



# Material Safety Data Sheet

Revision Date: 29-Jun-2015

Revision Number: 1

## 1. PRODUCT AND COMPANY IDENTIFICATION

**Product Name** EPOXY SWIMMING POOL PAINT WHITE  
**Product Code** IG-4010FR  
**Product Class** EPOXY  
**Color** White

**Manufacturer**  
Benjamin Moore & Co.  
101 Paragon Drive  
Montvale, NJ 07645  
Phone: 800-225-5554  
insl-x.com

**Emergency Telephone Number(s)**  
CANUTEC: 613-996-6666

## 2. COMPOSITION INFORMATION ON COMPONENTS

Chemical Name	CAS-No	Weight % (max)
Titanium dioxide	13463-67-7	15 - 40%
Polyamine adduct	-	10 - 30%
Xylene	1330-20-7	7 - 13 %
Kaolin	1332-58-7	5 - 10%
Benzyl alcohol	100-51-6	5 - 10%
Propylene glycol monomethyl ether	107-98-2	1 - 5%
Solvent naphtha, petroleum, light aromatic	64742-95-6	1 - 5%
Ethyl benzene	100-41-4	1 - 5%
Silica, amorphous	7631-86-9	1 - 5%
1,2,4-Trimethylbenzene	95-63-6	1 - 5%
Triethylenetetramine	112-24-3	1 - 5%
2-Butoxyethanol	111-76-2	0.1 - 0.25%

## 3. HAZARDS IDENTIFICATION

### Emergency Overview

### **DANGER**

Flammable. Vapors may cause flash fire. Harmful if swallowed. Vapor harmful. Harmful by inhalation. Vapors may be irritating to eyes, nose, throat, and lungs. May cause skin irritation and/or dermatitis. May cause allergic skin reaction.

IMPORTANT: Designed to be mixed with other components. Mixture will have hazards of all components.

**Appearance** liquid

**Odor** solvent

**Potential Health Effects**

**Principal Routes of Exposure** Eye contact, skin contact and inhalation.

**Acute Effects****Eyes**

Contact with eyes may cause irritation.

**Skin**

May cause skin irritation. May cause allergic skin reaction.

**Inhalation**

Harmful by inhalation. High vapor / aerosol concentrations are irritating to the eyes, nose, throat and lungs and may cause headaches, dizziness, drowsiness, unconsciousness, and other central nervous system effects.

**Ingestion**

Harmful if swallowed. Ingestion may cause irritation to mucous membranes. Small amounts of this product aspirated into the respiratory system during ingestion or vomiting may cause mild to severe pulmonary injury, possibly progressing to death.

**Chronic Effects**

Avoid repeated exposure. Prolonged exposure may cause chronic effects.

See Section 11 for additional Toxicological information.

**Aggravated Medical Conditions** None known.

**HMIS**            **Health:** 2\*            **Flammability:** 3            **Reactivity:** 0            **PPE:** -

**HMIS Legend**

0 - Minimal Hazard

1 - Slight Hazard

2 - Moderate Hazard

3 - Serious Hazard

4 - Severe Hazard

\* - Chronic Hazard

X - Consult your supervisor or S.O.P. for "Special" handling instructions.

*Note: The PPE rating has intentionally been left blank. Choose appropriate PPE that will protect employees from the hazards the material will present under the actual normal conditions of use.*

*Caution: HMIS® ratings are based on a 0-4 rating scale, with 0 representing minimal hazards or risks, and 4 representing significant hazards or risks. Although HMIS® ratings are not required on MSDSs under 29 CFR 1910.1200, the preparer, has chosen to provide them. HMIS® ratings are to be used only in conjunction with a fully implemented HMIS® program by workers who have received appropriate HMIS® training. HMIS® is a registered trade and service mark of the NPCA. HMIS® materials may be purchased exclusively from J. J. Keller (800) 327-6868.*

**4. FIRST AID MEASURES****General Advice**

If symptoms persist, call a physician. Show this safety data sheet to the doctor in attendance.

**Eye Contact**

Immediately flush with plenty of water. After initial flushing, remove any contact lenses and continue flushing for at least 15 minutes. Keep eye wide open while rinsing. If symptoms persist, call a physician.

**Skin Contact**

Wash off immediately with soap and plenty of water removing all contaminated clothes and shoes. If skin irritation persists, call a physician.

**Inhalation**

Move to fresh air. If symptoms persist, call a physician.  
If not breathing, give artificial respiration. Call a physician immediately.

<b>Ingestion</b>	Clean mouth with water and afterwards drink plenty of water. Do not induce vomiting without medical advice. Never give anything by mouth to an unconscious person. Consult a physician.
<b>Notes To Physician</b>	Treat symptomatically.
<b>Protection Of First-Aiders</b>	Use personal protective equipment.

## 5. FIRE-FIGHTING MEASURES

<b>Flammable Properties</b>	Vapors may travel considerable distance to a source of ignition and flash back. Vapors may cause flash fire.
<b>Suitable Extinguishing Media</b>	Foam, dry powder or water. Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
<b>Protective Equipment And Precautions For Firefighters</b>	As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.
<b>Specific Hazards Arising From The Chemical</b>	Flammable. Closed containers may rupture if exposed to fire or extreme heat. Keep product and empty container away from heat and sources of ignition. Thermal decomposition can lead to release of irritating gases and vapors.
<b>Sensitivity To Mechanical Impact</b>	No
<b>Sensitivity To Static Discharge</b>	Yes
<b>Flash Point Data</b>	
Flash Point (°F)	80
Flash Point (°C)	27
Flash Point Method	PMCC
<b>Flammability Limits In Air</b>	
Upper Explosion Limit	Not available
Lower Explosion Limit	Not available
<b>NFPA</b>	<b>Health: 2      Flammability: 3      Instability: 0      Special: Not Applicable</b>

### NFPA Legend

0 - Not Hazardous  
1 - Slightly  
2 - Moderate  
3 - High  
4 - Severe

*The ratings assigned are only suggested ratings, the contractor/employer has ultimate responsibilities for NFPA ratings where this system is used.*

*Additional information regarding the NFPA rating system is available from the National Fire Protection Agency (NFPA) at [www.nfpa.org](http://www.nfpa.org).*

## 6. ACCIDENTAL RELEASE MEASURES

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<b>Personal Precautions</b>	Remove all sources of ignition. Take precautions to prevent flashback. Ground and bond all containers and handling equipment. Take precautionary measures against static discharges. Ensure adequate ventilation. Avoid contact with skin, eyes and clothing. Use personal protective equipment.
<b>Environmental Precautions</b>	Prevent further leakage or spillage if safe to do so. Do not allow material to contaminate ground water system. Prevent product from entering drains. Do not flush into surface water or sanitary sewer system. Local authorities should be advised if significant spillages cannot be contained.
<b>Methods For Clean-Up</b>	Dam up. Soak up with inert absorbent material. Use a non-sparking or explosion proof means to transfer material to a sealed, appropriate container for disposal. Clean contaminated surface thoroughly.
<b>Other Information</b>	None known

## 7. HANDLING AND STORAGE

<b>Handling</b>	<p>Avoid contact with skin, eyes and clothing. Wear personal protective equipment. Do not breathe vapors or spray mist. Use only in ventilated areas. Prevent vapor build-up by providing adequate ventilation during and after use.</p> <p>Take precautionary measures against static discharges. To avoid ignition of vapors by static electricity discharge, all metal parts of the equipment must be grounded. Keep away from heat, sparks and flame. Do not smoke. Extinguish all flames and pilot lights, and turn off stoves, heaters, electric motors and other sources of ignition during use and until all vapors are gone. Ignition and/or flash back may occur.</p>
<b>Storage</b>	Keep containers tightly closed in a dry, cool and well-ventilated place. Keep away from heat. Keep away from open flames, hot surfaces and sources of ignition. Keep in properly labeled containers. Keep out of the reach of children.
<b>Technical measures/Precautions</b>	<p>Ensure adequate ventilation. Use only where airflow will keep vapors from building up in or near the work area in adjoining rooms. Comply with all national, state, and local codes pertaining to the storage, handling, dispensing and disposal of flammable liquids.</p> <p>Dissipate static electricity during transfer by grounding and bonding containers and equipment before transferring material. All equipment should be non-sparking and explosion proof. Use explosion proof electrical equipment for ventilation, lighting and material handling.</p>

## 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

### Exposure Limits

Chemical Name	ACGIH	Alberta	British Columbia	Ontario	Quebec
Titanium dioxide	10 mg/m <sup>3</sup> - TWA	10 mg/m <sup>3</sup> - TWA	10 mg/m <sup>3</sup> - TWA 3 mg/m <sup>3</sup> - TWA	10 mg/m <sup>3</sup> - TWA	10 mg/m <sup>3</sup> - TWAEV
Xylene	100 ppm - TWA 150 ppm - STEL	100 ppm - TWA 434 mg/m <sup>3</sup> - TWA 150 ppm - STEL 651 mg/m <sup>3</sup> - STEL	100 ppm - TWA 150 ppm - STEL	100 ppm - TWAEV 435 mg/m <sup>3</sup> - TWAEV 150 ppm - STEV 650 mg/m <sup>3</sup> - STEV	100 ppm - TWAEV 434 mg/m <sup>3</sup> - TWAEV 150 ppm - STEV 651 mg/m <sup>3</sup> - STEV
Kaolin	2 mg/m <sup>3</sup> - TWA	2 mg/m <sup>3</sup> - TWA	2 mg/m <sup>3</sup> - TWA particulate matter containing no asbestos and less than 1% crystalline silica	2 mg/m <sup>3</sup> - TWAEV containing no asbestos and less than 1% crystalline silica	5 mg/m <sup>3</sup> - TWAEV
Propylene glycol monomethyl ether	100 ppm - TWA 150 ppm - STEL	100 ppm - TWA 369 mg/m <sup>3</sup> - TWA 150 ppm - STEL 553 mg/m <sup>3</sup> - STEL	50 ppm - TWA 75 ppm - STEL	100 ppm - TWAEV 365 mg/m <sup>3</sup> - TWAEV 150 ppm - STEV 550 mg/m <sup>3</sup> - STEV	100 ppm - TWAEV 369 mg/m <sup>3</sup> - TWAEV 150 ppm - STEV 553 mg/m <sup>3</sup> - STEV
Ethyl benzene	20 ppm - TWA	100 ppm - TWA 434 mg/m <sup>3</sup> - TWA 125 ppm - STEL 543 mg/m <sup>3</sup> - STEL	20 ppm - TWA	20 ppm - TWA	100 ppm - TWAEV 434 mg/m <sup>3</sup> - TWAEV 125 ppm - STEV 543 mg/m <sup>3</sup> - STEV
Triethylenetetramine	N/E	N/E	N/E	0.5 ppm - TWAEV 3 mg/m <sup>3</sup> - TWAEV Absorption through skin, eyes, or mucous membranes	N/E
2-Butoxyethanol	20 ppm - TWA	20 ppm - TWA 97 mg/m <sup>3</sup> - TWA	20 ppm - TWA	20 ppm - TWA	20 ppm - TWAEV 97 mg/m <sup>3</sup> - TWAEV

**Legend**

ACGIH - American Conference of Governmental Industrial Hygienists

Alberta - Alberta Occupational Exposure Limits

British Columbia - British Columbia Occupational Exposure Limits

Ontario - Ontario Occupational Exposure Limits

Quebec - Quebec Occupational Exposure Limits

N/E - Not established

**Engineering Measures**

Ensure adequate ventilation, especially in confined areas.

**Personal Protective Equipment****Eye/Face Protection**

Safety glasses with side-shields. If splashes are likely to occur, wear:.. Tightly fitting safety goggles.

**Skin Protection**

Long sleeved clothing. Protective gloves.

**Respiratory Protection**

Use only with adequate ventilation. In operations where exposure limits are exceeded, use a NIOSH approved respirator that has been selected by a technically qualified person for the specific work conditions. When spraying the product or applying in confined areas, wear a NIOSH approved respirator specified for paint spray or organic vapors.

**Hygiene Measures**

Avoid contact with skin, eyes and clothing. Remove and wash contaminated clothing before re-use. Wash thoroughly after handling. When using do not eat, drink or smoke.

**9. PHYSICAL AND CHEMICAL PROPERTIES**

<b>Appearance</b>	liquid
<b>Odor</b>	solvent
<b>Density (lbs/gal)</b>	12.35 - 12.45
<b>Specific Gravity</b>	1.48 - 1.50
<b>pH</b>	Not available
<b>Viscosity (centistokes)</b>	Not available
<b>Evaporation Rate</b>	Not available
<b>Vapor Pressure</b>	Not available
<b>Vapor Density</b>	Not available
<b>Wt. % Solids</b>	70 - 80
<b>Vol. % Solids</b>	55 - 65
<b>Wt. % Volatiles</b>	20 - 30
<b>Vol. % Volatiles</b>	35 - 45
<b>VOC Regulatory Limit (g/L)</b>	<340
<b>Boiling Point (°F)</b>	248
<b>Boiling Point (°C)</b>	120
<b>Freezing Point (°F)</b>	Not available
<b>Freezing Point (°C)</b>	Not available
<b>Flash Point (°F)</b>	80
<b>Flash Point (°C)</b>	27
<b>Flash Point Method</b>	PMCC
<b>Upper Explosion Limit</b>	Not available
<b>Lower Explosion Limit</b>	Not available

**10. STABILITY AND REACTIVITY****Chemical Stability**

Stable under normal conditions. Hazardous polymerisation does not occur.

**Conditions To Avoid**

Keep away from open flames, hot surfaces, static electricity and sources of ignition. Sparks. Elevated temperature.

**Incompatible Materials**

Incompatible with strong acids and bases and strong oxidizing agents.

**Hazardous Decomposition Products**

Thermal decomposition can lead to release of irritating gases and vapors.

**Possibility Of Hazardous Reactions**

None under normal conditions of use.

## 11. TOXICOLOGICAL INFORMATION

### Acute Toxicity

#### **Product Information**

Repeated or prolonged exposure to organic solvents may lead to permanent brain and nervous system damage. Intentional misuse by deliberately concentrating and inhaling vapors may be harmful or fatal.

#### **Component**

##### Titanium dioxide

LD50 Oral: > 10000 mg/kg (Rat)  
LD50 Dermal: > 10000 mg/m<sup>3</sup> (Rabbit)  
LC50 Inhalation (Dust): > 6.82 mg/L (Rat, 4 hr.)

##### Xylene

LD50 Oral: 4300 mg/kg (Rat)  
LD50 Dermal: > 1700 mg/kg (Rabbit)  
LC50 Inhalation (Vapor): 5000 ppm (Rat, 4 hr.)

##### Kaolin

LD50 Oral: > 5000 mg/kg (Rat)

##### Benzyl alcohol

LD50 Oral: 1230-1660 mg/kg (Rat)  
LD50 Dermal: 2,000 mg/kg (Rabbit)  
LC50 Inhalation (Vapor): > 5,000 mg/m<sup>3</sup> (Rat)

##### Propylene glycol monomethyl ether

LD50 Oral: 6,600 mg/kg (Rat)  
LD50 Dermal: 13,000 mg/kg (Rabbit)  
LC50 Inhalation (Vapor): 10,000 ppm (Rat)

##### Solvent naphtha, petroleum, light aromatic

LD50 Oral: 8400 mg/kg (Rat)

##### Ethyl benzene

LD50 Oral: 3500 mg/kg (Rat)  
LD50 Dermal: > 5000 mg/kg (Rabbit)  
LC50 Inhalation (Vapor): 55000 mg/m<sup>3</sup> (Rat, 2 hr.)

##### Silica, amorphous

LD50 Oral: > 5000 mg/kg (Rat)  
LD50 Dermal: 2,000 mg/kg (Rabbit)  
LC50 Inhalation (Dust): > 2 mg/L

##### 1,2,4-Trimethylbenzene

LD50 Oral: 5000 mg/kg (Rat)  
LC50 Inhalation (Vapor): 18000 mg/m<sup>3</sup> (Rat, 4 hr.)

##### Triethylenetetramine

LD50 Oral: 2500 mg/kg (Rat)  
LD50 Dermal: 805 mg/kg (Rabbit)

##### 2-Butoxyethanol

LD50 Oral: 470 mg/kg (Rat)  
LD50 Dermal: 220 mg/kg (Rabbit)  
LC50 Inhalation (Vapor): 450 ppm (Rat, 4 hr.)

### Chronic Toxicity

#### **Carcinogenicity**

The information below indicates whether each agency has listed any ingredient as a carcinogen:.

Chemical Name	ACGIH	IARC	NTP	OSHA Carcinogen
Titanium dioxide		2B - Possible Human Carcinogen		Listed
Ethyl benzene	A3 - Confirmed Animal Carcinogen with Unknown Relevance to Humans	2B - Possible Human Carcinogen		Listed
2-Butoxyethanol	A3 - Confirmed Animal Carcinogen with Unknown Relevance to Humans			

• Although IARC has classified titanium dioxide as possibly carcinogenic to humans (2B), their summary concludes: "No significant exposure to titanium dioxide is thought to occur during the use of products in which titanium dioxide is bound to other materials, such as paint."

#### Legend

ACGIH - American Conference of Governmental Industrial Hygienists

IARC - International Agency for Research on Cancer

NTP - National Toxicity Program

OSHA - Occupational Safety & Health Administration

## 12. ECOLOGICAL INFORMATION

### Ecotoxicity Effects

### Product Information

#### Acute Toxicity to Fish

No information available

#### Acute Toxicity to Aquatic Invertebrates

No information available

#### Acute Toxicity to Aquatic Plants

No information available

### Component

#### Acute Toxicity to Fish

##### Titanium dioxide

LC50: > 1000 mg/L (Fathead Minnow - 96 hr.)

##### Xylene

LC50: 13.5 mg/L (Rainbow Trout - 96 hr.)

##### Ethyl benzene

LC50: 12.1 mg/L (Fathead Minnow - 96 hr.)

##### 2-Butoxyethanol

LC50: 1490 mg/L (Bluegill sunfish - 96 hr.)



**Acute Toxicity to Aquatic Invertebrates**Ethyl benzene

EC50: 1.8 mg/L (Daphnia magna - 48 hr.)

**Acute Toxicity to Aquatic Plants**Ethyl benzene

EC50: 4.6 mg/L (Green algae (Scenedesmus subspicatus), 72 hrs.)

**13. DISPOSAL CONSIDERATIONS****Waste Disposal Method**

Dispose of in accordance with federal, state, provincial, and local regulations. Local requirements may vary, consult your sanitation department or state-designated environmental protection agency for more disposal options.

**Empty Container Warning**

Emptied containers may retain product residue. Follow label warnings even after container is emptied. Residual vapors may explode on ignition.

**14. TRANSPORT INFORMATION****TDG**

<b>Proper Shipping Name</b>	Paint
<b>Hazard Class</b>	3
<b>UN-No</b>	UN1263
<b>Packing Group</b>	III
<b>Description</b>	UN1263, Paint, 3, III

**ICAO / IATA**

Contact the preparer for further information.

**IMDG / IMO**

Contact the preparer for further information.

**15. REGULATORY INFORMATION****International Inventories****TSCA: United States**

Yes - All components are listed or exempt.

**DSL: Canada**

Yes - All components are listed or exempt.

**National Pollutant Release Inventory (NPRI)****NPRI Parts 1- 4**

This product contains the following Parts 1-4 NPRI chemicals:

<u>Chemical Name</u>	<u>CAS-No</u>	<u>Weight % (max)</u>	<u>NPRI Parts 1- 4</u>
Xylene	1330-20-7	7 - 13 %	Listed
Benzyl alcohol	100-51-6	5 - 10%	Listed
Propylene glycol monomethyl ether	107-98-2	1 - 5%	Listed
Ethyl benzene	100-41-4	1 - 5%	Listed
1,2,4-Trimethylbenzene	95-63-6	1 - 5%	Listed
2-Butoxyethanol	111-76-2	0.1 - 0.25%	Listed

**NPRI Part 5**

This product contains the following NPRI Part 5 Chemicals:

<u>Chemical Name</u>	<u>CAS-No</u>	<u>Weight % (max)</u>	<u>NPRI Part 5</u>
Xylene	1330-20-7	7 - 13 %	Listed
Solvent naphtha, petroleum, light aromatic	64742-95-6	1 - 5%	Listed
1,2,4-Trimethylbenzene	95-63-6	1 - 5%	Listed
2-Butoxyethanol	111-76-2	0.1 - 0.25%	Listed

**WHMIS Regulatory Status**

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations (CPR) and the MSDS contains all the information required by the CPR

**WHMIS Hazard Class**

B2 Flammable liquid  
D2A Very toxic materials  
D2B Toxic materials

**16. OTHER INFORMATION**

**WARNING!** If you scrape, sand, or remove old paint, you may release lead dust. LEAD IS TOXIC. EXPOSURE TO LEAD DUST CAN CAUSE SERIOUS ILLNESS, SUCH AS BRAIN DAMAGE, ESPECIALLY IN CHILDREN. PREGNANT WOMEN SHOULD ALSO AVOID EXPOSURE. Wear a NIOSH approved respirator to control lead exposure. Clean up carefully with a HEPA vacuum and a wet mop. Before you start, find out how to protect yourself and your family by logging onto Health Canada @ <http://www.hc-sc.gc.ca/hl-vs/iyh-vsv/prod/paint-peinture-eng.php>.

**Prepared By** Product Stewardship Department  
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101 Paragon Drive  
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**Revision Date:** 29-Jun-2015  
**Revision Summary** No information available

Disclaimer

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IG-4010F  
**End of MSDS**