ADMINISTER OXYGEN. IF INGESTED, DO NOT INDUCE VOMITING; CALL A PHYSICIAN. IF SPLASHED INTO THE EYES, FLUSH EYES WITH CLEAR WATER FOR 15 MINUTES OR UNTIL IRRITATION SUBSIDES; CONSULT A PHYSICIAN AS MAY BE REQUIRED. IN CASE OF SKIN CONTACT, REMOVE ANY CONTAMINATED CLOTHING AND WASH SKIN WITH SOAP AND WARM WATER.

MEDICAL CONDITIONS PRONE TO AGGRAVATION BY EXPOSURE: PRE-EXISTING SKIN DISORDERS, CHRONIC RESPIRATORY DISEASES.



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**SECTION VI — REACTIVITY DATA**

STABILITY: ( ) - UNSTABLE (X) - STABLE  
HAZARDOUS POLYMERIZATION ( ) - MAY OCCUR (X) - WILL NOT OCCUR  
HAZARDOUS DECOMPOSITION PRODUCTS: FUMES PRODUCED WHEN HEATED TO DECOMPOSITION, SUCH AS IN WELDING, MAY INCLUDE ONE OR MORE OF THE FOLLOWING: CARBON DIOXIDE, CARBON MONOXIDE, ACROLEIN, HYDROGEN CHLORIDE, OXIDES OF NITROGEN.  
CONDITIONS TO AVOID: HIGH TEMPERATURES OR DIRECT HEATING.  
INCOMPATIBILITY (MATERIALS TO AVOID): OXYGEN AND STRONG OXIDANTS, STRONG ACIDS, STRONG BASES, AND AMINES. WILL DISSOLVE OR SOFTEN SOME PLASTICS AND RUBBER.  
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**SECTION VII — SPILL OR LEAK PROCEDURES**

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED: REMOVE ALL SOURCES OF IGNITION (FLAME, HOT SURFACES, AND ELECTRICAL, STATIC, OR FRICTIONAL SPARKS), VENTILATE AREA, CONTAIN AND REMOVE WITH INERT ABSORBENT AND NON-SPARKING TOOLS. REFER TO OTHER HAZARD CAUTIONS CONTAINED ON THIS SHEET BEFORE ATTEMPTING CLEAN-UP.  
WASTE DISPOSAL METHOD: DISPOSE OF IN ACCORDANCE WITH LOCAL, STATE, AND FEDERAL REGULATIONS. DO NOT INCINERATE CLOSED CONTAINERS.  
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**SECTION VIII — SAFE HANDLING AND USE INFORMATION**

RESPIRATORY PROTECTION: IN OUTDOOR, OPEN AREAS OR IN RESTRICTED VENTILATION AREAS, USE APPROVED CHEMICAL/MECHANICAL FILTERS DESIGNED TO REMOVE A COMBINATION OF PARTICULATE GAS AND VAPOR. TLV'S MUST NOT BE EXCEEDED. IN CONFINED AREAS, USE APPROVED AIR LINE TYPE RESPIRATORS OR HOODS.  
VENTILATION: ALL APPLICATION AREAS SHOULD BE VENTILATED IN ACCORDANCE WITH OSHA REGULATIONS. POCKETS OF HEAVY AND/OR FLAMMABLE VAPOR MUST NOT BE PERMITTED TO FORM. VENTILATION AND RESPIRATORY PROTECTION MUST BE ADEQUATE TO PREVENT THE TLV'S OF HAZARDOUS INGREDIENTS FROM BEING EXCEEDED.  
PROTECTIVE GLOVES: REQUIRED FOR PROLONGED OR REPEATED CONTACT.  
EYE PROTECTION: USE SAFETY EYEWEAR WITH SPLASH GUARDS OR SIDE SHIELDS.  
OTHER PROTECTIVE EQUIPMENT: USE PROTECTIVE APRON AND CLOTHING.  
HYGIENIC PRACTICES: WASH HANDS BEFORE EATING OR USING WASHROOM. SMOKE IN SMOKING AREAS ONLY.  
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**SECTION IX — SPECIAL PRECAUTIONS**

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORING: DO NOT STORE OR USE NEAR HEAT, SPARKS, OR FLAME. NO SMOKING OR OPEN LIGHTS.  
OTHER PRECAUTIONS: AVOID CONTACT WITH EYES. AVOID PROLONGED OR REPEATED CONTACT WITH SKIN. AVOID PROLONGED OR REPEATED BREATHING OF VAPORS. STORE IN SEALED CONTAINERS AWAY FROM SPACE HEATING EQUIPMENT.  
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**SECTION X — REGULATORY INFORMATION**

SARA TITLE III SECTION 313 SUPPLIER NOTIFICATION: THIS PRODUCT CONTAINS THE FOLLOWING TOXIC CHEMICALS SUBJECT TO THE REPORTING REQUIREMENTS OF SECTION 313 OF THE EMERGENCY PLANNING AND COMMUNITY RIGHT-TO-KNOW ACT OF 1986 AND OF 40 CFR 372:

CAS#	CHEMICAL NAME	PERCENT BY WEIGHT
NONE		

THIS INFORMATION MUST BE INCLUDED IN ALL MSDS'S THAT ARE COPIED AND DISTRIBUTED FOR THIS MATERIAL.

**MATERIAL SAFETY DATA SHEET GROUP 9**

includes the following:  
06-062-XX      06-066XX      06-067-XX

**FOR COATINGS, RESINS, AND RELATED MATERIALS**  
DATE OF PREPARATION - 11/1/91

MANUFACTURER'S NAME: COLUMBIA PAINT COMPANY  
ADDRESS: NORTH 112 HAVEN STREET  
ADDRESS: P. O. BOX 4569  
CITY, STATE: SPOKANE, WA 99202

EMERGENCY TELEPHONE NO. DAY: 509-535-9741 NIGHT: 1-800-424-9300  
INFORMATION TELEPHONE NO. DAY: 509-535-9741 NIGHT: 1-800-424-9300

**SECTION I — PRODUCT IDENTIFICATION**

MANUFACTURER'S CODE IDENTIFICATION: SEE ABOVE  
PRODUCT CLASS: SOLUTION ACRYLIC RESIN COATING  
TRADE NAME: SEE TABLE OF CONTENTS  
HMIS INFORMATION\*\* HEALTH - 2 FLAMMABILITY - 3  
REACTIVITY - 1 PERSONAL PROTECTIVE EQUIPMENT - H

**SECTION II — HAZARDOUS INGREDIENTS**

INGREDIENT MATERIAL DESCRIPTION	CAS #	% BY WEIGHT	TLV - (TWA)		LEL	VAPOR PRESS MMHG	DEG F.
			PPM	MG/M3			
TOLUENE	*108883	6.54-23.77*	100.00*	375.00*	1.2*	22.00 @	68.0
XYLENE (MIXED ISOMERS)	*1330-20-7	43.53-72.14*	100.00*	434.00*	1.0*	6.00 @	68.0
ETHYL BENZENE	*100414	8.92-14.78*	100.00*	435.00*	1.2*	10.00 @	78.6

**SECTION III — PHYSICAL DATA**

BOILING RANGE: HIGH 284.0 DF LOW 230.0 DF  
VAPOR PRESSURE: SEE SECTION II  
VAPOR DENSITY: HEAVIER THAN AIR  
EVAPORATION RATE: SLOWER THAN BUTYL ACETATE  
WEIGHT PER GALLON: 7.3 - 7.6  
% VOLATILE BY VOLUME: 81.0 - 95.0  
% VOLATILE BY WEIGHT: 76.2 - 83.5

**SECTION IV — FIRE AND EXPLOSION HAZARD DATA**

FLAMMABILITY CLASSIFICATION OSHA-CLASS IB DOT - FLAMMABLE LIQUID  
LOWEST FLASHPOINT T.C.C. 40.0 DF LOWER EXPLOSION LEVEL (LEL) 1.0%  
EXTINGUISHING MEDIA: (X) FOAM ( ) ALCOHOL FOAM (X) CO2  
(X) DRY-CHEMICAL ( ) WATER FOG ( ) OTHER  
UNUSUAL FIRE AND EXPLOSION HAZARDS: KEEP AWAY FROM HEAT, SPARKS, AND FLAME. VAPORS MAY IGNITE EXPLOSIVELY. VAPORS MAY SPREAD LONG DISTANCES. PREVENT BUILDUP OF VAPORS. EXTINGUISH ALL PILOT LIGHTS, AND TURN OFF HEATERS, NON-EXPLOSION PROOF ELECTRICAL EQUIPMENT, AND ALL SOURCES OF IGNITION UNTIL VAPORS ARE GONE. IN CLOSED CONTAINERS, PRESSURE BUILDUP MAY OCCUR DUE TO HEAT EXPOSURE. DURING EMERGENCY CONDITIONS, OVEREXPOSURE TO DECOMPOSITION PRODUCTS MAY CAUSE A HEALTH HAZARD. SYMPTOMS MAY NOT BE IMMEDIATELY APPARENT. OBTAIN MEDICAL ATTENTION. (SEE SECTION VI).  
SPECIAL FIRE FIGHTING PROCEDURES: WATER SPRAY MAY BE INEFFECTIVE. HOWEVER, WATER MAY BE USED TO COOL CLOSED CONTAINERS TO PREVENT PRESSURE BUILDUP. FULL PROTECTIVE EQUIPMENT RECOMMENDED, INCLUDING SELF-CONTAINED BREATHING APPARATUS, TO PROTECT FIREFIGHTERS FROM HAZARDOUS COMBUSTION PRODUCTS.

**SECTION V — HEALTH HAZARD DATA**

EFFECTS OF OVEREXPOSURE: OVEREXPOSURE VIA INHALATION CAN CAUSE CENTRAL NERVOUS SYSTEM DEPRESSION WITH SYMPTOMS RANGING FROM HEADACHES, DIZZINESS, LOSS OF COORDINATION, TO UNCONSCIOUSNESS. DELIBERATELY BREATHING CONCENTRATED SOLVENT VAPOR (GLUE SNIFFING) CAN RESULT IN PERMANENT BRAIN AND NERVOUS SYSTEM DAMAGE OR DEATH. INGESTION MAY RESULT IN GASTROINTESTINAL IRRITATION, NAUSEA, VOMITING, AND/OR DIARRHEA. EYE CONTACT CAN CAUSE SEVERE IRRITATION, REDNESS, TEARING, AND BLURRED VISION. PROLONGED OR REPEATED SKIN CONTACT WILL DRY AND DEFAT THE SKIN, LEADING TO IRRITATION AND DERMATITIS. <CHRONIC EFFECTS> REPEATED OVEREXPOSURE TO SOLVENT VAPORS MAY RESULT IN ONE OR MORE OF THE FOLLOWING: CENTRAL NERVOUS SYSTEM, BLOOD, LIVER, AND/OR KIDNEY INJURY, HEARING LOSS.  
PRIMARY ROUTES OF ENTRY: (X) - DERMAL (X) - INHALATION ( ) - INGESTION  
EMERGENCY AND FIRST AID PROCEDURES: IF OVERCOME BY VAPOR, REMOVE FROM EXPOSURE IMMEDIATELY; CALL A PHYSICIAN. IF BREATHING IS IRREGULAR OR STOPPED, START RESUSCITATION, ADMINISTER OXYGEN. IF INGESTED, DO NOT INDUCE VOMITING; CALL A PHYSICIAN. IF SPLASHED INTO THE EYES, FLUSH EYES WITH CLEAR WATER FOR 15 MINUTES OR UNTIL IRRITATION SUBSIDES; CONSULT A PHYSICIAN AS MAY BE REQUIRED. IN CASE OF SKIN CONTACT, REMOVE ANY CONTAMINATED CLOTHING AND WASH SKIN WITH SOAP AND WARM WATER.  
MEDICAL CONDITIONS PRONE TO AGGRAVATION BY EXPOSURE: PRE-EXISTING SKIN DISORDERS, CHRONIC RESPIRATORY DISEASES.

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**SECTION VI — REACTIVITY DATA**

STABILITY: ( ) - UNSTABLE (X) - STABLE  
HAZARDOUS POLYMERIZATION ( ) - MAY OCCUR (X) - WILL NOT OCCUR  
HAZARDOUS DECOMPOSITION PRODUCTS: FUMES PRODUCED WHEN HEATED TO DECOMPOSITION, SUCH AS IN WELDING, MAY INCLUDE ONE OR MORE OF THE FOLLOWING: CARBON DIOXIDE, CARBON MONOXIDE, ACROLEIN, HYDROGEN CHLORIDE, OXIDES OF NITROGEN.  
CONDITIONS TO AVOID: HIGH TEMPERATURES OR DIRECT HEATING.  
INCOMPATIBILITY (MATERIALS TO AVOID): OXYGEN AND STRONG OXIDANTS, STRONG ACIDS, STRONG BASES, AND AMINES. WILL DISSOLVE OR SOFTEN SOME PLASTICS AND RUBBER.  
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**SECTION VII — SPILL OR LEAK PROCEDURES**

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED: REMOVE ALL SOURCES OF IGNITION (FLAME, HOT SURFACES, AND ELECTRICAL, STATIC, OR FRICTIONAL SPARKS), VENTILATE AREA, CONTAIN AND REMOVE WITH INERT ABSORBENT AND NON-SPARKING TOOLS. REFER TO OTHER HAZARD CAUTIONS CONTAINED ON THIS SHEET BEFORE ATTEMPTING CLEAN-UP.  
WASTE DISPOSAL METHOD: DISPOSE OF IN ACCORDANCE WITH LOCAL, STATE, AND FEDERAL REGULATIONS. DO NOT INCINERATE CLOSED CONTAINERS.  
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**SECTION VIII — SAFE HANDLING AND USE INFORMATION**

RESPIRATORY PROTECTION: IN OUTDOOR, OPEN AREAS OR IN RESTRICTED VENTILATION AREAS, USE APPROVED CHEMICAL/MECHANICAL FILTERS DESIGNED TO REMOVE A COMBINATION OF PARTICULATE GAS AND VAPOR. TLV'S MUST NOT BE EXCEEDED. IN CONFINED AREAS, USE APPROVED AIR LINE TYPE RESPIRATORS OR HOODS.  
VENTILATION: ALL APPLICATION AREAS SHOULD BE VENTILATED IN ACCORDANCE WITH OSHA REGULATIONS. POCKETS OF HEAVY AND/OR FLAMMABLE VAPOR MUST NOT BE PERMITTED TO FORM. VENTILATION AND RESPIRATORY PROTECTION MUST BE ADEQUATE TO PREVENT THE TLV'S OF HAZARDOUS INGREDIENTS FROM BEING EXCEEDED.  
PROTECTIVE GLOVES: REQUIRED FOR PROLONGED OR REPEATED CONTACT.  
EYE PROTECTION: USE SAFETY EYEWEAR WITH SPLASH GUARDS OR SIDE SHIELDS.  
OTHER PROTECTIVE EQUIPMENT: USE PROTECTIVE APRON AND CLOTHING.  
HYGIENIC PRACTICES: WASH HANDS BEFORE EATING OR USING WASHROOM. SMOKE IN SMOKING AREAS ONLY.  
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**SECTION IX — SPECIAL PRECAUTIONS**

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORING: DO NOT STORE OR USE NEAR HEAT, SPARKS, OR FLAME. NO SMOKING OR OPEN LIGHTS.  
OTHER PRECAUTIONS: AVOID CONTACT WITH EYES. AVOID PROLONGED OR REPEATED CONTACT WITH SKIN. AVOID PROLONGED OR REPEATED BREATHING OF VAPORS. STORE IN SEALED CONTAINERS AWAY FROM SPACE HEATING EQUIPMENT.  
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**SECTION X — REGULATORY INFORMATION**

SARA TITLE III SECTION 313 SUPPLIER NOTIFICATION: THIS PRODUCT CONTAINS THE FOLLOWING TOXIC CHEMICALS SUBJECT TO THE REPORTING REQUIREMENTS OF SECTION 313 OF THE EMERGENCY PLANNING AND COMMUNITY RIGHT-TO-KNOW ACT OF 1986 AND OF 40 CFR 372:

CAS#	CHEMICAL NAME	PERCENT BY WEIGHT
108-88-3	TOLUENE	6.54 - 23.77%
1330-20-7	XYLENE (MIXED ISOMERS)	43.53 - 72.14%
100-41-4	ETHYL BENZENE	8.92 - 14.78%

THIS INFORMATION MUST BE INCLUDED IN ALL MSDS'S THAT ARE COPIED AND DISTRIBUTED FOR THIS MATERIAL.

MATERIAL SAFETY DATA SHEET GROUP 10

includes the following:
04-101-CC

FOR COATINGS, RESINS, AND RELATED MATERIALS
DATE OF PREPARATION - 11/1/91

MANUFACTURER'S NAME: COLUMBIA PAINT COMPANY
ADDRESS: NORTH 112 HAVEN STREET
ADDRESS: P.O. BOX 4569
CITY, STATE: SPOKANE, WA 99202

EMERGENCY TELEPHONE NO. DAY: 509-535-9741 NIGHT: 1-800-424-9300
INFORMATION TELEPHONE NO. DAY: 509-535-9741 NIGHT: 1-800-424-9300

SECTION I - PRODUCT IDENTIFICATION

MANUFACTURER'S CODE IDENTIFICATION: SEE ABOVE
PRODUCT CLASS: SYNTHETIC ALKYD RESIN COATING
TRADE NAME: SEE TABLE OF CONTENTS
HMIS INFORMATION\*\* HEALTH - 2 FLAMMABILITY - 3
REACTIVITY - 1 PERSONAL PROTECTIVE EQUIPMENT - H

SECTION II - HAZARDOUS INGREDIENTS

Table with 8 columns: INGREDIENT, CAS #, % BY WEIGHT, TLV - (TWA) PPM, TLV - (TWA) MG/M3, LEL, VAPOR PRESS MMHG, DEG F. Rows include MINERAL SPIRITS and ALUMINUM PIGMENT.

THIS PRODUCT CONTAINS HAZARDOUS COMPONENTS WHICH MAY BECOME AIRBORNE AND RESULT IN EXPOSURE WHEN REMOVED BY ABRASIVE BLASTING, SANDING, OR GRINDING. VENTILATE AND AVOID BREATHING DUSTS.

SECTION III - PHYSICAL DATA

BOILING RANGE: HIGH 399.0 DF LOW 277.0 DF
VAPOR PRESSURE: SEE SECTION II
VAPOR DENSITY: HEAVIER THAN AIR
EVAPORATION RATE: SLOWER THAN BUTYL ACETATE
WEIGHT PER GALLON: 8.2
% VOLATILE BY VOLUME: 57.5
% VOLATILE BY WEIGHT: 46.6

SECTION IV - FIRE AND EXPLOSION HAZARD DATA

FLAMMABILITY CLASSIFICATION OSHA-CLASS II DOT - COMBUSTIBLE LIQUID
LOWEST FLASHPOINT T.C.C. 106.0 DF LOWER EXPLOSION LEVEL (LEL) 1.0%
EXTINGUISHING MEDIA: (X) FOAM ( ) ALCOHOL FOAM ( ) CO2
(X) DRY CHEMICAL ( ) WATER FOG ( ) OTHER

UNUSUAL FIRE AND EXPLOSION HAZARDS: ISOLATE FROM HEAT, SPARKS, ELECTRICAL EQUIPMENT, AND OPEN FLAME. IN CLOSED CONTAINERS, PRESSURE BUILDUP MAY OCCUR DUE TO HEAT EXPOSURE. DURING EMERGENCY CONDITIONS, OVEREXPOSURE TO DECOMPOSITION PRODUCTS MAY CAUSE A HEALTH HAZARD. SYMPTOMS MAY NOT BE IMMEDIATELY APPARENT. OBTAIN MEDICAL ATTENTION. (SEE SECTION VI).

SPECIAL FIRE FIGHTING PROCEDURES: DO NOT USE A WATER STREAM. DO NOT USE HALOGENATED EXTINGUISHING AGENTS, LIKE HALON OR CARBON TETRACHLORIDE. CARE SHOULD BE USED WHEN APPLYING A CLASS B EXTINGUISHING AGENT AS SOME AGENTS CAN ACCELERATE A FIRE WHEN MOST OF THE SOLVENT HAS BEEN CONSUMED AND THE ALUMINUM FLAKE HAS STARTED TO BURN. ISOLATE THE FIRE BY RINGING IT WITH A DRY, INERT GRANULAR MATERIAL, OR CLASS D EXTINGUISHING AGENT, THEN LET IT ALONE. ALLOW THE MATERIAL TO BECOME COLD BEFORE DISPOSAL, SINCE METAL MAY CONTINUE TO BURN UNDER A CRUST WITHOUT FLAME. FULL PROTECTIVE EQUIPMENT IS RECOMMENDED, INCLUDING SELF-CONTAINED BREATHING APPARATUS TO PROTECT FIREFIGHTERS FROM HAZARDOUS COMBUSTION PRODUCTS.

SECTION V - HEALTH HAZARD DATA

EFFECTS OF OVEREXPOSURE: OVEREXPOSURE VIA INHALATION CAN CAUSE CENTRAL NERVOUS SYSTEM DEPRESSION WITH SYMPTOMS RANGING FROM HEADACHES, DIZZINESS, LOSS OF COORDINATION, TO UNCONSCIOUSNESS. DELIBERATELY BREATHING CONCENTRATED SOLVENT VAPOR (GLUE SNIFFING) CAN RESULT IN PERMANENT BRAIN AND NERVOUS SYSTEM DAMAGE OR DEATH. INGESTION MAY RESULT IN GASTROINTESTINAL IRRITATION, NAUSEA, VOMITING, AND/OR DIARRHEA. EYE CONTACT CAN CAUSE SEVERE IRRITATION, REDNESS, TEARING, AND BLURRED VISION. PROLONGED OR REPEATED SKIN CONTACT WILL DRY AN DEBAT THE SKIN, LEADING TO IRRITATION AND DERMATITIS. <CHRONIC EFFECTS> REPEATED OVEREXPOSURE TO SOLVENT VAPORS MAY RESULT IN ONE OR MORE OF THE FOLLOWING: CENTRAL NERVOUS SYSTEM, BLOOD, LIVER, AND/OR KIDNEY INJURY HEARING LOSS.

PRIMARY ROUTES OF ENTRY: (X) - DERMAL (X) - INHALATION ( ) - INGESTION
EMERGENCY AND FIRST AID PROCEDURES: IF OVERCOME BY VAPOR, REMOVE FROM EXPOSURE IMMEDIATELY; CALL A PHYSICIAN. IF BREATHING IS IRREGULAR OR STOPPED, START RESUSCITATION, ADMINISTER OXYGEN. IF INGESTED, DO NOT INDUCE VOMITING CALL A PHYSICIAN. IF SPLASHED INTO THE EYES, FLUSH EYES WITH CLEAR WATER FOR 15 MINUTES OR UNTIL IRRITATION SUBSIDES; CONSULT A PHYSICIAN AS MAY BE REQUIRED. IN CASE OF SKIN CONTACT, REMOVE ANY CONTAMINATED CLOTHING AND WASH SKIN WITH SOAP AND WARM WATER.
MEDICAL CONDITIONS PRONE TO AGGRAVATION BY EXPOSURE: PRE-EXISTING SKIN DISORDERS, CHRONIC RESPIRATORY DISEASES.

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**SECTION VI — REACTIVITY DATA**

STABILITY: ( ) - UNSTABLE (X) - STABLE  
HAZARDOUS POLYMERIZATION ( ) - MAY OCCUR (X) - WILL NOT OCCUR  
HAZARDOUS DECOMPOSITION PRODUCTS: FUMES PRODUCED WHEN HEATED TO DECOMPOSITION, SUCH AS IN WELDING, MAY INCLUDE ONE OR MORE OF THE FOLLOWING: CARBON DIOXIDE, CARBON MONOXIDE, ACROLEIN, HYDROGEN CHLORIDE, OXIDES OF NITROGEN, ALUMINUM OXIDE AND/OR ALUMINUM NITRIDE.  
CONDITIONS TO AVOID: HIGH TEMPERATURES OR DIRECT HEATING.  
INCOMPATIBILITY (MATERIALS TO AVOID): OXYGEN AND STRONG OXIDANTS, STRONG ACIDS, STRONG BASES, AND AMINES. WILL DISSOLVE OR SOFTEN SOME PLASTICS AND RUBBER.  
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**SECTION VII — SPILL OR LEAK PROCEDURES**

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED: REMOVE ALL SOURCES OF IGNITION (FLAME, HOT SURFACES, AND ELECTRICAL, STATIC, OR FRICTIONAL SPARKS), VENTILATE AREA, CONTAIN AND REMOVE WITH INERT ABSORBENT AND NON-SPARKING TOOLS. REFER TO OTHER HAZARD CAUTIONS CONTAINED ON THIS SHEET BEFORE ATTEMPTING CLEAN-UP.  
WASTE DISPOSAL METHOD: DISPOSE OF IN ACCORDANCE WITH LOCAL, STATE, AND FEDERAL REGULATIONS. DO NOT INCINERATE CLOSED CONTAINERS.  
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**SECTION VIII — SAFE HANDLING AND USE INFORMATION**

RESPIRATORY PROTECTION: IN OUTDOOR, OPEN AREAS OR IN RESTRICTED VENTILATION AREAS, USE APPROVED CHEMICAL/MECHANICAL FILTERS DESIGNED TO REMOVE A COMBINATION OF PARTICULATE GAS AND VAPOR. TLV'S MUST NOT BE EXCEEDED. IN CONFINED AREAS, USE APPROVED AIR LINE TYPE RESPIRATORS OR HOODS.  
VENTILATION: ALL APPLICATION AREAS SHOULD BE VENTILATED IN ACCORDANCE WITH OSHA REGULATIONS. POCKETS OF HEAVY AND/OR FLAMMABLE VAPOR MUST NOT BE PERMITTED TO FORM. VENTILATION AND RESPIRATORY PROTECTION MUST BE AD-EQUATE TO PREVENT THE TLV'S OF HAZARDOUS INGREDIENTS FROM BEING EXCEEDED.  
PROTECTIVE GLOVES: REQUIRED FOR PROLONGED OR REPEATED CONTACT.  
EYE PROTECTION: USE SAFETY EYEWEAR WITH SPLASH GUARDS OR SIDE SHIELDS.  
OTHER PROTECTIVE EQUIPMENT: USE PROTECTIVE APRON AND CLOTHING.  
HYGIENIC PRACTICES: WASH HANDS BEFORE EATING OR USING WASHROOM. SMOKE IN SMOKING AREAS ONLY.  
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**SECTION IX — SPECIAL PRECAUTIONS**

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORING: DO NOT STORE OR USE NEAR HEAT, SPARKS, OR FLAME. NO SMOKING OR OPEN LIGHTS.  
OTHER PRECAUTIONS: AVOID CONTACT WITH EYES. AVOID PROLONGED OR REPEATED CONTACT WITH SKIN. AVOID PROLONGED OR REPEATED BREATHING OF VAPORS. STORE IN SEALED CONTAINERS AWAY FROM SPACE HEATING EQUIPMENT.  
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**SECTION X — REGULATORY INFORMATION**

SARA TITLE III SECTION 313 SUPPLIER NOTIFICATION: THIS PRODUCT CONTAINS THE FOLLOWING TOXIC CHEMICALS SUBJECT TO THE REPORTING REQUIREMENTS OF SECTION 313 OF THE EMERGENCY PLANNING AND COMMUNITY RIGHT-TO-KNOW ACT OF 1986 AND OF 40 CFR 372:

CAS#	CHEMICAL NAME	PERCENT BY WEIGHT
1330-20-7	XYLENE (MIXED ISOMERS)	2.00%
7429-90-5	ALUMINUM (FUME OR DUST)	14.52%

THIS INFORMATION MUST BE INCLUDED IN ALL MSDS'S THAT ARE COPIED AND DISTRIBUTED FOR THIS MATERIAL

**MATERIAL SAFETY DATA SHEET GROUP 11**

includes the following:  
88-086-02

**FOR COATINGS, RESINS, AND RELATED MATERIALS**  
DATE OF PREPARATION - 11/1/91

MANUFACTURER'S NAME: COLUMBIA PAINT COMPANY  
ADDRESS: NORTH 112 HAVEN STREET  
ADDRESS: P. O. BOX 4569  
CITY, STATE: SPOKANE, WA 99202

EMERGENCY TELEPHONE NO. DAY: 509-535-9741 NIGHT: 1-800-424-9300  
INFORMATION TELEPHONE NO. DAY: 509-535-9741 NIGHT: 1-800-424-9300

**SECTION I — PRODUCT IDENTIFICATION**

MANUFACTURER'S CODE IDENTIFICATION: SEE ABOVE

PRODUCT CLASS: OIL/ALKYD RESIN COATING

TRADE NAME: SEE TABLE OF CONTENTS

HMS INFORMATION\*\*

HEALTH - 2  
REACTIVITY - 1

FLAMMABILITY - 2  
PERSONAL PROTECTIVE EQUIPMENT - J

**SECTION II — HAZARDOUS INGREDIENTS**

INGREDIENT MATERIAL DESCRIPTION	CAS #	% BY WEIGHT	TLV - (TWA) PPM	MG/M3	LEL	VAPOR PRESS MMHG	DEG F.
MINERAL SPIRITS	*8052-41-3	14.13*	100.00*	Not Est*	1.0*	2.00 @	68.0
SILICEOUS MUSCOVITE MICA -suspected carcinogen	*1318-94-1	2.87*	Not Est*	3.00*	Unk.*		Unknown
MAGNESIUM SILICATE (TALC)	*14807-96-6	9.20*	Not Est*	2.00*	Unk.*		Unknown
LEAD AS IN LEAD TETRAOXIDE	*	39.63*	Not Est*	.05*	Unk.*		Unknown
LEAD, AS IN LEAD DRIER	*	.12*	Not Est*	.05*	Unk.*		Unknown

THIS PRODUCT CONTAINS HAZARDOUS COMPONENTS WHICH MAY BECOME AIRBORNE AND RESULT IN EXPOSURE WHEN REMOVED BY ABRASIVE BLASTING, SANDING, OR GRINDING. VENTILATE AND AVOID BREATHING DUSTS.

**SECTION III — PHYSICAL DATA**

BOILING RANGE: HIGH 399.0 DF LOW 305.0 DF  
VAPOR PRESSURE: SEE SECTION II  
VAPOR DENSITY: HEAVIER THAN AIR  
EVAPORATION RATE: SLOWER THAN BUTYL ACETATE  
WEIGHT PER GALLON: 17.1  
% VOLATILE BY VOLUME: 36.5  
% VOLATILE BY WEIGHT: 14.2

**SECTION IV — FIRE AND EXPLOSION HAZARD DATA**

FLAMMABILITY CLASSIFICATION OSHA-CLASS II DOT - COMBUSTIBLE LIQUID  
LOWEST FLASHPOINT T.C.C. 106.0 DF LOWER EXPLOSION LEVEL (LEL) 1.0%  
EXTINGUISHING MEDIA: (X) FOAM ( ) ALCOHOL FOAM (X) CO2  
(X) DRY CHEMICAL ( ) WATER FOG ( ) OTHER

UNUSUAL FIRE AND EXPLOSION HAZARDS: ISOLATE FROM HEAT, SPARKS, ELECTRICAL EQUIPMENT, AND OPEN FLAME. IN CLOSED CONTAINERS, PRESSURE BUILDUP MAY OCCUR DUE TO HEAT EXPOSURE. DURING EMERGENCY CONDITIONS, OVEREXPOSURE TO DECOMPOSITION PRODUCTS MAY CAUSE A HEALTH HAZARD. SYMPTOMS MAY NOT BE IMMEDIATELY APPARENT. OBTAIN MEDICAL ATTENTION. (SEE SECTION VI).

SPECIAL FIRE FIGHTING PROCEDURES: WATER SPRAY MAY BE INEFFECTIVE. HOWEVER, WATER MAY BE USED TO COOL CLOSED CONTAINERS TO PREVENT PRESSURE BUILDUP. FULL PROTECTIVE EQUIPMENT RECOMMENDED, INCLUDING SELF-CONTAINED BREATHING APPARATUS, TO PROTECT FIREFIGHTERS FROM HAZARDOUS COMBUSTION PRODUCTS.

**SECTION V — HEALTH HAZARD DATA**

EFFECTS OF OVEREXPOSURE: OVEREXPOSURE VIA INHALATION CAN CAUSE CENTRAL NERVOUS SYSTEM DEPRESSION WITH SYMPTOMS RANGING FROM HEADACHES, DIZZINESS, LOSS OF COORDINATION, TO UNCONSCIOUSNESS. DELIBERATELY BREATHING CONCENTRATED SOLVENT VAPOR (GLUE SNIFFING) CAN RESULT IN PERMANENT BRAIN AND NERVOUS SYSTEM DAMAGE OR DEATH. INGESTION MAY RESULT IN GASTROINTESTINAL IRRITATION, NAUSEA, VOMITING, AND/OR DIARRHEA. EYE CONTACT CAN CAUSE SEVERE IRRITATION, REDNESS, TEARING, AND BLURRED VISION. PROLONGED OR REPEATED SKIN CONTACT WILL DRY AND DEFAAT THE SKIN, LEADING TO IRRITATION AND DERMATITIS. CRYSTALLINE SILICA DUST CAN CAUSE UPPER RESPIRATORY IRRITATION AND IRRITATION TO EYES. PROLONGED OVER-EXPOSURE TO SILICA DUST BY INHALATION MAY CAUSE DELAYED LUNG INJURY/DISEASE (SILICOSIS). ON THE BASIS OF INITIAL EXPERIMENTAL TESTS IN ANIMALS AND LIMITED EPIDEMIOLOGICAL STUDIES IN HUMAN POPULATIONS, THE INTERNATIONAL AGENCY FOR RESEARCH ON CANCER (IARC) HAS CONCLUDED THAT THERE IS LIMITED EVIDENCE FOR THE CARCINOGENICITY OF CRYSTALLINE SILICA TO HUMANS. <CHRONIC EFFECTS> REPEATED OVEREXPOSURE TO SOLVENT VAPORS MAY RESULT IN ONE OR MORE OF THE FOLLOWING: CENTRAL NERVOUS SYSTEM, BLOOD, LIVER, AND/OR KIDNEY INJURY, HEARING LOSS. LEAD IS A CUMULATIVE POISON. CHRONIC OVEREXPOSURE TO LEAD VIA INHALATION OR INGES-

TION MAY RESULT IN SEVERE DAMAGE TO BLOOD-FORMING, CENTRAL NERVOUS, URINARY, AND REPRODUCTIVE SYSTEMS. LEAD CROSSES THE PLACENTAL BARRIER AND POSES RISKS TO DEVELOPING FETUSES. SYMPTOMS OF OVEREXPOSURE TO LEAD INCLUDE ANEMIA, ABDOMINAL DISCOMFORT, METALLIC TASTE, LOSS OF APPETITE, HEADACHE, INSOMNIA, MUSCLE PAIN AND WEAKNESS, FINE TREMORS, NUMBNESS, NERVOUS IRRITABILITY. LONG TERM EXCESSIVE EXPOSURES TO TALC DUST MAY CAUSE TALCOSIS; A PULMONARY FIBROSIS, WHICH IN TURN MAY LEAD TO SEVERE AND PERMANENT DAMAGE TO THE LUNG.

EMERGENCY AND FIRST AID PROCEDURES: IF OVERCOME BY VAPOR, REMOVE FROM EXPOSURE IMMEDIATELY; CALL A PHYSICIAN. IF BREATHING IS IRREGULAR OR STOPPED, START RESUSCITATION, ADMINISTER OXYGEN. IF INGESTED, DO NOT INDUCE VOMITING; CALL THE POISON CONTROL CENTER IMMEDIATELY. IF SPLASHED INTO THE EYES, FLUSH EYES WITH CLEAR WATER FOR 15 MINUTES OR UNTIL IRRITATION SUBSIDES; CONSULT A PHYSICIAN AS MAY BE REQUIRED. IN CASE OF SKIN CONTACT, REMOVE ANY CONTAMINATED CLOTHING AND WASH SKIN WITH SOAP AND WARM WATER.

PRIMARY ROUTES OF EXPOSURE: (X) - DERMAL (X) - INHALATION ( ) - INGESTION

MEDICAL CONDITIONS PRONE TO AGGRAVATION BY EXPOSURE: PRE-EXISTING SKIN DISORDERS, CHRONIC RESPIRATORY DISEASES. INDIVIDUALS WITH PULMONARY AND/OR RESPIRATORY DISEASE INCLUDING, BUT NOT LIMITED TO, ASTHMA AND BRONCHITIS SHOULD NOT BE EXPOSED TO SILICA DUSTS.

**SECTION VI — REACTIVITY DATA**

STABILITY: ( ) - UNSTABLE (X) - STABLE  
 HAZARDOUS POLYMERIZATION ( ) - MAY OCCUR (X) - WILL NOT OCCUR  
 HAZARDOUS DECOMPOSITION PRODUCTS: FUMES PRODUCED WHEN HEATED TO DECOMPOSITION, SUCH AS IN WELDING, MAY INCLUDE ONE OR MORE OF THE FOLLOWING: CARBON DIOXIDE, CARBON MONOXIDE, ACROLEIN, HYDROGEN CHLORIDE, OXIDES OF NITROGEN, LEAD OXIDE(S).

CONDITIONS TO AVOID: HIGH TEMPERATURES OR DIRECT HEATING.  
 INCOMPATIBILITY (MATERIALS TO AVOID): OXYGEN AND STRONG OXIDANTS, STRONG ACIDS, STRONG BASES, AND AMINES. WILL DISSOLVE OR SOFTEN SOME PLASTICS AND RUBBER.

**SECTION VII — SPILL OR LEAK PROCEDURES**

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED: REMOVE ALL SOURCES OF IGNITION (FLAME, HOT SURFACES, AND ELECTRICAL, STATIC, OR FRICTIONAL SPARKS), VENTILATE AREA, CONTAIN AND REMOVE WITH INERT ABSORBENT AND NON-SPARKING TOOLS. REFER TO OTHER HAZARD CAUTIONS CONTAINED ON THIS SHEET BEFORE ATTEMPTING CLEAN-UP.

WASTE DISPOSAL METHOD: DISPOSE OF IN ACCORDANCE WITH LOCAL, STATE, AND FEDERAL REGULATIONS. DO NOT INCINERATE CLOSED CONTAINERS.

**SECTION VIII — SAFE HANDLING AND USE INFORMATION**

RESPIRATORY PROTECTION: IN OUTDOOR, OPEN AREAS OR IN RESTRICTED VENTILATION AREAS, USE APPROVED CHEMICAL/MECHANICAL FILTERS DESIGNED TO REMOVE A COMBINATION OF PARTICULATE GAS AND VAPOR. TLV'S MUST NOT BE EXCEEDED. IN CONFINED AREAS, USE APPROVED AIR LINE TYPE RESPIRATORS OR HOODS.

VENTILATION: ALL APPLICATION AREAS SHOULD BE VENTILATED IN ACCORDANCE WITH OSHA REGULATIONS. POCKETS OF HEAVY AND/OR FLAMMABLE VAPOR MUST NOT BE PERMITTED TO FORM. VENTILATION AND RESPIRATORY PROTECTION MUST BE AD-EQUATE TO PREVENT THE TLV'S OF HAZARDOUS INGREDIENTS FROM BEING EXCEEDED.

PROTECTIVE GLOVES: REQUIRED FOR PROLONGED OR REPEATED CONTACT.

EYE PROTECTION: USE SAFETY EYEWEAR WITH SPLASH GUARDS OR SIDE SHIELDS.

OTHER PROTECTIVE EQUIPMENT: USE PROTECTIVE APRON AND CLOTHING.

HYGIENIC PRACTICES: WASH HANDS BEFORE EATING OR USING WASHROOM. SMOKE IN SMOKING AREAS ONLY.

**SECTION IX — SPECIAL PRECAUTIONS**

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORING: DO NOT STORE OR USE NEAR HEAT, SPARKS, OR FLAME. NO SMOKING OR OPEN LIGHTS.

OTHER PRECAUTIONS: AVOID CONTACT WITH EYES. AVOID PROLONGED OR REPEATED CONTACT WITH SKIN. AVOID PROLONGED OR REPEATED BREATHING OF VAPORS. STORE IN SEALED CONTAINERS AWAY FROM SPACE HEATING EQUIPMENT. CONTAINS LEAD COMPOUND(S).

**SECTION X — REGULATORY INFORMATION**

SARA TITLE III SECTION 313 SUPPLIER NOTIFICATION: THIS PRODUCT CONTAINS THE FOLLOWING TOXIC CHEMICALS SUBJECT TO THE REPORTING REQUIREMENTS OF SECTION 313 OF THE EMERGENCY PLANNING AND COMMUNITY RIGHT-TO-KNOW ACT OF 1986 AND OF 40 CFR 372:

CAS#	CHEMICAL NAME	PERCENT BY WEIGHT
	LEAD COMPOUNDS	43.70%

THIS INFORMATION MUST BE INCLUDED IN ALL MSDS'S THAT ARE COPIED AND DISTRIBUTED FOR THIS MATERIAL.

**MATERIAL SAFETY DATA SHEET GROUP 12**

includes the following:  
88-641-02

**FOR COATINGS, RESINS, AND RELATED MATERIALS**  
DATE OF PREPARATION - 11/1/91

MANUFACTURER'S NAME:  
ADDRESS:  
ADDRESS:  
CITY, STATE:

COLUMBIA PAINT COMPANY  
NORTH 112 HAVEN STREET  
P. O. BOX 4569  
SPOKANE, WA 99202

EMERGENCY TELEPHONE NO.  
INFORMATION TELEPHONE NO.

DAY: 509-535-9741  
DAY: 509-535-9741

NIGHT: 1-800-424-9300  
NIGHT: 1-800-424-9300

**SECTION I — PRODUCT IDENTIFICATION**

MANUFACTURER'S CODE IDENTIFICATION: SEE ABOVE  
PRODUCT CLASS: ZINC DUST ALKYD RESIN COATING  
TRADE NAME: SEE TABLE OF CONTENTS  
HMIS INFORMATION\*\* HEALTH - 2  
REACTIVITY - 1

FLAMMABILITY - 2  
PERSONAL PROTECTIVE EQUIPMENT - J

**SECTION II — HAZARDOUS INGREDIENTS**

INGREDIENT MATERIAL DESCRIPTION	CAS #	% BY WEIGHT	TLV - (TWA) PPM	MG/M3	LEL	VAPOR PRESS MMHG	DEG F.
MINERAL SPIRITS	*8052-41-3	20.26*	100.00*	Not Est*	1.0*	2.00 @	68.0
ZINC DUST	*7440666	50.82*	Not Est*	15.00*	Unk.*		Unknown

**SECTION III — PHYSICAL DATA**

BOILING RANGE: HIGH 399.0 DF LOW 148.0 DF  
VAPOR PRESSURE: SEE SECTION II  
VAPOR DENSITY: HEAVIER THAN AIR  
EVAPORATION RATE: SLOWER THAN BUTYL ACETATE  
WEIGHT PER GALLON: 16.5  
% VOLATILE BY VOLUME: 51.2  
% VOLATILE BY WEIGHT: 20.6

**SECTION IV — FIRE AND EXPLOSION HAZARD DATA**

FLAMMABILITY CLASSIFICATION: OSHA-CLASS II DOT - COMBUSTIBLE LIQUID  
LOWEST FLASHPOINT T.C.C. 106.0 DF LOWER EXPLOSION LEVEL (LEL) 1.0%  
EXTINGUISHING MEDIA: ( ) FOAM ( ) ALCOHOL FOAM ( ) CO2  
(X) DRY CHEMICAL ( ) WATER FOG (X) DRY SAND

UNUSUAL FIRE AND EXPLOSION HAZARDS: ISOLATE FROM HEAT, SPARKS, ELECTRICAL EQUIPMENT, AND OPEN FLAME. IN CLOSED CONTAINERS, PRESSURE BUILDUP MAY OCCUR DUE TO HEAT EXPOSURE. HYDROGEN, A FLAMMABLE GAS WITH AN LEL OF 3.9%, EVOLVES WHEN ZINC DUST IS IN CONTACT WITH MOISTURE, ALKALIS, OR ACIDS. ZINC DUST MAY EXPLODE IN CONTACT WITH OXIDIZING AGENTS SUCH AS SULFUR AND OXYGEN, AND ALSO MAY BE IGNITED BY NAKED LIGHTS, CAUSING EXPLOSION. DURING EMERGENCY CONDITIONS, OVEREXPOSURE TO DECOMPOSITION PRODUCTS MAY CAUSE A HEALTH HAZARD. SYMPTOMS MAY NOT BE IMMEDIATELY APPARENT. OBTAIN MEDICAL ATTENTION. (SEE SECTION V, VI).  
SPECIAL FIRE FIGHTING PROCEDURES: WATER SPRAY MAY BE INEFFECTIVE. HOWEVER, WATER MAY BE USED TO COOL CLOSED CONTAINERS TO PREVENT PRESSURE BUILDUP. FULL PROTECTIVE EQUIPMENT RECOMMENDED, INCLUDING SELF-CONTAINED BREATHING APPARATUS, TO PROTECT FIREFIGHTERS FROM HAZARDOUS COMBUSTION PRODUCTS.

**SECTION V — HEALTH HAZARD DATA**

EFFECTS OF OVEREXPOSURE: OVEREXPOSURE VIA INHALATION CAN CAUSE CENTRAL NERVOUS SYSTEM DEPRESSION WITH SYMPTOMS RANGING FROM HEADACHES, DIZZINESS, LOSS OF COORDINATION, TO UNCONSCIOUSNESS. DELIBERATELY BREATHING CONCENTRATED SOLVENT VAPOR (GLUE SNIFFING) CAN RESULT IN PERMANENT BRAIN AND NERVOUS SYSTEM DAMAGE OR DEATH. INGESTION MAY RESULT IN GASTROINTESTINAL IRRITATION, NAUSEA, VOMITING, AND/OR DIARRHEA. EYE CONTACT CAUSE SEVERE IRRITATION, REDNESS, TEARING, AND BLURRED VISION. PROLONGED OR REPEATED SKIN CONTACT WILL DRY AND DEBAT THE SKIN, LEADING TO IRRITATION AND DERMATITIS. INHALATION OF EXCESSIVE QUANTITIES OF ZINC DUST, PARTICULARLY IF FRESHLY FORMED ZINC OXIDE FUME IS PRESENT, MAY CAUSE "METAL FUME FEVER." SYMPTOMS INCLUDE HEADACHE, FEVER, CHILLS, MUSCLE ACHES, NAUSEA, VOMITING, WEAKNESS, AND TIREDNESS. ATTACK MAY LAST 6-24 HOURS WITH NO KNOWN LONG-TERM EFFECTS. <CHRONIC EFFECTS> REPEATED OVEREXPOSURE TO SOLVENT VAPORS MAY RESULT IN ONE OF MORE OF THE FOLLOWING: CENTRAL NERVOUS SYSTEM, BLOOD, LIVER, AND/OR KIDNEY INJURY, HEARING LOSS.  
EMERGENCY AND FIRST AID PROCEDURES: IF OVERCOME BY VAPOR, REMOVE FROM EXPOSURE IMMEDIATELY; CALL A PHYSICIAN. BREATHING IS IRREGULAR OR STOPPED, START RESUSCITATION, ADMINISTER OXYGEN. IF INGESTED, DO NOT INDUCE VOMITING. CALL A PHYSICIAN. IF SPLASHED INTO THE EYES, FLUSH EYES WITH CLEAR WATER FOR 15 MINUTES OR UNTIL IRRITATION SUBSIDES; CONSULT A PHYSICIAN AS MAY BE REQUIRED. IN CASE OF SKIN CONTACT, REMOVE ANY CONTAMINATED CLOTHING AND WASH SKIN WITH SOAP AND WARM WATER.  
PRIMARY ROUTES OF ENTRY: (X) - DERMAL (X) - INHALATION ( ) - INGESTION  
MEDICAL CONDITIONS PRONE TO AGGRAVATION BY EXPOSURE: PRE-EXISTING SKIN DISORDERS, CHRONIC RESPIRATORY DISEASES



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**SECTION VI — REACTIVITY DATA**

STABILITY: ( ) - UNSTABLE (X) - STABLE  
HAZARDOUS POLYMERIZATION ( ) - MAY OCCUR (X) - WILL NOT OCCUR  
HAZARDOUS DECOMPOSITION PRODUCTS: FUMES PRODUCED WHEN HEATED TO DECOMPOSITION, SUCH AS IN WELDING, MAY INCLUDE ONE OR MORE OF THE FOLLOWING: CARBON DIOXIDE, CARBON MONOXIDE, ACROLEIN, HYDROGEN CHLORIDE, OXIDES OF NITROGEN, ZINC OXIDE.  
CONDITIONS TO AVOID: HIGH TEMPERATURES OR DIRECT HEATING.  
INCOMPATIBILITY (MATERIALS TO AVOID): OXYGEN AND STRONG OXIDANTS, STRONG ACIDS, STRONG BASES, AND AMINES. WILL DISSOLVE OR SOFTEN SOME PLASTICS AND RUBBER.  
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**SECTION VII — SPILL OR LEAK PROCEDURES**

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED: REMOVE ALL SOURCES OF IGNITION (FLAME, HOT SURFACES, AND ELECTRICAL, STATIC, OR FRICTIONAL SPARKS), VENTILATE AREA, CONTAIN AND REMOVE WITH INERT ABSORBENT AND NON-SPARKING TOOLS. AVOID THE FORMATION OF ZINC DUST CLOUDS. REFER TO OTHER HAZARD CAUTIONS CONTAINED ON THIS SHEET BEFORE ATTEMPTING CLEAN-UP.  
WASTE DISPOSAL METHOD: DISPOSE OF IN ACCORDANCE WITH LOCAL, STATE, AND FEDERAL REGULATIONS. DO NOT INCINERATE CLOSED CONTAINERS.  
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**SECTION VIII — SAFE HANDLING AND USE INFORMATION**

RESPIRATORY PROTECTION: IN OUTDOOR, OPEN AREAS OR IN RESTRICTED VENTILATION AREAS, USE APPROVED CHEMICAL/MECHANICAL FILTERS DESIGNED TO REMOVE A COMBINATION OF PARTICULATE GAS AND VAPOR. TLV'S MUST NOT BE EXCEEDED. IN CONFINED AREAS, USE APPROVED AIR LINE TYPE RESPIRATORS OR HOODS.  
VENTILATION: ALL APPLICATION AREAS SHOULD BE VENTILATED IN ACCORDANCE WITH OSHA REGULATIONS. POCKETS OF HEAVY AND/OR FLAMMABLE VAPOR MUST NOT BE PERMITTED TO FORM. VENTILATION AND RESPIRATORY PROTECTION MUST BE ADEQUATE TO PREVENT THE TLV'S OF HAZARDOUS INGREDIENTS FROM BEING EXCEEDED.  
PROTECTIVE GLOVES: REQUIRED FOR PROLONGED OR REPEATED CONTACT.  
EYE PROTECTION: USE SAFETY EYEWEAR WITH SPLASH GUARDS OR SIDE SHIELDS.  
OTHER PROTECTIVE EQUIPMENT: USE PROTECTIVE APRON AND CLOTHING.  
HYGIENIC PRACTICES: WASH HANDS BEFORE EATING OR USING WASHROOM. SMOKE IN SMOKING AREAS ONLY.  
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**SECTION IX — SPECIAL PRECAUTIONS**

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORING: DO NOT STORE OR USE NEAR HEAT, SPARKS, OR FLAME. NO SMOKING OR OPEN LIGHTS. STORE IN DRY CONTAINERS AWAY FROM MOISTURE, ACIDS, ALKALIS, AND OXIDIZING AGENTS.  
OTHER PRECAUTIONS: AVOID CONTACT WITH EYES. AVOID PROLONGED OR REPEATED CONTACT WITH SKIN. AVOID PROLONGED OR REPEATED BREATHING OF VAPORS.  
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**SECTION X — REGULATORY INFORMATION**

SARA TITLE III SECTION 313 SUPPLIER NOTIFICATION: THIS PRODUCT CONTAINS THE FOLLOWING TOXIC CHEMICALS SUBJECT TO THE REPORTING REQUIREMENTS OF SECTION 313 OF THE EMERGENCY PLANNING AND COMMUNITY RIGHT-TO-KNOW ACT OF 1986 AND OF 40 CFR 372:

CAS#	CHEMICAL NAME	PERCENT BY WEIGHT
7440-66-6	ZINC COMPOUNDS ZINC (FUME OR DUST)	48.79%

THIS INFORMATION MUST BE INCLUDED IN ALL MSDS'S THAT ARE COPIED AND DISTRIBUTED FOR THIS MATERIAL.

**MATERIAL SAFETY DATA SHEET GROUP 13**

includes the following:  
02-711-10

**FOR COATINGS, RESINS, AND RELATED MATERIALS**  
DATE OF PREPARATION - 11/1/91

MANUFACTURER'S NAME: COLUMBIA PAINT COMPANY  
ADDRESS: NORTH 112 HAVEN STREET  
ADDRESS: P. O. BOX 4569  
CITY, STATE: SPOKANE, WA 99202

EMERGENCY TELEPHONE NO. DAY: 509-535-9741 NIGHT: 1-800-424-9300  
INFORMATION TELEPHONE NO. DAY: 509-535-9741 NIGHT: 1-800-424-9300

**SECTION I — PRODUCT IDENTIFICATION**

MANUFACTURER'S CODE IDENTIFICATION: SEE ABOVE  
PRODUCT CLASS: VINYL-ACRYLIC LATEX RESIN COATING  
TRADE NAME: SEE TABLE OF CONTENTS  
HMIS INFORMATION\*\* HEALTH - 1 FLAMMABILITY - 2  
REACTIVITY - 1 PERSONAL PROTECTIVE EQUIPMENT - B

**SECTION II — HAZARDOUS INGREDIENTS**

INGREDIENT MATERIAL DESCRIPTION	CAS #	% BY WEIGHT	TLV - (TWA) PPM	MG/M3	LEL	VAPOR PRESS MMHG	DEG F.
CRYSTALLINE SILICA -suspected carcinogen	*14808-60-7	12.94*	Not Est*	10*	Unk.*		Unknown
MAGNESIUM SILICATE (TALC)	*14807-96-6	6.47*	Not Est*	2.00*	Unk.*		Unknown
ETHANOL	*64175	4.12*	1000.00*	1900.00*	3.3*	40.00 @	68.0
TITANIUM DIOXIDE	*13463-67-7	6.47*	Not Est.*	10.00*	Unk.*		Unknown

THIS PRODUCT CONTAINS HAZARDOUS COMPONENTS WHICH MAY BECOME AIRBORNE AND RESULT IN EXPOSURE WHEN REMOVED BY ABRASIVE BLASTING, SANDING, OR GRINDING. VENTILATE AND AVOID BREATHING DUSTS.

**SECTION III — PHYSICAL DATA**

BOILING RANGE: HIGH 477.0 DF LOW 148.0 DF  
VAPOR PRESSURE: SEE SECTION II  
VAPOR DENSITY: LIGHTER THAN AIR  
EVAPORATION RATE: SLOWER THAN BUTYL ACETATE  
WEIGHT PER GALLON: 12.4  
% VOLATILE BY VOLUME: 59.5  
% VOLATILE BY WEIGHT: 39.0  
APPEARANCE - ODOR: WHITE LIQUID  
PH - SOLUBILITY: DILUTABLE IN WATER

**SECTION IV — FIRE AND EXPLOSION HAZARD DATA**

FLAMMABILITY CLASSIFICATION OSHA-CLASS III-A DOT - COMBUSTIBLE LIQUID  
LOWEST FLASHPOINT T.C.C. 150.0 DF LOWER EXPLOSION LEVEL (LEL) 3.3%  
EXTINGUISHING MEDIA: ( ) FOAM ( ) CO2  
( ) DRY CHEMICAL (X) WATER FOG ( ) OTHER

UNUSUAL FIRE AND EXPLOSION HAZARDS: MATERIALS WILL NOT SUSTAIN COMBUSTION UNLESS WATER HAS EVAPORATED. CLOSED CONTAINERS MAY EXPLODE FROM STEAM PRESSURE WHEN EXPOSED TO EXTREME HEAT.  
SPECIAL FIRE FIGHTING PROCEDURES: FIREFIGHTERS SHOULD WEAR SELF-CONTAINED BREATHING APPARATUS AS PROTECTION FROM HAZARDOUS COMBUSTION PRODUCTS.

**SECTION V — HEALTH HAZARD DATA**

EFFECTS OF OVEREXPOSURE: EXCESS INHALATION OF VOLATILIZED AMMONIA MAY PRODUCE HEADACHE, NAUSEA, IRRITATION TO RESPIRATORY TRACT. SKIN CONTACT MAY PRODUCE IRRITATION DUE TO SLIGHT ALKALINITY. PRESENCE OF VOLATILIZED AMMONIA COULD IRRITATE EYES. CRYSTALLINE SILICA DUST CAN CAUSE UPPER RESPIRATORY IRRITATION AND IRRITATION TO EYES. PROLONGED OVEREXPOSURE TO SILICA DUST BY INHALATION MAY CAUSE DELAYED LUNG INJURY/DISEASE (SILICOSIS). ON THE BASIS OF INITIAL EXPERIMENTAL TESTS IN ANIMALS AND LIMITED EPIDEMIOLOGICAL STUDIES IN HUMAN POPULATIONS, THE INTERNATIONAL AGENCY FOR RESEARCH ON CANCER (IARC) HAS CONCLUDED THAT THERE IS LIMITED EVIDENCE FOR THE CARCINOGENICITY OF CRYSTALLINE SILICA TO HUMANS. RATS EXPOSED TO TITANIUM DIOXIDE DUST AT 250 MG/M<sup>3</sup> DEVELOPED LUNG CANCER; HOWEVER, SUCH EXPOSURES LEVELS ARE NOT ATTAINABLE IN THE WORK PLACE. LONG TERM EXCESSIVE EXPOSURES TO TALC DUST MAY CAUSE TALCOSIS, A PULMONARY FIBROSIS, WHICH IN TURN MAY LEAD TO SEVERE AND PERMANENT DAMAGE TO THE LUNG.

PRIMARY ROUTES OF EXPOSURE: (X) - DERMAL (X) - INHALATION ( ) - INGESTION  
EMERGENCY AND FIRST AID PROCEDURES: FOR IRRITATION DUE TO INHALATION, REMOVE TO FRESH AIR. FOR EYE CONTACT, FLUSH WITH LARGE AMOUNTS OF WATER FOR 15 MINUTES. IN CASE OF INGESTION, DRINK 1-2 GLASSES OF WATER TO DILUTE. DO NOT INDUCE VOMITING. CONSULT PHYSICIAN OR POISON CONTROL CENTER IMMEDIATELY.  
MEDICAL CONDITIONS PRONE TO AGGRAVATION BY EXPOSURE: INDIVIDUALS WITH PULMONARY AND/OR RESPIRATORY DISEASE INCLUDING, BUT NOT LIMITED TO, ASTHMA AND BRONCHITIS SHOULD NOT BE EXPOSED TO SILICA DUSTS.

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**SECTION VI — REACTIVITY DATA**

STABILITY: ( ) - UNSTABLE (X) - STABLE  
HAZARDOUS POLYMERIZATION ( ) - MAY OCCUR (X) - WILL NOT OCCUR  
HAZARDOUS DECOMPOSITION PRODUCTS: THE DRY PAINT FILM CAN BURN AND PRODUCE ONE OR MORE OF THE FOLLOWING:  
CARBON DIOXIDE, CARBON MONOXIDE, HYDROGEN CHLORIDE, AND/OR OXIDES OF NITROGEN.  
CONDITIONS TO AVOID: EXCESSIVE HEAT.  
INCOMPATIBILITY (MATERIALS TO AVOID): NONE REASONABLY FORESEEABLE.  
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**SECTION VII — SPILL OR LEAK PROCEDURES**

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED: WEARING PROTECTIVE GLOVES, WIPE UP LIQUID MATERIAL WITH ABSORBENT CLOTH.  
WASTE DISPOSAL METHOD: DISPOSE OF IN ACCORDANCE WITH LOCAL, STATE, AND FEDERAL REGULATIONS.  
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**SECTION VIII — SAFE HANDLING AND USE INFORMATION**

RESPIRATORY PROTECTION: IN RESTRICTED VENTILATION AREAS - APPROVED CHEMICAL/MECHANICAL FILTERS DESIGNED TO REMOVE PARTICULATES AND VAPOR.  
VENTILATION: PROVIDE AIR MOVEMENT TO REMOVE EXCESS VAPORS.  
PROTECTIVE GLOVES: REQUIRED FOR PROLONGED OR REPEATED CONTACT.  
EYE PROTECTION: SAFETY GLASSES.  
OTHER PROTECTIVE EQUIPMENT: NONE.  
HYGIENIC PRACTICES: WASH HANDS BEFORE EATING OR USING WASHROOM.  
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**SECTION IX — SPECIAL PRECAUTIONS**

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORING: DO NOT STORE IN EXCESSIVE HEAT (ABOVE 120 DF). USE WITH ADEQUATE VENTILATION.  
OTHER PRECAUTIONS: AVOID CONTACT WITH EYES.  
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**SECTION X — REGULATORY INFORMATION**

SARA TITLE III SECTION 313 SUPPLIER NOTIFICATION: THIS PRODUCT CONTAINS THE FOLLOWING TOXIC CHEMICALS SUBJECT TO THE REPORTING REQUIREMENTS OF SECTION 313 OF THE EMERGENCY PLANNING AND COMMUNITY RIGHT-TO-KNOW ACT OF 1986 AND OF 40 CFR 372:

CAS#	CHEMICAL NAME	PERCENT BY WEIGHT
NONE		

THIS INFORMATION MUST BE INCLUDED IN ALL MSDS'S THAT ARE COPIED AND DISTRIBUTED FOR THIS MATERIAL.

**MATERIAL SAFETY DATA SHEET GROUP 14**

includes the following:  
05-280-WB

**FOR COATINGS, RESINS, AND RELATED MATERIALS**  
DATE OF PREPARATION - 11/1/91

MANUFACTURER'S NAME: COLUMBIA PAINT COMPANY  
ADDRESS: NORTH 112 HAVEN STREET  
ADDRESS: P. O. BOX 4569  
CITY, STATE: SPOKANE, WA 99202

EMERGENCY TELEPHONE NO. DAY: 509-535-9741 NIGHT: 1-800-424-9300  
INFORMATION TELEPHONE NO. DAY: 509-535-9741 NIGHT: 1-800-424-9300

**SECTION I — PRODUCT IDENTIFICATION**

MANUFACTURER'S CODE IDENTIFICATION: SEE ABOVE  
PRODUCT CLASS: ACRYLIC - URETHANE  
TRADE NAME: SEE TABLE OF CONTENTS  
HMIS INFORMATION\*\* HEALTH - 1 FLAMMABILITY - 0 REACTIVITY - 1 PERSONAL PROTECTIVE EQUIPMENT - H

**SECTION II — HAZARDOUS INGREDIENTS**

INGREDIENT MATERIAL DESCRIPTION	CAS #	% BY WEIGHT	TLV - (TWA) PPM	MG/M3	LEL	VAPOR PRESS MMHG	DEG F.
2-PROPOXY ETHANOL -exposure contrb via skin	*2807309	3.68*	25.00*	Not Est*	1.3*	1.30 @	77.0
2,2,4 TRIMETHYL PENTANE DIOL-1,3 MONOISOBUTYRATE	*25265774	2.16*	Not Est*	Not Est*	Unk.*	1.00 @	189.0
N-METHYL PYRROLIDINONE	*872504	2.53*	Not Est*	Not Est*	Unk.*	.50 @	68.0
TITANIUM DIOXIDE	*13463-67-7	21.88*	Not Est*	10.00*	Unk.*		Unknown

**SECTION III — PHYSICAL DATA**

BOILING RANGE: HIGH 644.0 DF LOW 180.0 DF  
VAPOR PRESSURE: SEE SECTION II  
VAPOR DENSITY: LIGHTER THAN AIR  
EVAPORATION RATE: SLOWER THAN BUTYL ACETATE  
WEIGHT PER GALLON: 10.2  
% VOLATILE BY VOLUME: 63.2  
% VOLATILE BY WEIGHT: 51.3

**SECTION IV — FIRE AND EXPLOSION HAZARD DATA**

FLAMMABILITY CLASSIFICATION OSHA-CLASS III-B DOT - NOT REGULATED  
LOWEST FLASHPOINT T.C.C. 200.0 DF LOWER EXPLOSION LEVEL (LEL) N/A  
EXTINGUISHING MEDIA: ( ) FOAM ( ) CO2  
( ) DRY CHEMICAL (X) WATER FOG ( ) OTHER  
UNUSUAL FIRE AND EXPLOSION HAZARDS: MATERIALS WILL NOT SUSTAIN COMBUSTION UNLESS WATER HAS EVAPORATED. CLOSED CONTAINERS MAY EXPLODE FROM STEAM PRESSURE WHEN EXPOSED TO EXTREME HEAT.  
SPECIAL FIRE FIGHTING PROCEDURES: FIREFIGHTERS SHOULD WEAR SELF-CONTAINED BREATHING APPARATUS AS PROTECTION FROM HAZARDOUS COMBUSTION PRODUCTS.

**SECTION V — HEALTH HAZARD DATA**

EFFECTS OF OVEREXPOSURE: OVEREXPOSURE VIA INHALATION CAN CAUSE CENTRAL NERVOUS SYSTEM DEPRESSION WITH SYMPTOMS RANGING FROM HEADACHES, DIZZINESS, LOSS OF COORDINATION, TO UNCONSCIOUSNESS. INGESTION MAY RESULT IN GASTROINTESTINAL IRRITATION, NAUSEA, VOMITING, AND/OR DIARRHEA. EYE CONTACT CAN CAUSE SEVERE IRRITATION, REDNESS, TEARING, AND BLURRED VISION. PROLONGED OR REPEATED SKIN CONTACT WILL DRY AND DEFAIT THE SKIN, LEADING TO IRRITATION AND DERMATITIS. <CHRONIC EFFECTS> REPEATED OVEREXPOSURE TO SOLVENT VAPORS MAY RESULT IN DAMAGE TO THE BLOOD. RATS EXPOSED TO TITANIUM DIOXIDE DUST AT 250 MG/M<sup>3</sup> DEVELOPED LUNG CANCER; HOWEVER, SUCH EXPOSURE LEVELS ARE NOT ATTAINABLE IN THE WORK PLACE.  
PRIMARY ROUTE(S) OF ENTRY: (X) DERMAL (X) INHALATION ( ) INGESTION  
EMERGENCY AND FIRST AID PROCEDURES: IF OVERCOME BY VAPOR, REMOVE FROM EXPOSURE IMMEDIATELY; CALL A PHYSICIAN. IF BREATHING IS IRREGULAR OR STOPPED, START RESUSCITATION, ADMINISTER OXYGEN. IF INGESTED, DO NOT INDUCE VOMITING, CALL A PHYSICIAN. IF SPLASHED INTO THE EYES, FLUSH EYES WITH CLEAR WATER FOR 15 MINUTES OR UNTIL IRRITATION SUBSIDES. CONSULT A PHYSICIAN AS MAY BE REQUIRED. IN CASE OF SKIN CONTACT, REMOVE ANY CONTAMINATED CLOTHING AND WASH SKIN WITH SOAP AND WARM WATER.  
MEDICAL CONDITIONS PRONE TO AGGRAVATION BY EXPOSURE: UNKNOWN.

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**SECTION VI — REACTIVITY DATA**

STABILITY: ( ) UNSTABLE (X) STABLE  
HAZARDOUS POLYMERIZATION ( ) MAY OCCUR (X) WILL NOT OCCUR  
HAZARDOUS DECOMPOSITION PRODUCTS: THE DRY PAINT FILM CAN BURN AND PRODUCE ONE OR MORE OF THE FOLLOWING:  
CARBON DIOXIDE, CARBON MONOXIDE, HYDROGEN CHLORIDE, AND/OR OXIDES OF NITROGEN.  
CONDITIONS TO AVOID: EXCESSIVE HEAT.  
INCOMPATIBILITY (MATERIALS TO AVOID): NONE REASONABLY FORESEEABLE.  
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**SECTION VII — SPILL OR LEAK PROCEDURES**

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED: WEARING PROTECTIVE GLOVES, WIPE UP LIQUID MATERIAL WITH ABSORBENT CLOTH.  
WASTE DISPOSAL METHOD: DISPOSE OF IN ACCORDANCE WITH LOCAL, STATE, AND FEDERAL REGULATIONS.  
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**SECTION VIII — SAFE HANDLING AND USE INFORMATION**

RESPIRATORY PROTECTION: IF OUTDOORS, OPEN AREAS OR IN RESTRICTED VENTILATION AREAS, USE APPROVED CHEMICAL/ MECHANICAL FILTERS DESIGNED TO REMOVE A COMBINATION OF PARTICULATE GAS AND VAPOR. TLV'S MUST NOT BE EXCEEDED. IN CONFINED AREAS, USE APPROVED AIR LINE TYPE RESPIRATORS OR HOODS.  
VENTILATION: ALL APPLICATION AREAS SHOULD BE VENTILATED IN ACCORDANCE WITH OSHA REGULATIONS. POCKETS OF HEAVY AND/OR FLAMMABLE VAPOR MUST NOT BE PERMITTED TO FORM. VENTILATION AND RESPIRATORY PROTECTION MUST BE ADEQUATE TO PREVENT THE TLV'S OF HAZARDOUS INGREDIENTS FROM BEING EXCEEDED.  
PROTECTIVE GLOVES: REQUIRED FOR PROLONGED OR REPEATED CONTACT.  
EYE PROTECTION: USE SAFETY EYEWEAR WITH SPLASH GUARDS OR SIDE SHIELDS.  
OTHER PROTECTIVE EQUIPMENT: USE PROTECTIVE APRON AND CLOTHING.  
HYGIENIC PRACTICES: WASH HANDS BEFORE EATING OR USING WASHROOM. SMOKE IN SMOKING AREAS ONLY.  
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**SECTION IX — SPECIAL PRECAUTIONS**

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORING: DO NOT STORE IN EXCESSIVE HEAT (ABOVE 120 DF). USE WITH ADEQUATE VENTILATION.  
OTHER PRECAUTIONS: AVOID CONTACT WITH EYES. AVOID PROLONGED OR REPEATED CONTACT WITH SKIN. AVOID PROLONGED OR REPEATED BREATHING OF VAPORS. STORE IN SEALED CONTAINERS AWAY FROM SPACE HEATING EQUIPMENT.  
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**SECTION X — REGULATORY INFORMATION**

SARA TITLE III SECTION 313 SUPPLIER NOTIFICATION: THIS PRODUCT CONTAINS THE FOLLOWING TOXIC CHEMICALS SUBJECT TO THE REPORTING REQUIREMENTS OF SECTION 313 OF THE EMERGENCY PLANNING AND COMMUNITY RIGHT-TO-KNOW ACT OF 1986 AND OF 40 CFR 372:

CAS#	CHEMICAL NAME	PERCENT BY WEIGHT
NONE		

THIS INFORMATION MUST BE INCLUDED IN ALL MSDS'S THAT ARE COPIED AND DISTRIBUTED FOR THIS MATERIAL.

**MATERIAL SAFETY DATA SHEET GROUP 15**

includes the following:  
05-900-10

**FOR COATINGS, RESINS, AND RELATED MATERIALS**  
DATE OF PREPARATION - 11/1/91

MANUFACTURER'S NAME: COLUMBIA PAINT COMPANY  
ADDRESS: NORTH 112 HAVEN STREET  
ADDRESS: P. O. BOX 4569  
CITY, STATE: SPOKANE, WA 99202

EMERGENCY TELEPHONE NO. DAY: 509-535-9741 NIGHT: 1-800-424-9300  
INFORMATION TELEPHONE NO. DAY: 509-535-9741 NIGHT: 1-800-424-9300

**SECTION I — PRODUCT IDENTIFICATION**

MANUFACTURER'S CODE IDENTIFICATION: SEE ABOVE  
PRODUCT CLASS: WATERBORNE EPOXY/POLYAMINE RESIN COATING  
TRADE NAME: SEE TABLE OF CONTENTS  
HMIS INFORMATION\*\* HEALTH - 1 FLAMMABILITY - 0  
REACTIVITY - 1 PERSONAL PROTECTIVE EQUIPMENT - H

**SECTION II — HAZARDOUS INGREDIENTS**

INGREDIENT MATERIAL DESCRIPTION	CAS #	% BY WEIGHT	TLV - (TWA) PPM	MG/M3	LEL	VAPOR PRESS MMHG	DEG F.
2-BUTOXY ETHANOL -exposure contrb via skin	*111762	1.03*	25.00*	120.00*	1.1*	.60 @	68.0
BISPHENOL - A POLYGLYCIDYL ETHER	*25068386	11.61*	Not Est*	Not Est*	Unk.*	.01 @	68.0
ALIPHATIC GLYCIDYL ETHER	*68081845	3.85*	Not Est*	Not Est*	Unk.*	.10 @	68.0
POLYETHYLENE POLYAMINE & EPOXY ADDUCTS:SKIN EXPOS	13.16*	1.00*	Not Est*	Unk.*		Unknown	
2-PROPOXY ETHANOL -exposure contrb via skin	*2807309	3.29*	25.00*	Not Est*	1.3*	1.30 @	77.0
ACETIC ACID	*64197	1.10*	10.00*	25.00*	5.4*	11.40 @	68.0
TITANIUM DIOXIDE	*13463-67-7	22.94*	Not Est*	10.00*	Unk.*		Unknown

**SECTION III — PHYSICAL DATA**

BOILING RANGE: HIGH 338.0 DF LOW 212.0 DF  
VAPOR PRESSURE: SEE SECTION II  
VAPOR DENSITY: LIGHTER THAN AIR  
EVAPORATION RATE: SLOWER THAN BUTYL ACETATE  
WEIGHT PER GALLON: 10.4  
% VOLATILE BY VOLUME: 60.3  
% VOLATILE BY WEIGHT: 48.0

**SECTION IV — FIRE AND EXPLOSION HAZARD DATA**

FLAMMABILITY CLASSIFICATION OSHA-CLASS III-B DOT - NOT REGULATED  
LOWEST FLASHPOINT T.C.C. 200.0 DF LOWER EXPLOSION LEVEL (LEL) N/A  
EXTINGUISHING MEDIA: (X) FOAM (X) CO2  
(X) DRY CHEMICAL (X) WATER FOG ( ) OTHER  
UNUSUAL FIRE AND EXPLOSION HAZARDS: MATERIALS WILL NOT SUSTAIN COMBUSTION UNLESS WATER HAS EVAPORATED. CLOSED  
CONTAINERS MAY EXPLODE FROM STEAM PRESSURE WHEN EXPOSED TO EXTREME HEAT.  
SPECIAL FIRE FIGHTING PROCEDURES: FIREFIGHTERS SHOULD WEAR SELF-CONTAINED BREATHING APPARATUS AS PROTECTION  
FROM HAZARDOUS COMBUSTION PRODUCTS.

**SECTION V — HEALTH HAZARD DATA**

EFFECTS OF OVEREXPOSURE: OVEREXPOSURE VIA INHALATION CAN CAUSE CENTRAL NERVOUS SYSTEM DEPRESSION WITH SYMPTOMS RANGING FROM HEADACHES, DIZZINESS, LOSS OF COORDINATION, TO UNCONSCIOUSNESS. CONTAINS SENSITIZING MATERIAL WHICH MAY CAUSE ALLERGIC RESPIRATORY REACTION. INGESTION MAY RESULT IN GASTROINTESTINAL IRRITATION, NAUSEA, VOMITING, AND/OR DIARRHEA. EYE CONTACT MAY CAUSE EYE INJURY WHICH MAY PERSIST FOR SEVERAL DAYS. SKIN CONTACT MAY CAUSE SKIN IRRITATION AND/OR AN ALLERGIC SKIN REACTION WHICH CAN BE SEVERE IN CERTAIN INDIVIDUALS. <CHRONIC EFFECTS> REPEATED OVEREXPOSURE TO SOLVENT VAPORS MAY RESULT IN INJURY TO ONE OR MORE OF THE FOLLOWING: LIVER, KIDNEYS, BLOOD CELLS, BONE MARROW. RATS EXPOSED TO TITANIUM DIOXIDE DUST AT 250 MG/M<sup>3</sup> DEVELOPED LUNG CANCER; HOWEVER, SUCH EXPOSURE LEVELS ARE NOT ATTAINABLE IN THE WORK PLACE.

PRIMARY ROUTES OF ENTRY: (X) - DERMAL (X) - INHALATION ( ) - INGESTION

EMERGENCY AND FIRST AID PROCEDURES: IF OVERCOME BY VAPOR, REMOVE FROM EXPOSURE IMMEDIATELY; CALL A PHYSICIAN. IF BREATHING IS IRREGULAR OR STOPPED, START RESUSCITATION, ADMINISTER OXYGEN. IF INGESTED, DO NOT INDUCE VOMITING; CALL A PHYSICIAN. IF SPLASHED INTO THE EYES, FLUSH EYES WITH CLEAR WATER FOR 15 MINUTES OR UNTIL IRRITATION SUBSIDES; CONSULT A PHYSICIAN AS MAY BE REQUIRED. IN CASE OF SKIN CONTACT, REMOVE ANY CONTAMINATED CLOTHING AND WASH SKIN WITH SOAP AND WARM WATER.

MEDICAL CONDITIONS PRONE TO AGGRAVATION BY EXPOSURE: PRE-EXISTING SKIN OR LUNG DISEASES OR ALLERGIES. EXPOSURE TO THIS PRODUCT MAY INCREASE THE CHANCE OF DEVELOPING INCREASED ALLERGY SYMPTOMS.

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**SECTION VI — REACTIVITY DATA**

STABILITY: ( ) - UNSTABLE (X) - STABLE

HAZARDOUS POLYMERIZATION ( ) - MAY OCCUR (X) - WILL NOT OCCUR

HAZARDOUS DECOMPOSITION PRODUCTS: THE DRY PAINT FILM CAN BURN AND PRODUCE ONE OR MORE OF THE FOLLOWING: CARBON DIOXIDE, CARBON MONOXIDE, OXIDES OF NITROGEN, PHENOLICS.

CONDITIONS TO AVOID: EXCESSIVE HEAT.

INCOMPATIBILITY (MATERIALS TO AVOID): STRONG ACIDS AND BASES, AMINES, MERCAPTANS.  
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**SECTION VII — SPILL OR LEAK PROCEDURES**

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED: WEARING PROTECTIVE GLOVES, WIPE UP LIQUID MATERIAL WITH ABSORBENT CLOTH.

WASTE DISPOSAL METHOD: DISPOSE OF IN ACCORDANCE WITH LOCAL, STATE, AND FEDERAL REGULATIONS.  
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**SECTION VIII — SAFE HANDLING AND USE INFORMATION**

RESPIRATORY PROTECTION: IN OUTDOOR, OPEN AREAS OR IN RESTRICTED VENTILATION AREAS, USE APPROVED CHEMICAL/MECHANICAL FILTERS DESIGNED TO REMOVE A COMBINATION OF PARTICULATE GAS AND VAPOR. TLV'S MUST NOT BE EXCEEDED. IN CONFINED AREAS, USE APPROVED AIR LINE TYPE RESPIRATORS OR HOODS.

VENTILATION: ALL APPLICATION AREAS SHOULD BE VENTILATED IN ACCORDANCE WITH OSHA REGULATIONS. POCKETS OF HEAVY AND/OR FLAMMABLE VAPOR MUST NOT BE PERMITTED TO FORM. VENTILATION AND RESPIRATORY PROTECTION MUST BE ADEQUATE TO PREVENT THE TLV'S OF HAZARDOUS INGREDIENTS FROM BEING EXCEEDED.

PROTECTIVE GLOVES: REQUIRED FOR PROLONGED OR REPEATED CONTACT.

EYE PROTECTION: USE SAFETY EYEWEAR WITH SPLASH GUARDS OR SIDE SHIELDS.

OTHER PROTECTIVE EQUIPMENT: USE PROTECTIVE APRON AND CLOTHING.

HYGIENIC PRACTICES: WASH HANDS BEFORE EATING OR USING WASHROOM. SMOKE IN SMOKING AREAS ONLY.  
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**SECTION IX — SPECIAL PRECAUTIONS**

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORING: DO NOT STORE IN EXCESSIVE HEAT (ABOVE 120 DF). USE WITH ADEQUATE VENTILATION.

OTHER PRECAUTIONS: AVOID CONTACT WITH EYES. AVOID PROLONGED OR REPEATED CONTACT WITH SKIN. AVOID PROLONGED OR REPEATED BREATHING OF VAPORS. STORE IN SEALED CONTAINERS AWAY FROM SPACE HEATING EQUIPMENT.  
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**SECTION X — REGULATORY INFORMATION**

SARA TITLE III SECTION 313 SUPPLIER NOTIFICATION: THIS PRODUCT CONTAINS THE FOLLOWING TOXIC CHEMICALS SUBJECT TO THE REPORTING REQUIREMENTS OF SECTION 313 OF THE EMERGENCY PLANNING AND COMMUNITY RIGHT-TO-KNOW ACT OF 1986 AND OF 40 CFR 372:

CAS#	CHEMICAL NAME	PERCENT BY WEIGHT
	GLYCOL ETHERS	1.03%

THIS INFORMATION MUST BE INCLUDED IN ALL MSDS'S THAT ARE COPIED AND DISTRIBUTED FOR THIS MATERIAL.

**MATERIAL SAFETY DATA SHEET GROUP 16,**

includes the following:  
02-770-WB                      05-405-CC                      05-410-CC

**FOR COATINGS, RESINS, AND RELATED MATERIALS**  
**DATE OF PREPARATION - 11/1/91**

MANUFACTURER'S NAME: COLUMBIA PAINT COMPANY  
ADDRESS: NORTH 112 HAVEN STREET  
ADDRESS: P. O. BOX 4569  
CITY, STATE: SPOKANE, WA 99202

EMERGENCY TELEPHONE NO. DAY: 509-535-9741 NIGHT: 1-800-424-9300  
INFORMATION TELEPHONE NO. DAY: 509-535-9741 NIGHT: 1-800-424-9300

**SECTION I — PRODUCT IDENTIFICATION**

MANUFACTURER'S CODE IDENTIFICATION: SEE ABOVE  
PRODUCT CLASS: ACRYLIC LATEX RESIN COATING  
TRADE NAME: SEE TABLE OF CONTENTS  
HMIS INFORMATION\*\* HEALTH - 1 FLAMMABILITY - 0  
REACTIVITY - 1 PERSONAL PROTECTIVE EQUIPMENT - J

**SECTION II — HAZARDOUS INGREDIENTS**

INGREDIENT MATERIAL DESCRIPTION	CAS #	% BY WEIGHT	TLV - (TWA) PPM	MG/M3	LEL	VAPOR PRESS MMHG	DEG F.
MINERAL SPIRITS	*8052-41-3	1.62*	100.00*	Not Est*	1.0*	2.0 @	68.0
ETHYLENE GLYCOL	*107211	4.55*	50.00*	125.00*	3.2*	.08 @	68.0
SILICEOUS MUSCOVITE MICA -suspected carcinogen	*1318-94-1	6.95*	Not Est*	3.00*	Unk.*	Unknown	
MAGNESIUM SILICATE (TALC)	*14807-96-6	<1.0-8.68*	Not Est*	2.00*	Unk.*	Unknown	
CRYSTALLINE SILICA -suspected carcinogen	*14464-46-1	.1-8.68*	Not Est*	.05*	Unk.*	Unknown	
2,2,4 TRIMETHYL PENTANE DIOL-1,3 MONOISOBUTYRATE	*25265774	1.62*	Not Est*	Not Est*	Unk.*	1.00 @	189.0
DIBUTYL PHTHALATE	*84742	1.07*	Not Est*	5.00*	Unk.*	1.00 @	297.0
TITANIUM DIOXIDE	*13463-67-7	8.17*	Not Est*	10.00*	Unk.*	Unknown	

THIS PRODUCT CONTAINS HAZARDOUS COMPONENTS WHICH MAY BECOME AIRBORNE AND RESULT IN EXPOSURE WHEN REMOVED BY ABRASIVE BLASTING, SANDING, OR GRINDING. VENTILATE AND AVOID BREATHING DUSTS.

**SECTION III — PHYSICAL DATA**

BOILING RANGE: HIGH 644.0 DF LOW 212.0 DF  
VAPOR PRESSURE: SEE SECTION II  
VAPOR DENSITY: LIGHTER THAN AIR  
EVAPORATION RATE: SLOWER THAN BUTYL ACETATE  
WEIGHT PER GALLON: 10.66 - 11.7  
% VOLATILE BY VOLUME: 51.0 - 55.9  
% VOLATILE BY WEIGHT: 36.2 - 44.1

**SECTION IV — FIRE AND EXPLOSION HAZARD DATA**

FLAMMABILITY CLASSIFICATION OSHA-CLASS III-B DOT - NOT REGULATED  
LOWEST FLASHPOINT T.C.C. 200.0 DF LOWER EXPLOSION LEVEL (LEL) 1.0%  
EXTINGUISHING MEDIA: ( ) FOAM ( ) CO2  
( ) DRY CHEMICAL (X) WATER FOG ( ) OTHER  
UNUSUAL FIRE AND EXPLOSION HAZARDS: MATERIALS WILL NOT SUSTAIN COMBUSTION UNLESS WATER HAS EVAPORATED. CLOSED CONTAINERS MAY EXPLODE FROM STEAM PRESSURE WHEN EXPOSED TO EXTREME HEAT.  
SPECIAL FIRE FIGHTING PROCEDURES: FIREFIGHTERS SHOULD WEAR SELF-CONTAINED BREATHING APPARATUS AS PROTECTION FROM HAZARDOUS COMBUSTION PRODUCTS.

**SECTION V — HEALTH HAZARD DATA**

EFFECTS OF OVEREXPOSURE: EXCESS INHALATION OF VOLATILIZED AMMONIA MAY PRODUCE HEADACHE, NAUSEA, IRRITATION TO RESPIRATORY TRACT. SKIN CONTACT MAY PRODUCE IRRITATION DUE TO SLIGHT ALKALINITY. PRESENCE OF VOLATILIZED AMMONIA COULD IRRITATE EYES. EXCESS INHALATION OF VOLATILIZED ETHYLENE GLYCOL MAY CAUSE IRRITATION OF THE NOSE AND THROAT WITH HEADACHE, NAUSEA, AND VOMITING. ETHYLENE GLYCOL CAN BE HARMFUL OR FATAL IF SWALLOWED. SEVERE KIDNEY DAMAGE FOLLOWS THE SWALLOWING OF LARGE AMOUNTS OF ETHYLENE GLYCOL. LIQUID, VAPOR, AND MIST MAY CAUSE EYE IRRITATION. CRYSTALLINE SILICA DUST CAN CAUSE UPPER RESPIRATORY IRRITATION AND IRRITATION TO EYES. PROLONGED OVEREXPOSURE TO SILICA DUST BY INHALATION MAY CAUSE DELAYED LUNG INJURY/DISEASE (SILICOSIS). ON THE



BASIS OF INITIAL EXPERIMENTAL TESTS IN ANIMALS AND LIMITED EPIDEMIOLOGICAL STUDIES IN HUMAN POPULATIONS, THE INTERNATIONAL AGENCY FOR RESEARCH ON CANCER (IARC) HAS CONCLUDED THAT THERE IS LIMITED EVIDENCE FOR THE CARCINOGENICITY OF CRYSTALLINE SILICA TO HUMANS. RATS EXPOSED TO TITANIUM DIOXIDE DUST AT 250 MG/M<sup>3</sup> DEVELOPED LUNG CANCER; HOWEVER, SUCH EXPOSURE LEVELS ARE NOT ATTAINABLE IN THE WORK PLACE.

PRIMARY ROUTE(S) OF EXPOSURE: (X) DERMAL (X) INHALATION ( ) INGESTION  
EMERGENCY AND FIRST AID PROCEDURES: FOR IRRITATION DUE TO INHALATION, REMOVE TO FRESH AIR. FOR EYE CONTACT, FLUSH WITH LARGE AMOUNTS OF WATER FOR 15 MINUTES. IN CASE OF INGESTION, DRINK 1-2 GLASSES OF WATER TO DILUTE. DO NOT INDUCE VOMITING. CONSULT PHYSICIAN OR POISON CONTROL CENTER IMMEDIATELY.  
MEDICAL CONDITIONS PRONE TO AGGRAVATION BY EXPOSURE: ETHYLENE GLYCOL MAY AGGRAVATE EXISTING KIDNEY DISEASE. INDIVIDUALS WITH PULMONARY AND/OR RESPIRATORY DISEASE INCLUDING, BUT NOT LIMITED TO, ASTHMA AND BRONCHITIS SHOULD NOT BE EXPOSED TO SILICA DUSTS.

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**SECTION VI — REACTIVITY DATA**

STABILITY: ( ) UNSTABLE (X) STABLE  
HAZARDOUS POLYMERIZATION ( ) MAY OCCUR (X) WILL NOT OCCUR  
HAZARDOUS DECOMPOSITION PRODUCTS: THE DRY PAINT FILM CAN BURN AND PRODUCE ONE OR MORE OF THE FOLLOWING:  
CARBON DIOXIDE, CARBON MONOXIDE, HYDROGEN CHLORIDE, AND/OR OXIDES OF NITROGEN.  
CONDITIONS TO AVOID: EXCESSIVE HEAT.  
INCOMPATIBILITY (MATERIALS TO AVOID): NONE REASONABLY FORESEEABLE.

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**SECTION VII — SPILL OR LEAK PROCEDURES**

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED: WEARING PROTECTIVE GLOVES, WIPE UP LIQUID MATERIAL WITH ABSORBENT CLOTH.  
WASTE DISPOSAL METHOD: DISPOSE OF IN ACCORDANCE WITH LOCAL, STATE, AND FEDERAL REGULATIONS.

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**SECTION VIII — SAFE HANDLING AND USE INFORMATION**

RESPIRATORY PROTECTION: IN RESTRICTED VENTILATION AREAS - APPROVED CHEMICAL/MECHANICAL FILTERS DESIGNED TO REMOVE PARTICULATES AND VAPOR.  
VENTILATION: PROVIDE AIR MOVEMENT TO REMOVE EXCESS VAPORS.  
PROTECTIVE GLOVES: REQUIRED FOR PROLONGED OR REPEATED CONTACT.  
EYE PROTECTION: SAFETY GLASSES.  
OTHER PROTECTIVE EQUIPMENT: NONE.  
HYGIENIC PRACTICES: WASH HANDS BEFORE EATING OR USING WASHROOM.

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**SECTION IX — SPECIAL PRECAUTIONS**

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORING: DO NOT STORE IN EXCESSIVE HEAT (ABOVE 120 DF). USE WITH ADEQUATE VENTILATION.  
OTHER PRECAUTIONS: AVOID CONTACT WITH EYES.

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**SECTION X — REGULATORY INFORMATION**

SARA TITLE III SECTION 313 SUPPLIER NOTIFICATION: THIS PRODUCT CONTAINS THE FOLLOWING TOXIC CHEMICALS SUBJECT TO THE REPORTING REQUIREMENTS OF SECTION 313 OF THE EMERGENCY PLANNING AND COMMUNITY RIGHT-TO-KNOW ACT OF 1986 AND OF 40 CFR 372:

CAS#	CHEMICAL NAME	PERCENT BY WEIGHT
107-21-1	ETHYLENE GLYCOL	<1.0 - 4.70%
	BARIUM COMPOUNDS	<1.0 - 2.11%
84-74-2	DIBUTYL PHTHALATE	<1.0 - 1.10%

THIS INFORMATION MUST BE INCLUDED IN ALL MSDS'S THAT ARE COPIED AND DISTRIBUTED FOR THIS MATERIAL.

**MATERIAL SAFETY DATA SHEET GROUP 17**

includes the following:  
07-440-PP 11-800-XX

**FOR COATINGS, RESINS, AND RELATED MATERIALS**  
DATE OF PREPARATION - 11/1/91

MANUFACTURER'S NAME: COLUMBIA PAINT COMPANY  
ADDRESS: NORTH 112 HAVEN STREET  
ADDRESS: P. O. BOX 4569  
CITY, STATE: SPOKANE, WA 99202

EMERGENCY TELEPHONE NO. DAY: 509-535-9741 NIGHT: 1-800-424-9300  
INFORMATION TELEPHONE NO. DAY: 509-535-9741 NIGHT: 1-800-424-9300

**SECTION I — PRODUCT IDENTIFICATION**

MANUFACTURER'S CODE IDENTIFICATION: SEE ABOVE  
PRODUCT CLASS: AROMATIC MOISTURE-CURE URETHANE RESIN COATING  
TRADE NAME: SEE TABLE OF CONTENTS  
HMIS INFORMATION\*\* HEALTH - 3 FLAMMABILITY - 3  
REACTIVITY - 1 PERSONAL PROTECTIVE EQUIPMENT - H

**SECTION II — HAZARDOUS INGREDIENTS**

INGREDIENT MATERIAL DESCRIPTION	CAS #	% BY WEIGHT	TLV - (TWA) PPM	MG/M3	LEL	VAPOR PRESS MMHG	DEG F
HIGH-BOILING AROMATIC HYDROCARBON	*64742-95-6	>1.0-17.83*	80.00*	Not Est*	1.0*	5.00 @	100.0
ALUMINUM PIGMENT	*7429905	>1.0-14.67*	Not Est*	10.00*	Unk.*	Unknown	
HIGH FLASH NAPHTHA	*68333880	>1.0-7.90*	100.00*	Not Est*	1.0*	5.00 @	100.0
XYLENE (MIXED ISOMERS)	*1330-20-7	>1.0-10.38*	100.00*	434.00*	1.0*	6.00 @	68.0
ETHYL BENZENE	*100414	>1.0-2.12*	100.00*	435.00*	1.2*	10.00 @	78.6
METHYLENE BISPHENYL ISOCYANATE (MDI)	*101688	>.10-9.53*	.01*	.05*	Unk.*	Unknown	
N-BUTYL ACETATE	*123864	>1.0-12.50*	150.00*	710.00*	1.4*	8.00 @	68.0
HEXAMETHYLENE DIISOCYANATE (HDI)	*822060	>.10-1.20*	.01*	.03*	Unk.*	.02 @	68.0
HEXAMETHYLENE DIISO- CYANATE HOMOPOLYMER	*28182812	>.10-73.80*	Not Est*	1.00*	Unk.*	Unknown	

THIS PRODUCT CONTAINS HAZARDOUS COMPONENTS WHICH MAY BECOME AIRBORNE AND RESULT IN EXPOSURE WHEN REMOVED BY ABRASIVE BLASTING, SANDING, OR GRINDING. VENTILATE AND AVOID BREATHING DUSTS.

**SECTION III — PHYSICAL DATA**

BOILING RANGE: HIGH 350.0 DF LOW 277.0 DF  
VAPOR PRESSURE: SEE SECTION II  
VAPOR DENSITY: HEAVIER THAN AIR  
EVAPORATION RATE: SLOWER THAN BUTYL ACETATE  
WEIGHT PER GALLON: 8.8 - 9.2  
% VOLATILE BY VOLUME: 29.4 - 41.9  
% VOLATILE BY WEIGHT: 25.0 - 35.4

**SECTION IV — FIRE AND EXPLOSION HAZARD DATA**

FLAMMABILITY CLASSIFICATION OSHA-CLASS IC DOT - FLAMMABLE LIQUID  
LOWEST FLASHPOINT T.C.C. 98.0 DF LOWER EXPLOSION LEVEL (LEL) 1.0%  
EXTINGUISHING MEDIA: ( ) FOAM ( ) ALCOHOL FOAM ( ) CO2  
(X) DRY CHEMICAL ( ) WATER FOG ( ) OTHER

UNUSUAL FIRE AND EXPLOSION HAZARDS: KEEP AWAY FROM HEAT, SPARKS, AND FLAME. VAPORS MAY IGNITE EXPLOSIVELY. VAPORS MAY SPREAD LONG DISTANCES. PREVENT BUILDUP OF VAPORS. EXTINGUISH ALL PILOT LIGHTS AND TURN OFF HEATERS, NON-EXPLOSION PROOF ELECTRICAL EQUIPMENT, AND ALL OTHER SOURCES OF IGNITION UNTIL VAPORS ARE GONE. IN CLOSED CONTAINERS, PRESSURE BUILDUP MAY OCCUR DUE TO HEAT EXPOSURE. WATER CONTAMINATION MAY INCREASE THIS TENDENCY DUE TO CARBON DIOXIDE AND/OR HYDROGEN EVOLUTION. DURING EMERGENCY CONDITIONS, OVEREXPOSURE TO DECOMPOSITION PRODUCTS MAY CAUSE A HEALTH HAZARD. SYMPTOMS MAY NOT BE IMMEDIATELY APPARENT. OBTAIN MEDICAL ATTENTION. (SEE SECTION VI).

SPECIAL FIRE FIGHTING PROCEDURES: DO NOT USE A WATER STREAM. DO NOT USE HALOGENATED EXTINGUISHING AGENTS, LIKE HALON OR CARBON TETRACHLORIDE. CARE SHOULD BE USED WHEN APPLYING A CLASS B EXTINGUISHING AGENT AS SOME AGENTS CAN ACCELERATE A FIRE WHEN MOST OF THE SOLVENT HAS BEEN CONSUMED AND THE ALUMINUM FLAKE HAS STARTED TO BURN. ISOLATE THE FIRE BY RINGING IT WITH A DRY, INERT GRANULAR MATERIAL, OR CLASS D EXTINGUISHING AGENT, THEN LET IT ALONE. ALLOW THE MATERIAL TO BECOME COLD BEFORE DISPOSAL, SINCE METAL MAY CONTINUE TO BURN UNDER A CRUST WITHOUT FLAME. FULL PROTECTIVE EQUIPMENT IS RECOMMENDED, INCLUDING SELF-CONTAINED BREATHING APPARATUS, TO PROTECT FIREFIGHTERS FROM HAZARDOUS COMBUSTION PRODUCTS. NO SKIN SURFACE SHOULD BE EXPOSED.

## SECTION V — HEALTH HAZARD DATA

EFFECTS OF OVEREXPOSURE: OVEREXPOSURE VIA INHALATION CAN CAUSE CENTRAL NERVOUS SYSTEM DEPRESSION WITH SYMPTOMS RANGING FROM HEADACHES, DIZZINESS, LOSS OF COORDINATION, TO UNCONSCIOUSNESS. DELIBERATELY BREATHING CONCENTRATED SOLVENT VAPOR (GLUE-SNIFFING) CAN RESULT IN PERMANENT BRAIN AND NERVOUS SYSTEM DAMAGE OR DEATH. ISOCYANATE OVER-EXPOSURE MAY IRRITATE MUCOUS MEMBRANES OF THE RESPIRATORY TRACT, CAUSING RUNNY NOSE, DRYNESS OF THROAT, COUGHING, TIGHTNESS IN CHEST, LABORED BREATHING, OR BURNING SENSATION. EXTENSIVE EXPOSURES TO ISOCYANATE LEVELS ABOVE TLV COULD LEAD TO BRONCHITIS, BRONCHIAL SPASM, AND PULMONARY EDEMA. INGESTION MAY RESULT IN GASTROINTESTINAL IRRITATION, NAUSEA, VOMITING, AND/OR DIARRHEA. EYE CONTACT CAN CAUSE SEVERE IRRITATION, REDNESS, TEARING, AND BLURRED VISION, AND POSSIBLE CORNEAL INJURY. PROLONGED OR REPEATED SKIN CONTACT WILL DRY AND DEFEAT THE SKIN, LEADING TO IRRITATION AND DERMATITIS. <CHRONIC EFFECTS> REPEATED OVEREXPOSURE TO SOLVENT VAPORS MAY RESULT IN ONE OR MORE OF THE FOLLOWING: CENTRAL NERVOUS SYSTEM, BLOOD, LIVER, AND/OR KIDNEY INJURY, HEARING LOSS. ISOCYANATES CAN CAUSE LUNG SENSITIZATION. AN ALLERGIC RESPIRATORY REACTION INCLUDING CHEST TIGHTNESS, RESPIRATORY DISTRESS, OR ASTHMATIC ATTACK MAY OCCUR IN SENSITIZED INDIVIDUALS WHEN EXPOSURE TO THE ISOCYANATE IS BELOW THE TLV. CAN CAUSE LUNG INJURY. PROLONGED OR REPEATED CONTACT WITH THE SKIN CAN PRODUCE SKIN SENSITIZATION IN SOME INDIVIDUALS RESULTING IN ALLERGIC DERMATITIS WHICH MAY INCLUDE ITCHING, RASH, HIVES, AND SWELLING OF EXTREMITIES.

PRIMARY ROUTE(S) OF ENTRY: (X) - DERMAL (X) - INHALATION ( ) - INGESTION

EMERGENCY AND FIRST AID PROCEDURES: IF OVERCOME BY VAPOR, REMOVE FROM EXPOSURE IMMEDIATELY; CALL A PHYSICIAN. IF BREATHING IS IRREGULAR OR STOPPED, START RESUSCITATION, ADMINISTER OXYGEN. TREAT ANY ASTHMATIC-TYPE REACTIONS SYMPTOMATICALLY. IF INGESTED, DO NOT INDUCE VOMITING; CALL A PHYSICIAN. IF SPLASHED INTO THE EYES, FLUSH EYES WITH CLEAR WATER FOR 15 MINUTES OR UNTIL IRRITATION SUBSIDES; CONSULT A PHYSICIAN AS MAY BE REQUIRED. IN CASE OF SKIN CONTACT, REMOVE ANY CONTAMINATED CLOTHING AND WASH SKIN WITH SOAP AND WARM WATER.

MEDICAL CONDITIONS PRONE TO AGGRAVATION BY EXPOSURE: ASTHMATIC-TYPE CONDITIONS, CHRONIC BRONCHITIS, OTHER CHRONIC RESPIRATORY DISEASES, DIAGNOSED ISOCYANATE SENSITIVITY, RECURRENT SKIN ECZEMA OR SENSITIZATION.

## SECTION VI — REACTIVITY DATA

STABILITY: ( ) - UNSTABLE (X) - STABLE

HAZARDOUS POLYMERIZATION ( ) - MAY OCCUR (X) - WILL NOT OCCUR

HAZARDOUS DECOMPOSITION PRODUCTS: FUMES PRODUCED WHEN HEATED TO DECOMPOSITION, SUCH AS IN WELDING, MAY INCLUDE ONE OR MORE OF THE FOLLOWING: CARBON DIOXIDE, CARBON MONOXIDE, OXIDES OF NITROGEN, ALUMINUM OXIDE, ALUMINUM NITRIDE, ISOCYANATE MONOMER (SEE SECTION III), AND/OR TRACES OF HYDROGEN CYANIDE.

CONDITIONS TO AVOID: HIGH TEMPERATURES OR DIRECT HEATING.

INCOMPATIBILITY (MATERIALS TO AVOID): OXYGEN AND STRONG OXIDANTS, STRONG BASES, WATER, ALCOHOLS, AMINES, METAL COMPOUNDS, SURFACE ACTIVE MATERIALS, PHOSPHOROUS CONTAINING MATERIALS, CHLORINATED HYDROCARBONS.

## SECTION VII — SPILL OR LEAK PROCEDURES

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED: REMOVE ALL SOURCES OF IGNITION. PROVIDE VENTILATION AND FULL PROTECTIVE EQUIPMENT. CONTAIN AND COVER SPILL WITH INERT ABSORBENT MATERIAL; POUR LIQUID DECONTAMINANT OVER SPILLAGE AND ALLOW TO REACT AT LEAST 10 MIN.; COLLECT MATERIAL WITH NON-SPARKING TOOLS INTO OPEN CONTAINERS AND ADD FURTHER AMOUNTS OF DECONTAMINATION SOLUTION; COVER LOOSELY. WASH DOWN AREA WITH DECONTAMINANT AND FLUSH WITH WATER. \*DECONTAMINATION SOLUTIONS: AMMONIUM HYDROXIDE (0-10%), DETERGENT (2-5%), AND BALANCE WATER; OR SOLUTION OF UNION CARBIDE'S TERGITOL TMN-10 (20%) AND WATER (80%). WASTE DISPOSAL METHOD: DO NOT CLOSE CONTAINERS OF DECONTAMINATED MATERIAL UNTIL THE EVOLUTION OF CARBON DIOXIDE IS COMPLETE. INCINERATE OPENED CONTAINERS IN AN APPROVED FACILITY OR USE SECURE LANDFILL IN ACCORDANCE WITH LOCAL, STATE, AND FEDERAL REGULATIONS.

## SECTION VIII — SAFE HANDLING AND USE INFORMATION

RESPIRATORY PROTECTION: USE RESPIRATOR THAT IS RECOMMENDED OR APPROVED FOR USE IN ISOCYANATE CONTAINING ENVIRONMENTS (AIR PURIFYING OR FRESH AIR SUPPLIED). CONSIDER TYPE OF APPLICATION AND ENVIRONMENTAL CONCENTRATIONS. IN SPRAY APPLICATION YOU MUST PROTECT AGAINST EXPOSURE TO BOTH VAPOR AND SPRAY MIST. OBSERVE OSHA REGULATIONS FOR RESPIRATOR USE (29 CFR 1910.134). WHEN THE AIRBORNE ISOCYANATE MONOMER CONCENTRATIONS ARE KNOWN TO BE BELOW 0.2 PPM AND IF THE POLYISOCYANATE (POLYMERIC, OLIGOMER) CONCENTRATIONS ARE KNOWN TO BE BELOW 10 MG/M3, A PROPERLY FITTED AIR-PURIFYING (COMBINATION ORGANIC VAPOR AND PARTICULATE) RESPIRATOR, PROVEN BY TEST TO BE EFFECTIVE IN ISOCYANATE-CONTAINING SPRAY PAINT ENVIRONMENTS, WILL PROVIDE SUFFICIENT PROTECTION. WHEN THE AIRBORNE ISOCYANATE CONCENTRATIONS ARE NOT KNOWN, OR IF EITHER OF THE ABOVE GUIDELINES IS EXCEEDED, OR IF SPRAYING IS PERFORMED IN A CONFINED SPACE OR AREA WITH LIMITED VENTILATION, THE USE OF A POSITIVE PRESSURE AIR-SUPPLIED RESPIRATOR IS MANDATORY. \*NOTE\* EVEN DURING NON-SPRAY OPERATIONS SUCH AS MIXING, BRUSH OR ROLLER APPLICATION, IT IS POSSIBLE TO BE EXPOSED TO SOLVENT OR ISOCYANATE VAPORS. UNLESS CONCENTRATIONS ARE KNOWN TO BE BELOW TLV'S, THE ABOVE GUIDELINES SHOULD STILL BE FOLLOWED.

VENTILATION: ALL APPLICATION AREAS SHOULD BE VENTILATED IN ACCORDANCE WITH OSHA REGULATIONS. POCKETS OF HEAVY AND/OR FLAMMABLE VAPOR MUST NOT BE PERMITTED TO FORM; VENTILATION AND RESPIRATORY PROTECTION MUST BE ADEQUATE TO PREVENT THE TLV'S OF HAZARDOUS INGREDIENTS FROM BEING EXCEEDED.

SKIN PROTECTION: CHEMICAL RESISTANT GLOVES. COVER AS MUCH OF EXPOSED SKIN AREA AS POSSIBLE WITH APPROPRIATE CLOTHING.

EYE PROTECTION: USE SAFETY EYEWEAR WITH SPLASH GUARDS OR SIDE SHIELDS.

OTHER PROTECTIVE MEASURES: USE PROTECTIVE APRON OR CLOTHING. EYE WASH STATION AND SAFETY SHOWERS SHOULD BE AVAILABLE.

HYGIENIC PRACTICES: WASH HANDS BEFORE EATING OR USING WASHROOM. SMOKE IN SMOKING AREAS ONLY.

## SECTION IX — SPECIAL PRECAUTIONS

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORING: DO NOT STORE OR USE NEAR HEAT, SPARKS, OR FLAME. NO SMOKING OR OPEN LIGHTS. STORE IN TIGHTLY CLOSED CONTAINER AND PROTECT FROM MOISTURE AND FOREIGN MATERIALS. IF CONTAMINANTS ENTER CONTAINER, PRESSURE CAN BUILD UP DUE TO REACTION PRODUCING CARBON DIOXIDE AND HYDROGEN WHICH CAN CAUSE SEALED CONTAINER TO PRESSURIZE AND BURST. DO NOT RESEAL IF CONTAMINATION IS SUSPECTED.

OTHER PRECAUTIONS: AVOID CONTACT WITH EYES. AVOID PROLONGED OR REPEATED CONTACT WITH SKIN. AVOID PROLONGED OR REPEATED BREATHING OF VAPORS.

## SECTION X — REGULATORY INFORMATION

SARA TITLE III SECTION 313 SUPPLIER NOTIFICATION: THIS PRODUCT CONTAINS THE FOLLOWING TOXIC CHEMICALS SUBJECT TO THE REPORTING REQUIREMENTS OF SECTION 313 OF THE EMERGENCY PLANNING AND COMMUNITY RIGHT-TO-KNOW ACT OF 1986 AND OF 40 CFR 372:

CAS#	CHEMICAL NAME	PERCENT BY WEIGHT
7429-90-5	ALUMINUM (FUME OR DUST)	>1.0 - 16.93%
1330-20-7	XYLENE (MIXED ISOMERS)	>1.0 - 10.38%
100-41-4	ETHYL BENZENE	>1.0 - 2.12%
101-68-8	4,4-DIPHENYLMETHANE DIISOCYANATE	>.10 - 8.10%

THIS INFORMATION MUST BE INCLUDED IN ALL MSDS'S THAT ARE COPIED AND DISTRIBUTED FOR THIS MATERIAL.

**MATERIAL SAFETY DATA SHEET GROUP 18**

includes the following:  
88-645-02

**FOR COATINGS, RESINS, AND RELATED MATERIALS**  
DATE OF PREPARATION - 11/1/91

MANUFACTURER'S NAME: COLUMBIA PAINT COMPANY  
ADDRESS: NORTH 112 HAVEN STREET  
ADDRESS: P. O. BOX 4569  
CITY, STATE: SPOKANE, WA 99202

EMERGENCY TELEPHONE NO. DAY: 509-535-9741 NIGHT: 1-800-424-9300  
INFORMATION TELEPHONE NO. DAY: 509-535-9741 NIGHT: 1-800-424-9300

**SECTION I — PRODUCT IDENTIFICATION**

MANUFACTURER'S CODE IDENTIFICATION: SEE ABOVE  
PRODUCT CLASS: OIL/ALKYD RESIN PRIMER COATING  
TRADE NAME: SEE TABLE OF CONTENTS  
HMIS INFORMATION\*\* HEALTH - 2 FLAMMABILITY - 2  
REACTIVITY - 1 PERSONAL PROTECTIVE EQUIPMENT - J

**SECTION II — HAZARDOUS INGREDIENTS**

INGREDIENT MATERIAL DESCRIPTION	CAS #	% BY WEIGHT	TLV - (TWA) PPM	MG/M3	LEL	VAPOR PRESS MMHG	DEG F.
MINERAL SPIRITS	*8052-41-3	20.98*	100.00*	Not Est*	1.0*	2.00 @	68.0
BASIC ZINC MOLYBDATE	*13767-32-3	20.94*	Not Est*	15.00*	Unk.*		Unknown
CRYSTALLINE SILICA (AS QUARTZ)	*14808-60-7	.18*	Not Est*	.10*	Unk.*		Unknown

THIS PRODUCT CONTAINS HAZARDOUS COMPONENTS WHICH MAY BECOME AIRBORNE AND RESULT IN EXPOSURE WHEN REMOVED I ABRASIVE BLASTING, SANDING, OR GRINDING. VENTILATE AND AVOID BREATHING DUSTS.

**SECTION III — PHYSICAL DATA**

BOILING RANGE: HIGH 399.0 DF LOW 305.0 DF  
VAPOR PRESSURE: SEE SECTION II  
VAPOR DENSITY: HEAVIER THAN AIR  
EVAPORATION RATE: SLOWER THAN BUTYL ACETATE  
WEIGHT PER GALLON: 13.4  
% VOLATILE BY VOLUME: 43.8  
% VOLATILE BY WEIGHT: 21.6  
APPEARANCE - ODOR: LIGHT YELLOW LIQUID  
PH - SOLUBILITY: INSOLUBLE IN WATER

**SECTION IV — FIRE AND EXPLOSION HAZARD DATA**

FLAMMABILITY CLASSIFICATION OSHA-CLASS II DOT - COMBUSTIBLE LIQUID  
LOWEST FLASHPOINT T.C.C. 106.0 DF LOWER EXPLOSION LEVEL (LEL) 1.0%  
EXTINGUISHING MEDIA: (X) FOAM ( ) ALCOHOL FOAM (X) CO2  
(X) DRY CHEMICAL ( ) WATER FOG ( ) OTHER

UNUSUAL FIRE AND EXPLOSION HAZARDS: ISOLATE FROM HEAT, SPARKS, ELECTRICAL EQUIPMENT, AND OPEN FLAME. IN CLOSED CONTAINERS, PRESSURE BUILDUP MAY OCCUR DUE TO HEAT EXPOSURE. DURING EMERGENCY CONDITIONS, OVEREXPOSURE DECOMPOSITION PRODUCTS MAY CAUSE A HEALTH HAZARD. SYMPTOMS MAY NOT BE IMMEDIATELY APPARENT. OBTAIN MEDIC ATTENTION. (SEE SECTION VI).

SPECIAL FIRE FIGHTING PROCEDURES: WATER SPRAY MAY BE INEFFECTIVE. HOWEVER, WATER MAY BE USED TO COOL CLOSED CONTAINERS TO PREVENT PRESSURE BUILDUP. FULL PROTECTIVE EQUIPMENT RECOMMENDED INCLUDING SELF-CONTAINED BREATHING APPARATUS, TO PROTECT FIREFIGHTERS FROM HAZARDOUS COMBUSTION PRODUCTS.

**SECTION V — HEALTH HAZARD DATA**

EFFECTS OF OVEREXPOSURE: OVEREXPOSURE VIA INHALATION CAN CAUSE CENTRAL NERVOUS SYSTEM DEPRESSION WITH SYMPTOMS RANGING FROM HEADACHES, DIZZINESS, LOSS OF COORDINATION, TO UNCONSCIOUSNESS. DELIBERATELY BREATHING CONCENTRATED SOLVENT VAPOR (GLUE SNIFFING) CAN RESULT IN PERMANENT BRAIN AND NERVOUS SYSTEM DAMAGE OR DEATH. INGESTION MAY RESULT IN GASTROINTESTINAL IRRITATION, NAUSEA, VOMITING, AND/OR DIARRHEA. EYE CONTACT CAN CAUSE SEVERE IRRITATION, REDNESS, TEARING, AND BLURRED VISION. PROLONGED OR REPEATED SKIN CONTACT WILL DRY A DEFAT THE SKIN, LEADING TO IRRITATION AND DERMATITIS. <CHRONIC EFFECTS> REPEATED OVEREXPOSURE TO SOLVENT VAPORS MAY RESULT IN ONE OR MORE OF THE FOLLOWING: CENTRAL NERVOUS SYSTEM, BLOOD, LIVER, AND/OR KIDNEY INJUF HEARING LOSS. CRYSTALLINE SILICA DUST CAN CAUSE UPPER RESPIRATORY IRRITATION AND IRRITATION TO EYES. PROLONG OVEREXPOSURE TO SILICA DUST BY INHALATION MAY CAUSE DELAYED LUNG INJURY/DISEASE (SILICOSIS). ON THE BASIS OF INITIAL EXPERIMENTAL TESTS IN ANIMALS AND LIMITED EPIDEMIOLOGICAL STUDIES IN HUMAN POPULATIONS, THE INTERNATIONAL AGENCY FOR RESEARCH ON CANCER (IARC) HAS CONCLUDED THAT THERE IS LIMITED EVIDENCE FOR THE CARCINOGENICITY O CRYSTALLINE SILICA TO HUMANS.

PRIMARY ROUTE(S) OF ENTRY: (X) - DERMAL (X) - INHALATION ( ) - INGESTION  
EMERGENCY AND FIRST AID PROCEDURES: IF OVERCOME BY VAPOR, REMOVE FROM EXPOSURE IMMEDIATELY; CALL A PHYSICIAN. BREATHING IS IRREGULAR OR STOPPED, START RESUSCITATION, ADMINISTER OXYGEN. IF INGESTED, DO NOT INDUCE VOMITIN

CALL A PHYSICIAN. IF SPLASHED INTO THE EYES, FLUSH EYES WITH CLEAR WATER FOR 15 MINUTES OR UNTIL IRRITATION SUBSIDES; CONSULT A PHYSICIAN AS MAY BE REQUIRED. IN CASE OF SKIN CONTACT, REMOVE ANY CONTAMINATED CLOTHING AND WASH SKIN WITH SOAP AND WARM WATER.  
MEDICAL CONDITIONS PRONE TO AGGRAVATION BY EXPOSURE: PRE-EXISTING SKIN DISORDERS, CHRONIC RESPIRATORY DISEASES, INDIVIDUALS WITH PULMONARY AND/OR RESPIRATORY DISEASE INCLUDING, BUT NOT LIMITED TO, ASTHMA AND BRONCHITIS SHOULD NOT BE EXPOSED TO SILICA DUSTS.

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**SECTION VI — REACTIVITY DATA**

STABILITY: ( ) - UNSTABLE (X) - STABLE  
HAZARDOUS POLYMERIZATION ( ) - MAY OCCUR (X) - WILL NOT OCCUR  
HAZARDOUS DECOMPOSITION PRODUCTS: FUMES PRODUCED WHEN HEATED TO DECOMPOSITION, SUCH AS IN WELDING, MAY INCLUDE ONE OR MORE OF THE FOLLOWING: CARBON DIOXIDE, CARBON MONOXIDE, ACROLEIN, HYDROGEN CHLORIDE, OXIDES OF NITROGEN.  
CONDITIONS TO AVOID: HIGH TEMPERATURES OR DIRECT HEATING.  
INCOMPATIBILITY (MATERIALS TO AVOID): OXYGEN AND STRONG OXIDANTS, STRONG ACIDS, STRONG BASES, AND AMINES. WILL DISSOLVE OR SOFTEN SOME PLASTICS AND RUBBER.

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**SECTION VII — SPILL OR LEAK PROCEDURES**

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED: REMOVE ALL SOURCES OF IGNITION (FLAME, HOT SURFACES, AND ELECTRICAL, STATIC, OR FRICTIONAL SPARKS). VENTILATE AREA, CONTAIN AND REMOVE WITH INERT ABSORBENT AND NON-SPARKING TOOLS. REFER TO OTHER HAZARD CAUTIONS CONTAINED ON THIS SHEET BEFORE ATTEMPTING CLEAN-UP.  
WASTE DISPOSAL METHOD: DISPOSE IN ACCORDANCE WITH LOCAL, STATE, AND FEDERAL REGULATIONS. DO NOT INCINERATE CLOSED CONTAINERS.

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**SECTION VIII — SAFE HANDLING AND USE INFORMATION**

RESPIRATORY PROTECTION: IN OUTDOOR, OPEN AREAS OR IN RESTRICTED VENTILATION AREAS, USE APPROVED CHEMICAL/MECHANICAL FILTERS DESIGNED TO REMOVE A COMBINATION OF PARTICULATE GAS AND VAPOR. TLV'S MUST NOT BE EXCEEDED. IN CONFINED AREAS, USE APPROVED AIR LINE TYPE RESPIRATORS OR HOODS.  
VENTILATION: ALL APPLICATION AREAS SHOULD BE VENTILATED IN ACCORDANCE WITH OSHA REGULATIONS. POCKETS OF HEAVY AND/OR FLAMMABLE VAPOR MUST NOT BE PERMITTED TO FORM. VENTILATION AND RESPIRATORY PROTECTION MUST BE ADEQUATE TO PREVENT THE TLV'S OF HAZARDOUS INGREDIENTS FROM BEING EXCEEDED.  
PROTECTIVE GLOVES: REQUIRED FOR PROLONGED OR REPEATED CONTACT.  
EYE PROTECTION: USE SAFETY EYEWEAR WITH SPLASH GUARDS OR SIDE SHIELDS.  
OTHER PROTECTIVE EQUIPMENT: USE PROTECTIVE APRON OR CLOTHING.  
HYGIENIC PRACTICES: WASH HANDS BEFORE EATING OR USING WASHROOM. SMOKE IN SMOKING AREAS ONLY.

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**SECTION IX — SPECIAL PRECAUTIONS**

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORING: DO NOT STORE OR USE NEAR HEAT, SPARKS, OR FLAME. NO SMOKING OR OPEN LIGHTS.  
OTHER PRECAUTIONS: AVOID CONTACT WITH EYES. AVOID PROLONGED OR REPEATED CONTACT WITH SKIN. AVOID PROLONGED OR REPEATED BREATHING OF VAPORS. STORE IN SEALED CONTAINERS AWAY FROM SPACE HEATING EQUIPMENT.

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**SECTION X — REGULATORY INFORMATION**

SARA TITLE III SECTION 313 SUPPLIER NOTIFICATION: THIS PRODUCT CONTAINS THE FOLLOWING TOXIC CHEMICALS SUBJECT TO THE REPORTING REQUIREMENTS OF SECTION 313 OF THE EMERGENCY PLANNING AND COMMUNITY RIGHT-TO-KNOW ACT OF 1986 AND OF 40 CFR 372:

CAS#	CHEMICAL NAME	PERCENT BY WEIGHT
	ZINC COMPOUNDS	20.94%

THIS INFORMATION MUST BE INCLUDED IN ALL MSDS'S THAT ARE COPIED AND DISTRIBUTED FOR THIS MATERIAL.

**MATERIAL SAFETY DATA SHEET GROUP 19**

includes the following:  
11-905-XX

**FOR COATINGS, RESINS, AND RELATED MATERIALS**  
DATE OF PREPARATION - 11/1/91

MANUFACTURER'S NAME: COLUMBIA PAINT COMPANY  
ADDRESS: NORTH 112 HAVEN STREET  
ADDRESS: P. O. BOX 4569  
CITY, STATE: SPOKANE, WA 99202

EMERGENCY TELEPHONE NO. DAY: 509-535-9741 NIGHT: 1-800-424-9300  
INFORMATION TELEPHONE NO. DAY: 509-535-9741 NIGHT: 1-800-424-9300

**SECTION I — PRODUCT IDENTIFICATION**

MANUFACTURER'S CODE IDENTIFICATION: SEE ABOVE

PRODUCT CLASS: ORGANIC SOLVENT BLEND

TRADE NAME: SEE TABLE OF CONTENTS

HMS INFORMATION\*\*

HEALTH - 2  
REACTIVITY - 1

FLAMMABILITY - 3

PERSONAL PROTECTIVE EQUIPMENT - H

**SECTION II — HAZARDOUS INGREDIENTS**

INGREDIENT MATERIAL DESCRIPTION	CAS #	% BY WEIGHT	TLV - (TWA) PPM	TLV - (TWA) MG/M3	LEL	VAPOR PRESS MMHG	DEG F.
1-METHOXY-2-ACETOXY PROPANE	*108656	4.00*	Not Est*	Not Est*	1.3*	3.70 @	68.0
TOLUENE	*108883	27.00*	100.00*	375.00*	1.2*	22.00 @	68.0
METHANOL -exposure contrb via skin	*67561	2.00*	200.00*	260.00*	6.0*	100.00 @	68.0
ACETONE	*67641	46.00*	750.00*	1780.00*	2.6*	184.00 @	68.0
VM&P NAPHTHA	*8030306	16.00*	300.00*	1350.00*	1.0*	26.00 @	77.0
XYLENE (MIXED ISOMERS)	*1330-20-7	4.15*	100.00*	434.00*	1.0*	6.00 @	68.0

**SECTION III — PHYSICAL DATA**

BOILING RANGE: HIGH 312.0 DF LOW 133.0 DF  
VAPOR PRESSURE: SEE SECTION II  
VAPOR DENSITY: HEAVIER THAN AIR  
EVAPORATION RATE: SLOWER THAN BUTYL ACETATE  
WEIGHT PER GALLON: 6.8  
% VOLATILE BY VOLUME: 100.0  
% VOLATILE BY WEIGHT: 100.0

**SECTION IV — FIRE AND EXPLOSION HAZARD DATA**

FLAMMABILITY CLASSIFICATION: OSHA-CLASS IB DOT - FLAMMABLE LIQUID  
LOWEST FLASHPOINT T.C.C.: 25.0 DF LOWER EXPLOSION LEVEL (LEL): 1.0%  
EXTINGUISHING MEDIA: (X) FOAM (X) ALCOHOL FOAM (X) CO2  
(X) DRY CHEMICAL (X) WATER FOG ( ) OTHER

UNUSUAL FIRE AND EXPLOSION HAZARDS: KEEP AWAY FROM HEAT, SPARKS, AND FLAME. VAPORS MAY IGNITE EXPLOSIVELY. VAPORS MAY SPREAD LONG DISTANCES. PREVENT BUILDUP OF VAPORS. EXTINGUISH ALL PILOT LIGHTS, AND TURN OFF HEATERS, NON-EXPLOSION PROOF ELECTRICAL EQUIPMENT, AND ALL OTHER SOURCES OF IGNITION UNTIL VAPORS ARE GONE. IN CLOSED CONTAINERS, PRESSURE BUILDUP MAY OCCUR DUE TO HEAT EXPOSURE. DURING EMERGENCY CONDITIONS, OVEREXPOSURE TO DECOMPOSITION PRODUCTS MAY CAUSE A HEALTH HAZARD. SYMPTOMS MAY NOT BE IMMEDIATELY APPARENT. OBTAIN MEDICAL ATTENTION. (SEE SECTION VI).

SPECIAL FIRE FIGHTING PROCEDURES: WATER SPRAY MAY BE USED TO COOL CLOSED CONTAINERS TO PREVENT PRESSURE BUILDUP. FULL PROTECTIVE EQUIPMENT RECOMMENDED, INCLUDING SELF-CONTAINED BREATHING APPARATUS, TO PROTECT FIREFIGHTERS FROM HAZARDOUS COMBUSTION PRODUCTS.

**SECTION V — HEALTH HAZARD DATA**

EFFECTS OF OVEREXPOSURE: OVEREXPOSURE VIA INHALATION CAN CAUSE CENTRAL NERVOUS SYSTEM DEPRESSION WITH SYMPTOMS RANGING FROM HEADACHES, DIZZINESS, LOSS OF COORDINATION, TO UNCONSCIOUSNESS. DELIBERATELY BREATHING CONCENTRATED SOLVENT VAPOR (GLUE SNIFFING) CAN RESULT IN PERMANENT BRAIN AND NERVOUS SYSTEM DAMAGE OR DEATH. INGESTION MAY RESULT IN GASTROINTESTINAL IRRITATION, NAUSEA, VOMITING, AND/OR DIARRHEA. INGESTION OF A LARGE QUANTITY OF THIS MATERIAL WILL RESULT IN METHYL ALCOHOL POISONING. IN THIS CASE, SHORTNESS OF BREATH, CONFUSION, DRUNKEN BEHAVIOR, VISUAL DISTURBANCES, DROWSINESS, COMA, AND DEATH MAY RESULT. VISUAL EFFECTS INCLUDE BLURRED VISION, DIPLOPIA, CHANGES IN COLOR PERCEPTION, RESTRICTION OF VISUAL FIELDS AND COMPLETE BLINDNESS. INGESTION OF MODERATE QUANTITIES OF METHANOL ALSO PRODUCES ACIDOSIS. ONSET OF SYMPTOMS MAY BE DELAYED UP TO 24 HOURS. EYE CONTACT CAN CAUSE SEVERE IRRITATION, REDNESS, TEARING, AND BLURRED VISION. PROLONGED OR REPEATED SKIN CONTACT WILL DRY AND DEFAT THE SKIN, LEADING TO IRRITATION AND DERMATITIS. <CHRONIC EFFECTS>  
REPEATED OVEREXPOSURE TO SOLVENT VAPOR MAY RESULT IN ONE OR MORE OF THE FOLLOWING: CENTRAL NERVOUS SYSTEM

BLOOD, LIVER, AND/OR KIDNEY INJURY, HEARING LOSS. LONG-TERM EXPOSURE TO >1000 PPM METHANOL VAPOR MAY PRODUCE IMPAIRMENT OF VISION.  
 EMERGENCY AND FIRST AID PROCEDURES: IF OVERCOME BY VAPOR, REMOVE FROM EXPOSURE IMMEDIATELY; CALL A PHYSICIAN. IF BREATHING IS IRREGULAR OR STOPPED, START RESUSCITATION, ADMINISTER OXYGEN. IF INGESTED, IMMEDIATELY GIVE 2 GLASSES OF WATER; CALL A PHYSICIAN, HOSPITAL, E.R. OR POISON CONTROL CENTER FOR VOMITING INSTRUCTIONS. IF SPLASHED INTO THE EYES, FLUSH EYES WITH CLEAR WATER FOR 15 MINUTES OR UNTIL IRRITATION SUBSIDES; CONSULT A PHYSICIAN AS REQUIRED. IN CASE OF SKIN CONTACT, REMOVE ANY CONTAMINATED CLOTHING AND WASH SKIN WITH SOAP AND WARM WATER.  
 PRIMARY ROUTE(S) OF EXPOSURE: (X) - DERMAL (X) - INHALATION ( ) - INGESTION  
 MEDICAL CONDITIONS PRONE TO AGGRAVATION BY EXPOSURE: PRE-EXISTING SKIN OR EYE DISORDERS, CHRONIC RESPIRATORY DISEASES.

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**SECTION VI — REACTIVITY DATA**

STABILITY: ( ) - UNSTABLE (X) - STABLE  
 HAZARDOUS POLYMERIZATION ( ) - MAY OCCUR (X) - WILL NOT OCCUR  
 HAZARDOUS DECOMPOSITION PRODUCTS: FUMES PRODUCED WHEN HEATED TO DECOMPOSITION, SUCH AS IN WELDING, MAY INCLUDE ONE OR MORE OF THE FOLLOWING: CARBON DIOXIDE, CARBON MONOXIDE, ACRYLEIN, HYDROGEN CHLORIDE, OXIDES OF NITROGEN.  
 CONDITIONS TO AVOID: HIGH TEMPERATURES OR DIRECT HEATING.  
 INCOMPATIBILITY (MATERIALS TO AVOID): OXYGEN AND STRONG OXIDANTS, STRONG ACIDS, STRONG BASES, AND AMINES. WILL DISSOLVE OR SOFTEN SOME PLASTICS AND RUBBER.

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**SECTION VII — SPILL OR LEAK PROCEDURES**

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED: REMOVE ALL SOURCES OF IGNITION (FLAME, HOT SURFACES, AND ELECTRICAL, STATIC, OR FRICTIONAL SPARKS). VENTILATE AREA, CONTAIN AND REMOVE WITH INERT ABSORBENT AND NON-SPARKING TOOLS. REFER TO OTHER HAZARD CAUTIONS CONTAINED ON THIS SHEET BEFORE ATTEMPTING CLEAN-UP.  
 WASTE DISPOSAL METHOD: DISPOSE IN ACCORDANCE WITH LOCAL, STATE, AND FEDERAL REGULATIONS. DO NOT INCINERATE CLOSED CONTAINERS.

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**SECTION VIII — SAFE HANDLING AND USE INFORMATION**

RESPIRATORY PROTECTION: IN OUTDOOR, OPEN AREAS OR IN RESTRICTED VENTILATION AREAS, USE APPROVED CHEMICAL/MECHANICAL FILTERS DESIGNED TO REMOVE A COMBINATION OF PARTICULATE GAS AND VAPOR. TLV'S MUST NOT BE EXCEEDED. IN CONFINED AREAS, USE APPROVED AIR LINE TYPE RESPIRATORS OR HOODS.  
 VENTILATION: ALL APPLICATION AREAS SHOULD BE VENTILATED IN ACCORDANCE WITH OSHA REGULATIONS. POCKETS OF HEAVY AND/OR FLAMMABLE VAPOR MUST NOT BE PERMITTED TO FORM. VENTILATION AND RESPIRATORY PROTECTION MUST BE ADEQUATE TO PREVENT THE TLV'S OF HAZARDOUS INGREDIENTS FROM BEING EXCEEDED.  
 PROTECTIVE GLOVES: REQUIRED FOR PROLONGED OR REPEATED CONTACT.  
 EYE PROTECTION: USE SAFETY EYEWEAR WITH SPLASH GUARDS OR SIDE SHIELDS.  
 OTHER PROTECTIVE EQUIPMENT: USE PROTECTIVE APRON OR CLOTHING.  
 HYGIENIC PRACTICES: WASH HANDS BEFORE EATING OR USING WASHROOM. SMOKE IN SMOKING AREAS ONLY.

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**SECTION IX — SPECIAL PRECAUTIONS**

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORING: DO NOT STORE OR USE NEAR HEAT, SPARKS, OR FLAME. NO SMOKING OR OPEN LIGHTS.  
 OTHER PRECAUTIONS: AVOID CONTACT WITH EYES. AVOID PROLONGED OR REPEATED CONTACT WITH SKIN. AVOID PROLONGED OR REPEATED BREATHING OF VAPORS. STORE IN SEALED CONTAINERS AWAY FROM SPACE HEATING EQUIPMENT.

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**SECTION X — REGULATORY INFORMATION**

SARA TITLE III SECTION 313 SUPPLIER NOTIFICATION: THIS PRODUCT CONTAINS THE FOLLOWING TOXIC CHEMICALS SUBJECT TO THE REPORTING REQUIREMENTS OF SECTION 313 OF THE EMERGENCY PLANNING AND COMMUNITY RIGHT-TO-KNOW ACT OF 1986 AND OF 40 CFR 372:

CAS#	CHEMICAL NAME	PERCENT BY WEIGHT
1330-2-7	XYLENE (MIXED ISOMERS)	4.63%
108-88-3	TOLUENE	27.00%
67-64-1	ACETONE	46.00%

THIS INFORMATION MUST BE INCLUDED IN ALL MSDS'S THAT ARE COPIED AND DISTRIBUTED FOR THIS MATERIAL.

**MATERIAL SAFETY DATA SHEET GROUP 20**

includes the following:  
11-906-XX

**FOR COATINGS, RESINS, AND RELATED MATERIALS**  
DATE OF PREPARATION - 11/1/91

MANUFACTURER'S NAME: COLUMBIA PAINT COMPANY  
ADDRESS: NORTH 112 HAVEN STREET  
ADDRESS: P. O. BOX 4569  
CITY, STATE: SPOKANE, WA 99202

EMERGENCY TELEPHONE NO. DAY: 509-535-9741 NIGHT: 1-800-424-9300  
INFORMATION TELEPHONE NO. DAY: 509-535-9741 NIGHT: 1-800-424-9300

**SECTION I — PRODUCT IDENTIFICATION**

MANUFACTURER'S CODE IDENTIFICATION: SEE ABOVE

PRODUCT CLASS: ORGANIC SOLVENT BLEND

TRADE NAME: SEE TABLE OF CONTENTS

HMIS INFORMATION\*\* HEALTH - 2 FLAMMABILITY - 3  
REACTIVITY - 1 PERSONAL PROTECTIVE EQUIPMENT - H

**SECTION II — HAZARDOUS INGREDIENTS**

INGREDIENT MATERIAL DESCRIPTION	CAS #	% BY WEIGHT	TLV - (TWA)		LEL	VAPOR PRESS MMHG	DEG F.
			PPM	MG/M3			
ACETONE	*67641	18.00*	750.00*	1780.00*	2.6*	184.00 @	68.0
ISOPROPANOL	*67630	15.00*	400.00*	980.00*	25.0*	33.00 @	68.0
BUTANOL -exposure contrb via skin	*71363	5.00*	50.00*	150.00*	1.4*	5.50 @	68.0
TOLUENE	*108883	52.00*	100.00*	375.00*	1.2*	22.00 @	68.0
VM&P NAPHTHA	*8030306	10.00*	300.00*	1350.00*	1.0*	26.00 @	77.0

**SECTION III — PHYSICAL DATA**

BOILING RANGE: HIGH 312.0 DF LOW 133.0 DF  
VAPOR PRESSURE: SEE SECTION II  
VAPOR DENSITY: HEAVIER THAN AIR  
EVAPORATION RATE: SLOWER THAN BUTYL ACETATE  
WEIGHT PER GALLON: 6.9  
% VOLATILE BY VOLUME: 100.0  
% VOLATILE BY WEIGHT: 100.0

**SECTION IV — FIRE AND EXPLOSION HAZARD DATA**

FLAMMABILITY CLASSIFICATION OSHA-CLASS IB DOT - FLAMMABLE LIQUID  
LOWEST FLASHPOINT T.C.C. 37.0 DF LOWER EXPLOSION LEVEL (LEL) 1.0%  
EXTINGUISHING MEDIA: (X) FOAM ( ) ALCOHOL FOAM (X) CO2  
(X) DRY CHEMICAL ( ) WATER FOG ( ) OTHER

UNUSUAL FIRE AND EXPLOSION HAZARDS: KEEP AWAY FROM HEAT, SPARKS, AND FLAME. VAPORS MAY IGNITE EXPLOSIVELY. VAPORS MAY SPREAD LONG DISTANCES. PREVENT BUILDUP OF VAPORS. EXTINGUISH ALL PILOT LIGHTS, AND TURN OFF HEATERS, NON-EXPLOSION PROOF ELECTRICAL EQUIPMENT, AND ALL OTHER SOURCES OF IGNITION UNTILL ALL VAPORS ARE GONE. IN CLOSED CONTAINERS, PRESSURE BUILDUP MAY OCCUR DUE TO HEAT EXPOSURE. DURING EMERGENCY CONDITIONS, OVEREXPOSURE TO DECOMPOSITION PRODUCTS MAY CAUSE A HEALTH HAZARD. SYMPTOMS MAY NOT BE IMMEDIATELY APPARENT. OBTAIN MEDICAL ATTENTION. (SEE SECTION VI).

SPECIAL FIRE FIGHTING PROCEDURES: WATER SPRAY MAY BE INEFFECTIVE. HOWEVER, WATER MAY BE USED TO COOL CLOSED CONTAINERS TO PREVENT PRESSURE BUILDUP. FULL PROTECTIVE EQUIPMENT RECOMMENDED, INCLUDING SELF-CONTAINED BREATHING APPARATUS, TO PROTECT FIREFIGHTERS FROM HAZARDOUS COMBUSTION PRODUCTS.

**SECTION V — HEALTH HAZARD DATA**

EFFECTS OF OVEREXPOSURE: OVEREXPOSURE VIA INHALATION CAN CAUSE CENTRAL NERVOUS SYSTEM DEPRESSION WITH SYMPTOMS RANGING FROM HEADACHES, DIZZINESS, LOSS OF COORDINATION, TO UNCONSCIOUSNESS. DELIBERATELY BREATHING CONCENTRATED SOLVENT VAPOR (GLUE SNIFFING) CAN RESULT IN PERMANENT BRAIN AND NERVOUS SYSTEM DAMAGE OR DEATH. INGESTION MAY RESULT IN GASTROINTESTINAL IRRITATION, NAUSEA, VOMITING, AND/OR DIARRHEA. EYE CONTACT CAN CAUSE SEVERE IRRITATION, REDNESS, TEARING, AND BLURRED VISION. PROLONGED OR REPEATED SKIN CONTACT WILL DRY AND DEFAT THE SKIN, LEADING TO IRRITATION AND DERMATITIS. <CHRONIC EFFECTS> REPEATED OVEREXPOSURE TO SOLVENT VAPOR MAY RESULT IN ONE OR MORE OF THE FOLLOWING: CENTRAL NERVOUS SYSTEM, BLOOD, LIVER, AND/OR KIDNEY INJURY, HEARING LOSS.



PRIMARY ROUTE(S) OF ENTRY: (X) - DERMAL (X) - INHALATION ( ) - INGESTION  
EMERGENCY AND FIRST AID PROCEDURES: IF OVERCOME BY VAPOR, REMOVE FROM EXPOSURE IMMEDIATELY; CALL A PHYSICIAN. IF BREATHING IS IRREGULAR OR STOPPED, START RESUSCITATION, ADMINISTER OXYGEN. IF INGESTED, DO NOT INDUCE VOMITING; CALL A PHYSICIAN. IF SPLASHED INTO THE EYES, FLUSH EYES WITH CLEAR WATER FOR 15 MINUTES OR UNTIL IRRITATION SUBSIDES; CONSULT A PHYSICIAN AS MAY BE REQUIRED. IN CASE OF SKIN CONTACT, REMOVE ANY CONTAMINATED CLOTHING AND WASH SKIN WITH SOAP AND WARM WATER.  
MEDICAL CONDITIONS PRONE TO AGGRAVATION BY EXPOSURE: PRE-EXISTING SKIN DISORDERS, CHRONIC RESPIRATORY DISEASES.

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**SECTION VI — REACTIVITY DATA**

STABILITY: ( ) - UNSTABLE (X) - STABLE  
HAZARDOUS POLYMERIZATION ( ) - MAY OCCUR (X) - WILL NOT OCCUR  
HAZARDOUS DECOMPOSITION PRODUCTS: FUMES PRODUCED WHEN HEATED TO DECOMPOSITION, SUCH AS IN WELDING, MAY INCLUDE ONE OR MORE OF THE FOLLOWING: CARBON DIOXIDE, CARBON MONOXIDE, ACROLEIN, HYDROGEN CHLORIDE, OXIDES OF NITROGEN.  
CONDITIONS TO AVOID: HIGH TEMPERATURES OR DIRECT HEATING.  
INCOMPATIBILITY (MATERIALS TO AVOID): OXYGEN AND STRONG OXIDANTS, STRONG ACIDS, STRONG BASES, AND AMINES. WILL DISSOLVE OR SOFTEN SOME PLASTICS AND RUBBER.

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**SECTION VII — SPILL OR LEAK PROCEDURES**

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED: REMOVE ALL SOURCES OF IGNITION (FLAME, HOT SURFACES, AND ELECTRICAL, STATIC, OR FRICTIONAL SPARKS), VENTILATE AREA, CONTAIN AND REMOVE WITH INERT ABSORBENT AND NON-SPARKING TOOLS. REFER TO OTHER HAZARD CAUTIONS CONTAINED ON THIS SHEET BEFORE ATTEMPTING CLEAN-UP.  
WASTE DISPOSAL METHOD: DISPOSE IN ACCORDANCE WITH LOCAL, STATE, AND FEDERAL REGULATIONS. DO NOT INCINERATE CLOSED CONTAINERS.

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**SECTION VIII — SAFE HANDLING AND USE INFORMATION**

RESPIRATORY PROTECTION: IN OUTDOOR, OPEN AREAS OR IN RESTRICTED VENTILATION AREAS, USE APPROVED CHEMICAL/MECHANICAL FILTERS DESIGNED TO REMOVE A COMBINATION OF PARTICULATE GAS AND VAPOR. TLV'S MUST NOT BE EXCEEDED. IN CONFINED AREAS, USE APPROVED AIR LINE TYPE RESPIRATORS OR HOODS.  
VENTILATION: ALL APPLICATION AREAS SHOULD BE VENTILATED IN ACCORDANCE WITH OSHA REGULATIONS. POCKETS OF HEAVY AND/OR FLAMMABLE VAPOR MUST NOT BE PERMITTED TO FORM. VENTILATION AND RESPIRATORY PROTECTION MUST BE ADEQUATE TO PREVENT THE TLV'S OF HAZARDOUS INGREDIENTS FROM BEING EXCEEDED.  
PROTECTIVE GLOVES: REQUIRED FOR PROLONGED OR REPEATED CONTACT.  
EYE PROTECTION: USE SAFETY EYEWEAR WITH SPLASH GUARDS OR SIDE SHIELDS.  
OTHER PROTECTIVE EQUIPMENT: USE PROTECTIVE APRON OR CLOTHING.  
HYGIENIC PRACTICES: WASH HANDS BEFORE EATING OR USING WASHROOM. SMOKE IN SMOKING AREAS ONLY.

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**SECTION IX — SPECIAL PRECAUTIONS**

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORING: DO NOT STORE OR USE NEAR HEAT, SPARKS, OR FLAME. NO SMOKING OR OPEN LIGHTS.  
OTHER PRECAUTIONS: AVOID CONTACT WITH EYES. AVOID PROLONGED OR REPEATED CONTACT WITH SKIN. AVOID PROLONGED OR REPEATED BREATHING OF VAPORS. STORE IN SEALED CONTAINERS AWAY FROM SPACE HEATING EQUIPMENT.

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**SECTION X — REGULATORY INFORMATION**

SARA TITLE III SECTION 313 SUPPLIER NOTIFICATION: THIS PRODUCT CONTAINS THE FOLLOWING TOXIC CHEMICALS SUBJECT TO THE REPORTING REQUIREMENTS OF SECTION 313 OF THE EMERGENCY PLANNING AND COMMUNITY RIGHT-TO-KNOW ACT OF 1986 AND OF 40 CFR 372:

CAS#	CHEMICAL NAME	PERCENT BY WEIGHT
67-64-1	ACETONE	18.00%
71-36-3	N-BUTYL ALCOHOL	5.00%
108-88-3	TOLUENE	52.00%

THIS INFORMATION MUST BE INCLUDED IN ALL MSDS'S THAT ARE COPIED AND DISTRIBUTED FOR THIS MATERIAL.

**MATERIAL SAFETY DATA SHEET GROUP 21**

includes the following:  
88-195-CC

**FOR COATINGS, RESINS, AND RELATED MATERIALS**  
DATE OF PREPARATION - 11/1/91

MANUFACTURER'S NAME: COLUMBIA PAINT COMPANY  
ADDRESS: NORTH 112 HAVEN STREET  
ADDRESS: P. O. BOX 4569  
CITY, STATE: SPOKANE, WA 99202

EMERGENCY TELEPHONE NO. DAY: 509-535-9741 NIGHT: 1-800-424-9300  
INFORMATION TELEPHONE NO. DAY: 509-535-9741 NIGHT: 1-800-424-9300

**SECTION I — PRODUCT IDENTIFICATION**

MANUFACTURER'S CODE IDENTIFICATION: SEE ABOVE  
PRODUCT CLASS: LATEX EMULSION COATING  
TRADE NAME: SEE TABLE OF CONTENTS  
HMIS INFORMATION\*\* HEALTH - 2 FLAMMABILITY - 0  
REACTIVITY - 1 PERSONAL PROTECTIVE EQUIPMENT - E

**SECTION II — HAZARDOUS INGREDIENTS**

INGREDIENT MATERIAL DESCRIPTION	CAS #	% BY WEIGHT	TLV - (TWA) PPM	MG/M3	LEL	VAPOR PRESS MMHG	DEG F
CRYSTALLINE SILICA -suspected carcinogen	*14808-60-7	2.35*	Not Est*	.10*	Unk.*	Unknown	
2,2,4 TRIMETHYL PENTANE DIOL-1,3 MONOISOBUTYRATE	*25265774	1.38*	Not Est*	Not Est*	Unk.*	1.00 @	189.0
LEAD AS IN LEAD CHROMATE -suspected carcinogen	*7439-92-1	7.84*	Not Est*	.05*	Unk.*	Unknown	
CHROMIUM AS CR (VI) -known carcinogen	*7440-47-3	1.83*	Not Est*	.05*	Unk.*	Unknown	

THIS PRODUCT CONTAINS HAZARDOUS COMPONENTS WHICH MAY BECOME AIRBORNE AND RESULT IN EXPOSURE WHEN REMOVED BY ABRASIVE BLASTING, SANDING, OR GRINDING. VENTILATE AND AVOID BREATHING DUSTS.

**SECTION III — PHYSICAL DATA**

BOILING RANGE: HIGH 471.0 DF LOW 212.0 DF  
VAPOR PRESSURE: SEE SECTION II  
VAPOR DENSITY: LIGHTER THAN AIR  
EVAPORATION RATE: SLOWER THAN BUTYL ACETATE  
WEIGHT PER GALLON: 11.5  
% VOLATILE BY VOLUME: 60.7  
% VOLATILE BY WEIGHT: 44.3  
APPEARANCE - ODOR: YELLOW LIQUID, AMMONIA ODOR  
PH - SOLUBILITY: 8.5 - 9.5, DILUTABLE IN WATER

**SECTION IV — FIRE AND EXPLOSION HAZARD DATA**

FLAMMABILITY CLASSIFICATION OSHA-CLASS III-B DOT - NOT REGULATED  
LOWEST FLASHPOINT T.C.C. 200.0 DF LOWER EXPLOSION LEVEL (LEL) N/A  
EXTINGUISHING MEDIA: ( ) FOAM ( ) CO2  
( ) DRY CHEMICAL (X) WATER FOG ( ) OTHER  
UNUSUAL FIRE AND EXPLOSION HAZARDS: MATERIALS WILL NOT SUSTAIN COMBUSTION UNLESS WATER HAS EVAPORATED. CLOSED CONTAINERS MAY EXPLODE FROM STEAM PRESSURE WHEN EXPOSED TO EXTREME HEAT.  
SPECIAL FIRE FIGHTING PROCEDURES: FIREFIGHTERS SHOULD WEAR SELF-CONTAINED BREATHING APPARATUS AS PROTECTION FROM HAZARDOUS COMBUSTION PRODUCTS.

**SECTION V — HEALTH HAZARD DATA**

EFFECTS OF OVEREXPOSURE: EXCESS INHALATION OF VOLATILIZED AMMONIA MAY PRODUCE HEADACHE, NAUSEA, IRRITATION TO RESPIRATORY TRACT. SKIN CONTACT MAY PRODUCE IRRITATION DUE TO SLIGHT ALKALINITY. PRESENCE OF VOLATILIZED AMMONIA COULD IRRITATE EYES. EXCESS INHALATION OF VOLATILIZED ETHYLENE GLYCOL MAY CAUSE IRRITATION OF THE NOSE AND THROAT WITH HEADACHE, NAUSEA, AND VOMITING. ETHYLENE GLYCOL CAN BE HARMFUL OR FATAL IF SWALLOWED. SEVERE KIDNEY DAMAGE FOLLOWS THE SWALLOWING OF LARGE AMOUNTS OF ETHYLENE GLYCOL. LIQUID, VAPOR, AND MIST MAY CAUSE EYE IRRITATION. CRYSTALLINE SILICA DUST CAN CAUSE UPPER RESPIRATORY IRRITATION AND IRRITATION TO EYES. PROLONGED OVEREXPOSURE TO SILICA DUST BY INHALATION MAY CAUSE DELAYED LUNG INJURY/DISEASE (SILICOSIS). ON THE BASIS OF INITIAL EXPERIMENTAL TESTS IN ANIMALS AND LIMITED EPIDEMIOLOGICAL STUDIES IN HUMAN POPULATIONS, THE INTERNATIONAL AGENCY FOR RESEARCH ON CANCER (IARC) HAS CONCLUDED THAT THERE IS LIMITED EVIDENCE FOR THE CARCINOGENICITY OF CRYSTALLINE SILICA TO HUMANS. RATS EXPOSED TO TITANIUM DIOXIDE DUST AT 250 MG/M<sup>3</sup> DEVELOPED LUNG CANCER; HOWEVER, SUCH EXPOSURE LEVELS ARE NOT ATTAINABLE IN THE WORK PLACE. <CHRONIC EFFECTS> LEAD IS A CUMULATIVE POISON. CHRONIC OVER-EXPOSURE TO LEAD VIA INHALATION OR INGESTION MAY RESULT IN SEVERE DAMAGE TO BLOOD-FORMING, CENTRAL NERVOUS, URINARY, AND REPRODUCTIVE SYSTEMS. LEAD CROSSES THE PLACENTAL BARRIER AND

POSES RISKS TO DEVELOPING FETUSES. SYMPTOMS OF OVER-EXPOSURE TO LEAD INCLUDE ANEMIA, ABDOMINAL DISCOMFORT, METALLIC TASTE, LOSS OF APPETITE, HEADACHE, INSOMNIA, MUSCLE PAIN AND WEAKNESS, FINE TREMORS, NUMBNESS, NERVOUS IRRITABILITY. LEAD CHROMATE IS A SUSPECTED HUMAN CARCINOGEN.  
 PRIMARY ROUTE(S) OF EXPOSURE: (X) DERMAL (X) INHALATION ( ) INGESTION  
 EMERGENCY AND FIRST AID PROCEDURES: FOR IRRITATION DUE TO INHALATION, REMOVE TO FRESH AIR. FOR EYE CONTACT, FLUSH WITH LARGE AMOUNTS OF WATER FOR 15 MINUTES. IN CASE OF INGESTION, DRINK 1-2 GLASSES OF WATER TO DILUTE. DO NOT INDUCE VOMITING. CONSULT PHYSICIAN OR POISON CONTROL CENTER IMMEDIATELY.  
 MEDICAL CONDITIONS PRONE TO AGGRAVATION BY EXPOSURE: ETHYLENE GLYCOL MAY AGGRAVATE EXISTING KIDNEY DISEASE. INDIVIDUALS WITH PULMONARY AND/OR RESPIRATORY DISEASE INCLUDING, BUT NOT LIMITED TO, ASTHMA AND BRONCHITIS SHOULD NOT BE EXPOSED TO SILICA DUSTS.

**SECTION VI — REACTIVITY DATA**

STABILITY: ( ) UNSTABLE (X) STABLE  
 HAZARDOUS POLYMERIZATION ( ) MAY OCCUR (X) WILL NOT OCCUR  
 HAZARDOUS DECOMPOSITION PRODUCTS: THE DRY PAINT FILM CAN BURN AND PRODUCE ONE OR MORE OF THE FOLLOWING: CARBON DIOXIDE, CARBON MONOXIDE, HYDROGEN CHLORIDE, AND/OR OXIDES OF NITROGEN.  
 CONDITIONS TO AVOID: EXCESSIVE HEAT.  
 INCOMPATIBILITY (MATERIALS TO AVOID): NONE REASONABLY FORESEEABLE.

**SECTION VII — SPILL OR LEAK PROCEDURES**

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED: WEARING PROTECTIVE GLOVES, WIPE UP LIQUID MATERIAL WITH ABSORBENT CLOTH.  
 WASTE DISPOSAL METHOD: DISPOSE OF IN ACCORDANCE WITH LOCAL, STATE, AND FEDERAL REGULATIONS.

**SECTION VIII — SAFE HANDLING AND USE INFORMATION**

RESPIRATORY PROTECTION: IN RESTRICTED VENTILATION AREAS - APPROVED CHEMICAL/MECHANICAL FILTERS DESIGNED TO REMOVE PARTICULATES AND VAPOR.  
 VENTILATION: PROVIDE AIR MOVEMENT TO REMOVE EXCESS VAPORS.  
 PROTECTIVE GLOVES: REQUIRED FOR PROLONGED OR REPEATED CONTACT.  
 EYE PROTECTION: SAFETY GLASSES.  
 OTHER PROTECTIVE EQUIPMENT: NONE.  
 HYGIENIC PRACTICES: WASH HANDS BEFORE EATING OR USING WASHROOM.

**SECTION IX — SPECIAL PRECAUTIONS**

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORING: DO NOT STORE IN EXCESSIVE HEAT (ABOVE 120 DF). USE WITH ADEQUATE VENTILATION.  
 OTHER PRECAUTIONS: AVOID CONTACT WITH EYES.

**SECTION X — REGULATORY INFORMATION**

SARA TITLE III SECTION 313 SUPPLIER NOTIFICATION: THIS PRODUCT CONTAINS THE FOLLOWING TOXIC CHEMICALS SUBJECT TO THE REPORTING REQUIREMENTS OF SECTION 313 OF THE EMERGENCY PLANNING AND COMMUNITY RIGHT-TO-KNOW ACT OF 1986 AND OF 40 CFR 372:

CAS#	CHEMICAL NAME	PERCENT BY WEIGHT
7439-92-1	LEAD	7.84%
7440-47-3	CHROMIUM	1.83%

THIS INFORMATION MUST BE INCLUDED IN ALL MSDS'S THAT ARE COPIED AND DISTRIBUTED FOR THIS MATERIAL.

**MATERIAL SAFETY DATA SHEET GROUP 22**

includes the following:

06-643-XX

06-645-XX

**FOR COATINGS, RESINS, AND RELATED MATERIALS**  
DATE OF PREPARATION - 11/1/91

MANUFACTURER'S NAME: COLUMBIA PAINT COMPANY  
ADDRESS: NORTH 112 HAVEN STREET  
ADDRESS: P. O. BOX 4569  
CITY, STATE: SPOKANE, WA 99202

EMERGENCY TELEPHONE NO. DAY: 509-535-9741 NIGHT: 1-800-424-9300  
INFORMATION TELEPHONE NO. DAY: 509-535-9741 NIGHT: 1-800-424-9300

**SECTION I — PRODUCT IDENTIFICATION**

MANUFACTURER'S CODE IDENTIFICATION: SEE ABOVE  
PRODUCT CLASS: UREA-FORMALDEHYDE MODIFIED ALKYD RESIN COATING  
TRADE NAME: SEE TABLE OF CONTENTS  
HMIS INFORMATION\*\* HEALTH - 3 FLAMMABILITY - 3  
REACTIVITY - 1 PERSONAL PROTECTIVE EQUIPMENT - H

**SECTION II — HAZARDOUS INGREDIENTS**

INGREDIENT MATERIAL DESCRIPTION	CAS #	% BY WEIGHT	TLV - (TWA) PPM	MG/M3	LEL	VAPOR PRESS MMHG	DEG F.
AMORPHOUS SILICA	*7631-86-9	1.50-3.07*	Not Est*	10.00*	Unk.		Unknown
TOLUENE	*108883	22.10-22.46*	100.00*	375.00*	1.2*	22.00 @	68.0
FORMALDEHYDE -suspected carcinogen	*000050000	.33*	1.00*	1.50*	7.0*		Unknown
ETHANOL	*64175	14.94-15.19*	1000.00*	1900.00*	3.3*	40.00 @	68.0
ISOPROPANOL	*67630	4.14-4.21*	400.00*	980.00*	25.0*	33.00 @	68.0
XYLENE (MIXED ISOMERS)	*1330-20-7	7.46-7.58*	100.00*	434.00*	1.0*	6.00 @	68.0
ETHYL BENZENE	*100414	1.53-1.55*	100.00*	435.00*	1.2*	10.00 @	78.6

THIS PRODUCT CONTAINS HAZARDOUS COMPONENTS WHICH MAY BECOME AIRBORNE AND RESULT IN EXPOSURE WHEN REMOVED BY ABRASIVE BLASTING, SANDING, OR GRINDING. VENTILATE AND AVOID BREATHING DUSTS.

**SECTION III — PHYSICAL DATA**

BOILING RANGE: HIGH 284.0 DF LOW 148.0 DF  
VAPOR PRESSURE: SEE SECTION II  
VAPOR DENSITY: HEAVIER THAN AIR  
EVAPORATION RATE: SLOWER THAN BUTYL ACETATE  
WEIGHT PER GALLON: 8.2 - 8.3  
% VOLATILE BY VOLUME: 60.6 - 61.1  
% VOLATILE BY WEIGHT: 51.3 - 52.1

**SECTION IV — FIRE AND EXPLOSION HAZARD DATA**

FLAMMABILITY CLASSIFICATION OSHA-CLASS IB DOT - FLAMMABLE LIQUID  
LOWEST FLASHPOINT T.C.C. 40.0 DF LOWER EXPLOSION LEVEL (LEL) 1.0%  
EXTINGUISHING MEDIA: (X) FOAM (-) ALCOHOL FOAM (X) CO2  
(X) DRY CHEMICAL (-) WATER FOG (-) OTHER

UNUSUAL FIRE AND EXPLOSION HAZARDS: KEEP AWAY FROM HEAT, SPARKS, AND FLAME. VAPORS MAY IGNITE EXPLOSIVELY. VAPORS MAY SPREAD LONG DISTANCES. PREVENT BUILDUP OF VAPORS. EXTINGUISH ALL PILOT LIGHTS, AND TURN OFF HEATERS, NON-EXPLOSION PROOF ELECTRICAL EQUIPMENT, AND ALL SOURCES OF IGNITION UNTIL VAPORS ARE GONE. IN CLOSED CONTAINERS, PRESSURE BUILDUP MAY OCCUR DUE TO HEAT EXPOSURE. DURING EMERGENCY CONDITIONS, OVEREXPOSURE TO DECOMPOSITION PRODUCTS MAY CAUSE A HEALTH HAZARD. SYMPTOMS MAY NOT BE IMMEDIATELY APPARENT. OBTAIN MEDICAL ATTENTION. (SEE SECTION VI).

SPECIAL FIRE FIGHTING PROCEDURES: WATER SPRAY MAY BE INEFFECTIVE. HOWEVER, WATER MAY BE USED TO COOL CLOSED CONTAINERS TO PREVENT PRESSURE BUILDUP. FULL PROTECTIVE EQUIPMENT RECOMMENDED, INCLUDING SELF-CONTAINED BREATHING APPARATUS, TO PROTECT FIREFIGHTERS FROM HAZARDOUS COMBUSTION PRODUCTS.

**SECTION V — HEALTH HAZARD DATA**

EFFECTS OF OVEREXPOSURE: OVEREXPOSURE VIA INHALATION CAN CAUSE CENTRAL NERVOUS SYSTEM DEPRESSION WITH SYMPTOMS RANGING FROM HEADACHES, DIZZINESS, LOSS OF COORDINATION, TO UNCONSCIOUSNESS. DELIBERATELY BREATHING CONCENTRATED SOLVENT VAPOR (GLUE SNIFFING) CAN RESULT IN PERMANENT BRAIN AND NERVOUS SYSTEM DAMAGE OR DEATH. INGESTION MAY RESULT IN GASTROINTESTINAL IRRITATION, NAUSEA, VOMITING, AND/OR DIARRHEA. EYE CONTACT CAN CAUSE SEVERE IRRITATION, REDNESS, TEARING, AND BLURRED VISION. PROLONGED OR REPEATED SKIN CONTACT WILL DRY AND DEFAAT THE SKIN, LEADING TO IRRITATION AND DERMATITIS. <CHRONIC EFFECTS> REPEATED OVEREXPOSURE TO SOLVENT VAPORS MAY RESULT IN ONE OR MORE OF THE FOLLOWING: CENTRAL NERVOUS SYSTEM, BLOOD, LIVER, AND/OR KIDNEY INJURY, HEARING LOSS. FORMALDEHYDE IS A SUSPECTED HUMAN CARCINOGEN.

PRIMARY ROUTES OF ENTRY: (X) - DERMAL (X) - INHALATION ( ) - INGESTION  
 EMERGENCY AND FIRST AID PROCEDURES: IF OVERCOME BY VAPOR, REMOVE FROM EXPOSURE IMMEDIATELY; CALL A PHYSICIAN. IF BREATHING IS IRREGULAR OR STOPPED, START RESUSCITATION, ADMINISTER OXYGEN. IF INGESTED, DO NOT INDUCE VOMITING; CALL A PHYSICIAN. IF SPLASHED INTO THE EYES, FLUSH EYES WITH CLEAR WATER FOR 15 MINUTES OR UNTIL IRRITATION SUBSIDES; CONSULT A PHYSICIAN AS MAY BE REQUIRED. IN CASE OF SKIN CONTACT, REMOVE ANY CONTAMINATED CLOTHING AND WASH SKIN WITH SOAP AND WARM WATER.  
 MEDICAL CONDITIONS PRONE TO AGGRAVATION BY EXPOSURE: PRE-EXISTING SKIN DISORDERS, CHRONIC RESPIRATORY DISEASES.

**SECTION VI — REACTIVITY DATA**

STABILITY: ( ) - UNSTABLE (X) - STABLE  
 HAZARDOUS POLYMERIZATION ( ) - MAY OCCUR (X) - WILL NOT OCCUR  
 HAZARDOUS DECOMPOSITION PRODUCTS: FUMES PRODUCED WHEN HEATED TO DECOMPOSITION, SUCH AS IN WELDING, MAY INCLUDE ONE OR MORE OF THE FOLLOWING: CARBON DIOXIDE, CARBON MONOXIDE, ACROLEIN, HYDROGEN CHLORIDE, OXIDES OF NITROGEN.  
 CONDITIONS TO AVOID: HIGH TEMPERATURES OR DIRECT HEATING.  
 INCOMPATIBILITY (MATERIALS TO AVOID): OXYGEN AND STRONG OXIDANTS, STRONG ACIDS, STRONG BASES, AND AMINES. WILL DISSOLVE OR SOFTEN SOME PLASTICS AND RUBBER.

**SECTION VII — SPILL OR LEAK PROCEDURES**

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED: REMOVE ALL SOURCES OF IGNITION (FLAME, HOT SURFACES, AND ELECTRICAL, STATIC, OR FRICTIONAL SPARKS), VENTILATE AREA, CONTAIN AND REMOVE WITH INERT ABSORBENT AND NON-SPARKING TOOLS. REFER TO OTHER HAZARD CAUTIONS CONTAINED ON THIS SHEET BEFORE ATTEMPTING CLEAN-UP.  
 WASTE DISPOSAL METHOD: DISPOSE OF IN ACCORDANCE WITH LOCAL, STATE, AND FEDERAL REGULATIONS. DO NOT INCINERATE CLOSED CONTAINERS.

**SECTION VIII — SAFE HANDLING AND USE INFORMATION**

RESPIRATORY PROTECTION: IN OUTDOOR, OPEN AREAS OR IN RESTRICTED VENTILATION AREAS, USE APPROVED CHEMICAL/MECHANICAL FILTERS DESIGNED TO REMOVE A COMBINATION OF PARTICULATE GAS AND VAPOR. TLV'S MUST NOT BE EXCEEDED. IN CONFINED AREAS, USE APPROVED AIR LINE TYPE RESPIRATORS OR HOODS.  
 VENTILATION: ALL APPLICATION AREAS SHOULD BE VENTILATED IN ACCORDANCE WITH OSHA REGULATIONS. POCKETS OF HEAVY AND/OR FLAMMABLE VAPOR MUST NOT BE PERMITTED TO FORM. VENTILATION AND RESPIRATORY PROTECTION MUST BE ADEQUATE TO PREVENT THE TLV'S OF HAZARDOUS INGREDIENTS FROM BEING EXCEEDED.  
 PROTECTIVE GLOVES: REQUIRED FOR PROLONGED OR REPEATED CONTACT.  
 EYE PROTECTION: USE SAFETY EYEWEAR WITH SPLASH GUARDS OR SIDE SHIELDS.  
 OTHER PROTECTIVE EQUIPMENT: USE PROTECTIVE APRON AND CLOTHING.  
 HYGIENIC PRACTICES: WASH HANDS BEFORE EATING OR USING WASHROOM. SMOKE IN SMOKING AREAS ONLY.

**SECTION IX — SPECIAL PRECAUTIONS**

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORING: DO NOT STORE OR USE NEAR HEAT, SPARKS, OR FLAME. NO SMOKING OR OPEN LIGHTS.  
 OTHER PRECAUTIONS: AVOID CONTACT WITH EYES. AVOID PROLONGED OR REPEATED CONTACT WITH SKIN. AVOID PROLONGED OR REPEATED BREATHING OF VAPORS. STORE IN SEALED CONTAINERS AWAY FROM SPACE HEATING EQUIPMENT.

**SECTION X — REGULATORY INFORMATION**

SARA TITLE III SECTION 313 SUPPLIER NOTIFICATION: THIS PRODUCT CONTAINS THE FOLLOWING TOXIC CHEMICALS SUBJECT TO THE REPORTING REQUIREMENTS OF SECTION 313 OF THE EMERGENCY PLANNING AND COMMUNITY RIGHT-TO-KNOW ACT OF 1986 AND OF 40 CFR 372:

CAS#	CHEMICAL NAME	PERCENT BY WEIGHT
108-88-3	TOLUENE	22.10 - 22.46%
50-00-0	FORMALDEHYDE	.33%
1330-20-7	XYLENE (MIXED ISOMERS)	7.46 - 7.58%
100-41-4	ETHYL BENZENE	1.53 - 1.55%

THIS INFORMATION MUST BE INCLUDED IN ALL MSDS'S THAT ARE COPIED AND DISTRIBUTED FOR THIS MATERIAL.