

MATERIAL SAFETY DATA SHEET

BIO FOAM[®] Impression Foam

SECTION 1 - CHEMICAL PRODUCT AND COMPANY IDENTIFICATION	
IDENTITY BIO-FOAM [®] Impression Foam	DATE PREPARED 12/17/01
SYNONYMS, CHEMICAL NAMES, COMMON NAMES Bio Foam	USE: Castings or impressions.

MANUFACTURER'S NAME Smithers-Oasis	TELEPHONE NUMBER – INFORMATION 330-673-5831
ADDRESS 919 Marvin Avenue P.O. Box 118 Kent, OH 44240 USA	TELEPHONE NUMBER - INFORMATION Transportation emergency: CHEMTREC: 800-424-9300 International Transportation: CHEMTREC: 703-527-3887 Rocky Mountain Poison Control Center: 303-623-5716

SECTION 2 - COMPOSITION, INFORMATION ON INGREDIENTS			
HAZARDOUS COMPONENTS	OSHA PEL	ACGIH TLV	%
Proprietary acid catalysts	1 mg/m ³ TWA	1 mg/m ³ TWA 3 mg/m ³ STEL	10-13 %
Barium sulfate CAS# 7727-43-7	15 mg/m ³ TWA as Ba (Total dust) 5 mg/m ³ TWA as Ba (Respirable fraction)	10 mg/m ³ TWA	3-4 %
Formaldehyde CAS# 50-00-0	0.75 ppm TWA 2 ppm STEL	0.3 ppm CEILING	< 0.1 %
Other components are non hazardous or hazardous components are present at less than 1% (0.1% for carcinogens).			

EMERGENCY OVERVIEW
Blue fine-celled thermoset phenolic plastic foam. May be irritating to eyes, skin, and respiratory tract.

SECTION 3 -HAZARDS IDENTIFICATION
PRIMARY ROUTE(S) OF EXPOSURE: Contact and Inhalation of dust.
IRRITATION DATA: May cause irritation to eyes and respiratory tract.

INHALATION:

ACUTE: Dust or fumes may cause irritation to the nasal passages, lacrimation, olfactory changes, and pulmonary changes

CHRONIC: None known.

SKIN CONTACT:

ACUTE: May cause irritation.

CHRONIC: May cause dermatitis.

EYE CONTACT:

ACUTE: Contact may be irritating.

CHRONIC: May cause conjunctivitis.

INGESTION:

ACUTE: May cause mouth irritation due to local pH effect.

CHRONIC: Prolonged exposure may cause symptoms similar to acute effects.

MEDICAL CONDITIONS GENERALLY AGGRAVATED BY EXPOSURE

None known.

SECTION 4 - EMERGENCY AND FIRST AID PROCEDURES

INHALATION: Remove from exposure to fresh air. If breathing has stopped, give artificial respiration. Oxygen may be given if breathing is difficult. Get medical attention.

SKIN CONTACT: Wash affected area with soap and water until no evidence of the material remains. Get medical attention if irritation develops.

EYE CONTACT: Flush thoroughly with water for at least 15 minutes, occasionally lifting the upper and lower lids, until no evidence of the material remains. Get medical attention if irritation develops. If wearing contact lens, remove immediately and flush eyes as above.

INGESTION: Do not induce vomiting. Treat symptomatically and supportively. If a large quantity is ingested, get medical attention since there could be a problem with physical blockage.

SECTION 5 - FIRE FIGHTING MEASURES

FLASH POINT	FLAMMABLE LIMITS	LEL	Not applicable
Not applicable		UEL	Not applicable

AUTOIGNITION TEMPERATURE: ~600° F.

EXTINGUISHING MEDIA

Water, foam, carbon dioxide, or dry chemical.

SPECIAL FIRE FIGHTING PROCEDURES

Avoid breathing smoke. Firefighters should wear full protective NIOSH approved self-contained breathing apparatus.

UNUSUAL FIRE AND EXPLOSION HAZARDS

Finished foam will support combustion if it is ignited by direct contact with an open flame or exposed to temperatures in the range of 600° F. If foam is placed in a microwave for an extended period, it will begin to burn. Combustion occurs at the center of the brick and due to the insulating effect of the foam, can proceed unnoticed until an appreciable heat buildup occurs.

SECTION 6 - ACCIDENTAL RELEASE MEASURES

Wear suitable protective equipment. Reclaim or place in suitable container for disposal.

SECTION 7 - HANDLING AND STORAGE

Store in a cool, dry well ventilated area, out of direct sunlight. Foam stored in stagnant or hot enclosures may result in off gassing of residual formaldehyde gas.

Wash thoroughly after handling. Observe good personal and industrial hygiene procedures. When foam is soaked or used in water, some low levels of residual formaldehyde may accumulate in tub water. Repeated skin immersion in water containing formaldehyde has caused skin rashes, particularly in sensitive persons. It is recommended that impervious latex or chemical resistant gloves be worn and water tubs be emptied regularly.

SECTION 8 - EXPOSURE CONTROLS, PERSONAL PROTECTION

RESPIRATORY PROTECTION

A dust mask is recommended if dust is excessive. Where airborne concentrations may exceed guidelines for permissible air concentrations, choose a respirator in accordance with OSHA Respirator Standard 29 CFR 1910.134.

VENTILATION

Use general dilution ventilation to maintain exposure below the exposure limits.

PROTECTIVE GLOVES

Use barrier cream or choose appropriate gloves in accordance with OSHA Personal Protective Equipment Standard 29 CFR 1910.132.

EYE PROTECTION

Safety glasses are recommended or choose in accordance with OSHA 29 CFR 1910.133.

OTHER PROTECTIVE CLOTHING OR EQUIPMENT

Not normally required.

RECOMMENDED EXPOSURE LIMITS

OSHA and ACGIH have not set exposure limits for this material. See Section 2 for exposure limits of components and particulate matter.

SECTION 9 - PHYSICAL AND CHEMICAL PROPERTIES

BOILING POINT	Not applicable	SPECIFIC GRAVITY	Not available
pH	3.0 in 5% slurry	MELTING POINT	Not available
VAPOR PRESSURE (mm Hg)	Not applicable	SOFTENING POINT	Not available
VAPOR DENSITY (Air = 1)	Not applicable	EVAPORATION RATE	Not applicable
SOLUBILITY	Not soluble.		
COEFFICIENT OF WATER/OIL DISTRIBUTION:	Not applicable.		
APPEARANCE AND ODOR:	Fine-celled thermoset green phenolic plastic foam.		

SECTION 10 - STABILITY AND REACTIVITY

STABILITY	Unstable		Conditions to Avoid Stable at normal room temperature.
	Stable	X	
INCOMPATIBILITY (Materials to Avoid)			
Normally unreactive.			
HAZARDOUS DECOMPOSITION PRODUCTS			
Smoke, oxides of carbon, and possible trace amounts of formaldehyde, phenol, cresols, xylenols, and sulfur dioxide.			

HAZARDOUS POLYMERIZATION	May Occur		Conditions to Avoid None known.
	Will Not Occur	X	

SECTION 11 - TOXICOLOGICAL INFORMATION

Toxicity studies on a similar compound indicate that the Oral LD50 (rat): >5000 mg/kg.
 Primary Dermal Irritation Study in Albino Rabbits on a similar compound: Non irritant

Carcinogenicity: This product may contain trace levels of formaldehyde (<0.1%) as an impurity.
 Tumorigenic data (RTECS): Formaldehyde; barium sulfate.
 Reproductive data (RTECS): Formaldehyde.
 Mutagenic data (RTECS): Formaldehyde; barium sulfate
 Teratology data: Formaldehyde

SECTION 12 - ECOLOGICAL INFORMATION

This formulation has not been tested for environmental effects. It is a thermoset plastic and is not biodegradable.

SECTION 13 - DISPOSAL CONSIDERATIONS

Dispose in accordance with all applicable federal, state, and local environmental regulations.
 Recycling is recommended. It can be cut up and used as a soil conditioner. Since it dries faster than regular soils, it can be used to aerate tightly packed clay type soils.

If discarded in its original form, material is not regulated by Resource Conservation and Recovery Act (RCRA) as a hazardous waste. Passes TCLP test requirements.

SECTION 14 - TRANSPORT INFORMATION

PROPER SHIPPING NAME	DOT CLASSIFICATION	DOT UN/NA
Not regulated	Not applicable	Not applicable

Material is not regulated as a DOT Marine Pollutant

SECTION 15 - REGULATORY INFORMATION

OSHA: This material may be classified as hazardous under OSHA regulations.
 See 29 CFR 1910.1048 for the OSHA Formaldehyde Standard.

TSCA: All components are listed or exempt from listing on the TSCA 8(b) inventory.

SARA Title III - Toxic chemicals list 40 CFR 372.65

Copper phthalocyanine CAS# 147-14-8 1-2 %
 Barium sulfate is exempt from reporting under the category barium compounds (59FR33208).

SARA HAZARD CATEGORIES:

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

CERCLA Toxic Chemicals List 40 CFR 302:

A spill in excess of 16,000 pounds may require reporting to the National Response Center.

STATE REGULATIONS:

CALIFORNIA PROPOSITION 65: The following statement is made in order to comply with the California Safe Drinking Water and Toxic Enforcement Act of 1986. This product contains the following chemicals known to the State of California to cause cancer or reproductive harm:

Formaldehyde	< 0.1 %
Ethylene oxide	Trace

PENNSYLVANIA RIGHT TO KNOW: Hazardous substances and special hazardous substances on the list which must be identified when present in products at reportable levels are:

Barium sulfate	3-4 %
Acid catalyst	10 %

NEW JERSEY RIGHT TO KNOW: Components on the Hazardous Substance List are:

Formaldehyde	<0.1 %
Acid catalysts	10 %

OTHER STATES: Contact Manufacturer

SECTION 16 – OTHER INFORMATION

HMIS Ratings:

Health	1
Flammability	1
Reactivity	0

where 0=minimal, 1=slight, 2=moderate, 3=serious, 4=severe

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