

W. R. GRACE
MATERIAL SAFETY DATA SHEET

Product Name: Bituthene Mastic
MSDS ID Number: M-85753

MSDS Date: 11/14/2005

SECTION 1 - CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Product Name: Bituthene Mastic
MSDS Number: M-85753
Cancelled MSDS Number: M-85704
MSDS Date: 11/14/2005
Chemical Family Name: Modified Asphalt & Inorganic Fillers In Organic Solvent.
Product Use: Termination Sealer
Chemical Formula: Mixture-NA
CAS # (Chemical Abstracts Service Number): Mixture-NA

Manufactured by:

W.R.Grace & Co.-Conn.
62 Whittemore Avenue
Cambridge, MA 02140

Grace Canada, Inc.
294 Clements Road West
Ajax, Ontario L1S 3C6

In Case of Emergency Call:

In USA: (617) 876-1400 In Canada: (905) 683-8561

SECTION 2 - COMPOSITION/INFORMATION ON INGREDIENTS

Ingredient	CAS#	Percent (max)
1,2,4-Trimethylbenzene	000095-63-6	1-10
Cumene	000098-82-8	1-10
Ethyl benzene	000100-41-4	1-10
Kaolin	001332-58-7	25-50
Organophilic clay	121888-66-2	1-10
Petroleum Asphalt	008052-42-4	50-100
Silica, amorphous, fumed, cryst.-free	112945-52-5	1-10
Solvent naphtha, petroleum, light arom.	064742-95-6	10-25
Styrene-Butadiene block copolymer	009003-55-8	1-10
Xylenes (o-, m-, p- isomers)	001330-20-7	1-10

SECTION 3 - HAZARDS IDENTIFICATION

Emergency Overview:

Caution!

Combustible liquid.
May be harmful if inhaled.
Inhalation of high vapor concentration can cause CNS depression, unconsciousness or death.
Causes severe respiratory tract irritation.
May cause kidney, lung and liver tumors.
Causes severe eye irritation.
Causes skin irritation.
Harmful if absorbed through skin.
May produce local skin tumors.
May be harmful if ingested.
Causes digestive tract irritation if ingested.

HMIS Rating:

Health: 2*
Flammability: 2
Reactivity: 0
Personal Protective Equipment: B,G (See Section 8)

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Potential Health Effects:

Inhalation: Causes severe respiratory tract irritation.

Effects include: Drowsiness, nausea, CNS depression, vomiting, coma, headache, dizziness, loss of consciousness, death, coughing, anemia, narcotic effects, irritation, Ethyl benzene contained in this product has been shown to produce kidney, lung and liver tumors based on animal inhalation studies. Xylene contained in this product has been shown to affect the liver, kidney, lungs, spleen, heart and adrenals based on high exposure animal studies.

Eye Contact: Eye contact can cause severe irritation.

Prolonged eye contact can result in tissue damage.

Skin Contact: Skin contact causes irritation.

Prolonged skin contact can result in irritation causing redness and itching.

May defat skin.

Animal tests indicate that prolonged and repeated skin contact with the asphalt in this product may produce local skin tumors.

Skin Absorption: Harmful if absorbed through the skin.

May cause effects similar to those defined under inhalation.

Ingestion: Harmful if ingested.

If ingested, causes irritation to the linings of the mouth, esophagus and stomach.

Effects include: Drowsiness, nausea, fatigue, pulmonary edema (from aspiration into the lungs from vomiting), CNS depression, vomiting, diarrhea, headache, dizziness, loss of consciousness, death, anemia and narcotic effects.

SECTION 4 - FIRST AID MEASURES:

Skin Contact: In case of skin contact, clean fingernails and wash skin with soap and water. If residue remains, clean with waterless handcream or abrasive soap. Never use solvents. Call a physician.

Remove contaminated clothing and wash before reuse.

Eye Contact: Flush eyes with water for at least 15 minutes while holding eyelids open.

Get immediate medical attention.

Ingestion: Do not induce vomiting.

Never give anything by mouth to an unconscious person.

If discomfort or irritation persists, consult a physician.

Inhalation: If symptoms develop, get fresh air. If symptoms persist, consult a physician.

If breathing has stopped, give artificial respiration then oxygen if needed.

SECTION 5 - FIRE AND EXPLOSION HAZARD DATA

Flash Point:	107.0°F (42°C)
Flash Point Method:	Pensky Marten Closed Cup
Lower Explosion Limit:	Not Available
Upper Explosion Limit:	Not Available
Auto-ignition Temperature:	Not Available

NFPA Rating:

Health:	2
Flammability:	2
Reactivity:	0

Extinguishing Media: In case of fire, use water spray, dry chemical, Carbon dioxide or foam.

Special Fire Fighting Procedures: Firefighters should be equipped with Self-contained Breathing Apparatus (SCBA) to prevent inhalation of hazardous decomposition products. (See Section 10.) Water spray may be ineffective when extinguishing fire. Water may be used to cool closed containers. Do not scatter spilled material with high pressure water stream. Fog nozzles are preferred if water is used.

Unusual Fire and Explosion Hazards: Keep away from heat, electrical equipment, sparks, and open flame. Extinguish all sources of ignition. Vapors are heavier than air and may travel along ground to ignition sources such as electrical equipment, smoking materials, welding equipment,

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and pilot lights. Product can ignite explosively. Closed containers may explode when exposed to extreme heat. Flammable liquid. Keep containers closed except when in use.

SECTION 6 - ACCIDENTAL RELEASE MEASURES:

Spills/Leaks:

Use proper personal protective equipment. Do not flush to sewer or allow to enter waterways. Keep unnecessary people away.

SECTION 7 - HANDLING AND STORAGE

Precautionary Measures:

Avoid contact with eyes, skin and clothing.
 Use only with adequate ventilation.
 Forced ventilation is necessary in pits and other confined areas.
 Leave work area periodically to reduce effects of inhalation. Respirators must worn if exposures can not be maintained below exposure limits.
 Do not take internally.
 Practice good personal hygiene to avoid ingestion.
 Wash clothing before reuse.
 To avoid skin contact, use gloves or barrier creams. Promptly cleanse hands with waterless hand cleaner, clean fingernails and wash with soap and water after handling.
 When working around heating and air conditioning systems, block intake vents to prevent vapor from traveling into buildings. Keep away from heat, sparks and flame. Enforce no smoking policy for all trades present on job site. Keep container closed tightly when not in use to avoid unnecessary release of vapors and to prevent spills. Do not reuse empty containers.
 FOR PROFESSIONAL USE ONLY. KEEP OUT OF CHILDREN'S REACH

SECTION 8 - EXPOSURE CONTROLS AND PERSONAL PROTECTIVE EQUIPMENT

EXPOSURE GUIDELINES (US)

Ingredient	ACGIH TLV			OSHA PEL			Other
	TWA	STEL	Ceiling	TWA	STEL	Ceiling	
1,2,4-Trimethylbenzene	-	-	-	-	-	-	NIOSH - 25 ppm TWA; 125 mg/m ³ TWA
Cumene	50 ppm TWA	-	-	50 ppm TWA; 245 mg/m ³ TWA	-	-	-
Ethyl benzene	100 ppm TWA	125 ppm STEL	-	100 ppm TWA; 435 mg/m ³ TWA	125 ppm STEL; 545 mg/m ³ STEL	-	-
Kaolin	2 mg/m ³ TWA (respirable fraction) (The value is for particulate matter)	-	-	total dust: 10 mg/m ³ TWA; respirable fraction: 5 mg/m ³ TWA	-	-	-
Organophilic clay	-	-	-	-	-	-	-
Petroleum Asphalt	0.5 mg/m ³ TWA (inhalable fraction); (as benzene-soluble aerosol)	-	-	-	-	-	-
Silica, amorphous, fumed, cryst.-free	-	-	-	-	-	-	-
Solvent naphtha, petroleum, light arom.	-	-	-	-	-	-	-
Styrene-Butadiene block copolymer	-	-	-	-	-	-	-
Xylenes (o-, m-, p-isomers)	100 ppm TWA	150 ppm STEL	-	100 ppm TWA; 435 mg/m ³ TWA	150 ppm STEL; 655 mg/m ³ STEL	-	-

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EXPOSURE GUIDELINES (CANADA)

Employers should consult local Provincial regulatory limits for exposure guidelines which may vary locally.

Engineering Controls: Explosion-proof portable ventilation is required to prevent vapor build-up during application in enclosed or depressed areas. Vapors are heavier than air and will build-up in confined spaces without ventilation. Vapor build-up can be life threatening. Portable equipment such as a Coppus Vano portable blower/exhauster should be used in accordance with the manufacturer's instructions.

Personal Protective Equipment:

Respiratory Protection: Respiratory protection is not normally required. However, a chemical cartridge respirator with organic vapor cartridge is required at or above the applicable exposure limits (Consult above Exposure Guidelines). If no limits exist, use an approved respirator whenever a vapor or mist is generated or if respiratory irritation occurs. Supplied air respirator (SCBA) is required at exposure levels above the capabilities of a chemical cartridge respirator.

Skin Protection: PVA supported polyvinyl alcohol, nitrile or viton gloves are recommended. Natural rubber or butyl rubber gloves should not be worn.

Eye Protection: At minimum, safety glasses with side shields should be worn where exposure to excessive dust or spray is likely.

Work/Hygienic Practices: Use good personal hygiene practices.

You and your personnel must completely understand the fire and explosion hazards before using combustible liquid based products.

To avoid skin contact, wear recommended gloves (see skin protection recommendation) and wash with soap and water after handling. Intermittent or occasional skin contact with petroleum asphalt is not expected to have serious health effects as long as good personal hygiene measures are taken. Promptly cleanse with waterless hand cleaner, clean fingernails and wash with soap and water after handling. All employees working with this product must exercise good and prudent personal hygiene practices. .

Avoid rubbing eyes while handling.

SECTION 9 - PHYSICAL AND CHEMICAL PROPERTIES

Physical State:	Liquid
Appearance/Odor:	Hydrocarbon (solvent type) odor.
Odor Threshold: (ppm)	Not Determined
pH:	Not Applicable
Vapor Pressure: (Mm Hg)	Not Determined
Vapor Density: (Air = 1)	<1.0
Solubility In Water:	Negligible
Specific Gravity: (Water = 1)	1.26
Evaporation Rate: (Butyl Acetate = 1)	Slower than Ether
Boiling Point:	315°F
Viscosity:	Not Available
Bulk Density: (Pounds/Cubic Foot)(Pcf)	Not Applicable
% Volatiles (gr/L): (70°F) (21°C)	<25.0%

SECTION 10 - STABILITY AND REACTIVITY

Chemical Stability:	Stable
Conditions To Avoid:	Heat, Sparks, Open flames, Oxidizing materials, Strong oxidizers, Strong acids, Water, nitric acid, rubber and plastics.
Hazardous Polymerization:	Will not polymerize.
Hazardous Decomposition Products:	Carbon dioxide, Carbon monoxide, Sulfur oxides and Low molecular weight hydrocarbons.

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SECTION 11 - TOXICOLOGICAL INFORMATION

<u>Ingredient(No data unless listed.)</u>	<u>CAS Number</u>	<u>LD50 and LC50</u>
1,2,4-Trimethylbenzene	000095-63-6	Inhalation LC50 Rat : 18 gm/m3/4H; Oral LD50 Rat : 5 gm/kg
Cumene	000098-82-8	Inhalation LC50 Mouse : 10 m/m3/7H; Oral LD50 Rat : 1400 mg/kg;
Ethyl benzene	000100-41-4	Oral LD50 Rat : 3500 mg/kg; Dermal LD50 Rabbit : 17800 uL/kg
Silica, amorphous, fumed, cryst.-free	112945-52-5	Oral LD50 Rat : 3160 mg/kg
Xylenes (o-, m-, p- isomers)	001330-20-7	Inhalation LC50 Rat : 5000 ppm/4H; Oral LD50 Rat : 4300 mg/kg;

Carcinogenicity:

Ingredient	IARC Group 1	IARC Group 2A	IARC Group 2B	NTP Known	NTP Suspect	OSHA
1,2,4-Trimethylbenzene	No	No	No	No	No	No
Cumene	No	No	No	No	No	No
Ethyl benzene	No	No	Yes	No	No	No
Kaolin	No	No	No	No	No	No
Organophilic clay	No	No	No	No	No	No
Petroleum Asphalt	No	No	Yes	No	No	No
Silica, amorphous, fumed, cryst.-free	No	No	No	No	No	No
Solvent naphtha, petroleum, light arom.	No	No	No	No	No	No
Styrene-Butadiene block copolymer	No	No	No	No	No	No
Xylenes (o-, m-, p- isomers)	No	No	No	No	No	No

Animal tests indicate that prolonged and repeated skin contact with the asphalt in this product may produce local skin tumors.

Ethyl benzene contained in this product has been shown to produce kidney, lung and liver tumors based on animal inhalation studies.

Mutagenicity: Ethyl benzene contained in this product has produced mutagenic effects based on animal studies.

Teratogenicity: Not applicable.

Reproductive Toxicity: Not applicable.

SECTION 12 - ECOLOGICAL INFORMATION

Environmental Fate: No data available for product.

Ecotoxicity: No data available for product.

SECTION 13 - DISPOSAL CONSIDERATIONS

Waste Disposal Procedures:

Consult all regulations (federal, state, provincial, local) or a qualified waste disposal firm when characterizing waste for disposal. Waste/rejected product consisting of unused liquid product in sealed containers is a EPA Hazardous Waste #D001 (due to its ignitability). Dispose of all waste at a disposal facility as permitted by applicable government regulations. Dried waste and waste absorbed in a noncombustible media would not be hazardous if no longer combustible. Because of the Xylene content (CAS# 1330-20-7) this product is considered a hazardous substance under the U.S. EPA Clean Water Act. Spills of this product must be reported to the national Response Center at 1-800-424-8802. Spill reporting requirements and reportable quantities vary by region.

In case of any spill or release, consult all applicable state and local regulations. Observing all precautions noted above, absorb spilled product with an inert noncombustible material and remove for disposal. Remove all sources of ignition. Do not use metal shovels or other tools which could create sparks.

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SECTION 14 - TRANSPORTATION INFORMATION

Proper Shipping Name:	Not Applicable
UN/NA Number:	Not Applicable
Domestic Hazard Class:	Nonhazardous
Surface Freight Classification:	Adhesives, Cement N.O.I
Label/Placard Required:	Not Applicable

SECTION 15 - REGULATORY INFORMATION

REGULATORY CHEMICAL LISTS:

CERCLA (Comprehensive Response Compensation and Liability Act):
(None present unless listed below)

<u>Chemical Name</u>	<u>CAS #</u>	<u>Wt %</u>	<u>CERCLA RQ</u>
Cumene	000098-82-8	1	final RQ = 5000 pounds (2270 kg)
Ethyl benzene	000100-41-4	1	final RQ = 1000 pounds (454 kg)
Xylenes (o-, m-, p- isomers)	001330-20-7	2	final RQ = 100 pounds (45.4 kg)

SARA Title III (Superfund Amendments and Reauthorization Act)

SARA Section 312/Tier I & II Hazard Categories:

Health Immediate (acute)	Yes
Health Delayed (chronic)	Yes
Flammable	Yes
Reactive	No
Pressure	No

302 Reportable Ingredients (Identification Threshold 1%):

<u>Chemical Name</u>	<u>CAS #</u>	<u>Wt %</u>	<u>SARA 302 TPQ</u>
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313 Reportable Ingredients (Chemicals present below reporting threshold are exempt):

<u>Chemical Name</u>	<u>CAS #</u>	<u>Wt %</u>
1,2,4-Trimethylbenzene	000095-63-6	4
Cumene	000098-82-8	1
Ethyl benzene	000100-41-4	1
Xylenes (o-, m-, p- isomers)	001330-20-7	2

National Volatile Organic Compound Emission Standards For Architectural Coatings:

Volatile Organic Content: (gr/L) 244 gr/L

WHMIS Classification(s): D2 B

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

State Regulatory Information:

California Proposition 65: This product does not contain substances known to the state of California to cause cancer, birth defects or other reproductive harm.

Massachusetts Hazardous Substance List(Identification threshold 0.001%(1ppm)):

<u>Chemical Name</u>	<u>CAS #</u>	<u>Wt %</u>
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New Jersey Hazardous Substance List(Identification threshold (0.1%)):

<u>Chemical Name</u>	<u>CAS #</u>	<u>Wt %</u>
1,2,4-Trimethylbenzene	000095-63-6	4
Cumene	000098-82-8	1
Ethyl benzene	000100-41-4	1
Xylenes (o-, m-, p- isomers)	001330-20-7	2

