

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, blurred vision, coughing, difficulty with speech, central nervous system depression, intoxication, anesthetic effect or narcosis, difficulty of breathing, allergic response, tremors, severe lung irritation or damage, liver damage, kidney damage, pulmonary edema, convulsions, 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, allergic response. Skin contact may result in dermal absorption of component(s) of this product which may cause 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, intoxication, difficulty of breathing, abnormal blood pressure, 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. 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. Closed containers may burst if exposed to extreme heat or fire. Dust explosion hazard. Solvent must not be allowed to evaporate because contact of water with aluminum dust generates hydrogen, which is a flammable gas. May decompose under fire conditions emitting irritant and/or toxic gases. Rags, steel wool or waste soaked with this material may spontaneously catch fire if improperly discarded. Immediately after use, place soaked rags, steel wool or waste in a sealed water-filled metal container.

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, acrolein, oxides of sulfur, ammonia, aldehydes, aluminum oxide, toxic gases, nitrogen, monoazo compounds, aromatic amines, 3,3' dichlorobenzidine. Oxides of calcium, acid halides, smoke.

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. 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 80f. 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. Avoid spontaneous combustion of contaminated rags and other easily ignitable organic accumulations.

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. Use non-sparking 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 stable below 212 f (100 c). See section 5 fire fighting measures

Materials to avoid : Oxidizers, acids, reducing agents, bases, halogens, amines, ammonium salts, peroxides, nitric acid, organic materials, halogenated compounds, combustible materials. 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. 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.

Carcinogenicity : 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). 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 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. 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.

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 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
4308-6110	devguard 4308 alkyd industrial gloss enamel - machine gray	8.16	451.19	57.02	106 f	277-415	*320	paint, combustible liquid, UN 1263, PGIII
4308-6650	devguard 4308 alkyd industrial gloss enamel - medium green	7.84	445.94	56.38	109 f	277-415	320	paint, combustible liquid, UN 1263, PGIII
4308-7370	devguard 4308 alkyd industrial gloss enamel - warm brown	8.25	450.83	57.02	100 f	277-415	*320	paint, combustible liquid, UN 1263, PGIII
4308-7460	devguard 4308 alkyd industrial gloss enamel - architectural brown	8.33	451.79	57.17	105 f	277-415	*320	paint, combustible liquid, UN 1263, PGIII
4308-7850	devguard 4308 alkyd industrial gloss enamel - imperial blue	7.81	421.83	53.58	104 f	277-415	*320	paint, combustible liquid, UN 1263, PGIII
4308-8600	devguard 4308 alkyd industrial gloss enamel - medium yellow	8.28	441.36	55.89	106 f	277-415	*320	paint, combustible liquid, UN 1263, PGIII
4308-9000	devguard 4308 alkyd industrial gloss enamel - safety red	7.82	440.76	55.78	105 f	277-415	320	paint, combustible liquid, UN 1263, PGIII
4308-9020	devguard 4308 alkyd industrial gloss enamel - aluminum	7.48	494.33	65.35	70 f	240-365	*340	paint, 3, UN1263, PGII
4308-9200	devguard 4308 alkyd industrial gloss enamel - safety orange	8.04	449.51	56.92	102 f	277-415	320	paint, combustible liquid, UN 1263, PGIII
4308-9400	devguard 4308 alkyd industrial gloss enamel - safety yellow	8.33	436.21	55.32	106 f	277-415	320	paint, combustible liquid, UN 1263, PGIII
4308-9990	devguard 4308 alkyd industrial gloss enamel - black	7.75	425.42	53.94	102 f	277-415	*320	paint, combustible liquid, UN 1263, PGIII

Ingredients

Product Codes with % by Weight (ANSI Section 2)

Chemical Name	Common Name	CAS. No.	4308-6110	4308-6650	4308-7370	4308-7460	4308-7850	4308-8600	4308-9000	4308-9020	4308-9200	4308-9400	4308-9990
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	.1-1.0
ethanol, 2-butoxy-	2-butoxyethanol	111-76-2											.1-1.0
1,2-benzenedicarboxylic acid, bis(2-ethylhexyl) ester	di (2-ethylhexyl) phthalate	117-81-7						.01-.1					
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				5-10							
benzene, dimethyl-	xylene	1330-20-7	1-5	1-5	1-5	1-5	1-5	1-5	1-5	1-5	1-5	1-5	1-5
iron oxide	iron oxide	1332-37-2			1-5	1-5							
kaolin	clay	1332-58-7						1-5				1-5	
carbon black	carbon black	1333-86-4	.1-1.0		.1-1.0	1-5	.1-1.0						1-5
titanium oxide	titanium dioxide	13463-67-7	5-10	1-5	.1-1.0	1-5	1-5	5-10			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			5-10	5-10	
copper, {29h, 31h-phthalocyaninato(2-n29,n30,n31, n32)-, (sp-4-1)-	phthalocyanine blue pigment	147-14-8					1-5						
2-naphthalenol, 1-((4-methyl-2-nitrophenyl)azo)-	pigment red 3	2425-85-6							5-10				
neodecanoic acid, cobalt salt	cobalt neodecanoate	27253-31-2											.1-1.0
2-naphthalenol, 1-((2,4-dinitrophenyl)azo)-	dinitroaniline orange	3468-63-1									1-5		
c.i. pigment yellow 42	yellow iron oxide	51274-00-1			5-10	1-5						1-5	
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					
naphtha (petroleum), heavy alkylate	heavy solvent naphtha	64741-65-7	1-5	5-10	5-10	1-5	10-20	5-10	5-10		1-5	5-10	10-20
solvent naphtha (petroleum), medium aliphatic	medium aliphatic solvent naphtha	64742-88-7	5-10	10-20	10-20	10-20	10-20	10-20	10-20	5-10	10-20	10-20	10-20
solvent naphtha (petroleum), light aliphatic	light aliphatic solvent naphtha (petroleum)	64742-89-8								40-50			
linseed oil, polymerized	linseed oil	67746-08-1								10-20			
quaternary ammonium compounds, bis(hydrogenated tallow alkyl)di=methyl, salts with bentonite	dispersant, organoclay	68953-58-2		1-5	1-5	1-5		1-5	1-5			1-5	
benzene	benzene	71-43-2								LT .01			
aluminum	aluminum	7429-90-5								5-10			
stoddard solvent	mineral spirits	8052-41-3	30-40	20-30	20-30	20-30	10-20	10-20	20-30	1-5	20-30	10-20	10-20
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
petroleum hydrocarbon resin	petroleum hydrocarbon resin	Sup. Conf.								10-20			
long oil alkyd resin	long oil alkyd resin	Sup. Conf.	5-10	10-20	10-20	10-20	30-40	20-30	20-30		10-20	20-30	30-40
alkyd resin	alkyd resin	Sup. Conf.	30-40	20-30	20-30	20-30	10-20	10-20	20-30		20-30	10-20	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									
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
di (2-ethylhexyl) phthalate	117-81-7	5 mg/m3	not est.	not est.	not est.	5 mg/m3	not est.	not est.	not est.	not est.	n	y	y	y	n	y	y	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
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
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
phthalocyanine blue pigment	147-14-8	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
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
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	y	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
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
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
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
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
light aliphatic solvent naphtha (petroleum)	64742-89-8	not est.	not est.	not est.	not est.	300 ppm	not est.	not est.	not est.	not est.	n	n	n	n	n	n	n	n
linseed oil	67746-08-1	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
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
benzene	71-43-2	.5 ppm	2.5 ppm	not est.	y	1 ppm	5 ppm	not est.	not est.	not est.	n	y	y	y	n	y	y	y
aluminum	7429-90-5	10 mg/m3	not est.	not est.	not est.	5 mg/m3	not est.	not est.	not est.	not est.	n	y	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
petroleum hydrocarbon resin	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