

HAZARDS IDENTIFICATION

(ANSI Section 3)

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

Effects of overexposure :

Inhalation : Irritation of respiratory tract. Prolonged inhalation may lead to loss of appetite, mucous membrane irritation, fatigue, drowsiness, dizziness and/or lightheadedness, headache, uncoordination, nausea, vomiting, diarrhea, chest pain, coughing, central nervous system depression, intoxication, difficulty of breathing, allergic response, blood abnormalities, tremors, severe lung irritation or burns, liver damage, kidney damage, spleen damage, pulmonary edema, pneumoconiosis.

Skin contact : Irritation of skin. Prolonged or repeated contact can cause dermatitis, defatting, allergic response, severe skin irritation or burns. Possible sensitization to skin. Skin contact may result in dermal absorption of component(s) of this product which may cause fatigue, drowsiness, dizziness and/or lightheadedness, headache, nausea, vomiting, diarrhea, central nervous system depression, blood abnormalities, liver damage, kidney damage.

Eye contact : Irritation of eyes. Prolonged or repeated contact can cause conjunctivitis, tearing of eyes, redness of eyes, severe eye irritation, severe eye irritation or burns, corneal injury.

Ingestion : Ingestion may cause lung inflammation and damage due to aspiration of material into lungs, fatigue, drowsiness, dizziness and/or lightheadedness, headache, nausea, vomiting, diarrhea, gastro-intestinal disturbances, severe abdominal pain, apathy, central nervous system depression, respiratory problems, intoxication, blood abnormalities, burns of the mouth, throat, stomach, liver damage, kidney damage, pulmonary edema, loss of consciousness, acute poisoning, respiratory failure, cardiac failure, brain damage.

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

FIRST-AID MEASURES

(ANSI Section 4)

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. Remove to fresh air if inhalation causes eye watering, headaches, dizziness, or other discomfort.

Skin contact : Wash thoroughly with soap and water. If any product remains, gently rub petroleum jelly, vegetable or mineral/baby oil onto skin. Repeated applications may be needed. Remove contaminated clothing. Wash contaminated clothing before re-use. Dispose of contaminated leather items, such as shoes and belts. If irritation occurs, consult a physician.

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.

FIRE-FIGHTING MEASURES

(ANSI Section 5)

Fire extinguishing media : Dry chemical or foam water fog. Carbon dioxide. 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.

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.

Hazardous decomposition or combustion products : Carbon monoxide, carbon dioxide, oxides of nitrogen, acrid fumes, oxides of sulfur, peroxides, aldehydes, toxic gases, acids, unidentified organic compounds.

ACCIDENTAL RELEASE MEASURES

(ANSI Section 6)

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. Use non-sparking tools. Evacuate all unnecessary personnel. Place collected material in proper container. 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.

HANDLING AND STORAGE

(ANSI Section 7)

Handling and storage : Store below 100f (38c). Keep away from heat, sparks and open flame. Keep from freezing. Keep away from direct sunlight, heat and all sources of ignition. Keep container tightly closed in a well-ventilated area.

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 exposure controls/personal protection. Empty containers may contain hazardous residues. Ground equipment when transferring to prevent accumulation of static charge.

EXPOSURE CONTROLS/PERSONAL PROTECTION

(ANSI Section 8)

Respiratory protection : Control environmental concentrations below applicable exposure standards when using this material. When respiratory protection is determined to be necessary, use a NIOSH/MSHA (Canadian z94.4) Approved elastomeric sealing- surface facepiece respirator outfitted with organic vapor cartridges and paint spray (dust/mist) prefilters. Determine the proper level of protection by conducting appropriate air monitoring. Consult 29CFR 1910.134 For selection of respirators (Canadian z94.4).

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, apron, boots.

STABILITY AND REACTIVITY

(ANSI Section 10)

Under normal conditions : Stable see section 5 fire fighting measures

Materials to avoid : Oxidizers, acids, reducing agents, bases, halogens, amines, metals, nitric acid, lewis acids, curing agents, caustics, mineral acids. Nitrates, styrene monomer.

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

Hazardous polymerization : Will not occur may polymerize in presence of aliphatic amines.

TOXICOLOGICAL INFORMATION**(ANSI Section 11)**

Supplemental health information : Contains a chemical that is moderately toxic by ingestion. Contains a chemical that is toxic by ingestion. Contains a chemical that is toxic by inhalation. Contains a chemical that may be absorbed through skin. 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 iron oxide, repeated or prolonged exposure to iron oxide dust may cause siderosis, a benign pneumoconiosis. Other effects of overexposure may include toxicity to liver, kidney, lungs, central nervous system, blood, spleen.

Carcinogenicity : The international agency for research on cancer (IARC) has concluded that untreated and mildly treated mineral oils are carcinogenic to humans (group 1) based on sufficient evidence of carcinogenicity in humans and laboratory animals. Exposure to mineral oils in a variety of occupations has been strongly and consistently associated with the occurrence of skin cancer, especially of the scrotum. Highly refined oils, which are more representative of oils currently used in industry, are unclassifiable as carcinogens (group 3) based on inadequate evidence in humans and animals. The international agency for research on cancer (IARC) has classified carbon black as possibly carcinogenic to humans (group 2b) based on sufficient evidence in animals and inadequate evidence in humans. In a 2-year inhalation bioassay conducted by the national toxicology program (NTP), ethylene glycol butyl ether (egbe) caused an increased incidence of liver tumors in male mice and forestomach tumors in female mice exposed to 250 ppm, the highest concentration tested with mice. In rats, an increased incidence of tumors affecting the adrenal gland was seen in females exposed at 125 ppm only. This finding was not statistically significant. No increased incidence of any tumor type was seen in male rats exposed to the highest test concentration of 125ppm. The relevance of these findings to humans is unclear. In a lifetime inhalation study, exposure to 250 mg/m3 titanium dioxide resulted in the development of lung tumors in rats. These tumors occurred only at dust levels that overwhelmed the animals' lung clearance mechanisms and were different from common human lung tumors in both type and location. The relevance of these findings to humans is unknown but questionable. The international agency for research on cancer (IARC) has classified titanium dioxide as possibly carcinogenic to humans (group 2b) based on inadequate evidence of carcinogenicity in humans and sufficient evidence of carcinogenicity in experimental animals.

Reproductive effects : No reproductive effects are anticipated

Mutagenicity : No mutagenic effects are anticipated

Teratogenicity : Some laboratory test results have shown ethylene glycol to be an animal teratogen. However, an expert panel convened by the national toxicology program's center for the evaluation of risks to human reproduction (cerhr) conducted a review of the scientific literature and concluded that ethylene glycol does not present a significant concern with respect to developmental and reproductive toxicity in humans.

ECOLOGICAL INFORMATION**(ANSI Section 12)**

No ecological testing has been done by akzo nobel paints llc on this product as a whole.

DISPOSAL CONSIDERATIONS**(ANSI Section 13)**

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

REGULATORY INFORMATION**(ANSI Section 15)**

As of the date of this MSDS, all of the components in this product are listed (or are otherwise exempt from listing) on the TSCA inventory. This product has been classified in accordance with the hazard criteria of the CPR (controlled products regulations) and the MSDS contains all the information required by the CPR.

Physical Data**(ANSI Sections 1, 9, and 14)**

Product Code	Description	Wt. / Gal.	VOC gr. / ltr.	% Volatile by Volume	Flash Point	Boiling Range	HMIS	DOT, proper shipping name
4408-0100	tru-glaze-wb 4408 waterborne epoxy gloss coating - white (comp a)	11.23	249.26	63.75	none	212-302	*310	paint**protect from freezing**
4408-0110	tru-glaze-wb waterborne epoxy gloss coating - white tint base (comp a)	10.65	262.92	65.54	none	212-302	*310	paint**protect from freezing**
4408-0115	tru-glaze wb waterborne epoxy gloss coating - white tint base (component a)	11.17	233.68	66.16	none	212-453	310	paint**protect from freezing**
4408-0300	tru-glaze-wb waterborne epoxy gloss coating - intermediate tint base (comp a)	9.92	279.70	66.36	none	210-335	*310	paint**protect from freezing**
4408-0400	tru-glaze-wb waterborne epoxy gloss coating - deep tint base (component a)	9.33	295.04	67.79	none	210-335	*310	paint**protect from freezing**
4408-0500	tru-glaze-wb waterborne epoxy gloss coating - neutral tint base (component a)	8.62	253.10	71.12	none	212-302	310	paint**protect from freezing**
4408-1033	tru-glaze-wb 4408 waterborne epoxy gloss coating - norkan beige	11.34	246.02	63.11	none	212-302	310	paint**protect from freezing**
4408-2231	tru-glaze-wb 4408 waterborne epoxy gloss coating - norkan light gray	11.25	248.35	63.64	none	212-302	310	paint**protect from freezing**
4408-4165	tru-glaze wb 4408 waterborne epoxy gloss - g m safety blue	8.85	301.63	70.91	none	210-335	310	paint**protect from freezing**
4408-6150	tru-glaze-wb 4408 waterborne epoxy gloss coating - clear gray ab-91 (comp a)	10.00	289.53	65.83	none	212-302	*310	paint**protect from freezing**
4408-9990	tru-glaze wb 4408 waterborne epoxy gloss bla ck coating (comp. a)	8.55	305.43	70.59	none	212-302	*310	paint**protect from freezing**
4408-9999	tru-glaze-wb waterborne epoxy - converter (component b)	9.10	173.52	49.12	above 200f	212-212	310	paint**protect from freezing**

Ingredients

Product Codes with % by Weight (ANSI Section 2)

Chemical Name	Common Name	CAS. No.	4408-0100	4408-0110	4408-0115	4408-0300	4408-0400	4408-0500	4408-1033	4408-2231	4408-4165	4408-6150	4408-9990	4408-9999
fatty, c18-unsatd. dimers, polymer with bisphenol a epichlorohydrin, tall-oil fatty acids, tetraethyl pentamine and triethylenetetramine	polyamidoamines	106906-26-7	1-5	1-5		1-5	1-5		1-5	1-5	1-5	1-5	1-5	
1,2-ethanediol	ethylene glycol	107-21-1										1-5		
ethanol, 2-butoxy-	2-butoxyethanol	111-76-2	1-5	1-5		5-10	5-10		1-5	1-5	5-10	5-10	5-10	
ethanol, 2-(2-butoxyethoxy)-	diethylene glycol monobutyl ether	112-34-5			1-5									
kaolin	clay	1332-58-7										1-5		
carbon black	carbon black	1333-86-4										.1-1.0	1-5	
titanium oxide	titanium dioxide	13463-67-7	30-40	20-30	20-30	10-20	10-20		30-40	30-40	5-10	10-20		
copper, {29h, 31h-phthalocyaninato(2-)n29,n30,n31, n32)-(sp-4-1)-	phthalocyanine blue pigment	147-14-8									1-5			
oxirane,2,2'-((1-methylethylidene) bis(4,1-phenyleneoxymethylene)) bis-	diglycidyl ether of bisphenol a	1675-54-3												10-20
aluminum hydroxide	aluminum hydroxide	21645-51-2	1-5	1-5	1-5				1-5	1-5				
ethanol, 2-propoxy-	ethylene glycol monopropyl ether	2807-30-9	1-5	1-5	1-5	1-5	1-5	5-10	1-5	1-5	1-5	1-5	1-5	10-20
c.i. pigment yellow 42	yellow iron oxide	51274-00-1							1-5					
acetic acid	acetic acid	64-19-7	1-5	1-5	1-5	1-5	1-5	1-5	1-5	1-5	1-5	1-5	1-5	
distillates, petroleum, hydrotreated heavy naphthenic	petroleum hydrocarbon	64742-52-5											.1-1.0	
solvent naphtha (petroleum), light aromatic	light aromatic solvent naphtha	64742-95-6	1-5	1-5		1-5	1-5		1-5	1-5	1-5	1-5	1-5	
water	water	7732-18-5	30-40	40-50	40-50	40-50	40-50	50-60	30-40	30-40	50-60	40-50	50-60	30-40
oxirane, methyl-, polymer with oxirane	surfactant	9003-11-6		1-5		1-5	1-5	1-5			1-5	1-5		
benzene,1,2,4-trimethyl-	pseudocumene	95-63-6	.1-1.0	.1-1.0		.1-1.0	.1-1.0		.1-1.0	.1-1.0	.1-1.0	.1-1.0	.1-1.0	
modified aliphatic amine solution	amine curing agent - whmis #4955	Sup. Conf.	5-10	5-10	10-20	5-10	10-20	20-30	5-10	5-10	10-20	5-10	10-20	
epoxy resin	epoxy resin- whmis# 4977	Sup. Conf.												40-50
resinous modifier	resinous modifier	Sup. Conf.	5-10	5-10		5-10	10-20		5-10	5-10	5-10	5-10	10-20	

Chemical Hazard Data

(ANSI Sections 2, 8, 11, and 15)

Common Name	CAS. No.	ACGIH-TLV				OSHA-PEL				S.R. Std.	S2	S3	CC	H	M	N	I	O	
		8-Hour TWA	STEL	C	S	8-Hour TWA	STEL	C	S										
polyamidoamines	106906-26-7	not est.	not est.	not est.	not est.	not est.	not est.	not est.	not est.	not est.	not est.	n	n	n	n	n	n	n	n
ethylene glycol	107-21-1	not est.	not est.	100 mg/m3	not est.	not est.	not est.	not est.	not est.	not est.	not est.	n	y	y	y	n	n	n	n
2-butoxyethanol	111-76-2	20 ppm	not est.	not est.	not est.	50 ppm	not est.	not est.	not est.	y	not est.	n	y	n	n	n	n	n	n
diethylene glycol monobutyl ether	112-34-5	not est.	not est.	not est.	not est.	not est.	not est.	not est.	not est.	not est.	not est.	n	y	n	y	n	n	n	n
clay	1332-58-7	2 mg/m3	not est.	not est.	not est.	5 mg/m3	not est.	not est.	not est.	not est.	not est.	n	n	n	n	n	n	n	n
carbon black	1333-86-4	3.5 mg/m3	not est.	not est.	not est.	3.5 mg/m3	not est.	not est.	not est.	not est.	not est.	n	n	n	n	n	n	n	y
titanium dioxide	13463-67-7	10 mg/m3	not est.	not est.	not est.	10 mg/m3	not est.	not est.	not est.	not est.	not est.	n	n	n	n	n	y	y	n
phthalocyanine blue pigment	147-14-8	not est.	not est.	not est.	not est.	not est.	not est.	not est.	not est.	not est.	not est.	n	n	n	n	n	n	n	n
diglycidyl ether of bisphenol a	1675-54-3	not est.	not est.	not est.	not est.	not est.	not est.	not est.	not est.	not est.	not est.	n	n	n	n	n	n	n	n
aluminum hydroxide	21645-51-2	10 mg/m3	not est.	not est.	not est.	5 mg/m3	not est.	not est.	not est.	not est.	not est.	n	n	n	n	n	n	n	n
ethylene glycol monopropyl ether	2807-30-9	not est.	not est.	not est.	not est.	not est.	not est.	not est.	not est.	not est.	not est.	n	y	n	y	n	n	n	n
yellow iron oxide	51274-00-1	5 mg/m3	not est.	not est.	not est.	10 mg/m3	not est.	not est.	not est.	not est.	not est.	n	n	n	n	n	n	n	n
acetic acid	64-19-7	10 ppm	15 ppm	not est.	not est.	10 ppm	not est.	not est.	not est.	not est.	not est.	n	n	y	n	n	n	n	n
petroleum hydrocarbon	64742-52-5	5 mg/m3	10 mg/m3	not est.	not est.	5 mg/m3	not est.	not est.	not est.	not est.	not est.	n	n	n	n	n	n	n	y
light aromatic solvent naphtha	64742-95-6	not est.	not est.	not est.	not est.	500x ppm	not est.	not est.	not est.	not est.	not est.	n	n	n	n	n	n	n	n

Footnotes:

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

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

n/a=not applicable
not est=not established
CC=CERCLA Chemical

ppm=parts per million
mg/m3=milligrams per cubic meter
Sup Conf=Supplier Confidential

S2=Sara Section 302 EHS
S3=Sara Section 313 Chemical
S.R. Std.=Supplier Recommended Standard

H=Hazardous Air Pollutant, M=Marine Pollutant
P=Pollutant, S=Severe Pollutant
Carcinogenicity Listed By:
N=NTP, I=IARC, O=OSHA, y=yes, n=no

Chemical Hazard Data (Continued) (ANSI Sections 2, 8, 11, and 15)

Common Name	CAS. No.	ACGIH-TLV				OSHA-PEL				S.R. Std.	S2	S3	CC	H	M	N	I	O
		8-Hour TWA	STEL	C	S	8-Hour TWA	STEL	C	S									
surfactant	9003-11-6	not est.	not est.	not est.	not est.	not est.	not est.	not est.	not est.	not est.	n	n	n	n	n	n	n	n
amine curing agent - whmis #4955	Sup. Conf.	not est.	not est.	not est.	not est.	not est.	not est.	not est.	not est.	not est.	n	n	n	n	n	n	n	n
epoxy resin- whmis# 4977	Sup. Conf.	not est.	not est.	not est.	not est.	not est.	not est.	not est.	not est.	not est.	n	n	n	n	n	n	n	n

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

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not est=not established
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ppm=parts per million
mg/m3=milligrams per cubic meter
Sup Conf=Supplier Confidential

S2=Sara Section 302 EHS
S3=Sara Section 313 Chemical
S.R.Std.=Supplier Recommended Standard

H=Hazardous Air Pollutant, M=Marine Pollutant
P=Pollutant, S=Severe Pollutant
Carcinogenicity Listed By:
N=NTP, I=IARC, O=OSHA, y=yes, n=no

