

W. R. GRACE
MATERIAL SAFETY DATA SHEET

Product Name: Perm-A-Barrier Liquid, Part A
MSDS ID Number: M-85797

MSDS Date: 02/04/2008

SECTION 1 - CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Product Name: Perm-A-Barrier Liquid, Part A
MSDS Number: M-85797
Cancelled MSDS Number: M-85782
MSDS Date: 02/04/2008
Chemical Family Name: Fluid Applied Barrier made of Napthenic Oils and Inorganic filler.
Product Use: Waterproofing
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
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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)
Calcium oxide	001305-78-8	25-50
Castor oil based ester	NJ801415063P	1-10
Chromium (III) oxide	001308-38-9	< 1
Distillates, petroleum, hydrotreated heavy naphthenic	064742-52-5	50-100
Quartz	014808-60-7	1-10
Titanium dioxide	013463-67-7	1-10
Zinc oxide	001314-13-2	1-10

SECTION 3 - HAZARDS IDENTIFICATION

Emergency Overview:

Caution!

Causes eye irritation.
Causes skin irritation.
Causes digestive tract irritation if ingested.
Product reacts with other component and also with water. Reaction is exothermic, releasing heat and fumes.
Mixed product contained in the pail may reach temperatures of 291°F.
Contact with hot material will cause burns.
Do not seal containers once mixed with other components or contaminated with water. Sealed containers explode due to pressure from reaction.

HMIS Rating:

Health:	2*
Flammability:	1
Reactivity:	1
Personal Protective Equipment:	B, G (See section 8)

Potential Health Effects:

Inhalation: Not expected to be harmful. However, if mixed material is allowed to set in the container, temperatures up to 291°F can be reached liberating water vapor, carbon disulfide and other hydrocarbons. Inhalation of these materials can cause irritation. Prolonged inhalation can cause lung damage. Overexposure is not likely to occur unless specific use generates dust, vapors or mist. Effects include: Flu-like symptoms (metal fume fever).
Eye Contact: Eye contact causes irritation.
Skin Contact: Skin contact causes irritation. Contact with hot material will result in burns.
Skin Absorption: Not expected to be harmful if absorbed through the skin.
Ingestion: Due to the physical nature of this product, ingestion is not likely. If ingested, causes irritation to the linings of the mouth, esophagus and stomach. Effects include: Nausea, vomiting, sneezing, coughing, labored breathing and burns.

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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.

If discomfort or irritation persists, consult a physician.

Remove contaminated clothing and wash before reuse.

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

If discomfort or irritation persists, consult a physician.

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: Not Determined

Flash Point Method: Not Applicable

Lower Explosion Limit: Not Available

Upper Explosion Limit: Not Available

Auto-Ignition Temperature: Not Available

NFPA Rating:

Health: 1

Flammability: 1

Reactivity: 1

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

Special Fire Fighting Procedures: Wear self-contained breathing apparatus and complete personal protective equipment when potential for exposure to vapors or products of combustion exist. Water may be used to cool containers to prevent pressure build-up and possible auto-ignition or explosion. Avoid breathing hazardous vapors or products of combustion, keep upwind. Isolate area and keep unnecessary people away. Prevent run-off from fire control or dilution from entering streams or drinking water supplies.

Unusual Fire and Explosion Hazards: None unless noted below.

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.

Oil spills released directly to waterways may be subject to National Response Center (1-800-424-8802) reporting.

Immediately contact your company's environmental coordinator or the Grace Environmental Health and Safety Department.

SECTION 7 - HANDLING AND STORAGE

Precautionary Measures:

Use all product within 30-60 minutes of mixing to avoid an exothermic reaction (release of heat and fumes) Reaction times may vary depending upon temperature and mixing conditions.

Avoid contact with eyes, skin and clothing.

Do not take internally.

Practice good personal hygiene to avoid ingestion.

Promptly cleanse hands after handling.

Use only with adequate ventilation.

Wear respiratory protection during spray applications.

Contact with hot material will result in burns.

Reaction releases heat and fumes if unused mixed product is allowed to sit in pail.

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	
Calcium oxide	2 mg/m3 TWA	-	-	5 mg/m3 TWA (not in effect as a result of reconsideration)	-	-	-
Castor oil based ester	-	-	-	-	-	-	-
Distillates, petroleum, hydrotreated heavy naphthenic	-	-	-	-	-	-	-

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Quartz	0.025 mg/m ³ TWA (respirable fraction)	-	-	((250)/(%SiO ₂ + 5) mppcf TWA (respirable)); ((10)/(%SiO ₂ + 2) mg/m ³ TWA (respirable)); ((30)/(%SiO ₂ + 2) mg/m ³ TWA (total dust))	-	-	
Titanium dioxide	10 mg/m ³ TWA		-	10 mg/m ³ TWA (total dust)			-
Zinc oxide	5 mg/m ³ TWA (fume); 10 mg/m ³ TWA (dust)	10 mg/m ³ STEL (fume)	-	5 mg/m ³ TWA (fume); 10 mg/m ³ TWA (total dust); 5 mg/m ³ TWA (respirable fraction)	10 mg/m ³ STEL (fume)		

Respirable Quartz (Crystalline Silica) can result in lung disease (i.e. silicosis and/or lung cancer). However, due to the physical nature of this product (liquid) exposures are not expected unless after product dries it is abraded and airborne dust is created.

EXPOSURE GUIDELINES (CANADA)

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

Engineering Controls: Provide local exhaust ventilation to prevent vapor build up during application. This is particularly important in enclosed or confined areas where natural ventilation may not be adequate. Provide enough ventilation to maintain exposure levels below regulatory limits.

Personal Protective Equipment:

Respiratory Protection: Respiratory protection may not be required in well ventilated areas. However, indoors or where ventilation is inadequate, the use of respirators equipped with organic vapor cartridges is required. During spray applications, the use of a dust/mist respirator such as a 3M Type P-95 with organic vapor (OV) protection (or equivalent) is required, but the specific respirator(s) may not adequately protect against actual working conditions which must be assessed periodically as work progresses. (See Work/Hygienic Practices.)

Skin Protection: Impervious (PVC, latex or nitrile) gloves should be worn any time direct contact is possible.

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.

Carbon disulfide and other potentially harmful gases, vapors and fumes may evolve as a result of exothermic reactions ("hot product") when components are mixed. Carbon disulfide may be detected by odor at about 1 ppm, but the ability to smell fatigues (diminishes) rapidly, therefore, odor does not serve as a good warning property. If eye or respiratory irritation occurs, or if a foul odor is detected, you may be experiencing exposure to Carbon disulfide and other organics. Leave the area immediately and seek fresh air.

Quartz (Crystalline silica) is a naturally-occurring mineral that is commonly contained in materials that are mined from the earth's surface such as sand, limestone, clay and gypsum (Calcium sulfate). Total quartz is a value usually representing the combined fractions of large, nonrespirable sized particles and of respirable sized particles (less than ten microns in aerodynamic diameter). It is only the respirable fraction of total quartz that is recognized as hazardous by professionals in the field of Occupational Health and by most regulatory agencies.

This product contains compounds subject to exposure guidelines and/or identified as carcinogens. (See Sections 8 and 11). However, due to the physical nature of this product, these compounds are unlikely to reach exposure limits unless airborne dust or spray mist is created.

SECTION 9 - PHYSICAL AND CHEMICAL PROPERTIES

Physical State:	Liquid
Appearance/Odor:	Greenish Semi-viscous Liquid
Odor Threshold: (ppm)	Not Determined
pH:	Not Available
Vapor Pressure: (Mm Hg)	Unknown
Vapor Density: (Air = 1)	Unknown
Solubility In Water:	Unknown
Specific Gravity: (Water = 1)	1.245 – 1.285
Evaporation Rate: (Butyl Acetate = 1)	Unknown
Boiling Point:	Not Determined
Viscosity:	Unknown
Bulk Density: (Pounds/Cubic Foot)(Pcf)	~83
% Volatiles (gr/L): (70°F)(21°C)	75 g/l

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SECTION 10 - STABILITY AND REACTIVITY

Chemical Stability: Stable
Conditions To Avoid: Heat, Strong acids, Organic materials, Water, phosphorous pentoxide, magnesium, rubber, linseed oil, hydrogen flouride, boric acid and the reaction process will cause a pressure build up in unvented containers and could result in an explosive release of pressure. Therefore, containers must not be sealed once the reaction has begun. Once the reaction is complete and the product is cured, this material is no longer sensitive to contact with water.
Hazardous Polymerization: Will not polymerize.
Hazardous Decomposition Products: Carbon dioxide and toxic fumes of zinc oxide.

SECTION 11 - TOXICOLOGICAL INFORMATION

Ingredient(No data unless listed.) CAS Number LD50 and LC50
Zinc oxide 001314-13-2 Inhalation LC50 Mouse: 2500 mg/m3; Oral LD50 Mouse: 7950 mg/kg

Carcinogenicity:

Table with 7 columns: Ingredient, IARC Group 1, IARC Group 2A, IARC Group 2B, NTP Known, NTP Suspect, OSHA. Rows include Calcium oxide, Castor oil based ester, Chromium (III) oxide, Distillates, petroleum, hydrotreated heavy naphthenic, Quartz, Titanium dioxide, and Zinc oxide.

Product contains less than 5% Quartz. Prolonged and repeated exposure to respirable Quartz (Crystalline silica) can decrease lung function and create risk of lung disease (i.e. silicosis and/or lung cancer). However, Quartz is not expected to be bio-available during routine use and application.

Mutagenicity: Not applicable.
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. According to EPA (40 CFR § 261), waste of this product is not defined as hazardous. Dispose of waste in accordance with all applicable regulations.

SECTION 14 - TRANSPORTATION INFORMATION

Proper Shipping Name: Not Applicable
UN/NA Number: Not Applicable
Domestic Hazard Class: Nonhazardous
Surface Freight Classification: Adhesive Cements 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)

Chemical Name CAS # Wt % CERCLA RQ

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 No
Reactive No
Pressure No

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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>
Zinc compounds	RR-00578-7	3.10831
Chromium Compounds	RR-00634-8	0.65

National Volatile Organic Compound Emission Standards For Architectural Coatings:

Volatile Organic Content: (gr/L) 75 g/l (as applied)

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: WARNING! This product contains 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>
Chromium (III) oxide	001308-38-9	.65
Quartz	014808-60-7	<5.0

New Jersey Hazardous Substance List(Identification threshold (0.1%)):

<u>Chemical Name</u>	<u>CAS #</u>	<u>Wt %</u>
Chromium compounds	RR-00634-8	.65
Zinc compounds	RR-00578-7	3.10831

Pennsylvania Hazardous Substance List(Identification threshold 0.01%):

<u>Chemical Name</u>	<u>CAS #</u>	<u>Wt %</u>
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CHEMICAL INVENTORY STATUS:

All chemicals in this product are listed or exempt from listing in the following countries:

US	CANADA		EUROPE	AUSTRALIA	JAPAN	KOREA	PHILIPPINES
TSCA	DSL	NDSL	EINECS/ELINCS	AICS	ENCS	ECL	PICCS
Yes	No	Yes	Yes	Yes	Not Determined	Not Determined	Not Determined

SECTION 16 - OTHER INFORMATION

Non-Hazardous Ingredient Disclosure:

<u>Chemical Name</u>	<u>CAS Number</u>
Prepared by:	EH&S Department
Approved by:	EH&S Department
Approved Date:	02/04/2008

Disclaimer:

"The data included herein are presented in accordance with various environment, health and safety regulations. It is the responsibility of a recipient of the data to remain currently informed on chemical hazard information, to design and update its own program and to comply with all national, federal, state and local laws and regulations applicable to safety, occupational health, right-to-know and environmental protection."