Material Safety Data Sheet

Revision Date: *21-May-2010* **Revision Number:** *1*

1. PRODUCT AND COMPANY IDENTIFICATION

Product Name **SATIN IMPERVO**
Product Code **C235**
Product Class SOLVENT THINNED PAINT
Color All

Manufacturer
Benjamin Moore & Co.
101 Paragon Drive
Montvale, NJ 07645
Phone: 201-573-9600
www.benjaminmoore.com

Emergency Telephone Number(s)
CHEMTREC: 800-424-9300

2. COMPOSITION INFORMATION ON COMPONENTS

Hazardous Components

Chemical Name	CAS-No	Weight % (max)
Limestone	1317-65-3	35
Hydrotreated heavy naphtha, petroleum	64742-48-9	35
Titanium dioxide	13463-67-7	25
Iron oxide	1309-37-1	10
Kaolin	1332-58-7	5
Carbon black	1333-86-4	5
Silica, amorphous	7631-86-9	5
Aluminum hydroxide	21645-51-2	5
Cobalt bis(2-ethylhexanoate)	136-52-7	0.5
Ethyl benzene	100-41-4	0.5
Silica, crystalline	14808-60-7	0.5

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.
Combustible material.

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

Appearance liquid **Odor** solvent

OSHA Regulatory Status This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).

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.

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.

Contains: Crystalline Silica which has been determined to be carcinogenic to humans by IARC (1) when in respirable form. Risk of cancer depends on duration and level of inhalation exposure to spray mist or dust from sanding the dried paint.

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, Benjamin Moore & Co., has choosen 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.

Ingestion 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.

Notes To Physician Treat symptomatically.

Protection Of First-Aiders Use personal protective equipment.

5. FIRE-FIGHTING MEASURES

Suitable Extinguishing Media Foam, dry powder or water. Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

Protective Equipment And Precautions For Firefighters As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

Specific Hazards Arising From The Chemical 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.

Sensitivity To Mechanical Impact No

Sensitivity To Static Discharge Yes

Flash Point Data

Flash Point (°F)	119.0
Flash Point (°C)	48.3
Flash Point Method	PMCC

Flammability Limits In Air

Lower Explosion Limit	0.7
Upper Explosion Limit	5.3

NFPA **Health:** 1 **Flammability:** 2 **Instability:** 0 **Special:** Not Applicable

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

The ratings assigned by Benjamin Moore & Co. 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.

6. ACCIDENTAL RELEASE MEASURES

Personal Precautions Use personal protective equipment. Remove all sources of ignition.

Environmental Precautions 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.

Methods For Clean-Up Dam up. Soak up with inert absorbent material. Pick up and transfer to properly labeled containers. Clean contaminated surface thoroughly.

Other Information None known

7. HANDLING AND STORAGE

Handling 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.

Storage Keep containers tightly closed in a dry, cool and well-ventilated place. Keep away from heat. Keep in properly labeled containers.

DANGER - 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 AND PERSONAL PROTECTION

Exposure Limits

Hazardous Components

Chemical Name	ACGIH	OSHA
Limestone	N/E	15 mg/m^3 - TWA total 5 mg/m^3 - TWA
Hydrotreated heavy naphtha, petroleum	N/E	N/E
Titanium dioxide	10 mg/m^3 - TWA	15 mg/m^3 - TWA total

Iron oxide	5 mg/m^3 - TWA	10 mg/m^3 - TWA
Kaolin	2 mg/m^3 - TWA	15 mg/m^3 - TWA total 5 mg/m^3 - TWA
Carbon black	3.5 mg/m^3 - TWA	3.5 mg/m^3 - TWA
Silica, amorphous	N/E	- (80)/(% SiO2) mg/m^3 TWA 20 mppcf - TWA
Aluminum hydroxide	1 mg/m^3 - TWA	N/E
Cobalt bis(2-ethylhexanoate)	N/E	N/E
Ethyl benzene	100 ppm - TWA 125 ppm - STEL	100 ppm - TWA 435 mg/m^3 - TWA
Silica, crystalline	0.025 mg/m^3 - TWA	respirable - (10)/(%SiO2 + 2) mg/m^3 TWA respirable - (250)/(%SiO2 + 5) mppcf TWA total dust - (30)/(%SiO2 + 2) mg/m^3 TWA

Legend
ACGIH - American Conference of Governmental Industrial Hygienists Exposure Limits
OSHA - Occupational Safety & Health Administration 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) 9.4 - 11.9
Specific Gravity 1.12 - 1.43
pH Not available
Viscosity (centistokes) Not available
Evaporation Rate Not available
Vapor Pressure Not available
Vapor Density Not available
Wt. % Solids 60 - 80

Vol. % Solids 40 - 60
Wt. % Volatiles 20 - 40
Vol. % Volatiles 40 - 60
VOC Regulatory Limit (g/L) < 380
Boiling Point (°F) 365.0
Boiling Point (°C) 185.0

9. PHYSICAL AND CHEMICAL PROPERTIES

Freezing Point (°F)	Not available
Freezing Point (°C)	Not available
Flash Point (°F)	119.0
Flash Point (°C)	48.3
Flash Point Method	PMCC
Upper Explosion Limit	5.3
Lower Explosion Limit	0.7

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.
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
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

Limestone
LD50 Oral: 6,450 mg/kg (Rat) vendor data
Sensitization: No sensitizing effects known.

Hydrotreated heavy naphtha, petroleum
LD50 Oral: > 5,000 mg/kg (Rat) vendor data
LD50 Dermal: > 3,000 mg/kg (Rabbit)

Titanium dioxide
LD50 Oral: > 24000 mg/kg (Rat)
LD50 Dermal: > 10000 mg/m³ (Rabbit)
LC50 Inhalation (Dust): > 6.82 mg/L (Rat, 4 hr.)

Iron oxide

LD50 Oral: > 5000 mg/kg (Rat) vendor data

Kaolin
LD50 Oral: > 5000 mg/kg (Rat)

Carbon black
LD50 Oral: > 15400 mg/kg (Rat)
LD50 Dermal: > 3000 mg/kg (Rabbit)

Silica, amorphous
LD50 Oral: > 10000 mg/kg (Rat)
LD50 Dermal: 2,000 mg/kg (Rabbit)
LC50 Inhalation (Dust): > 2 mg/L

Ethyl benzene
LD50 Oral: 3500 mg/kg (Rat)
LD50 Dermal: > 5000 mg/kg (Rabbit)
LC50 Inhalation (Vapor): 55000 mg/m^3 (Rat, 2 hr.)
Sensitization: No sensitizing effects known.

Silica, crystalline
LD50 Oral: 500 mg/kg (Rat) vendor data

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
Carbon black		2B - Possible Human Carcinogen		Listed
Cobalt bis(2-ethylhexanoate)		2B - Possible Human Carcinogen		
Ethyl benzene	A3	2B - Possible Human Carcinogen		Listed
Silica, crystalline	A2	1 - Human Carcinogen		Listed

- Crystalline Silica has been determined to be carcinogenic to humans by IARC (1) when in respirable form. Risk of cancer depends on duration and level of inhalation exposure to spray mist or dust from sanding the dried paint.
- 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 & 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: >1000 mg/L (Fathead Minnow - 96 hr.)

Ethyl benzene
LC50: 12.1 mg/L (Fathead Minnow - 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, and local regulations. Local requirements may vary, consult your sanitation department or state-designated environmental protection agency for more disposal options.

14. TRANSPORT INFORMATION

14. TRANSPORT INFORMATION

DOT

Proper Shipping Name	Paint
Hazard Class	3
UN-No	UN1263
Packing Group	III

In the US this material may be reclassified as a Combustible Liquid and is not regulated in containers of less than 119 gallons (450 liters) via surface transportation (refer to 49CFR173.120(b)(2) for further information).

ICAO / IATA Contact Benjamin Moore & Co. for further information.

IMDG / IMO Contact Benjamin Moore & Co. for further information.

15. REGULATORY INFORMATION

International Inventories

United States TSCA	Yes - All components are listed or exempt.
Canada DSL	Yes - All components are listed or exempt.

Federal Regulations

SARA 311/312 hazardous categorization

Acute Health Hazard	Yes
Chronic Health Hazard	Yes
Fire Hazard	Yes
Sudden Release of Pressure Hazard	No
Reactive Hazard	No

SARA 313

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product contains a chemical or chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372:

Chemical Name	CAS-No	Weight % (max)
Ethyl benzene	100-41-4	0.5

This product may contain trace amounts of (other) SARA reportable chemicals. Contact Benjamin Moore & Co. for further information.

Clean Air Act, Section 112 Hazardous Air Pollutants (HAPs) (see 40 CFR 61)

This product contains the following HAPs:

Chemical Name	CAS-No	Weight % (max)
Cobalt bis(2-ethylhexanoate)	136-52-7	0.5
Ethyl benzene	100-41-4	0.5

This product may contain trace amounts of (other) HAPs chemicals. Contact Benjamin Moore & Co. for further information.

State Regulations

California Proposition 65

This product may contain small amounts of materials known to the state of California to cause cancer or reproductive harm.

State Right-to-Know

Chemical Name	Massachusetts	New Jersey	Pennsylvania	Louisiana	Rhode Island
Limestone	X	X	X		X
Titanium dioxide	X	X	X		X
Iron oxide	X	X	X		X
Kaolin	X	X	X		X
Carbon black	X	X	X		X
Silica, amorphous	X	X	X		
Cobalt bis(2-ethylhexanoate)		X	X		
Ethyl benzene	X	X	X		X
Silica, crystalline	X	X	X		X

Legend
X - Listed

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 contacting the National Lead Information Hotline at 1-800-424-LEAD or log on to www.epa.gov/lead.

Prepared By
Product Stewardship Department
Benjamin Moore & Co.
360 Route 206 - P.O. Box 4000
Flanders, NJ 07836
866-690-1961

Revision Date: 21-May-2010
Revision Summary Not 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.

End of MSDS