



MATERIAL SAFETY DATA SHEET

prepared 11/06/08

ICI Paints North America
15885 Sprague Road
Strongsville, Ohio 44136
EMERGENCY TELEPHONE NO. (800) 545-2643
DEVTHANE 359
359K

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 mucous membrane irritation, fatigue, drowsiness, dizziness and/or lightheadedness, headache, uncoordination, nausea, vomiting, chest pain, blurred vision, flu-like symptoms, coughing, difficulty with speech, central nervous system depression, anesthetic effect or narcosis, difficulty of breathing, allergic response, tremors, severe lung irritation or damage, liver damage, kidney damage, pneumoconiosis, loss of consciousness, respiratory failure, asphyxiation, death. Possible sensitization to respiratory tract.

Skin contact : Irritation of skin. Prolonged or repeated contact can cause dermatitis, defatting, blistering, severe skin irritation, 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 drowsiness, dizziness and/or lightheadedness.

Eye contact : Irritation of eyes. Prolonged or repeated contact can cause conjunctivitis, blurred vision, 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, mouth and throat irritation, mucous membrane irritation, drowsiness, dizziness and/or lightheadedness, headache, uncoordination, nausea, vomiting, diarrhea, gastro-intestinal disturbances, abdominal pain, central nervous system depression, burns of the mouth, throat, stomach, severe irritation of the mouth, throat, stomach, liver damage, kidney damage, pulmonary edema, loss of consciousness.

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

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. Get medical attention if discomfort or irritation persists.

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. 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 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. Dust explosion hazard. 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, formaldehyde, oxides of sulfur, hydrogen cyanide, toxic gases, isocyanate, barium compounds, acrylic monomers. Silicon 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. Ventilate area with explosion-proof equipment. Spills may be collected with absorbent materials. Use non-sparking tools. Evacuate all unnecessary personnel. Place collected material in proper container. Spilled material is extremely slippery. Complete personal protective equipment must be used during cleanup. Vacuum with grounded equipment. 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 80f. Keep away from heat, sparks and open flame. Store in original container. 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 : Respiratory protection is required for use in isocyanate containing environments. Consider type of application and environmental concentrations when selecting respiratory protection. Observe governmental regulations for respirator use. (29 CFR 1910.134(OSHA))(Canadian z94.4) The use of positive pressure supplied air respirator is mandatory when the airborne isocyanate concentrations are not known. Note: isocyanate based materials have been determined to cause allergic sensitization in humans. Avoid inhalation and dermal (skin) contact with the uncured material.

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, face shield, apron, boots.

STABILITY AND REACTIVITY (ANSI Section 10)

Under normal conditions : Stable can form explosive peroxides on long standing in air. See section 5 fire fighting measures

Materials to avoid : Oxidizers, acids, reducing agents, bases, halogens, amines, water, peroxides, nitric acid, alcohols, metal compounds, surface active materials, combustible materials. Nitrates.

Conditions to avoid : Elevated temperatures, moisture, 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. Free diisocyanate may cause allergic reaction in susceptible persons. 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.

Carcinogenicity : 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. 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
359B2635	devthane 359 dtm high build gloss aliphatic urethane, flowserve gray	11.20	432.02	47.83	80 f	212-289	*330	UN1263, paint, 3, PGIII
359B3501	devthane 359 dtm high build gloss aliphatic urethane mastic - white base	11.69	409.84	44.99	80 f	147-295	330	UN1263, paint, 3, PGIII
359B3601	devthane 359 dtm high build gloss aliphatic urethane mastic - special white base	12.96	421.83	45.94	80 f	212-295	230	UN1263, paint, 3, PGIII
359B7460	devthane 359 dtm uva high build gloss aliphatic urethane mastic - architectural brn	12.68	371.26	41.05	80 f	147-147	*330	UN1263, paint, 3, PGIII
359B8912	devthane 359 dtm high build gloss aliphatic urethan - yellow	9.45	408.77	45.08	80 f	212-415	230	UN1263, paint, 3, PGIII
359B9400	devthane 359 dtm high build gloss aliphatic urethane, safety yellow	10.21	448.07	49.58	80 f	212-415	330	UN1263, paint, 3, PGIII
359B9500	devthane 359 dtm high build gloss aliphatic urethane mastic - white tint base	10.88	402.17	44.40	80 f	147-147	330	UN1263, paint, 3, PGIII
359B9501	devthane 359 dtm high build gloss aliphatic urethane mastic - deep tint base	10.83	408.63	45.16	80 f	212-212	330	UN1263, paint, 3, PGIII
359B9502	devthane 359 dtm high build gloss aliphatic urethane mastic - neutral tint base	10.95	406.25	44.93	80 f	147-147	330	UN1263, paint, 3, PGIII
359C0910	devthane 359 high build gloss aliphatic urethane - converter	8.85	265.67	29.30	80 f	n/d	*331	UN1866, resin solution, 3, PGIII

Ingredients**Product Codes with % by Weight (ANSI Section 2)**

Chemical Name	Common Name	CAS. No.	359B2635	359B3501	359B3601	359B7460	359B8912	359B9400	359B9500	359B9501	359B9502	359C0910
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	.1-1.0	
2-propanol, 1-methoxy-, acetate	propylene glycol monomethyl ether	108-65-6		1-5	5-10							
octadecanamide, n,n'-1,2-ethanediybis-	n,n'-ethylenedistearamide	110-30-5							1-5			
ethane, 1,1',1"-methylidenetris(oxy)-tris-	ethyl orthoformate	122-51-0			1-5							
acetic acid, butyl ester	butyl acetate	123-86-4	30-40	20-30	10-20	20-30	30-40	30-40	20-30	20-30	20-30	10-20
benzene, dimethyl-	xylene	1330-20-7	.1-1.0	.1-1.0	1-5	.1-1.0	1-5	1-5	.1-1.0	.1-1.0	.1-1.0	10-20
iron oxide	iron oxide	1332-37-2				1-5						
carbon black	carbon black	1333-86-4	.1-1.0			1-5						
titanium oxide	titanium dioxide	13463-67-7	10-20	20-30	20-30	1-5	1-5	1-5	10-20	5-10		

Ingredients (Continued)

Product Codes with % by Weight (ANSI Section 2)

Chemical Name	Common Name	CAS. No.	359B2635	359B3501	359B3601	359B7460	359B8912	359B9400	359B9500	359B9501	359B9502	359C0910
butanamide, 2-((4-chloro-2-nitrophenyl)azo)-n-(2-methoxyphenyl)-3-oxo-	c.i. pigment yellow 73	13515-40-7					1-5					
hexane, 1,6-diisocyanato-, homopolymer	aliphatic polyisocyanate	28182-81-2										70-80
c.i. pigment yellow 42	yellow iron oxide	51274-00-1	1-5			1-5						
butanamide, 2-((2-methoxy-4-nitrophenyl)azo)-n-(2-methoxyphenyl)-3-oxo-	pigment yellow 74	6358-31-2						1-5				
ethanol	ethyl alcohol	64-17-5		.1-1.0		.1-1.0			.1-1.0	.1-1.0	.1-1.0	
butanamide, 2-((4-methoxy-2-nitrophenyl)azo)-n-(2-methoxyphenyl)-3-oxo-	yellow pigment	6528-34-3					1-5					
sulfuric acid, barium salt	barium sulfate	7727-43-7	20-30	10-20	20-30	30-40	5-10	10-20	10-20	20-30	30-40	
hexane, 1,6-diisocyanato-	hexamethylene diisocyanate	822-06-0										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	
acrylic resin	acrylic resin	Sup. Conf.	20-30	30-40	20-30	20-30	30-40	30-40	30-40	30-40	30-40	
vegetable oil derivative	anti-settling additive	Sup. Conf.			1-5							
polysiloxane defoamer	polysiloxane defoamer	Sup. Conf.	1-5				1-5					

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
propylene glycol monomethyl ether	108-65-6	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
n,n'-ethylenedistearamide	110-30-5	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
ethyl orthoformate	122-51-0	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
butyl acetate	123-86-4	150 ppm	200 ppm	not est.	not est.	150 ppm	not est.	not est.	not est.	not est.	n	n	y	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
iron oxide	1332-37-2	5 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
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
c.i. pigment yellow 73	13515-40-7	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
aliphatic polyisocyanate	28182-81-2	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
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.	n	n	n	n	n	n	n	n
pigment yellow 74	6358-31-2	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
yellow pigment	6528-34-3	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
barium sulfate	7727-43-7	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
hexamethylene diisocyanate	822-06-0	0.005 ppm	not est.	not est.	not est.	not est.	not est.	not est.	not est.	not est.	n	y	y	y	n	n	n	n
anti-settling additive	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
polysiloxane defoamer	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