

**W. R. GRACE**  
**MATERIAL SAFETY DATA SHEET**

Product Name: Serpiflex® Shield (White)  
MSDS ID Number: Z-01555

MSDS Date: 07/03/2002

**SECTION 1 - CHEMICAL PRODUCT AND COMPANY IDENTIFICATION**

**Product Name:** Serpiflex® Shield (White)  
**MSDS Number:** Z-01555  
**Cancelled MSDS Number:** Z-01548  
**MSDS Date:** 06/26/2002  
**Chemical Family Name:** Polymer Mixture  
**Product Use:** Lead/Asbestos Abatement  
**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**

<b>Ingredient</b>	<b>CAS#</b>	<b>Percent (max)</b>
2-Propenoic acid, butyl ester, polymer with ethenyl acetate	025067-01-0	10-25
Calcium carbonate	001317-65-3	1-10
Magnesium Aluminum Silicate	012174-11-7	<1
Ethylene Glycol	000107-21-1	1-10
Phenol, isopropylated, phosphate (3:1)	068937-41-7	1-10
Quartz	014808-60-7	< 1
Titanium dioxide	013463-67-7	1-10
Zinc borate	001332-07-6	1-10

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**SECTION 3 - HAZARDS IDENTIFICATION**

**Emergency Overview:**

**Caution!**

Causes eye irritation.  
Causes skin irritation.  
Causes respiratory tract irritation.  
Causes digestive tract irritation if ingested.  
May cause liver and kidney damage.  
May cause teratogenic and developmental toxic effects.

**HMIS Rating:**

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

**Potential Health Effects:**

**Inhalation:**

Spray applications of this material may create aerosols which may be irritating to the upper respiratory tract, nose, and throat.  
May cause nausea and headaches.  
Vapors or mist in unusually high concentrations generated from spraying, heating or use in poorly ventilated areas can cause a burning sensation, shortness of breath, headache, nausea, coughing and wheezing. Prolonged or repeated overexposure may result in fluid in the lungs, chemical pneumonia and serious damage to lung tissue and respiratory tract.  
Absorption through the lungs may cause symptoms similar to those identified under ingestion.  
Effects include: Nausea. Sneezing. Coughing. Burning.

**Eye Contact:**

Spray applications of this material may create aerosols which may be irritating to the eyes.  
Prolonged eye contact can result in redness and itching.

**Skin Contact:**

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

**Skin Absorption:**

Not expected to be harmful if absorbed through the skin.

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**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), CNS depression and headache.

Diethylene & Ethylene glycol can cause liver and kidney damage. Ethylene glycol has been shown to produce teratogenic and developmental toxic effects in laboratory animals.

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**SECTION 4 - FIRST AID MEASURES:**

**Skin Contact:**

Wash with soap and water.

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.

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**SECTION 5 - FIRE AND EXPLOSION HAZARD DATA**

<b>Flash Point:</b>	Not Applicable
<b>Flash Point Method:</b>	Not Applicable
<b>Lower Explosion Limit:</b>	Not Available
<b>Upper Explosion Limit:</b>	Not Available
<b>Auto-Ignition Temperature:</b>	Not Available

**NFPA Rating:**

<b>Health:</b>	1
<b>Flammability:</b>	0
<b>Reactivity:</b>	0

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**Extinguishing Media:** Foam, Alcohol Foam, CO<sub>2</sub>, Dry Chemical, Water Fog.

**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. Isolate area and keep unnecessary people away.

**Unusual Fire and Explosion Hazards:**

None unless noted below.

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**SECTION 6 - ACCIDENTAL RELEASE MEASURES:**

**Spills/Leaks:**

Prevent spills from entering drinking water supplies, streams, or sewers.

Collect material with an inert, noncombustible material and remove for disposal.

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**SECTION 7 - HANDLING AND STORAGE**

**Precautionary Measures:**

Avoid contact with eyes, skin and clothing.

Do not take internally.

Practice good personal hygiene to avoid ingestion.

Use only with adequate ventilation.

Wash clothing before reuse.

**FOR PROFESSIONAL USE ONLY. KEEP OUT OF CHILDREN'S REACH.**

Keep away from heat, sparks and flame.

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**SECTION 8 - EXPOSURE CONTROLS AND PERSONAL PROTECTIVE EQUIPMENT**

**EXPOSURE GUIDELINES (US)**

Ingredient	ACGIH TLV			OSHA PEL			Other
	TWA	STEL	Ceiling	TWA	STEL	Ceiling	
2-Propenoic acid, butyl ester, polymer with ethenyl acetate	-	-	-	-	-	-	-
Calcium carbonate	10 mg/m3 TWA (The value is for particulate matter containing no asbestos and	-	-	total dust: 15 mg/m3 TWA; respirable fraction: 5 mg/m3 TWA	-	-	-
Ethylene Glycol	-	-	C 100 mg/m3 (aerosol)	-	-	-	-
Phenol, isopropylated, phosphate (3:1)	-	-	-	-	-	-	-
Quartz	0.05 mg/m3 TWA (respirable fraction)	-	-	respirable dust: 0.1 mg/m3 TWA	-	-	-
Titanium dioxide	10 mg/m3 TWA	-	-	total dust: 10 mg/m3 TWA	-	-	-
Triphenyl phosphate	3 mg/m3 TWA	-	-	3 mg/m3 TWA	-	-	-
Zinc borate	-	-	-	-	-	-	-

**EXPOSURE GUIDELINES (CANADA)**

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

**Engineering Controls:** Not generally required.

**Personal Protective Equipment:**

**Respiratory Protection:** Respiratory protection is required during spray application. A dust/mist respirator such as a 3M Type P-95 or 3M Type 3-95 with organic vapor protection (or equivalent) is adequate. Specific working conditions, which must be assessed periodically, may require an increased level of respiratory protection. A respirator equipped with organic vapor cartridges may be required indoors and in other poorly ventilated areas. Respirators may not be required during non-spray applications and other specific situations. In all cases, maintain exposures below governmental limits specified in Section 2. (See Work/Hygenic Practices for additional information.)

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

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**Eye Protection:** Wear goggles to prevent exposure to high vapor or mist concentrations. Wear goggles or safety glasses with side shields and a full-face shield to prevent contact due to splashing.

**Work/Hygienic Practices:** Work clothing with long sleeves/long pants and work boots must be worn. Clothing must be laundered before reuse. Disposable tyvek suits may be used during spray applications.

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.

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**SECTION 9 - PHYSICAL AND CHEMICAL PROPERTIES**

<b>Physical State:</b>	Liquid
<b>Appearance/Odor:</b>	White Liquid Mild Latex odor
<b>Odor Threshold:</b> (ppm)	Not Determined
<b>pH:</b>	Not Available
<b>Vapor Pressure:</b> (Mm Hg)	Unknown
<b>Vapor Density:</b> (Air = 1)	<1.0
<b>Solubility In Water:</b>	Appreciable
<b>Specific Gravity:</b> (Water = 1)	Not Available
<b>Evaporation Rate:</b> (Butyl Acetate = 1)	<1.0
<b>Boiling Point:</b>	>212°F/100°C
<b>Viscosity:</b>	Unknown
<b>Bulk Density:</b> (Pounds/Cubic Foot)(Pcf)	Not Applicable
<b>% Volatiles:</b> (70°F) (21°C)	~ 60%

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**SECTION 10 - STABILITY AND REACTIVITY**

<b>Chemical Stability:</b>	Stable
<b>Conditions To Avoid:</b>	Strong oxidizers, Strong acids, Ammonium salts, flourine, maganese trioxide, oxygen diflouride and chlorine trifluoride.
<b>Hazardous Polymerization:</b>	Will not polymerize.
<b>Hazardous Decomposition Products:</b>	Carbon dioxide, Carbon monoxide, magnesium carbonate and lime.

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**SECTION 11 - TOXICOLOGICAL INFORMATION**

<b><u>Ingredient(No data unless listed.)</u></b>	<b><u>CAS Number</u></b>	<b><u>LD50 and LC50</u></b>
Ethylene Glycol	000107-21-1	Inhalation LC50 Rat : 10876 mg/kg; Oral LD50 Rat : 4700 mg/kg; Oral LD50 Mouse

**Carcinogenicity:**

Ingredient	IARC Group 1	IARC Group 2A	IARC Group 2B	NTP Known	NTP Suspect	OSHA
2-Propenoic acid, butyl ester, polymer with ethenyl acetate	No	No	No	No	No	No
Calcium carbonate	No	No	No	No	No	No
Ethylene Glycol	No	No	No	No	No	No
Magnesium Aluminum Silicate	No	No	Yes	No	No	No
Phenol, isopropylated, phosphate (3:1)	No	No	No	No	No	No
Quartz	Yes	No	No	Yes	Yes	Yes
Titanium dioxide	No	No	No	No	No	No
Zinc borate	No	No	No	No	No	No

Product contains less than 1% 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.

<b>Mutagenicity:</b>	No information available.
<b>Teratogenicity:</b>	Ethylene glycol contained in this product has been shown to produce teratogenic effects in laboratory animals.
<b>Reproductive Toxicity:</b>	Ethylene glycol contained in this product has been shown to produce developmental toxic effects in laboratory animals.

**SECTION 12 - ECOLOGICAL INFORMATION**

<b>Environmental Fate:</b>	No data available for product.
<b>Ecotoxicity:</b>	No data available for product.

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**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:** Consumer Commodity ORM-D  
**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>
Acetaldehyde	000075-07-0	0.01	final RQ = 1000 pounds (454 kg)
Ethylene Glycol	000107-21-1	4.85	final RQ = 5000 pounds (2270 kg)
Glycol ethers	RR-00067-9	4.85	(Includes mono- and di- ethers of ethylene glycol; diethylene glycol and
Vinyl acetate	000108-05-4	0.02	final RQ = 5000 pounds (2270 kg)
Zinc borate	001332-07-6	2.03	final RQ = 1000 pounds (454 kg)



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**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

**302 Reportable Ingredients (Identification Threshold 1%):**

<u>Chemical Name</u>	<u>CAS #</u>	<u>Wt %</u>	<u>SARA 302 TPQ</u>
Vinyl acetate	000108-05-4	.02437	TPQ = 1000 pounds; RQ = 5000 pounds

**313 Reportable Ingredients (Chemicals present below reporting threshold are exempt):**

<u>Chemical Name</u>	<u>CAS #</u>	<u>Wt %</u>
Ethylene Glycol	000107-21-1	4.85
Chlorothalonil	001897-45-6	.03232
Vinyl acetate	000108-05-4	.02437
Acetaldehyde	000075-07-0	.009748
Glycol ethers	RR-00067-9	.0058
Zinc Compounds	RR-00578-7	2.03

**National Volatile Organic Compound Emission Standards For Architectural Coatings:**

**Volatile Organic Content:** (gr/L) 70.16 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.

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

<u>Chemical Name</u>	<u>CAS #</u>	<u>Wt %</u>
Ethylene Glycol	000107-21-1	4.85
Zinc borate	001332-07-6	2.03
Vinyl acetate	000108-05-4	.02437
Acetaldehyde	000075-07-0	.009748
Glycol ethers	RR-00067-9	.0058

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

<u>Chemical Name</u>	<u>CAS #</u>	<u>Wt %</u>
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**Pennsylvania Hazardous Substance List(Identification threshold 0.01%):**

<u>Chemical Name</u>	<u>CAS #</u>	<u>Wt %</u>
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**SECTION 16 - OTHER INFORMATION**

**Non-Hazardous Ingredient Disclosure:**

<u>Chemical Name</u>	<u>CAS Number</u>
Water	007732-18-5

**Prepared by:** EH&S Department  
**Approved by:** EH&S Department  
**Approved Date:** 06/26/2002

**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."