



## Material Safety Data Sheet

Revision Date: 23-Sep-2013

Revision Number: 3

### 1. PRODUCT AND COMPANY IDENTIFICATION

**Product Name** IMPERVO ALKYD ENAMEL HIGH GLOSS  
**Product Code** K1332B  
**Product Class** SOLVENT THINNED PAINT  
**Color** All

**Manufacturer** Benjamin Moore & Co.  
101 Paragon Drive  
Montvale, NJ 07645  
Phone: 855-724-6802  
www.benjaminmoore.com

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

### 2. COMPOSITION INFORMATION ON COMPONENTS

#### Hazardous Components

Chemical Name	CAS-No	Weight % (max)
Soybean oil, polymer with pentaerythritol and phthalic anhydride	66070-60-8	30 - 60%
Hydrotreated heavy naphtha, petroleum	64742-48-9	15 - 40%
Titanium dioxide	13463-67-7	10 - 30%
Solvent naphtha, petroleum, medium aliphatic	64742-88-7	7 - 13 %
Kaolin	1332-58-7	3 - 7%
Soybean Oil	8001-22-7	3 - 7%
Xylene	1330-20-7	1 - 5%
Cobalt bis(2-ethylhexanoate)	136-52-7	0.25 - 0.5%
Ethyl benzene	100-41-4	0.25 - 0.5%
Methyl ethyl ketoxime	96-29-7	0.1 - 0.25%

### 3. HAZARDS IDENTIFICATION

### 3. HAZARDS IDENTIFICATION

#### Emergency Overview

#### **WARNING**

Vapors may be irritating to eyes, nose, throat, and lungs. May cause skin irritation and/or dermatitis. May cause allergic skin reaction. Combustible material.

Rags, steel wool or waste soaked with this product may spontaneously catch fire if improperly discarded.

**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 and/or dermatitis. May cause allergic skin reaction.

**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**

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

See Section 11 for additional Toxicological information.

**Aggravated Medical Conditions** None known

**HMIS**            **Health:** 1\*            **Flammability:** 2            **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.

<b>Eye Contact</b>	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.
<b>Skin Contact</b>	Wash off immediately with soap and plenty of water removing all contaminated clothes and shoes. If skin irritation persists, call a physician.
<b>Inhalation</b>	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>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>	Combustible material. 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)	110
Flash Point (°C)	43
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: 1</b>
	<b>Flammability: 2</b>
	<b>Instability: 0</b>
	<b>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**

<b>Personal Precautions</b>	Use personal protective equipment. Remove all sources of ignition.
<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. Pick up and transfer to properly labeled containers. Clean contaminated surface thoroughly.
<b>Other Information</b>	None known

**7. HANDLING AND STORAGE**

<b>Handling</b>	Use only in area provided with appropriate exhaust ventilation. Do not breathe vapors or spray mist. Wear personal protective equipment. 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 open flames, hot surfaces and sources of ignition.
<b>Storage</b>	Keep containers tightly closed in a dry, cool and well-ventilated place. Keep away from heat. Keep in properly labeled containers.  <b>DANGER</b> - Rags, steel wool or waste soaked with this product may spontaneously catch fire if improperly discarded. Immediately after use, place rags, steel wool or waste in a sealed water-filled metal container.

**8. EXPOSURE CONTROLS / PERSONAL PROTECTION****Exposure Limits****Hazardous Components**

Chemical Name	ACGIH	Alberta	British Columbia	Ontario	Quebec
Soybean oil, polymer with pentaerythritol and phthalic anhydride	N/E	N/E	N/E	N/E	N/E
Hydrotreated heavy naphtha, petroleum	N/E	N/E	N/E	N/E	N/E
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

Solvent naphtha, petroleum, medium aliphatic	N/E	N/E	N/E	525 mg/m <sup>3</sup> - TWAEV 140°C Flash aliphatic solvent	N/E
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
Soybean Oil	N/E	N/E	N/E	N/E	N/E
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
Cobalt bis(2-ethylhexanoate)	N/E	N/E	N/E	N/E	N/E
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	100 ppm - TWA 125 ppm - STEL	100 ppm - TWAEV 434 mg/m <sup>3</sup> - TWAEV 125 ppm - STEV 543 mg/m <sup>3</sup> - STEV
Methyl ethyl ketoxime	N/E	N/E	N/E	N/E	N/E

### 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.

#### Skin Protection

Long sleeved clothing. Protective gloves.

#### Respiratory Protection

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

### Appearance

liquid

### Odor

solvent

### Density (lbs/gal)

8.6 - 8.7

### Specific Gravity

1.0 - 1.1

### pH

Not available

### Viscosity (centistokes)

Not available

## 9. PHYSICAL AND CHEMICAL PROPERTIES

Evaporation Rate	Not available
Vapor Pressure	Not available
Vapor Density	Not available
Wt. % Solids	60 - 70
Vol. % Solids	45 - 55
Wt. % Volatiles	30 - 40
Vol. % Volatiles	45 - 55
VOC Regulatory Limit (g/L)	< 400
Boiling Point (°F)	340
Boiling Point (°C)	171
Freezing Point (°F)	Not available
Freezing Point (°C)	Not available
Flash Point (°F)	110
Flash Point (°C)	43
Flash Point Method	PMCC
Upper Explosion Limit	Not available
Lower Explosion Limit	Not available

## 10. STABILITY AND REACTIVITY

<b>Chemical Stability</b>	Stable under normal conditions. Hazardous polymerisation does not occur.
<b>Conditions To Avoid</b>	Keep away from open flames, hot surfaces, static electricity and sources of ignition.
<b>Incompatible Materials</b>	Incompatible with strong acids and bases and strong oxidizing agents.
<b>Hazardous Decomposition Products</b>	Thermal decomposition can lead to release of irritating gases and vapors.
<b>Possibility Of Hazardous Reactions</b>	None under normal conditions of use.

## 11. TOXICOLOGICAL INFORMATION

### Acute Toxicity

#### **Product**

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**

Hydrotreated heavy naphtha, petroleum

LD50 Oral: > 5,000 mg/kg (Rat) vendor data

LD50 Dermal: > 3,160 mg/kg (Rabbit)

Titanium dioxide

LD50 Oral: &gt; 10000 mg/kg (Rat)

LD50 Dermal: > 10000 mg/m<sup>3</sup> (Rabbit)

LC50 Inhalation (Dust): &gt; 6.82 mg/L (Rat, 4 hr.)

Solvent naphtha, petroleum, medium aliphatic

LD50 Oral: &gt; 6240 mg/kg (Rat)

LD50 Dermal: &gt; 3120 mg/kg (Rabbit)

LC50 Inhalation (Vapor): 1400 ppm (Rat, 4 hr.)

Kaolin

LD50 Oral: &gt; 5000 mg/kg (Rat)

Xylene

LD50 Oral: 4300 mg/kg (Rat)

LD50 Dermal: &gt; 1700 mg/kg (Rabbit)

LC50 Inhalation (Vapor): 5000 ppm (Rat, 4 hr.)

Sensitization: No sensitizing effects known.

Ethyl benzene

LD50 Oral: 3500 mg/kg (Rat)

LD50 Dermal: &gt; 5000 mg/kg (Rabbit)

LC50 Inhalation (Vapor): 55000 mg/m<sup>3</sup> (Rat, 2 hr.)

Sensitization: No sensitizing effects known.

Methyl ethyl ketoxime

LD50 Oral: 930 mg/kg (Rat)

LD50 Dermal: 200 µL/kg (Rabbit)

LC50 Inhalation (Vapor): &gt; 4.8 mg/L (Rat)

**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
Cobalt bis(2-ethylhexanoate)		2B - Possible Human Carcinogen		
Ethyl benzene	A3 - Confirmed Animal Carcinogen with Unknown Relevance to Humans	2B - Possible Human Carcinogen		Listed

- 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."
- Cobalt and cobalt compounds are listed as possible human carcinogens by IARC (2B). However, there is inadequate evidence of the carcinogenicity of cobalt and cobalt compounds in humans.

**Legend**

ACGIH - American Conference of Governmental Industrial Hygienists

IARC - International Agency for Research on Cancer

NTP - National Toxicity Program

OSHA - Occupational Safety &amp; Health Administration

**12. ECOLOGICAL INFORMATION****Ecotoxicity Effects****Product****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: &gt;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.)

Methyl ethyl ketoxime

LC50: 48 mg/L (Bluegill sunfish - 96 hr.)

**Acute Toxicity to Aquatic Invertebrates**Ethyl benzene

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

Methyl ethyl ketoxime

EC50: 750 mg/L (Daphnia magna - 48 hr.)



## 12. ECOLOGICAL INFORMATION

### Acute Toxicity to Aquatic Plants

Ethyl benzene

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

## 13. DISPOSAL CONSIDERATIONS

<b>Waste Disposal Method</b>	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.
<b>Empty Container Warning</b>	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

In Canada, Class 3 flammable liquids may be reclassified as non-regulated for domestic ground transportation if they meet the requirements of TDG General Exemption SOR/2008-34.

<b>ICAO / IATA</b>	Contact the preparer for further information.
<b>IMDG / IMO</b>	Contact the preparer for further information.

## 15. REGULATORY INFORMATION

### International Inventories

<b>United States TSCA</b>	Yes - All components are listed or exempt.
<b>Canada DSL</b>	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:

## 15. REGULATORY INFORMATION

<b>Chemical Name</b>	<b>CAS-No</b>	<b>Weight % (max)</b>
Xylene	1330-20-7	1 - 5%
Cobalt bis(2-ethylhexanoate)	136-52-7	0.25 - 0.5%
Ethyl benzene	100-41-4	0.25 - 0.5%

*This product may contain trace amounts of (other) NPRI Parts I-4 reportable chemicals. Contact the preparer for further information.*

### **NPRI Part 5**

This product contains the following NPRI Part 5 Chemicals:

<b>Chemical Name</b>	<b>CAS-No</b>	<b>Weight % (max)</b>
Hydrotreated heavy naphtha, petroleum	64742-48-9	15 - 40%
Solvent naphtha, petroleum, medium aliphatic	64742-88-7	7 - 13 %
Xylene	1330-20-7	1 - 5%

*This product may contain trace amounts of (other) NPRI Part 5 reportable chemicals. Contact the preparer for further information.*

### **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**

B3 Combustible liquid  
 B6 Reactive flammable material  
 D2A Very 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  
 Benjamin Moore & Co.  
 101 Paragon Drive  
 Monvale, NJ 07645  
 855-724-6802

**Revision Date:** 23-Sep-2013

**Revision Summary**

No information available

Disclaimer

The information contained herein is presented in good faith and believed to be accurate as of the effective date shown above. This information is furnished without warranty of any kind. Employers should use this information only as a supplement to other information gathered by them and must make independent determination of suitability and completeness of information from all sources to assure proper use of these materials and the safety and health of employees. Any use of this data and information must be determined by the user to be in accordance with applicable federal, provincial, and local laws and regulations.

K1332B

**End of MSDS**