

MATERIAL SAFETY DATA SHEET



SECTION 1 - PRODUCT AND COMPANY INFORMATION

PPG Industries, Inc.
One PPG Place
Pittsburgh, PA 15272

EMERGENCY PHONE NUMBERS (412) 434-4515 (U.S.)
(24 hours/day):

(514) 645-1320 (Canada)
01-800-00-21-400 (Mexico)
0532-3889090 (China)

TECHNICAL INFORMATION: (414) 764-6000 (OAK CREEK, WI) 8:00 a.m. - 5:00 p.m. Central
PRODUCT SAFETY/MSDS INFORMATION: (412) 492-5555 7:00 a.m. - 4:30 p.m. EST
Product ID: G13687 (0819)
PRODUCT NAME: MUNSELL GREEN EPOXY PRIME
SYNONYMS: None
ISSUE DATE: 03/17/2005
EDITION NO.: 2
CHEMICAL FAMILY: Epoxy

EMERGENCY OVERVIEW:

Flammable. Keep away from heat, sparks, flames, and other sources of ignition. Do not smoke. Extinguish all flames and pilot lights. Turn off stoves, heaters, electrical motors, and other sources of ignition during use and until all vapors/odors are gone. CAUSES SEVERE EYE IRRITATION. MAY CAUSE SKIN BURNS. MAY BE ABSORBED THROUGH THE SKIN. PROLONGED OR REPEATED CONTACT MAY CAUSE AN ALLERGIC SKIN REACTION. VAPOR AND/OR SPRAY MIST MAY BE HARMFUL IF INHALED. VAPOR IRRITATES EYES, NOSE, AND THROAT. SANDING AND GRINDING DUSTS MAY BE HARMFUL IF INHALED. HARMFUL IF SWALLOWED. DRIED FILM OF THIS PRODUCT MAY BE HARMFUL IF CHEWED OR SWALLOWED.

SECTION 2 - COMPOSITION INFORMATION

The following ingredient(s) marked with an "x" are considered hazardous under applicable U.S. OSHA and/or Canadian WHMIS regulations. If no ingredients are listed, then there are no U.S. OSHA and/or Canadian WHMIS hazardous ingredients in this product.

Material/ CAS Number	Percent	Hazardous
EPOXY RESIN 25068-38-6	10 - 30	X
METHYL ISOBUTYL KETONE 108-10-1	10 - 30	X
BARIUM SULFATE 7727-43-7	7 - 13	X
XYLENES 1330-20-7	5 - 10	X
DIACETONE ALCOHOL 123-42-2	5 - 10	X
PROPYLENE GLYCOL MONOMETHYL ETHER 107-98-2	3 - 7	X
AROMATIC HYDROCARBON 64742-94-5	1 - 5	X
CYCLOHEXANONE 108-94-1	1 - 5	X
ETHYL BENZENE 100-41-4	1 - 5	X
SILICA 7631-86-9	1 - 5	X
TITANIUM DIOXIDE 13463-67-7	0.5-1.5	X
CARBON BLACK 1333-86-4	0.1-1.0	X

SECTION 3 - HAZARDS IDENTIFICATION

ACUTE OVEREXPOSURE EFFECTS

EYE CONTACT:

Causes severe eye irritation. Redness, itching, burning sensation and visual disturbances may indicate excessive eye contact.

SKIN CONTACT:

May cause skin burns. Dryness, itching, cracking, burning, redness, and swelling are conditions associated with excessive skin contact.

SKIN ABSORPTION:

May be absorbed through the skin. Prolonged or repeated contact may cause an allergic skin reaction.

INHALATION:

Vapor and/or spray mist may be harmful if inhaled. Vapor irritates eyes, nose, and throat. Sanding and grinding dusts may be harmful if inhaled.

INGESTION:

Harmful if swallowed. Dried film of this product may be harmful if chewed or swallowed.

SIGNS & SYMPTOMS OF OVEREXPOSURE:

Repeated exposure to high vapor concentrations may cause irritation of the respiratory system and permanent brain and nervous system damage. Eye watering, headaches, nausea, dizziness and loss of coordination are indications that solvent levels are too high. Intentional misuse by deliberately concentrating and inhaling the contents can be harmful or fatal. Dryness, itching, cracking, burning, redness, and swelling are conditions associated with excessive skin contact.

MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE: Not applicable.

CHRONIC OVEREXPOSURE EFFECTS

Avoid long-term and repeated contact.

Repeated exposure to vapors above recommended exposure limits (see Section 8) may cause irritation of the respiratory system and permanent brain and nervous system damage. Intentional misuse by deliberately concentrating and inhaling the contents can be harmful or fatal. High exposures to xylenes in some animal studies have been reported to cause health effects on the developing embryo and fetus. These effects were often at levels toxic to the mother.

The effects of long-term, low level exposures to this product have not been determined. Safe handling of this material on a long-term basis should emphasize the prevention of all contact with this material to avoid any effects from repetitive acute exposures. See Section 11, of this MSDS for a detailed list of chronic health effects information available on individual ingredients in this product.

SECTION 4 - FIRST AID MEASURES

If ingestion, irritation, any type of overexposure or symptoms of overexposure occur during or persists after use of this product, contact a POISON CONTROL CENTER, EMERGENCY ROOM OR PHYSICIAN immediately; have Material Safety Data Sheet information available.

EYE CONTACT:

Remove contact lens and pour a gentle stream of warm water through the affected eye for at least 15 minutes. If irritation persists, contact a poison control center, emergency room, or physician as further treatment may be necessary.

SKIN CONTACT:

Run a gentle stream of water over the affected area for 15 minutes. A mild soap may be used if available. If any symptoms persist, contact a poison control center, emergency room, or physician as further treatment may be necessary.

INHALATION:

Remove from area to fresh air. If symptomatic, contact a poison control center, emergency room or physician for treatment information.

INGESTION:

Gently wipe or rinse the inside of the mouth with water. Sips of water may be given if person is fully conscious. Never give anything by mouth to an unconscious or convulsing person. Do Not induce vomiting. Contact a poison control center, emergency room or physician right away as further treatment will be necessary.

SECTION 5 - FIRE FIGHTING MEASURES

FLAMMABLE PROPERTIES

FLASHPOINT: 72 Degrees F (22 Degrees C)

FLASHPOINT TEST METHOD:

Pensky-Martens Closed Cup

UEL: Not Available.

LEL: 1.4

AUTOIGNITION TEMPERATURE:

Not Available.

EXTINGUISHING MEDIA:

Use National Fire Protection Association (NFPA) Class B extinguishers (carbon dioxide, dry chemical, or universal aqueous film forming foam) designed to extinguish NFPA Class IB flammable liquid fires. Water spray may be ineffective. Water spray may be used to cool closed containers to prevent pressure build-up and possible autoignition or explosion when exposed to extreme heat.

PROTECTION OF FIREFIGHTERS:

Fire-fighters should wear self-contained breathing apparatus and full protective clothing.

UNUSUAL FIRE AND EXPLOSION HAZARDS:

Keep this product away from heat, sparks, flame, and other sources of ignition (i.e., pilot lights, electric motors, static electricity). Invisible vapors can travel to a source of ignition and flash back. Do not smoke while using this product. Keep containers tightly closed when not in use. Closed containers may explode when overheated. Do not apply to hot surfaces. Toxic gases may form when this product comes in contact with extreme heat. May produce hazardous decomposition products when exposed to extreme heat. Extreme heat includes, but is not limited to, flame cutting, brazing, and welding.

SECTION 6 - ACCIDENTAL RELEASE MEASURE

STEPS TO BE TAKEN IF MATERIAL IS RELEASED OR SPILLED:

Provide maximum ventilation. Only personnel equipped with proper respiratory, skin, and eye protection should be permitted in the area. Remove all sources of ignition. Take up spilled material with sand, vermiculite, or other noncombustible absorbent material and place in clean, empty containers for disposal. Only the spilled material and the absorbant should be placed in this container.

SECTION 7 - HANDLING AND STORAGE

PRECAUTIONS TO BE TAKEN DURING HANDLING AND STORAGE:

Vapors may collect in low areas. If this material is part of a multiple component system, read the Material Safety Data Sheet(s) for the other component or components before blending as the resulting mixture may have the hazards of all of its parts. Containers should be grounded when pouring. Avoid free fall of liquids in excess of a few inches.

STORAGE:

Do not store above 120 degrees F.(48 degrees C.). Store large quantities in buildings designed and protected for storage of NFPA Class IB flammable liquids.

SECTION 8 - EXPOSURE CONTROLS & PERSONAL PROTECTION
ENGINEERING CONTROLS:

Provide general dilution or local exhaust ventilation in volume and pattern to keep the concentration of ingredients listed in Section 8 below the lowest suggested exposure limits, the LEL below the stated limit, and to remove decomposition products during welding or flame cutting.

PERSONAL PROTECTIVE EQUIPMENT

EYES:

Wear chemical-type splash goggles when possibility exists for eye contact due to splashing or spraying liquid, airborne particles, or vapors.

SKIN/GLOVES:

Wear protective clothing to prevent skin contact. Apron and gloves should be constructed of: nitrile rubber. No specific permeation/degradation testing have been done on protective clothing for this product. Recommendations for skin protection are based on infrequent contact with this product. For frequent contact or total immersion, contact a manufacturer of protective clothing for appropriate chemical impervious equipment. Clean contaminated clothing and shoes.

RESPIRATOR:

Overexposure to vapors may be prevented by ensuring proper ventilation controls, vapor exhaust or fresh air entry. A NIOSH- approved air purifying respirator with the appropriate chemical cartridges or a positive-pressure, air-supplied respirator may also reduce exposure. Read the respirator manufacturer's instructions and literature carefully to determine the type of airborne contaminants against which the respirator is effective, its limitations, and how it is to be properly fitted and used. Provide general dilution or local exhaust ventilation in volume and pattern to keep the concentration of ingredients listed in Section 2 below the lowest suggested exposure limits, the LEL below the stated limit, and to remove decomposition products during welding or flame cutting.

GENERAL HYGIENE - ESTABLISHED EXPOSURE LIMITS

If Threshold Limit Values (TLVs) have been established by ACGIH, OSHA, Ontario or PPG, they will be listed below. These limits are intended for use in the practice of industrial hygiene as guidelines or recommendations in the control of potential workplace health hazards. These limits are not a relative index of toxicity and should not be used by anyone without industrial hygiene training.

Material/ CAS Number	Percent	ACGIH TLV	ACGIH STEL	OSHA PEL	OSHA STEL
METHYL ISOBUTYL KETONE 108-10-1	10 - 30	50 ppm	75 ppm	50 ppm	75 ppm
BARIUM SULFATE 7727-43-7	7 - 13	10 mg/m ³	Not established	R- 5 mg/m ³	Not established
XYLENES 1330-20-7	5 - 10	100 ppm	150 ppm	100 ppm	150 ppm
DIACETONE ALCOHOL 123-42-2	5 - 10	50 ppm	Not established	50 ppm	Not established
PROPYLENE GLYCOL MONOMETHYL ETHER 107-98-2	3 - 7	100 ppm	150 ppm	100 ppm	150 ppm
CYCLOHEXANONE 108-94-1	1 - 5	S- 20 PPM	Not established	S- 25 ppm	Not established
ETHYL BENZENE 100-41-4	1 - 5	100 ppm	125 ppm	100 ppm	125 ppm
SILICA 7631-86-9	1 - 5	10 mg/m ³	Not established	6 mg/m ³	Not established
TITANIUM DIOXIDE 13463-67-7	0.5-1.5	10 mg/m ³	Not established	10 mg/m ³	Not established
CARBON BLACK 1333-86-4	0.1-1.0	3.5 mg/m ³	Not established	3.5 mg/m ³	Not established

Key: OSHA=Occupational Safety and Health Administration;
PEL=Permissible Exposure Limit; Ceiling=PEL Ceiling Limit; STEL=PEL
Short-Term Exposure Limit; Skin=OSHA Skin Designation.

Material/ CAS Number	Percent	Ontario TWA	Ontario STEL	PPG IPEL	PPG STEL
METHYL ISOBUTYL KETONE 108-10-1	10 - 30	50 ppm	75 ppm	Not established	Not established
BARIUM SULFATE 7727-43-7	7 - 13	10 mg/m ³	Not established	Not established	Not established
XYLENES 1330-20-7	5 - 10	100 ppm	150 ppm	Not established	Not established
DIACETONE ALCOHOL 123-42-2	5 - 10	50 ppm	75 ppm	Not established	Not established
PROPYLENE GLYCOL MONOMETHYL ETHER 107-98-2	3 - 7	100 ppm	150 ppm	Not established	Not established
CYCLOHEXANONE 108-94-1	1 - 5	S- 25 ppm	Not established	Not established	Not established
ETHYL BENZENE 100-41-4	1 - 5	100 ppm	125 ppm	Not established	Not established
SILICA 7631-86-9	1 - 5	R- 0.10 MG/m ³	Not established	Not established	Not established
TITANIUM DIOXIDE 13463-67-7	0.5-1.5	10 mg/m ³	Not established	Not established	Not established
CARBON BLACK 1333-86-4	0.1-1.0	3.5 mg/m ³	Not established	Not established	Not established

Key: ACGIH=American Conference of Governmental Industrial Hygienists; OSHA=Occupational Safety and Health Administration; TLV=Threshold Limit Value; TWA=Time Weighted Average; PEL=Permissible Exposure Limit; IPEL=Internal Permissible Exposure Limit; Ceiling=TLV or PEL Ceiling Limit; STEL=TLV or PEL Short-Term Exposure Limit; Skin= Skin Absorption Designation. [C- Ceiling Limit; S- Potential Skin Absorption; R-Respirable Dust]

Additional Information Not applicable.

**SECTION 9 - PHYSICAL & CHEMICAL PROPERTIES
(FORMULA VALUES, NOT SALES SPECIFICATIONS)**

SPECIFIC GRAVITY: 1.210
PHYSICAL STATE: Liquid
Percent Solids: 51.59
Percent Volatile by Volume: 67.270
pH: Not available.
ODOR THRESHOLD: Not available.
Vapour Pressure (mm Hg): 8.0 mmHg
ODOR/APPEARANCE: Viscous liquid with an odor characteristic of the solvents listed in Section 2.
VAPOR DENSITY: HEAVIER THAN AIR
Evaporation Rate: 79
BOILING POINT OR RANGE: 237 - 410Degrees F
Freezing Point or Range: Not Applicable.
Melting Point or Range(°C): Not Applicable.
Octanol/Water Partition Coefficient: Not Applicable.
WEIGHT PER GALLON: 10.08 (U.S.) / 12.0 (IMPERIAL)

SECTION 10 - STABILITY AND REACTIVITY

STABILITY:
This product is normally stable and will not undergo hazardous reactions.

CONDITIONS TO AVOID:

None Known.

INCOMPATIBLE MATERIALS:

Avoid contact with strong alkalis, strong mineral acids, or strong oxidizing agents.

HAZARDOUS POLYMERIZATION:

None Known.

HAZARDOUS DECOMPOSITION PRODUCTS:

- Carbon monoxide - Carbon dioxide - Oxides of sulfur - Oxides of zinc - Oxides of barium - Oxides of phosphorus - Lower molecular weight polymer fractions

SECTION 11 - TOXICOLOGICAL INFORMATION

ACUTE TOXICITY

Material/ CAS Number	Percent	ORAL LD50 (g/kg)	DERMAL LD50 (g/kg)	INHALATION LC50 (mg/l)
METHYL ISOBUTYL KETONE 108-10-1	10 - 30	2.08 g/kg	Not Available	32.77 mg/L. 4 h
XYLENES 1330-20-7	5 - 10	4.30 g/kg	1.70 g/kg	21.88 mg/L. 4 h
DIACETONE ALCOHOL 123-42-2	5 - 10	4.00 g/kg	Not Available	Not Available
PROPYLENE GLYCOL MONOMETHYL ETHER 107-98-2	3 - 7	6.60 g/kg	13.00 g/kg	Not Available
AROMATIC HYDROCARBON 64742-94-5	1 - 5	3.20 g/kg	1.69 g/kg	.59 mg/L. 4 h
CYCLOHEXANONE 108-94-1	1 - 5	1.62 g/kg	.95 g/kg	Not Available
ETHYL BENZENE 100-41-4	1 - 5	3.50 g/kg	17.80 g/kg	Not Available
CARBON BLACK 1333-86-4	0.1-1.0	15.40 g/kg	3.00 g/kg	Not Available

CHRONIC TOXICITY

Target Organs:

- Blood - Carcinogen - Kidney - Liver - Embryotoxin - Brain - Central nervous system - Lung - None known

Mutagenicity:

This has not been tested for this product.

Reproductive:

This has not been tested for this product.

SUPPLEMENTAL HEALTH INFORMATION:

Material/ CAS Number	Percent	Ingredient Specific Animal Data:
CYCLOHEXANONE 108-94-1	1 - 5	This product contains cyclohexanone. Long-term inhalation studies with laboratory animals associate cyclohexanone with kidney and liver injury, effects on white blood cells, decreased lung ventilation and oxygen consumption.
ETHYL BENZENE 100-41-4	1 - 5	Ethylbenzene has been reported by NTP to cause cancer in laboratory animals following a chronic (2 year) inhalation exposure. Dose levels of 75, 250 and 750 ppm were used, with evidence of carcinogenicity found in the kidneys of rats and the lung and liver of mice at 750 ppm. The No Observed Effect Level (NOEL) was 75 ppm. The relevance of these findings to humans is uncertain, but appropriate safeguards should be employed to reduce or eliminate inhalation exposure to ethylbenzene.
TITANIUM DIOXIDE 13463-67-7	0.5-1.5	This product contains titanium dioxide. Animals inhaling massive quantities of titanium dioxide dust in a long-term study developed lung tumors. Studies with humans involved in manufacture of this pigment indicate no increased risk of cancer from exposure.
CARBON BLACK 1333-86-4	0.1-1.0	This product contains carbon black which has been rated an IARC 2B carcinogen due to animal data.

SECTION 12 - ECOLOGICAL INFORMATION

POTENTIAL ENVIRONMENTAL EFFECTS

Ecotoxicity: No Information Available.

ENVIRONMENTAL FATE

Mobility: No Information Available.

Biodegradation: No Information Available.

Bioaccumulation: No Information Available.

PHYSICAL/CHEMICAL

Hydrolysis: No Information Available.

Photolysis: No Information Available.

SECTION 13 - DISPOSAL CONSIDERATIONS

Provide maximum ventilation, only personnel equipped with proper respiratory and skin and eye protection should be permitted in the area. Take up spilled material with sawdust, vermiculite, or other absorbent material and place in containers for disposal.

Waste material must be disposed of in accordance with federal, state, provincial and local environmental control regulations. Empty containers should be recycled by an appropriately licensed reconditioner/salvager or disposed of through a permitted waste management facility. Additional disposal information is contained on the Environmental Data Sheet for this product, which can be obtained from your PPG representative.

SECTION 14 - TRANSPORTATION INFORMATION

Proper Shipping Name: Paint
NOS Technical Name: None
Hazard Class: 3
Subsidiary Class(es): None
UN Number: UN1263
Packing Group: II

USA - RQ Hazardous Substances: Xylenes, Naphthalene, Methyl Isobutyl Ketone

USA-RQ Hazardous Substance Threshold Ship Weight: Xylenes>1008.98 Pounds, Naphthalene>22220 Pounds, Methyl Isobutyl Ketone>34435.3

Marine Pollutant Name: None

USA Shipments Only - RQ Threshold Ship Weight: This is the total weight of this product that must be shipped to exceed the RQ quantity.

SECTION 15 - REGULATORY INFORMATION

INVENTORY STATUS

U.S. TSCA: This product and/or all of its components are listed on the U.S. TSCA Inventory or is otherwise exempt from TSCA Inventory reporting requirements.

FEDERAL REGULATIONS

US Regulations

Material/ CAS Number	Percent	CERCLA HS - RQ (LBS)	SARA EHS- TPQ (LBS)	SARA 313
EPOXY RESIN 25068-38-6	10 - 30	Not Listed	Not Listed	Not Listed
METHYL ISOBUTYL KETONE 108-10-1	10 - 30	5000 lbs	Not Listed	Listed
BARIUM SULFATE 7727-43-7	7 - 13	Not Listed	Not Listed	Not Listed
XYLENES 1330-20-7	5 - 10	100 lbs	Not Listed	Listed
DIACETONE ALCOHOL 123-42-2	5 - 10	Not Listed	Not Listed	Not Listed
PROPYLENE GLYCOL MONOMETHYL ETHER 107-98-2	3 - 7	Not Listed	Not Listed	Not Listed
AROMATIC HYDROCARBON 64742-94-5	1 - 5	Not Listed	Not Listed	Not Listed
CYCLOHEXANONE 108-94-1	1 - 5	5000 lbs	Not Listed	Not Listed
ETHYL BENZENE 100-41-4	1 - 5	1000 lbs	Not Listed	Listed
SILICA 7631-86-9	1 - 5	Not Listed	Not Listed	Not Listed
TITANIUM DIOXIDE 13463-67-7	0.5-1.5	Not Listed	Not Listed	Not Listed
CARBON BLACK 1333-86-4	0.1-1.0	Not Listed	Not Listed	Not Listed

SARA 311/312

Health (acute): Yes

Health (chronic): Yes

Fire (flammable): Yes

Pressure: No

Reactivity: No

WHMIS HAZARD CLASS: - Class B, Division 2 - Class D, Division 2, Subdivision A - Class D, Division 2, Subdivision B - Class D, Division 1, Subdivision B

STATE/PROVINCIAL REGULATIONS

CALIFORNIA PROP. 65: WARNING: This product contains a chemical known to the State of California to cause cancer.

Additional Information

Material/ CAS Number	Percent	IARC Group 1(Kno wn Human Carc.)	IARC Group 2A (Proba ble Carc.)	IARC 2B (Suspec ted Carc.)	ACGIH Carc.	NTP Known Carc.	OSHA Carc.
ETHYL BENZENE 100-41-4	1 - 5	N	N	Y	N	N	Y
CARBON BLACK 1333-86-4	0.1-1.0	N	N	Y	N	N	Y

Key: IARC- International Agency on the Research of Cancer; ACGIH- American Conference of Governmental Industrial Hygienists; NTP- National Toxicology Program *Denotes chemical as NTP Known Carcinogen; + Denotes NTP Possible Carcinogen; OSHA- Occupational Safety and Health Administration.

SECTION 16 - OTHER INFORMATION

Hazard Rating Systems

NFPA Rating: 3 30

HMIS Rating: 3*30

Rating System: 0=Minimal, 1=Slight, 2=Moderate, 3=Serious, 4=Severe, *=Chronic Effects.

HMIS=Hazardous Materials Identification System; NFPA=National Fire Protection Association;

Safe handling of this product requires that all of the information on the MSDS be evaluated for specific work environments and conditions of use.

PREPARED BY: Product Safety Department

REASON FOR REVISION: Section 11 has been updated. Date. Edition. Updated MSDS format.

This Material Safety Data Sheet has been prepared in accordance with Canada's Workplace Hazardous Materials Information System (WHMIS) and the OSHA Hazard Communication Standard (29 CFR 1910.1200), the supplier notification requirements of SARA Title III, Section 313 and other applicable right-to-know regulations.

Additional environmental information is contained on the Environmental Data Sheet for this product, which can be obtained from your PPG representative.

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*** END OF MSDS ***