

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, drowsiness, dizziness and/or lightheadedness, headache, nausea, coughing, central nervous system depression, respiratory problems, intoxication, confusion, difficulty of breathing, blood abnormalities, kidney damage, pneumoconiosis, loss of consciousness.

Skin contact : Irritation of skin. Prolonged or repeated contact can cause dermatitis, defatting, blistering, allergic response, severe skin irritation. Possible sensitization to skin. Skin contact may result in dermal absorption of component(s) of this product which may cause headache, nausea, central nervous system depression.

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

Ingestion : Ingestion may cause lung inflammation and damage due to aspiration of material into lungs, mucous membrane irritation, dizziness and/or lightheadedness, headache, nausea, vomiting, diarrhea, gastro-intestinal disturbances, severe abdominal pain, 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, liver disorders, nervous system 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. 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. Self-contained breathing apparatus recommended.

Hazardous decomposition or combustion products : Carbon monoxide, carbon dioxide, oxides of nitrogen, acrid fumes, phosphorous, oxides of sulfur, hydrogen chloride, toxic gases, smoke and soot. Propionaldehyde oxides of calcium. Manganese oxides cyanides.

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. Evacuate all unnecessary personnel. Place collected material in proper container. Spilled material is extremely slippery. 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.

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.

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, halogens, alkalis, copper, ammonium salts, nitric acid, hydrofluoric acid, organic materials, combustible materials, mineral acids. Nitrates, styrene monomer.

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

Hazardous polymerization : Will not occur

TOXICOLOGICAL INFORMATION

(ANSI Section 11)

Supplemental health information : Contains a chemical that may be absorbed through skin.

Excessive inhalation of fumes may lead to metal fume fever characterized by a metallic taste in mouth, excessive thirst, coughing, weakness, fatigue, muscular pain, nausea, chills and fever. 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, reproductive system.

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. Notice: in a 2 year study conducted by the national toxicology program (NTP), there was clear evidence of carcinogenic activity in male and female mice dermally exposed to diethanolamine based on development of liver and kidney tumors. There was no evidence of carcinogenicity in either male or female rats. The relevance of this study to humans is not known. A dietary study with nmp found increased liver tumors in male and female mice given 1100 and 1400 mg/kg bwt/day for 18 months, respectively. Since liver tumors are commonly reported when non-genotoxic chemicals are tested in the mouse bioassay, the relevance to humans is unknown. 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 : Nmp may adversely affect reproduction in the rat after ingestion, although fertility is unaltered. These effects occurred at exposures which also caused mild generalized effects in the parental animals. It is therefore unclear if nmp specifically targets the reproductive system or whether these changes were secondary to other systemic effects. Fetal effects including delayed development, soft tissue variations and skeletal variations were observed in pregnant animals exposed by ingestion, inhalation and skin contact. While these events generally occurred in the presence of maternal toxicity, mild fetotoxicity was sometimes present in the absence of maternal effects. The relevance of these findings to humans is unknown.

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 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
1789	ici colorant raw umber	12.82	535.45	63.06	none	212-400	*210	paint ** protect from freezing **
1790	ici colorant yellow oxide (yox) jaune oxyde	15.18	620.88	65.76	none	212-400	*310	paint additive
1791	ici colorant lemon yellow (lly) jaune citron	10.91	463.86	56.68	none	212-400	*310	paint additive
1792	ici colorant thalo green (grn) vert thalo	11.81	476.43	58.12	none	212-400	*310	paint additive
1793	ici colorant thalo blue (tbl) bleu thalo	11.64	503.08	58.38	none	212-400	*310	paint additive
1794	ici colorant white (wht) blanc	14.20	431.66	52.51	none	212-400	*310	paint additive
1795	ici colorant magenta (mag)	10.75	559.04	66.11	none	212-680	*310	paint additive
1796	ici colorant fast fast red (ffr) rouge vif	11.51	519.41	56.99	none	212-400	*310	paint additive
1797	ici colorant black (blk) noir	12.03	508.95	56.62	none	212-400	*310	paint additive
1798	ici colorant oxide red (oxr) rouge oxyde	14.49	463.77	55.73	none	212-400	*310	paint additive

Ingredients

Product Codes with % by Weight (ANSI Section 2)

Chemical Name	Common Name	CAS. No.	1789	1790	1791	1792	1793	1794	1795	1796	1797	1798
ethanol, 2,2',2"-nitrilotris-	triethanolamine	102-71-6							1-5			
quino(2,3-b)acridine-7,14-dione, 5,12-dihydro-	quinacridone red	1047-16-1								1-5		
1,2-ethanediol	ethylene glycol	107-21-1	20-30	20-30	20-30	20-30	20-30	10-20	20-30	20-30	20-30	10-20
ethanol, 2,2'-iminobis	diethanolamine	111-42-2					.1-1.0		.1-1.0	.1-1.0		
poly(oxy-1,2-ethanediyl, alpha-4-nonylphenyl)- omega-hydroxy-, branched	glycol ether	127087-87-0	5-10	1-5	5-10	5-10	5-10	1-5	5-10	5-10	5-10	5-10
umber	raw umber	12713-03-0	20-30									
manganese oxide	manganese oxide	1317-34-6	5-10									
limestone	limestone	1317-65-3	1-5									
c.i. pigment green 7	phthalo green pigment	1328-53-6				5-10						
iron oxide	iron oxide	1332-37-2										30-40
kaolin	clay	1332-58-7	5-10	1-5	20-30	30-40	30-40	20-30	20-30	30-40	40-50	10-20
carbon black	carbon black	1333-86-4	.1-1.0								5-10	
titanium oxide	titanium dioxide	13463-67-7						20-30				

Ingredients (Continued)

Product Codes with % by Weight (ANSI Section 2)

Chemical Name	Common Name	CAS. No.	1789	1790	1791	1792	1793	1794	1795	1796	1797	1798
9-octadecenoic acid, 12-hydroxy-, methyl ester, (r-(z))-	maleic ricinoleate polyester plasticizer	141-24-2					1-5					
copper, (29h, 31h-phthalocyaninato(2-)n29,n30,n31, n32)-,(sp-4-1)-	phthalocyanine blue pigment	147-14-8					5-10					
aluminum hydroxide	aluminum hydroxide	21645-51-2						1-5				
c.i. pigment yellow 42	yellow iron oxide	51274-00-1	1-5	50-60								
1,2,3-propanetriol	glycerine	56-81-5			1-5	1-5		1-5	1-5			
1,2-propanediol	propylene glycol	57-55-6	1-5	1-5	1-5	1-5	1-5		1-5	1-5	1-5	
fatty acids, coco, ethoxylated	ethoxylated coco fatty acids	61791-29-5						1-5				1-5
benzoic acid, 4-((2,5-dichlorophenyl)amino carbonyl)-2-((2-hydroxy-3-((2-methoxyphenyl)amino carbonyl)-1-naphthalenyl)azo)-, methyl ester	monoazo red	61847-48-1								5-10		
butanamide, 2-((2-methoxy-4-nitrophenyl)azo) -n-(2-methoxyphenyl)-3-oxo-	pigment yellow 74	6358-31-2			10-20							
silica	amorphous silica	7631-86-9						1-5				
water	water	7732-18-5	10-20	10-20	10-20	10-20	10-20	10-20	20-30	10-20	10-20	10-20
lecithins	lecithin	8002-43-5	1-5		1-5	1-5	1-5	1-5	1-5	1-5	5-10	1-5
2-pyrrolidinone, 1-methyl-	n-methylpyrrolidone	872-50-4				1-5	1-5					
quino(2,3-b)acridine-7,14-dione, 5,12-dihydro-2,9- dimethyl-	quinacridone red	980-26-7							5-10			
trade secret	trade secret	Sup. Conf.					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										
triethanolamine	102-71-6	5 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	n
quinacridone red	1047-16-1	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	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.	n	y	y	y	n	n	n	n	n
diethanolamine	111-42-2	2 mg/m3	not est.	not est.	y	not est.	not est.	not est.	not est.	not est.	n	y	n	y	n	n	n	n	n
glycol ether	127087-87-0	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	n
raw umber	12713-03-0	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
manganese oxide	1317-34-6	.2 mg/m3	not est.	not est.	not est.	not est.	3 mg/m3	5 mg/m3	y	not est.	n	y	n	y	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	n
phthalo green pigment	1328-53-6	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
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	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	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	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	n	y	y	n
maleic ricinoleate polyester plasticizer	141-24-2	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	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	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.	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
glycerine	56-81-5	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	n
propylene glycol	57-55-6	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
ethoxylated coco fatty acids	61791-29-5	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
monoazo red	61847-48-1	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	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	n
amorphous silica	7631-86-9	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	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	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									
n-methylpyrrolidone	872-50-4	not est.	not est.	not est.	not est.	not est.	not est.	not est.	not est.	not est.	n	y	n	n	n	n	n	n
quinacridone red	980-26-7	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
trade secret	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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Carcinogenicity Listed By:
N=NTP, I=IARC, O=OSHA, y=yes, n=no