SAFETY DATA SHEET

Randolph X1567 WING WALK COMPOUND (Black or Gray)

1 – IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND OF THE COMPANY UNDERTAKING

PRODUCT NAME: **Randolph X1567 WING WALK COMPOUND (Black or Gray)**
PRODUCT NUMBER: X-1567B or X-1567G
SUPPLIER: Consolidated Aircraft Coatings
P.O. Box 3129, Riverside, CA 92519, USA
4343 Fort Drive, Riverside, CA 92509, USA
(951) 684-4280
(951) 809-7144
(760) 782-1947
EMERGENCY TELEPHONE: (800) 424-9300 (Chemtrec- US)
(703) 527-3887 (International – Call Collect)

2 - HAZARDS IDENTIFICATION

Highly flammable. Irritating to eyes and skin. Harmful: danger of serious damage to health by prolonged exposure through inhalation. Possible risk of harm to the unborn child. Harmful: may cause lung damage if swallowed. Vapors may cause drowsiness and dizziness.
CLASSIFICATION (1999/45) XI, XN, F, N, R11, R20, R50/53, R66, R67

3 – COMPOSITION /INFORMATION ON INGREDIENTS

Name	EC No.	CAS No.	Content %	Classification (67/548/EEC)
Mineral Spirits	232-489-3	8052-41-3	5-35%	XN, N, R10, R51/53, R65, R66, S16, S23, S24, S36, S60, S62
Xylene	215-535-7	1330-20-7	8-40%	XN, R10, R20/21, R36/38, S25
VM&P Naphtha	265-150-3	64742-48-9	10-40%	XN, R10, R65, R66
Ethyl Benzene	202-849-4	100-41-4	0-10%	XN, R10, R20/21, R36/38, S25
Aromatic Petroleum Distillates	265-199-0	64742-95-6	0-30%	R10, R36/37/38, R20, R65, S16, S29, S24/25
1,2,4-Trimethylbenzene	202-436-9	95-63-6	0-30%	XN, N, R10, R20, R36/37/38, R51/53, S26, S61
1,3,5-Trimethylbenzene	203-604-4	108-67-8	0-10%	XI, N, R10, R37, R51/53, S61
Diethyl benzene	246-874-9	25340-17-4	0-10%	R10, S16, S24/25, S33, S37, S45, S9, S28A
Isopropyl benzene	202-704-5	98-82-8	0-10%	XN, N, R10, R37, R51/53, R65, S24, S37, S61, S62
Silica	238-878-4	14808-60-7	0-30%	R48/20, R40, S22, S38
Methyl Ethyl Ketoxime	202-496-6	96-29-7	0-10%	XN, R21, R40, R41, R43, S13, S23, S26, S36/37/39
Glycol Ether DB	203-961-6	112-34-5	0-10%	XI, R36, S24, S26
Propylene Glycol Monomethyl Ether Acetate	203-603-9	108-65-6	0-10%	XI, R10, R36, S16, S25, S36/37/39
Non Hazardous and other ingredients below reportable levels	N/A	N/A	Balance	

The Full Text for all R-Phrases and S-Phrases is displayed in Section 15

COMPOSITION COMMENTS
The data shown are in accordance with the latest EC Directives.

4- FIRST AID MEASURES

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.
INHALATION HEALTH RISKS AND SYMPTOMS OF EXPOSURE:
Irritating to the eyes, nose, and respiratory tract. Can cause wheezing, coughing, shortness of breath, and tightness in the chest. Can cause dizziness, headaches and in coordination. Nausea, vomiting, and stomach upset can occur. Can cause anesthetic and/or narcotic effects.
SKIN AND EYE CONTACT HEALTH RISKS AND SYMPTOMS OF EXPOSURE:
May cause slight to mild irritation. May cause corneal opacity (clouding of eye surface). Can cause eye burning sensation, tearing, and redness. Prolonged or repeated contact may dry the skin and lead to irritation (i.e., dermatitis). Can cause skin redness, itching, and burning sensation.
INGESTION HEALTH RISK AND SYMPTOMS OF EXPOSURE:
Irritating to the mouth, throat, and stomach. May cause nausea, vomiting, pain, and stomach upset (e.g., diarrhea). Can cause dizziness, faintness, headache and in coordination.
HEALTH HAZARDS (ACUTE AND CHRONIC):
Overexposure may cause anesthesia, headache, nausea or dizziness. Breathing the vapors may irritate the nose and throat. Detectable amounts of chemicals or substances known to the state of California to cause cancer, birth defects, or other reproductive harm may be found in this product. Use care when handling chemical and petroleum products even though they are water reducible.
MEDICAL CONDITIONS GENERALLY AGGRAVATED BY EXPOSURE TO THIS PRODUCT:
Preexisting eye, skin, heart, central nervous system and respiratory disorders may be aggravated by exposure to this product.
EMERGENCY AND FIRST AID PROCEDURES:
If inhaled and symptomatic, move to fresh air and get medical attention if symptoms persist. Any material that contacts the eye should be washed out immediately with water; flush with water for at least 15 minutes. If easy to do, remove contact lenses. Wash skin with soap and water. Remove contaminated clothing and shoes. If ingested, do not induce vomiting. Drink 1 or 2 glasses of milk or water to dilute. Call a poison control center or get medical attention immediately. Never give anything by mouth to an unconscious person.

5- FIRE FIGHTING PROCEDURES

EXTINGUISHING MEDIA:
Dry Chemical, CO2, Halon, Foam
SPECIAL FIREFIGHTING PROCEDURES:
Do not enter a confined area without full bunker gear including a positive-pressure NIOSH-approved self-contained breathing apparatus. Wear protective clothing.
UNUSUAL FIRE AND EXPLOSION HAZARDS:
High temperatures can cause sealed containers to rupture due to a build up of internal pressure. Cool with water. Vapors are heavier than air and can travel some distance away and flash back. Flammable material.
SENSITIVITY TO STATIC DISCHARGE:
Material may accumulate a static charge that could act as an ignition source. Precautions should be taken when pouring to minimize splash/free fall.

6-ACCIDENTAL RELEASE MEASURES

PERSONAL PRECAUTIONS:
Wear protective clothing as described in Section 8.
ENVIRONMENTAL PRECAUTIONS:
Spillages or uncontrolled discharges into watercourses must immediately be alerted to Environmental Agency or other appropriate regulatory authority.
SPILL CLEANUP METHODS:
Keep combustibles away from spilled material. Extinguish all ignition sources. Avoid sparks, open flames, and smoking. Ventilate. Absorb in vermiculite, dry sand, or earth and place into containers for disposal.

7-HANDLING AND STORAGE

USAGE PRECAUTIONS:
Keep away from heat, sparks and open flames. Avoid spilling, skin and eyes contact. Use with adequate ventilation and avoid excessive exposure to solvent vapors. Use approved respirator if air contamination exceeds the accepted level.
STORAGE PRECAUTIONS:
FLAMMABLE/Combustible. Keep away from oxidizers, open flames and other ignition sources. Keep unused contents in original container and tightly closed lids. Store in a cool, dry and well-ventilated place and at an ambient Temperature not to exceeding above 120^{o}F.
STORAGE CLASS:
FLAMMABLE liquid storage.

8-EXPOSURE CONTROL/PERSONAL PROTECTION

Name	Workplace Exposure Limits	Remarks
Mineral Spirits	ACGIH: 100 ppm TWA NIOSH: 350 mg/m3 TWA 20000 mg/m3 IDLH OSHA-Final PELs: 500 ppm TWA; 2900 mg/m3 TWA	Consult local authorities for acceptable exposure limits
Xylene	ACGIH: 100 ppm TWA; 150 ppm STEL NIOSH: None listed OSHA-Final PELs: 100 ppm TWA; 435 mg/m3 TWA	Same As Above
VM&P Naphtha	ACGIH: 200 mg/m3 TWA NIOSH: 100 mg/m3 TWA OSHA-Final PELs: None listed	Same As Above
Ethyl Benzene	ACGIH: 100 ppm TWA; 125 ppm STEL NIOSH: 100 ppm TWA; 435 mg/m3 TWA 800 ppm IDLH (10% LEL) OSHA-Final PELs: 100 ppm TWA; 435 mg/m3 TWA	Same As Above
Aromatic Petroleum Distillates	ACGIH: 25ppm TWA NIOSH: None listed OSHA-Final PELs: 100 ppm TWA	Same As Above
1,2,4-Trimethylbenzene	ACGIH: 25 ppm TWA NIOSH: 25 ppm TWA; 125 mg/m^3 TWA OSHA-Final PELs: none listed	Same As Above
1,3,5-Trimethylbenzene	ACGIH: 25 ppm TWA NIOSH: 25 ppm TWA; 125 mg/m3 TWA OSHA-Final PELs: None listed	Same As Above
Diethyl benzene	ACGIH: None listed NIOSH: None listed OSHA-Final PELs: None listed	Same As Above
Isopropyl benzene	ACGIH: 50 ppm TWA NIOSH: 50 ppm TWA; 245 mg/m3 TWA 900 ppm IDLH OSHA-Final PELs: 50 ppm TWA; 245 mg/m3 TWA	Same As Above
Silica	ACGIH: 0.025 mg/m3 TWA NIOSH: 0.05 mg/m3 TWA OSHA-Final PELs: None listed	Same As Above
Methyl Ethyl Ketoxime	ACGIH: None listed NIOSH: None listed OSHA-Final PELs: None listed	Same As Above
Glycol Ether DB	ACGIH: None listed NIOSH: None listed OSHA-Final PELs: None listed	Same As Above
Propylene Glycol Monomethyl Ether Acetate	ACGIH: None listed NIOSH: None listed OSHA-Final PELs: None listed	Same As Above
Non Hazardous and other ingredients below reportable levels	N/A	Same As Above

PROTECTIVE EQUIPMENTS:

PROCESS CONDITIONS: Provide eyewash station.

ENGINEERING MEASURES: Provide adequate ventilation. Fully equipped spray booth is recommended to ensure the workers legal exposure limits are not exceeded.

RESPIRATORY EQUIPMENT: Wear respirator with appropriate cartridge for organic solvents and chemicals.

HANDPROTECTION: Wear approved gloves such as Neoprene, Nitrile or Rubber types.

EYE PROTECTION:	Wear splash-proof goggles.
OTHER PROTECTION:	Wear appropriate clothing to prevent any possible skin contact.
HYGIENE MEASURES:	DO NOT SMOKE IN THE WORK AREA. Wash at the end of each work shift and before eating, drinking or smoking. Promptly remove contaminated clothing.

9- PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE:	Liquid
COLOR:	Black or Gray
ODOR:	Organic solvents characteristics
BOILING POINT:	242-405° F
RELATIVE DENSITY:	1.413 g/mL
VAPOR DENSITY:	Heavier than air
FLASH POINT:	44°F (7° C) (Closed Cup)
FLAMMABILITY LIMITS:	LOWER: NA UPPER: NA
SOLUBILITY VALUE (g/100g H_2O @ 20°C):	Insoluble
VOLATILE ORGANIC COMPOUND (VOC):	374 g/L

10- STABILITY AND REACTIVITY

STABILITY:
Stable under normal storage/use conditions.
CONDITIONS TO AVOID:
Heat and fires. Ignition sources.
INCOMPATIBILITY (MATERIALS TO AVOID):
Avoid strong oxidizing agents, acids and alkalies. .
HAZARDOUS DECOMPOSITION OR BYPRODUCTS:
Smoke, soot and carbon dioxide, carbon monoxide
HAZARDOUS POLYMERIZATION:
N/A

11-TOXICOLOGICAL INFORMATION

Mineral Spirits (CAS#8052-41-3): LD50/rabbit/ eye/draize test = 500 mg/24H Moderate; Carcinogenicity: Not listed by ACGIH, IARC, NTP, or CA Prop 65. Epidemiology: Epidemiological studies involving petroleum refinery workers indicate persons with routine exposure to petroleum or one of its constituents may be at an increased risk to the development of benign neoplasm's, digestive tract cancer, and skin cancer. Teratogenicity**:** No information found Reproductive Effects: No information found. Mutagenicity: No information found. Neurotoxicity: No information found

Xylene (CAS#1330-20-7): LD50/LC50: Draize test, rabbit, eye: 87 mg Mild; Draize test, rabbit, eye: 5 mg/24H Severe; Draize test, rabbit, skin: 100% Moderate; Draize test, rabbit, skin: 500 mg/24H Moderate; Inhalation, rat: LC50 = 5000 ppm/4H; Oral, mouse: LD50 = 2119 mg/kg; Oral, rat: LD50 = 4300 mg/kg; Skin, rabbit: LD50 = >1700 mg/kg; Carcinogenicity: Not listed by ACGIH, IARC, NTP, or CA Prop 65. Epidemiology: 175 workers were exposed to 21 ppm of xylene for 7 years. Subjective symptoms such as anxiety, forgetfulness, inability to concentrate and dizziness were reported. Xylenes accounted for >70% of the total exposure. Liver & kidney effects were not reported. Teratogenicity: No increased incidence of birth defects was reported in a study of lab workers exposed to xylene during early pregnancy. Exposure to other solvents and chemicals also occurred. An increased incidence of spontaneous abortions was reported. Animal information suggests that xylene is not teratogenic or embryo toxic at exposure levels that are not harmful to the mother. Reproductive Effects: An increase in menstrual disorders has been reported in women exposed to organic solvents such as benzene, toluene, and xylenes. It is not possible to attribute these effects to xylenes in particular. Mutagenicity: Xylene does not appear to be a mutagen. Neurotoxicity: Xylene may be ototoxic (damages hearing or enhances sensitivity to noise) in chronic occupational exposures, probably from a neurotoxin mechanism.

VM&P Naphtha (CAS#64742-48-9): **RTECS:** Not available. **LD50/LC50:** Dermal, rat: LD50 = >3160 mg/kg Oral, rat: LD50 = >10000 mg/kg **Carcinogenicity:** Not listed as a carcinogen by ACGIH, IARC, NIOSH, NTP, OSHA, or CA Prop 65. **Epidemiology:** No information found. **Teratogenicity: no information found Reproductive: any information found Mutagenicity: any information found Neurotoxicity: any** information found

Ethyl Benzene (CAS#100-41-4). Acute Dermal LD50 Rabbit: 17800 mg/kg, Acute Oral LD50 Rat: 3500 mg/kg. Carcinogenicity: ACGIH- A3 Confirmed animal carcinogen with unknown relevance to humans. IARC Monographs: 2B possibly carcinogenic to humans. Skin corrosion/irritation: Causes skin irritation. Epidemiology: No epidemiological data is available for this product.
Mutagenicity: No data available to indicate product or any components present at greater than 0.1% are mutagenic or genotoxic.
Neurological effects: High vapor/aerosol concentrations (attainable only at elevated temperatures) may cause central nervous system effects such as dizziness, drowsiness or headaches. Central and/or peripheral nervous system damage. Reproductive effects Contains no ingredient listed as toxic to reproduction. Teratogenicity: No data available to indicate product or any components present at greater than 0.1% may cause birth defects.

Aromatic Petroleum Distillates (CAS#64742-95-6): Inhalation: Toxicity: Minimally Toxic. Based on test data for the material. Irritation: Elevated temperatures or mechanical action may form vapors, mist, or fumes which may be irritating to the eyes, nose, throat, or lungs. Based on test

data for structurally similar materials. **Ingestion** Toxicity: LD50 > 3000 mg/kg Minimally Toxic. Based on test data for structurally similar. **Skin** Irritation: May cause mild, short-lasting discomfort to eyes. Based on test data for the material. **CHRONIC/OTHER EFFECTS:** Vapor/aerosol concentrations above recommended exposure levels are irritating to the eyes and respiratory tract may cause headaches, dizziness, anesthesia, drowsiness, unconsciousness and other central nervous system effects including death. Prolonged and/or repeated skin contact with low viscosity materials may defat the skin resulting in possible irritation and dermatitis. Small amounts of liquid aspirated into the lungs during ingestion or from vomiting may cause chemical pneumonitis or pulmonary edema.
1, 2, 4-Trimethylbenzene (CAS#95-63-6): RTECS#: DC3325000 **LD50/LC50:** Inhalation, rat: LC50 = 18000 mg/m3/4H;
Oral, mouse: LD50 = 6900 mg/kg; Oral, rat: LD50 = 5 gm/kg; **Carcinogenicity:** 1, 2, 4-Trimethylbenzene - Not listed as a carcinogen by ACGIH, IARC, NTP, or CA Prop 65.
1, 3, 5-Trimethylbenzene (CAS#108-67-8): Routes of Entry: Eye contact. Ingestion. **Toxicity to Animals:**
WARNING: THE LC50 VALUES HEREUNDER ARE ESTIMATED ON THE BASIS OF A 4-HOUR EXPOSURE. Acute toxicity
of the vapor (LC50): 4881.9 ppm 4 hour(s) [Rat]. **Chronic Effects on Humans:** Not available. **Other Toxic Effects on Humans:**
Hazardous in case of ingestion, of inhalation (lung irritant). Slightly hazardous in case of skin contact (irritant, permeator), **special Remarks on Toxicity to Animals:** Not available. **Special Remarks on Chronic Effects on Humans:** Not available.
Special Remarks on other Toxic Effects on Humans: Not available.
Diethyl benzene (CAS#25340-17-4): Acute toxicity: LD50 Oral - rabbit - 3,000 mg/kg **Skin corrosion/irritation:** Skin - rabbit - Skin irritation **Serious eye damage/eye irritation:** Eyes - rabbit - Mild eye irritation **Respiratory or skin sensitization:** no data available. **Germ cell mutagenicity:** no data available. **Carcinogenicity:**
IARC: No component of this product present at levels greater than or equal to 0.1% is identified as probable,
possible or confirmed human carcinogen by IARC.
ACGIH: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by ACGIH.
NTP: No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.
OSHA: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.
Reproductive toxicity: no data available
Specific target organ toxicity - single exposure (Globally Harmonized System): no data available
Specific target organ toxicity - repeated exposure (Globally Harmonized System): no data available
Aspiration hazard: The substance or mixture is known to cause human aspiration toxicity hazards or has to be regarded as if it causes a human aspiration toxicity hazard. **Potential health effects: Inhalation** May be harmful if inhaled. Causes respiratory tract irritation. **Ingestion** May be harmful if swallowed. Aspiration hazard if swallowed - can enter lungs and cause damage.
Skin May be harmful if absorbed through skin. Causes skin irritation. **Eyes** Causes eye irritation. **Signs and Symptoms of Exposure:** To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated. **Additional Information:** RTECS: CZ5600000
Isopropyl benzene (CAS#98-82-8): LD50/LC50: Draize test, rabbit, eye: 86 mg Mild; Draize test, rabbit, eye: 500 mg/24H Mild; Draize test, rabbit, skin: 100 mg/24H Moderate; Inhalation, mouse: LC50 = 10 gm/m3/7H; Inhalation, mouse: LC50 = 15300 mg/m3/2H; Inhalation, mouse: LC50 = 10000 mg/m3/7H; Inhalation, rat: LC50 = 39000 mg/m3/4H; Oral, mouse: LD50 = 12750 mg/kg; Oral, rat: LD50 = 1400 mg/kg; Oral, rat: LD50 = 2.9 gm/kg; Skin, rabbit: LD50 = 12300 uL/kg; **Carcinogenicity:**
Not listed by ACGIH, IARC, NTP, or CA Prop 65. **Epidemiology:** No information found **Teratogenicity:** No information found
Reproductive Effects: No information found **Mutagenicity:** No information found Neurotoxicity**:** a nervous system depressant, producing behavioral changes at low doses and ataxia (failure of muscular coordination), narcosis, unconsciousness, and respiratory depression at high doses .
Silica (CAS#14808-60-7): The method of exposure to crystalline silica that can lead to the adverse health effects described below is inhalation.
A. SILICOSIS
The major concern is silicosis, caused by the inhalation and retention of respirable crystalline silica dust. Silicosis can
exist in several forms, chronic (or ordinary), accelerated, or acute. Chronic or Ordinary Silicosis (often referred to as Simple Silicosis) is the most common form of silicosis, and can occur after many years of exposure to relatively low levels of airborne respirable crystalline silica dust. It is further defined as either simple or complicated silicosis. Simple silicosis is characterized by lung lesions (shown as radiographic opacities) less than 1 centimeter in diameter, primarily in the upper lung zones. Often, simple silicosis is not associated with symptoms, detectable changes in lung function or disability. Simple silicosis may be progressive and may develop into complicated silicosis or progressive massive fibrosis (PMF).Complicated silicosis or PMF is characterized by lung lesions (shown as radiographic opacities) greater than 1 centimeter in diameter. Although there may be no symptoms associated with complicated silicosis or PMF, the symptoms, if present, are shortness of breath, wheezing, cough and sputum production. Complicated silicosis or PMF may be associated with decreased lung function and may be disabling. Advanced complicated silicosis or PMF may lead to death. Advanced complicated silicosis or PMF can result in heart disease secondary to the lung disease (cor pumonale). Accelerated Silicosis can occur with exposure to high concentrations of respirable crystalline silica over a relatively short period; the lung lesions can appear within five (5) years of initial exposure. Progression can be rapid. Accelerated
silicosis is similar to chronic or ordinary silicosis, except that lung lesions appear earlier and progression is more rapid. Acute Silicosis can occur with exposures to very high concentrations of respirable crystalline silica over a very short time
period, sometimes as short as a few months. The symptoms of acute silicosis include progressive shortness of breath,
fever, cough and weight loss. Acute silicosis is fatal.
B. CANCER
IARC - The International Agency for Research on Cancer ("IARC") concluded that there was "*sufficient evidence* in humans for the carcinogenicity of crystalline silica in the forms of quartz or cristobalite from occupational sources", and that there is "*sufficient evidence* in experimental animals for the carcinogenicity of quartz and cristobalite." The overall IARC evaluation was that "crystalline silica inhaled in the form of quartz or cristobalite from occupational sources is *carcinogenic to humans* (*Group 1*)." The IARC evaluation noted that "carcinogenicity was not detected in all industrial circumstances studies. Carcinogenicity may be dependent on inherent characteristics of the crystalline silica or

on external factors affecting its biological activity or distribution of its polymorphs." For further information on the IARC evaluation, see IARC Monographs on the Evaluation of Carcinogenic Risks to Humans, Volume 68, "Silica, Some Silicates..." (1997).
NTP - The National Toxicology Program's Eleventh Annual Report on Carcinogens classifies "silica, crystalline (respirable size)" as a known human carcinogen.
OSHA - Crystalline silica (quartz) is not regulated by the U. S. Occupational Safety and Health Administration as a carcinogen.

C. AUTOIMMUNE DISEASES

Several studies have reported excess cases of several autoimmune disorders, -- scleroderma, systemic lupus erythematosus, and rheumatoid arthritis -- among silica-exposed workers**.** For a review of the subject, the following may be consulted: "Occupational Exposure to Crystalline Silica and Autoimmune Disease", Environmental Health Perspectives, Volume 107, Supplement 5, pp. 793-802 (1999); "Occupational Scleroderma", Current Opinion in Rheumatology, Volume 11, pp. 490-494 (1999).

D. TUBERCULOSIS

Individuals with silicosis are at increased risk to develop pulmonary tuberculosis, if exposed to persons with tuberculosis. The following may be consulted for further information: Occupational Lung Disorders, Third Edition, Chapter 12, entitled "Silicosis and Related Diseases", Parkes, W. Raymond (1994); "Risk of pulmonary tuberculosis relative to silicosis and exposure to silica dust in South African gold miners," Occup Environ Med., Volume 55, pp.496-502 (1998).

E. KIDNEY DISEASE

Several studies have reported excess cases of kidney diseases, including end stage renal disease, among silica-exposed workers. For additional information on the subject, the following may be consulted: "Kidney Disease and Silicosis", Nephron, Volume 85, pp. 14-19 (2000).

F. NON-MALIGNANT RESPIRATORY DISEASES

The reader is referred to Section 3.5 of the NIOSH Special Hazard Review cited below, for information concerning the association between exposure to crystalline silica and chronic bronchitis, emphysema and small airways disease. There are studies that disclose an association between dusts found in various mining occupations and non-malignant respiratory diseases, particularly among smokers. It is unclear whether the observed associations exist only with underlying silicosis, only among smokers, or result from exposure to mineral dusts generally (independent of the presence or absence of crystalline silica, or the level of crystalline silica in the dust).
Sources of information:
The ***NIOSH Hazard Review - Occupational Effects of Occupational Exposure to Respirable Crystalline Silica***
published in April 2002 summarizes and discusses the medical and epidemiological literature on the health risks and diseases associated with occupation exposures to respirable crystalline silica. The *NIOSH Hazard Review* should be consulted for additional information, and citations to published studies on health risks and diseases associated with occupational exposure to respirable crystalline silica. The *NIOSH Hazard Review* is available from NIOSH - Publications Dissemination, 4676 Columbia Parkway, Cincinnati, OH 45226, or by calling 1-800-35-NIOSH (1-800-356-4676), or through the NIOSH web site, www.cdc.gov/niosh/topics/silica, then click on the link "NIOSH Hazard Review:
Health Effects of Occupational Exposure to Respirable Crystalline Silica". **RTECS#:** VV7330000 **LD50/LC50:** Not available. Human TCLo inhalation: 16 mppcf/8H/17.9Y intermittent. Toxic effects: fibrosis, pneumoconiosis, cough, difficult breathing.
Carcinogenicity: ACGIH: A2 - Suspected Human Carcinogen California**:** carcinogen, initial date 10/1/88 (airborne particles of respirable size) NTP**:** Known carcinogen **IARC:** Group 1 carcinogen **Epidemiology:** IARC Group 1: Proven human carcinogenic substance. **Teratogenicity:** No information found **Reproductive Effects:** No information found Mutagenicity**:** Mutagenic effects have occurred in humans. **Neurotoxicity:** No information found
Methyl Ethyl Ketoxime (CAS#96-29-7): RTECS#: EL9275000 **LD50/LC50:** Draize test, rabbit, eye: 100 uL Severe; Oral, mouse: LD50 = 1 gm/kg; Oral, rat: LD50 = 930 mg/kg; Skin, rabbit: LD50 = 200 uL/kg; Skin, rabbit: LD50 = 200 uL/kg = 184 mg/kg.
Carcinogenicity: Not listed by ACGIH, IARC, NTP, or CA Prop 65. **Epidemiology:** No data available. **Teratogenicity:** No data available.
Reproductive Effects: No data available. **Mutagenicity:** See actual entry in RTECS for complete information.
Neurotoxicity: No data available.
Glycol Ether DB (CAS#112-34-5): RTECS#: KJ9100000 **LD50/LC50:** Draize test, rabbit, eye: 20 mg Severe; Draize test, rabbit, eye: 20 mg/24H Moderate; Oral, mouse: LD50 = 2400 mg/kg; Oral, mouse: LD50 = 6050 mg/kg; Oral, rabbit: LD50 = 2200 mg/kg; Oral, rat: LD50 = 5660 mg/kg; Oral, rat: LD50 = 4500 mg/kg; Skin, rabbit: LD50 = 2700 mg/kg; Oral, rat: LD50 = 1746-10502 mg/kg, Oral, rat: LD50 = 1746-15918 mg/kg
Carcinogenicity: CAS# 112-34-5: Not listed by ACGIH, IARC, NTP, or CA Prop 65. **Epidemiology:** No information found Teratogenicity**:** No information found **Reproductive Effects:** No information found **Mutagenicity:** No information found **Neurotoxicity:** No information found
Propylene Glycol Monomethyl Ether Acetate (CAS#108-65-6): Acute toxicity: Oral LD50: LD50 Oral - rat - 8,532 mg/kg Inhalation LC50: no data available. Dermal LD50: LD50 Dermal - rabbit - > 5,000 mg/kg. Skin corrosion/irritation: Skin - rabbit - No skin irritation. Serious eye damage/eye irritation: no data available. Respiratory or skin sensitization: Maximization Test - guinea pig - Did not cause sensitization on laboratory animals. Germ cell mutagenicity: no data available. Carcinogenicity: IARC: No possible or confirmed human carcinogen by IARC. ACGIH: Not identified as a carcinogen or potential carcinogen by ACGIH. NTP: Not identified as a known or anticipated carcinogen by NTP. OSHA: Not identified as a carcinogen or potential carcinogen by OSHA. Reproductive toxicity: no data available. Teratogenicity: no data available. Aspiration hazard: no data available. Potential health effects: Inhalation**:** May be harmful if inhaled. May cause respiratory tract irritation. Ingestion: May be harmful if swallowed
Skin: May be harmful if absorbed through skin. May cause skin irritation. Eyes**:** May cause eye irritation. Synergistic effects: no data available.

12- ECOLOGICAL INFORMATION

Mineral Spirits (CAS#8052-41-3): Ecotoxicity: No data available. No information available. Environmental: No information available. Physical: No information available.
Xylene (CAS#1330-20-7): Ecotoxicity: Fish: Rainbow trout: LC50 = 13.5 mg/L; 96 Hr; Unspecified Fish: Goldfish: LD50 = 13 mg/L; 24 Hr; Unspecified Fish: Fathead Minnow: LC50 = 46 mg/L; 1 Hr; Static bioassay Acute and long-term toxicity to fish and invertebrates: LD50 for

goldfish is 13 mg/L/24 Hr.Cas#1330-20-7:LC50(96Hr.) rainbow trout = 8.05 mg/L, Static condition;LC50(96Hr.) fathead minnow = 16.1 mg/L, flow-through conditions; LC50(96Hr.) bluegill = 16.1 mg/L, flow-through;EC50 (48 Hr.) water flea = 3.82 mg/L, flow-through conditions;EC50(24 Hr.) photo bacterium phosphoreum = 0.0084 mg/L, Microtox test.
Environmental: In air, xylenes degrade by reacting with photo chemically produced hydroxyl radicals. In soil it will volatilize and leach into groundwater. Little bioconcentration is expected.
Physical: ATMOSPHERIC FATE: According to a model of gas/particle partitioning of semi volatile organic compounds in the atmosphere, xylene, which has an experimental vapor pressure of 7.99 mm Hg at 25 deg C, will exist solely as a vapor in the ambient atmosphere. Vapor-phase xylene is degraded in the atmosphere by reaction with photo chemically-produced hydroxyl radicals; the atmospheric lifetime of xylene is about 14-26 hours. Ambient levels of xylene are detected in the atmosphere due to large emissions of this compound.
VM&P Naphtha (CAS#64742-48-9): No information found
Ethyl Benzene (CAS#100-41-4): EC50 Water flea (Daphnia magna): 1.37 mg/l 48.00 hours. LC50 Rainbow trout, Donaldson trout (Oncorhynchus mykiss): 4.2 mg/l 96.00 hours. Ecotoxicity: Toxic to aquatic life. Environmental effects: Bioaccumulation is unlikely to be significant because of the low water solubility of this product. An environmental hazard cannot be excluded in the event of unprofessional handling or disposal.
Aromatic Petroleum Distillates (CAS#64742-95-6): ECOTOXICITY:
Expected to be toxic to aquatic organisms. May cause long-term adverse effects in the aquatic environment. **MOBILITY:** Highly volatile, will partition rapidly to air. Not expected to partition to sediment and wastewater solids **PERSISTENCE AND DEGRADABILITY: Biodegradation:** Expected to be readily biodegradable. **Hydrolysis:** Transformation due to hydrolysis not expected to be significant. **Photolysis:** Transformation due to photolysis not expected to be significant
Atmospheric Oxidation: Expected to degrade rapidly in air
1, 2, 4-Trimethylbenzene (CAS#95-63-6): Ecotoxicity: Fish: Fathead Minnow: LC50 = 77.2 mg/L; 96 Hr; Flow-through at 25 C (pH 7.24) **other:** Do not empty into drains.
1, 3, 5-Trimethylbenzene (CAS#108-67-8): Ecotoxicity: Not available. **BOD5 and COD:** Not available. **Products of Biodegradation:** Possibly hazardous short term degradation products are not likely. However, long term degradation products may arise. **Toxicity of the Products of Biodegradation:** The products of degradation are more toxic. **Special Remarks on the Products of Biodegradation:** Not available.
Diethyl benzene (CAS#25340-17-4): Toxicity: Toxicity to fish LC50 - Pimephales promelas (fathead minnow) - 26.0 mg/l - 96.0 h Toxicity to daphnia and other aquatic invertebrates. EC50 - Daphnia magna (Water flea) - 8.9 mg/l - 48 h
Persistence and degradability: Biodegradability Result: - Not readily biodegradable.
Bioaccumulative potential: no data available **Mobility in soil:** no data available **PBT and vPvB assessment:** no data available
Other adverse effects: An environmental hazard cannot be excluded in the event of unprofessional handling or disposal. Toxic to aquatic life.
Isopropyl benzene (CAS#98-82-8): Ecotoxicity: Water flea Daphnia: EC50 =0.6 mg/L; 48Hr; Unspecified Bacteria: Phytobacterium phosphoreum: EC50 = 1.48 mg/L; 5,15,30 min; Microtox test Fish: Fathead Minnow: LC50 = 6.32 mg/L; 96 Hr; Flow-through at 24.5 C (pH 7.58) When released to soil, material is expected to biodegrade and may volatilize from the soil surface. Isopropyl benzene is expected to strongly adsorb to soils and is not expected to leach to groundwater. When released to water, material is expected to volatilize with an estimated half-life of 5-14 days and to biodegrade rapidly. Compared to these processes, aqueous photo oxidation by hydroxyl radicals (estimated half-life 0.7 years) and peroxy radicals (estimated half-life 2.2 years) are expected to be relatively slow, and so are not expected to be significant fate processes. **Environmental:** Bioconcentration is not expected to be significant. When released to the atmosphere, vapor phase of isopropyl benzene will react with photo chemically generated hydroxyl radicals with an estimated half-life of 25 hours in polluted atmospheres and 49 hours in normal atmospheres. The reaction of vapor phase Isopropyl benzene with ozone has an estimated half-life of 3 years and the half-life of direct photolysis was estimated to be 1500 years. **Physical:** No information available. **Other:** No information available.
Silica (CAS#14808-60-7): silica (quartz) is not known to be ecotoxic; i.e., there are no data that suggests that crystalline silica (quartz) is toxic to birds, fish, invertebrates, microorganisms or plant. **Ecotoxicity:** No data available. No information available. **Environmental:** No information available. **Physical:** No information available. **Other:** Do not empty into drains.
Methyl Ethyl Ketoxime (CAS#96-29-7): No information available.
Glycol Ether DB (CAS#112-34-5): Ecotoxicity: Fish: Bluegill/Sunfish: LC50 = 1300 mg/L; 96 Hr.; Static conditions, 23 degrees CFish: Goldfish: LC50 = 2700 mg/L; 24 Hr.; Unspecified Water flea Daphnia: LC50 = 2850 mg/L; 24 Hr.; Unspecified Goldfish, LC50=2700mg/24hr.; Atlantic silverside, TL50=2000ppm/96hr.
Environmental: In soil and water, this chemical is highly mobile and undergoes aerobic biodegradation.
Physical: According to a model of gas/particle partitioning of semi volatile organic compounds in the atmosphere, this material which has a measured vapor pressure of 0.06 mm Hg at 25 deg C, will exist solely as a vapor in the ambient atmosphere. Its Vapor-phase is degraded in the atmosphere by reaction with photo chemically-produced hydroxyl radicals; the half-life for this reaction in air is estimated to be about 10 hours. Alcohols and ethers do not absorb UV light in the environment.
Other: not expected to volatilize from water surfaces based on an estimated Henry's Law constant of 1.3X10-8 atm-cu m/mole, calculated from experimental values for vapor pressure and water solubility. According to a classification scheme, an estimated BCF value of 2, from a measured log Kow, suggests that bioconcentration in aquatic organisms is low.
Propylene Glycol Monomethyl Ether Acetate (CAS#108-65-6): Toxicity: Mortality LC50/- Salmo gairdneri = 100 - 180 mg/l -96 h; Toxicity to daphnia and other aquatic invertebrates. Immobilization EC50 - Daphnia magna (Water flea) > 500 mg/l - 48 h. Persistence and degradability: Readily biodegradable. Bioaccumulative potential: no data available. Mobility in soil: no data available. PBT and vPvB assessment: no data available. Other adverse effects: Biochemical Oxygen Demand (BOD) : 0.36 mg/l, Chemical Oxygen Demand (COD) : 1.74 mg/g. An environmental hazard cannot be excluded in the event of unprofessional handling or disposal. Harmful to aquatic life.

13 – DISPOSAL CONSIDERATIONS

Hazardous wastes should be sent to a RCRA approved incinerator or disposed of in a RCRA approved waste facility. Dispose of container and unused contents in accordance with federal, state and local requirements.

14 – TRANSPORT INFORMATION

DOT PROPER SHIPPING NAME: PAINT
PRIMARY HAZARD CLASS/DIVISION: 3
UN/UA NUMBER: UN1263
PACKING GROUP: II

IMO PROPER SHIPPING NAME: PAINT
IMO UN CLASS: 3
IMO UN NUMBER: 1263
IMO PACKING GROUP: II
IMO LABEL: FLAMMABLE LIQUID
IMO VESSEL STOWAGE: B

Air shipping this product is not advised and if done must be handled by a certified carrier according to IATA rules.

GHS LABEL:

DANGER

HIGHLY FLAMMABLE LIQUID AND VAPOR. VAPOR HARMFUL. CAUSES SERIOUS EYE IRRITATION. CAUSES SKIN IRRITATION. MAY CAUSE ALLERGIC SKIN REACTION. HARMFUL OR FATAL IF SWALLOWED AND ENTERS AIRWAYS. TOXIC TO AQUATIC LIFE.
Refer to MSDS for additional information on safe handling / use. - Keep out of reach of children. For Industrial Use Only.

Contains: Mineral Spirits, Xylene, VM&P Naphtha, Ethylbenzene, Aromatic Petroleum Distillates, 1,2,4-Trimethylbenzene, 1,3,5-Trimethylbenzene, Diethylbenzene, Isopropylbenzene, Silica, Methyl Ethyl Ketoxime, Glycol Ether DB, and Propylene Glycol Mono Methyl Ether Acetate. This product contains one or more chemicals known to the State of California to cause cancer, birth defects, and/or other reproductive harm.

Hazards: H225: Highly flammable liquid and vapour. H304: May be fatal if swallowed and enters airways. H319: Causes serious eye irritation. H315: Causes skin irritation. H335: May cause respiratory irritation.H312+H332: Harmful in contact with skin or if inhaled. H373: May cause damage to organs through prolonged or repeated exposure: Inhalation - neuropsychological effects, auditory dysfunction and effects on colour vision. H411: Toxic to aquatic life with long lasting effects.

Precautionary Statement(s): P210: Keep away from heat/sparks/open flames/hot surfaces. – No smoking. P403+P233: Store in a well-ventilated place. Keep container tightly closed. P202: Do not handle until all safety precautions have been read and understood. P280: Wear protective gloves/protective clothing/eye protection/face protection. P260: Do not breathe mist/vapours/spray. P271: Use only outdoors or in a well-ventilated area. P303+361+353: IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower. P304+340: IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. P305+351+338: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do – continue rinsing.

First Aid: Inhalation - Move person to fresh air. If symptoms occur obtain medical attention. **Skin Contact** - Wash affected skin with soap and water. If symptoms occur obtain medical attention. **Eye Contact** - If substance has got into the eyes, immediately wash out with plenty of water for at least 15 minutes. If symptoms occur obtain medical attention. **Ingestion** - Do not induce vomiting. Drink one glass of water. If symptoms occur obtain medical attention.

15 – REGULATORY INFORMATION

Hazards: H225: Highly flammable liquid and vapour. H304: May be fatal if swallowed and enters airways. H319: Causes serious eye irritation. H315: Causes skin irritation. H335: May cause respiratory irritation.H312+H332: Harmful in contact with skin or if inhaled. H373: May cause damage to organs through prolonged or repeated exposure: Inhalation - neuropsychological effects, auditory dysfunction and effects on colour vision. H411: Toxic to aquatic life with long lasting effects.

Precautionary Statement(s): P210: Keep away from heat/sparks/open flames/hot surfaces. – No smoking. P403+P233: Store in a well-ventilated place. Keep container tightly closed. P202: Do not handle until all safety precautions have been read and understood. P280: Wear protective gloves/protective clothing/eye protection/face protection. P260: Do not breathe mist/vapours/spray. P271: Use only outdoors or in a well-ventilated area. P303+361+353: IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower. P304+340: IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. P305+351+338: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do – continue rinsing.

CODES:


XN and XI


F


N

- XN and XI=harmful
- F=highly flammable
- N= dangerous for the environment

R-Phrases:
R10: Flammable
R20: Harmful by inhalation
R20/21: Harmful by inhalation and in contact with skin

R21: Harmful in contact with skin
R36: Irritating to eyes
R36/37: Irritating to eyes and respiratory system
R36/38: Irritating to eyes and skin
R36/37/38: Irritating to eyes, respiratory system and skin
R37: Irritating to respiratory system
R41: Risk of serious damage to eyes
R43: May cause sensitization by skin contact
R40: Limited evidence of a carcinogenic effect
R48/20: Harmful: danger of serious damage to health by prolonged exposure through inhalation
R51/53: Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment
R65: Harmful: may cause lung damage if swallowed
R66: Repeated exposure may cause skin dryness or cracking
R67: Vapors may cause drowsiness and dizziness

S-Phrases:
S9: Keep container in a well-ventilated place
S13: Keep away from food, drink and animal feeding stuffs
S16: Keep away from sources of ignition - No smoking
S22: Do not breathe dust
S23: Do not breathe fumes and/or vapors
S24: Avoid contact with skin
S24/25: Avoid contact with skin and eyes
S25: Avoid contact with eyes
S26: In case of contact with eyes, rinse immediately with plenty of water and seek medical advice
S28: After contact with skin, wash immediately with plenty of Water.
S29: Do not empty into drains
S33: Take precautionary measures against static discharges
S36: Wear suitable protective clothing
S37: Wear suitable gloves
S38: In case of insufficient ventilation wear suitable respiratory equipment
S36/37/39: Wear suitable protective clothing, gloves and eye/face protection
S45: In case of accident or if you feel unwell seek medical advice immediately (show the label where possible)
S60: This material and its container must be disposed of as hazardous waste
S61: Avoid release to the environment. Refer to special instructions/safety data sheet
S62: If swallowed, do not induce vomiting: seek medical advice immediately and show this container or label

16- DISCLAIMER

Above information is based on data supplied to us and is believed to be correct. Since the information contained herein may be applied under conditions beyond our control and with which we may be unfamiliar and since the data made available subsequent to the date hereof may suggest modifications of the information, we do not assume responsibility for the results of its use. This information is furnished upon the condition that the person receiving it shall make his own determination of the suitability of the material for his particular purpose. It is the user's obligation to determine the safe use of it.