



MATERIAL SAFETY DATA SHEET

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ICI Paints North America

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MIRROLAC ALKYD URETHANE GLOSS

DP70XX

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, blurred vision, coughing, difficulty with speech, central nervous system depression, intoxication, metallic taste, anesthetic effect or narcosis, difficulty of breathing, allergic response, fever and chills, dehydration, tremors, severe lung irritation or damage, liver damage, kidney damage, pulmonary edema, convulsions, pneumoconiosis, loss of consciousness, coma, respiratory failure, asphyxiation, death. Possible sensitization to respiratory tract.

Skin contact : Irritation of skin. Prolonged or repeated contact can cause dermatitis, defatting, blistering, allergic response. Skin contact may result in dermal absorption of component(s) of this product which may cause blurred vision, central nervous system depression.

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

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

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

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.

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 may ignite explosively at ambient temperatures. 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. Self-contained breathing apparatus recommended.

Hazardous decomposition or combustion products : Carbon monoxide, carbon dioxide, oxides of nitrogen, phosphorous, oxides of sulfur, ammonia, toxic gases. Oxides of calcium.

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.

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 29CFR1910.134 For selection of respirators (Canadian z94.4).

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

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

STABILITY AND REACTIVITY

(ANSI Section 10)

Under normal conditions : Stable see section 5 fire fighting measures

Materials to avoid : Oxidizers, acids, bases, amines, ammonium salts, peroxides, nitric acid, hydrofluoric acid, mineral acids. Nitrates, styrene monomer.

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

Hazardous polymerization : Will not occur

TOXICOLOGICAL INFORMATION

(ANSI Section 11)

Supplemental health information : 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. Other effects of overexposure may include toxicity to liver, kidney, lungs, central nervous system, spleen, gastrointestinal tract.

The information contained herein is based on data available at the time of preparation of this data sheet which ICI Paints believes to be reliable. However, no warranty is expressed or implied regarding the accuracy of this data. ICI Paints shall not be responsible for the use of this information, or of any product, method or apparatus mentioned and you must make your own determination of its suitability and completeness for your own use, for the protection of the environment, and the health and safety of your employees and the users of this material. Complies with OSHA hazard communication standard 29CFR1910.1200.

Carcinogenicity : Inhalation of non-asbestiform cosmetic grade talc for 2 years at 6 and 18 mg/m³ produced clear evidence of carcinogenicity in female rats (lung and adrenal tumors) and some evidence of carcinogenicity in male rats (adrenal tumors). No evidence of carcinogenicity was demonstrated in male and female mice exposed under the same conditions. Microscopic examination of the lungs of rats and mice exposed to talc revealed additional exposure related effects primarily associated with the inflammatory response. Stoddard solvent iic has been shown to cause kidney tumors in male rats in a national toxicology program (NTP) study. These tumors were associated with a specific protein, alpha-2u-microglobulin. Because humans do not produce this protein stoddard solvent iic has not been classified as a human carcinogen. Contains crystalline silica which is considered a hazard by inhalation. IARC has classified crystalline silica as carcinogenic to humans (group 1). Crystalline silica is also a known cause of silicosis, a noncancerous lung disease. The national toxicology program (NTP) has classified crystalline silica as a known human carcinogen. 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. The international agency for research on cancer (IARC) has evaluated ethylbenzene and classified it as a possible human carcinogen (group 2b) based on sufficient evidence for carcinogenicity in experimental animals, but inadequate evidence for cancer in exposed humans. In a 2 year inhalation study conducted by the national toxicology program (NTP), ethylbenzene vapor at 750 ppm produced kidney and testicular tumors in rats and lung and liver tumors in mice. Genetic toxicity studies showed no genotoxic effects. The relevance of these results to humans is not known. The international agency for research on cancer (IARC) has classified

cobalt and certain cobalt compounds as possibly carcinogenic to humans (group 2b). Injection of metallic cobalt, cobalt alloys, and certain cobalt compounds has resulted in the development of localized tumors in laboratory animals. 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 : High exposures to xylene in some animal studies, often at maternally toxic levels, have affected embryo/fetal development. The significance of this finding to humans is not known.

Mutagenicity : No mutagenic effects are anticipated

Teratogenicity : No teratogenic effects are anticipated

ECOLOGICAL INFORMATION (ANSI Section 12)

No ecological testing has been done by ICI paints 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
DP7001	mirrolac int-ext alkyd urethane gloss enamel - white	10.10	373.96	47.71	105 f	266-415	320	UN1263, paint, combustible liquid, PGIII
DP7003	mirrolac interior/exterior alkyd urethane gloss enamel - black	7.75	425.42	53.94	102 f	277-415	*320	UN1263, paint, combustible liquid, PGIII
DP7049	mirrolac int-ext alkyd - urethane gloss enamel - high hide base	9.69	377.28	48.15	105 f	266-415	320	UN1263, paint, combustible liquid, PGIII
DP7051	mirrolac int/ext alkyd urethane gloss enamel - medium base	9.64	375.87	48.05	105 f	266-415	320	UN1263, paint, combustible liquid, PGIII
DP7053	mirrolac int/ext alkyd - urethane gloss enamel - deep base	9.52	379.15	48.53	105 f	266-415	320	UN1263, paint, combustible liquid, PGIII
DP7057	mirrolac interior/exterior alkyd urethane gloss enamel - clear base	9.58	377.85	48.28	105 f	276-415	*320	UN1263, paint, combustible liquid, PGIII
DP7103	mirrolac interior/exterior alkyd flat enamel - flat black	9.39	415.74	53.16	100 f	235-415	*320	UN1263, paint, combustible liquid, PGIII

Ingredients

Product Codes with % by Weight (ANSI Section 2)

Chemical Name	Common Name	CAS. No.	DP7001	DP7003	DP7049	DP7051	DP7053	DP7057	DP7103
benzene, ethyl-	ethylbenzene	100-41-4	.1-1.0	.1-1.0	.1-1.0	.1-1.0	.1-1.0	.1-1.0	.1-1.0
ethanol, 2-butoxy-	2-butoxyethanol	111-76-2		.1-1.0					
antigorite	antigorite	12135-86-3							1-5
quaternary ammonium compounds, benzylbis (hydrogenated tallow alkyl)methyl, benzoate lauryl sulfate, salts with bentonite	rheological additive	121888-66-2		1-5					
limestone	limestone	1317-65-3						20-30	
benzene, dimethyl-	xylene	1330-20-7	.1-1.0	1-5	.1-1.0	.1-1.0	.1-1.0	.1-1.0	.1-1.0
kaolin	clay	1332-58-7	5-10		10-20		20-30	1-5	
carbon black	carbon black	1333-86-4		1-5					1-5

Ingredients (Continued)

Product Codes with % by Weight (ANSI Section 2)

Chemical Name	Common Name	CAS. No.	DP7001	DP7003	DP7049	DP7051	DP7053	DP7057	DP7103
titanium oxide	titanium dioxide	13463-67-7	20-30		10-20	10-20	1-5		
crystalite	crystalline silica, cristobalite	14464-46-1							10-20
tremolite, nonasbestiform	tremolite	14567-73-8							1-5
talc	talc	14807-96-6							1-5
quartz	quartz	14808-60-7						.1-1.0	.1-1.0
anthophyllite, nonasbestiform	anthophyllite	17068-78-9							.1-1.0
neodecanoic acid, cobalt salt	cobalt neodecanoate	27253-31-2		.1-1.0					
nepheline syenite	feldspar-type minerals	37244-96-5				10-20			
naphtha (petroleum), heavy alkylate	heavy solvent naphtha	64741-65-7	1-5	10-20	1-5	1-5	1-5	5-10	10-20
hydrotreated heavy naphtha	hydrotreated heavy naphtha	64742-48-9							1-5
solvent naphtha (petroleum), medium aliphatic	medium aliphatic solvent naphtha	64742-88-7	5-10	10-20	5-10	5-10	10-20	10-20	20-30
soybean oil, polymer with pentaerythritol, tdi and tung oil	alkyd resin	67989-28-0	10-20		10-20	10-20	10-20	10-20	
fatty acid, c18-unsaturated, dimers, polymers with ethylenediamine, pentaerythritol, phthalic anhydride and tall-oil fatty acids	alkyd resin	68604-95-5	10-20		5-10	5-10	5-10		
kieselguhr, soda ash flux-calcined	silica, diatomaceous earth	68855-54-9							5-10
quaternary ammonium compounds, bis(hydrogenated tallow alkyl)di=methyl, salts with bentonite	dispersant, organoclay	68953-58-2	1-5						
lecithins	lecithin	8002-43-5							1-5
stoddard solvent	mineral spirits	8052-41-3	10-20	10-20	10-20	10-20	10-20	5-10	
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
alkyd resin	alkyd resin	Sup. Conf.		10-20					
tall oil fatty acid resin solution	tall oil fatty acid resin solution	Sup. Conf.							1-5
long oil alkyd resin	long oil alkyd resin	Sup. Conf.	5-10	30-40	10-20	10-20	10-20	10-20	20-30

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									
ethylbenzene	100-41-4	100 ppm	125 ppm	not est.	not est.	100 ppm	not est.	not est.	not est.	not est.	n	y	y	y	n	n	y	n
2-butoxyethanol	111-76-2	20 ppm	not est.	not est.	not est.	50 ppm	not est.	not est.	y	not est.	n	y	n	n	n	n	n	n
antigorite	12135-86-3	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
rheological additive	121888-66-2	10 mg/m3	not est.	not est.	not est.	10 mg/m3	not est.	not est.	not est.	not est.	n	n	n	n	n	n	n	n
limestone	1317-65-3	10 mg/m3	not est.	not est.	not est.	5 mg/m3	not est.	not est.	not est.	not est.	n	n	n	n	n	n	n	n
xylene	1330-20-7	100 ppm	150 ppm	not est.	not est.	100 ppm	not est.	not est.	not est.	not est.	n	y	y	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.	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.	n	n	n	n	n	n	y	n
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.	n	n	n	n	n	y	y	n
crystalline silica, cristobalite	14464-46-1	.025 mg/m3	not est.	not est.	not est.	0.05 mg/m3	not est.	not est.	not est.	not est.	n	n	n	n	n	y	y	n
tremolite	14567-73-8	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
talc	14807-96-6	2 mg/m3	not est.	not est.	not est.	not est.	not est.	not est.	not est.	not est.	n	n	n	n	n	n	n	n
quartz	14808-60-7	.025 mg/m3	not est.	not est.	not est.	0.1 mg/m3	not est.	not est.	not est.	not est.	n	n	n	n	n	y	y	n
anthophyllite	17068-78-9	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
cobalt neodecanoate	27253-31-2	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	y
feldspar-type minerals	37244-96-5	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
heavy solvent naphtha	64741-65-7	100 ppm	not est.	not est.	not est.	500 ppm	not est.	not est.	not est.	not est.	n	n	n	n	n	n	n	n
hydrotreated heavy naphtha	64742-48-9	300 ppm	not est.	not est.	not est.	not est.	not est.	not est.	not est.	not est.	n	n	n	n	n	n	n	n
medium aliphatic solvent naphtha	64742-88-7	not est.	not est.	not est.	not est.	500 x ppm	not est.	not est.	not est.	not est.	n	n	n	n	n	n	n	n
silica, diatomaceous earth	68855-54-9	10 mg/m3	not est.	not est.	not est.	6 mg/m3	not est.	not est.	not est.	not est.	n	n	n	n	n	n	n	n
dispersant, organoclay	68953-58-2	10 mg/m3	not est.	not est.	not est.	15 mg/m3	not est.	not est.	not est.	not est.	n	n	n	n	n	n	n	n
lecithin	8002-43-5	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
mineral spirits	8052-41-3	100 ppm	not est.	not est.	not est.	500 ppm	not est.	not est.	not est.	not est.	n	n	n	n	n	n	n	n
tall oil fatty acid resin solution	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

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