MATERIAL SAFETY DATA SHEET

FIRE AND EXPLOSION HAZARD DATA

Extinguishing media : Dry chemical or foam water fog. Carbon dioxide.

Unusual fire and explosion hazards : Closed containers may explode when exposed to extreme heat or fire. Vapors are heavier than air and may travel long distances to a source of ignition and flash back. Vapors can form explosive mixtures in air at elevated temperatures. Closed containers may burst if exposed to extreme heat or fire. May decompose under fire conditions emitting irritant and/or toxic gases.

Special fire fighting procedures : Water may be used to cool and protect exposed containers. Firefighters should use full protective clothing, eye protection, and self-contained breathing apparatus. Self-contained breathing apparatus recommended.

HEALTH HAZARD DATA

Primary route(s) of exposure : Inhalation, skin contact, eye contact, ingestion.

Effects of overexposure :

Inhalation : Irritation of respiratory tract. Prolonged inhalation may lead to mucous membrane irritation, fatigue, drowsiness, dizziness and/or lightheadedness, headache, uncoordination, nausea, vomiting, diarrhea, coughing, difficulty with speech, central nervous system depression, metallic taste, anesthetic effect or narcosis, fever and chills, dehydration, pulmonary edema, loss of consciousness, asphyxiation, death.

Skin contact : Irritation of skin. Prolonged or repeated contact can cause dermatitis, defatting.

Eye contact : Irritation of eyes. Prolonged or repeated contact can cause conjunctivitis, blurred vision, tearing of eyes, redness of eyes.

Ingestion : Ingestion may cause lung inflammation and damage due to aspiration of material into lungs, mouth and throat irritation, mucous membrane irritation, fatigue, drowsiness, dizziness and/or lightheadedness, headache, uncoordination, nausea, vomiting, diarrhea, gastro-intestinal disturbances, abdominal pain, central nervous system depression, anesthetic effect or narcosis, convulsions, loss of consciousness.

Supplemental health information : Other effects of overexposure may include toxicity to liver, kidney. May be absorbed through skin. The international agency for research on cancer (IARC) has determined that there is sufficient evidence for the carcinogenicity of benzene to humans and experimental animals (group 1). The national toxicology program (NTP) has determined that benzene is known to be carcinogenic. Benzene is regulated by OSHA as a carcinogen. Notice - reports have associated repeated and prolonged occupational overexposure to solvents with permanent brain and nervous system damage. Intentional misuse by deliberately concentrating and inhaling the contents may be harmful or fatal. Contains crystalline silica which is considered a hazard by inhalation. IARC has classified crystalline silica as probably carcinogenic for humans (2a). This classification is based on the findings of laboratory animal studies that were considered sufficient and data from epidemiological studies that were considered limited for carcinogenicity. Crystalline silica is also a known cause of silicosis, a noncancerous lung disease. NTP has classified crystalline silica a reasonably anticipated human carcinogen.

Medical conditions aggravated by exposure : Eye, skin, respiratory disorders lung disorders asthma-like conditions

FIRST AID PROCEDURES

Inhalation : Remove to fresh air. Restore and support continued breathing. Get emergency medical attention. Have trained person give oxygen if necessary. Get medical help for any breathing difficulty.

Skin contact : Flush from skin with water. Then wash thoroughly with soap and water. Remove contaminated clothing. Wash contaminated clothing before re-use.

Eye contact : Flush immediately with large amounts of water, especially under lids for at least 15 minutes. If irritation or other effects persist, obtain medical treatment.

Ingestion : If swallowed, obtain medical treatment immediately.

REACTIVITY DATA

Stability : Stable

Incompatibility : Oxidizers, acids, bases, amines, nitric acid, mineral acids.

Conditions to avoid : Elevated temperatures, contact with oxidizing agent, sparks, open flame. Ignition sources

Hazardous decomposition products : Carbon monoxide, carbon dioxide, acrid fumes, oxides of phosphorus, aldehydes, toxic gases, smoke and soot.

Hazardous polymerization : Will not occur

SPILL OR LEAK PROCEDURES

Steps to be taken in case material is released or spilled : Comply with all applicable health and environmental regulations. Eliminate all sources of ignition. Ventilate area. Spills may be collected with absorbent materials. Evacuate all unnecessary personnel. Place collected material in proper container. Contains a chemical that is toxic to fish. Complete personal protective equipment must be used during cleanup. Large spills - shut off leak if safe to do so. Dike and contain spill. Pump to storage or salvage vessels. Use absorbent to pick up excess residue. Keep salvageable material and rinse water out of sewers and water courses. Small spills - use absorbent to pick up residue and dispose of properly.

Waste disposal : Dispose in accordance with all applicable regulations. Avoid discharge to natural waters.

SPECIAL PROTECTION INFORMATION

Respiratory protection : Control environmental concentrations below applicable standards. Where respiratory protection is required, use only NIOSH/MSHA approved respirators in accordance with OSHA standard 29 CFR 1910.134.

Ventilation : Provide dilution ventilation or local exhaust to prevent build-up of vapors. Use explosion-proof equipment.

Personal protective equipment : Eye wash, safety shower, safety glasses or goggles. Impervious gloves, impervious clothing, face shield, apron, boots.

SPECIAL PRECAUTIONS

Handling and storage : Store below 100f. Keep away from heat, sparks and open flame. Keep away from direct sunlight, heat and all sources of ignition.

Other precautions : Use only with adequate ventilation. Do not take internally. Keep out of reach of children. Avoid contact with skin and eyes, and breathing of vapors. Wash hands thoroughly after handling, especially before eating or smoking. Keep containers tightly closed and upright when not in use. Avoid conditions which result in formation of inhalable particles such as spraying or abrading (sanding) painted surfaces. If such conditions cannot be avoided, use appropriate respiratory protection as directed under special protection information. Empty containers may contain hazardous residues. Ground equipment when transferring to prevent accumulation of static charge.

Physical Data

Product Code	Description	Wt./Gal.	VOC gr./ltr.	% Volatile by Volume	Flash Point	Boiling Range	HMIS	DOT, proper shipping name
4160-1000	white	11.89	415.43	48.77	108 f	176-400	*120	paint, combustible liquid, UN1263, PGIII
4160-6120	gray	11.71	415.21	48.76	108 f	176-400	*120	paint, combustible liquid, UN1263, PGIII
4160-7100	red	11.86	417.21	48.97	108 f	176-400	*120	paint, combustible liquid, UN1263, PGIII

Ingredients

Product Codes with % by Weight

	4160-1000	4160-6120	4160-7100
iron oxide			5-10
stoddard solvent	1-5	1-5	1-5
solvent naphtha (petroleum), light aromatic	5-10	5-10	5-10
2-heptanone	5-10	5-10	5-10
titanium oxide	5-10	1-5	
quartz	.1-1.0	.1-1.0	.1-1.0
antigorite	5-10	5-10	5-10
benzene	.01-.1	.01-.1	.01-.1
anthophyllite, nonasbestiform	1-5	1-5	1-5
talc	10-20	10-20	10-20
trimethyl benzene	1-5	1-5	1-5
benzene,1,2,4-trimethyl-	1-5	1-5	1-5
1,3,5-trimethylbenzene	1-5	1-5	1-5
tremolite, nonasbestiform	10-20	10-20	10-20
benzene, dimethyl-	1-5	1-5	1-5
phosphoric acid, zinc salt	1-5	1-5	1-5
zinc oxide	1-5	1-5	1-5
alkyd resin	10-20	10-20	10-20
fatty acids, tall-oil, polymers with glycerol, pentaerythritol and phthalic anhydride	5-10	5-10	5-10

Chemical Hazard Data

			ACGIH-TLV		OSHA-PEL				S.R.	S	S	C			
CHEMICAL NAME	COMMON NAME	CAS. NO.	8-HOUR TWA	STEL	8-HOUR TWA	STEL	C	S	STD.	2	3	C	N	I	O
iron oxide	metallic brown iron oxide	1309-37-1	5 mg/m^3	ne	10 mg/m^3	ne	ne	ne	ne	n	n	n	n	n	n
stoddard solvent	mineral spirits	8052-41-3	100 ppm	ne	100 ppm	ne	ne	ne	ne	n	n	n	n	n	n
solvent naphtha (petroleum), light aromatic	light aromatic solvent naphtha (petroleum)	64742-95-6	100 ppm	150 ppm	100 ppm	150 ppm	ne	ne	50 ppm	n	n	n	n	n	n
2-heptanone	methyl amyl ketone	110-43-0	50 ppm	ne	100 ppm	ne	ne	ne	ne	n	n	n	n	n	n
titanium oxide	titanium dioxide	13463-67-7	10 mg/m^3	ne	5 mg/m^3	ne	ne	ne	5 mg/m^3	n	n	n	n	n	n
quartz	quartz	14808-60-7	0.1 mg/m^3	ne	0.1 mg/m^3	ne	ne	ne	ne	n	n	n	y	y	n
antigorite	same	12135-86-3	ne	ne	ne	ne	ne	ne	ne	n	n	n	n	n	n
benzene	benzene	71-43-2	10 ppm	ne	1 ppm	5ppm	ne	ne	ne	n	y	y	y	y	y
anthophyllite, nonasbestiform	same	17068-78-9	ne	ne	ne	ne	ne	ne	ne	n	n	n	n	n	n
talc	talc	14807-96-6	2 mg/m^3	ne	2 mg/m^3	ne	ne	ne	ne	n	n	n	n	n	n
trimethyl benzene	trimethyl benzene	25551-13-7	25 ppm	ne	125 mg/m^3	ne	ne	ne	ne	n	n	n	n	n	n
benzene,1,2,4-trimethyl-	pseudocumene	95-63-6	25 ppm	ne	ne	ne	ne	ne	ne	n	y	n	n	n	n
1,3,5-trimethylbenzene	same	108-67-8	25 ppm	35 ppm	ne	ne	ne	ne	ne	n	n	n	n	n	n
tremolite, nonasbestiform	same	14567-73-8	ne	ne	ne	ne	ne	ne	ne	n	n	n	n	n	n
benzene, dimethyl-	xylene, mixed isomers	1330-20-7	100 ppm	150 ppm	100 ppm	150ppm	ne	ne	ne	n	y	y	n	n	n
phosphoric acid, zinc salt	zinc phosphate	7779-90-0	10 mg/m^3	ne	15 mg/m^3	ne	ne	ne	ne	n	y	n	n	n	n
zinc oxide	same	1314-13-2	5 mg/m^3	5 mg/m^3	5 mg/m^3	5 mg/m^3	ne	ne	ne	n	y	n	n	n	n
alkyd resin	alkyd resin	sup. conf.	ne	ne	ne	ne	ne	ne	ne	n	n	n	n	n	n
fatty acids, tall-oil, polymers with glycerol, pentaerythritol and phthalic anhydride	same	66070-62-0	ne	ne	ne	ne	ne	ne	ne	n	n	n	n	n	n

Footnotes:

C = Ceiling - Concentration that should not be exceeded, even instantaneously.

S.R.STD. = Supplier Recommended Standard

S = Skin - Additional exposure, over and above airborne exposure, may result from skin absorption.

n/a = not applicable

ne = not established

ppm = parts per million

mg/m^3 = milligrams per cubic meter

S2 = Sara Section 302 EHS

S3 = Sara Section 313 Chemical

CC = CERCLA Chemical

Carcinogenicity Listed By:
N = NTP, I = IARC, O = OSHA
y = yes, n = no