

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, coughing, central nervous system depression, intoxication, anesthetic effect or narcosis, difficulty of breathing, allergic response, asthmatic reaction, severe lung irritation or damage, liver damage, kidney damage, convulsions, pneumoconiosis, loss of consciousness, asphyxiation. Possible sensitization to respiratory tract.

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

Ingestion : Ingestion may cause lung inflammation and damage due to aspiration of material into lungs, mouth and throat irritation, mucous membrane irritation, headache, uncoordination, nausea, vomiting, diarrhea, gastro-intestinal disturbances, abdominal pain, central nervous system depression, difficulty of breathing, abnormal blood pressure, 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. 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 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. 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.

Hazardous decomposition or combustion products : Carbon monoxide, carbon dioxide, oxides of nitrogen, chloride fumes, oxides of sulfur, ammonia, toxic gases, nitrogen, monoazo compounds, aromatic amines, 3,3' dichlorobenzidine. Oxides of calcium, halogenated compounds, acid halides.

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. 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 : Where respiratory protection is required, use only NIOSH/ MSHA approved respirators in accordance with OSHA standard 29 CFR 1910.134.

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

Personal protective equipment : Eye wash, safety shower, safety glasses or goggles. Impervious gloves, impervious clothing, 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, ammonium salts, peroxides, organic materials, combustible materials, 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 : 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, lungs.

Carcinogenicity : 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-2-microglobulin. Because humans do not produce this protein stoddard solvent iic has not been classified as a human carcinogen. Decomposition of diarylide pigments at temperatures above 392f (200c) can produce trace amounts of monazo dyes, which can then decompose to produce aromatic amines. As the temperature increases into the 464-572f (240-300c), trace quantities of 3,3'-dichlorobenzidine (3,3'-dcb) can be detected. The national toxicology program (NTP) has classified 3,3'-dcb as a known human carcinogen. The international agency for research on cancer (IARC) has classified 3,3'-dcb as a possible human carcinogen (group 2b: sufficient animal data, inadequate human data). 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. In 2-year feed studies of c.i. Pigment red 3, there was some evidence of carcinogenic activity in male rats (adrenal gland - benign pheochromocytomas) and female rats (hepatocellular adenomas). There was also some evidence of carcinogenic activity in male mice (adenomas of renal cortex and thyroid gland), but no evidence in female mice. 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 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. C.I. Pigment 5 showed weak hepatocarcinogenic potential in female rats and in male mice. In the female rats, the liver carcinogenicity was accompanied by hepatotoxicity. Contains methyl ethyl ketoxime (meko). In a lifetime, inhalation study, liver carcinomas were observed in rodents exposed to meko. The relevance to humans is unknown.

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 : C.I. Pigment red was found to be mutagenic with and without metabolic activation in salmonella/microsome studies. In vivo tests and in vitro tests on mammalian cells were negative for mutagenicity.

Teratogenicity : No teratogenic effects are anticipated

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
4309-0110	devguard rust preventative white tint base gloss enamel	10.10	371.42	47.72	105 f	266-415	*320	UN1263,paint,combustible liquid,PGIII
4309-0300	devguard rust preventative intermediate tint base gloss enamel	9.64	374.95	48.06	105 f	266-415	*320	UN1263,paint,combustible liquid,PGIII
4309-0400	devguard rust preventative deep tint base gloss enamel	9.50	379.33	48.59	105 f	266-415	*320	UN1263,paint,combustible liquid,PGIII
4309-0500	devguard rust preventative neutral tint base gloss enamel	9.58	377.64	48.29	105 f	276-415	*320	UN1263,paint,combustible liquid,PGIII
4309-6110	devguard rust preventative machine gray gloss enamel	8.97	375.46	48.20	105 f	266-415	*320	UN1263,paint,combustible liquid,PGIII
4309-8600	devguard rust preventative medium yellow gloss enamel	9.15	377.88	48.47	105 f	266-415	*320	UN1263,paint,combustible liquid,PGIII
4309-9000	devguard rust preventative safety red gloss enamel	8.18	313.24	40.18	104 f	277-415	320	UN1263,paint,combustible liquid,PGIII
4309-9200	devguard rust preventative safety orange gloss enamel	8.39	334.30	42.94	104 f	277-415	320	UN1263,paint,combustible liquid,PGIII
4309-9400	devguard rust preventative safety yellow gloss enamel	8.48	335.12	42.98	104 f	277-415	320	UN1263,paint,combustible liquid,PGIII
4309-9990	devguard rust preventative black gloss enamel	8.52	317.52	40.70	104 f	277-415	*320	UN1263,paint,combustible liquid,PGIII

Ingredients

Product Codes with % by Weight (ANSI Section 2)

Chemical Name	Common Name	CAS. No.	4309-0110	4309-0300	4309-0400	4309-0500	4309-6110	4309-8600	4309-9000	4309-9200	4309-9400	4309-9990
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	.1-1.0	.1-1.0
benzene, 1,4-dimethyl-	para-xylene	106-42-3				.1-1.0			.1-1.0	.1-1.0	.1-1.0	.1-1.0
benzene, 1,3-dimethyl-	1,3-dimethylbenzene	108-38-3	.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	.1-1.0
limestone	limestone	1317-65-3				20-30	1-5	1-5				

Ingredients (Continued)

Product Codes with % by Weight (ANSI Section 2)

Chemical Name	Common Name	CAS. No.	4309-0110	4309-0300	4309-0400	4309-0500	4309-6110	4309-8600	4309-9000	4309-9200	4309-9400	4309-9990
benzene, dimethyl-	xylene	1330-20-7	.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	.1-1.0
kaolin	clay	1332-58-7	5-10		20-30	1-5	5-10	5-10		1-5		10-20
carbon black	carbon black	1333-86-4					.1-1.0					1-5
titanium oxide	titanium dioxide	13463-67-7	20-30	10-20	1-5		5-10	5-10	.1-1.0	1-5	5-10	
butanamide, 2-((4-chloro-2-nitrophenyl)azo)-n-(2-methoxyphenyl)-3-oxo-	c.i. pigment yellow 73	13515-40-7						1-5		1-5		
hexanoic acid, 2-ethyl-, cobalt(2+) salt	cobalt alkanoate	136-52-7	.1-1.0	.1-1.0	.1-1.0	.1-1.0	.1-1.0	.1-1.0				
quartz	quartz	14808-60-7				.1-1.0						
hexanoic acid, 2-ethyl-, zirconium salt	zirconium carboxylate	22464-99-9							1-5	1-5	1-5	1-5
2-naphthalenol, 1-((4-methyl-2-nitrophenyl)azo)-	pigment red 3	2425-85-6							10-20			
2-naphthalenol, 1-((2,4-dinitrophenyl)azo)-	dinitroaniline orange	3468-63-1								1-5		
nepheline syenite	feldspar-type minerals	37244-96-5		10-20								
c.i. pigment yellow 42	yellow iron oxide	51274-00-1									1-5	
butanamide, 2,2'-((3,3'-dichloro(1,1'-biphenyl)-4,4'-diyl)bis(azo))bis(n-(2-methylphenyl)-3-oxo-	diarylide yellow	5468-75-7									5-10	
butanamide, 2,2'-((3,3'-dichloro(1,1'-biphenyl)-4,4'-diyl)bis(azo))bis(n-(4-chloro-2,5-dimethoxyphenyl)-3-oxo-	diazo yellow	5567-15-7						1-5				
solvent naphtha (petroleum), medium aliphatic	medium aliphatic solvent naphtha	64742-88-7	5-10	5-10	10-20	10-20	5-10	10-20	10-20	20-30	10-20	10-20
soybean oil, polymer with pentaerythritol, tdi and tung oil	alkyd resin	67989-28-0	10-20	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		10-20	1-5				
quaternary ammonium compounds, bis(hydrogenated tallow alkyl)di=methyl, salts with bentonite	dispersant, organoclay	68953-58-2	1-5				1-5					
stoddard solvent	mineral spirits	8052-41-3	20-30	20-30	20-30	10-20	20-30	10-20	10-20	5-10	10-20	10-20
benzene, 1,2-dimethyl-	ortho-xylene	95-47-6				.1-1.0					.1-1.0	.1-1.0
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				
rheological additive	rheological additive	Sup. Conf.								1-5	1-5	1-5
long oil alkyd resin	long oil alkyd resin	Sup. Conf.							30-40	30-40	20-30	20-30
long oil alkyd resin	long oil alkyd resin	Sup. Conf.	5-10	10-20	10-20	10-20	10-20	10-20	10-20	10-20	20-30	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
para-xylene	106-42-3	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
1,3-dimethylbenzene	108-38-3	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
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
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
cobalt alkanoate	136-52-7	.02 mg/m3	not est.	not est.	not est.	.05 mg/m3	not est.	not est.	not est.	not est.	n	y	n	y	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
zirconium carboxylate	22464-99-9	5 mg/m3	10 mg/m3	not est.	not est.	5 mg/m3	not est.	not est.	not est.	not est.	n	n	n	n	n	n	n	n
pigment red 3	2425-85-6	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
dinitroaniline orange	3468-63-1	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

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										
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	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	n
diarylide yellow	5468-75-7	not est.	not est.	not est.	not est.	not est.	not est.	not est.	not est.	not est.	n	n	n	n	n	y	n	n	n
diazo yellow	5567-15-7	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	n
medium aliphatic solvent naphtha dispersant, organoclay	64742-88-7	100 ppm	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	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	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	n
ortho-xylene	95-47-6	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	n
rheological 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	n

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

