

NEW FORMULATION

**Material Safety Data Sheet**

May be used to comply with OSHA's Hazard Communication Standard, 29 CFR 1910.1200. Standard must be consulted for specific requirements.

**U.S. Department of Labor**

Occupational Safety and Health Administration  
(Non-Mandatory Form)  
Form Approved  
OMB No. 1218-0072



**IDENTITY (As Used on Label and List)**  
VACSEAL - HIGH VACUUM LEAK SEALANT

*Note: Blank spaces are not permitted. If any item is not applicable, or no information is available, the space must be marked to indicate that.*

**Section I GENERAL DESCRIPTION: SILICONE RESIN SOLUTION**

Manufacturer's Name SPACE ENVIRONMENT LABORATORIES	Emergency Telephone Number (303) 443-4090
Address (Number, Street, City, State, and ZIP Code) P.O. BOX 1061	Telephone Number for Information (303) 443-4090
BOULDER, COLORADO 80306	Date Prepared MARCH 15, 1994
U.S.A.	Signature of Preparer (optional) R.J. DEVEREUX

**Section II - Hazardous Ingredients/Identity Information**

Hazardous Components (Specific Chemical Identity; Common Name(s))	OSHA PEL	ACGIH TLV	Other Limits Recommended	% (optional)
CAS NO.	INGREDIENT			
75-09-2	DICHLOROMETHANE	500 ppm	50 ppm	25%
127-18-4	PERCHLOROETHYLENE	35 ppm	50 ppm	STEL 200ppm 10%
064742898	NAPHTHA PETROLEUM	100 ppm	100 ppm	10%
000097858	ISOBUTYL ISOBUTRATE	Not Established		6%
108419-34-7	ACETATE ESTER	Not Established		5%
00108883	TOLUENE	100 ppm	100 ppm	STEL 150ppm 4%
000071432	BENZENE (Trace Impurity)	1 ppm	10 ppm	STEL 5ppm 0.01%

**Section III - Physical/Chemical Characteristics**

Boiling Point AT 760 mm Hg	DICHLOROMETHANE	40.1°C 104°F	Specific Gravity (H <sub>2</sub> O = 1) AT 77DEG. F (25 DEG. C)	0.975
Vapor Pressure (mm Hg.) AT 20°C	DICHLOROMETHANE	350mmHg	Melting Point	N/A
Vapor Density (AIR = 1) AT 1 atm	DICHLOROMETHANE	2.90	Evaporation Rate (Butyl Acetate = 1)	NOT DETERMINED N/D

Solubility in Water  
LESS THAN 0.1%

Appearance and Odor  
CLEAR, COLORLESS LIQID, TYPICAL MIDLY SWEET ODOR

**Section IV - Fire and Explosion Hazard Data**

Flash Point (Method Used) NONE (TCC) DICHLOROMETHANE	Flammable Limits 12-19% (VOL.) @ 100°C	LEL	UEL
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Extinguishing Media  
WATER FOG, DRY CHEMICAL, FOAM, CARBON DIOXIDE, OTHER.

Special Fire Fighting Procedures  
FIREFIGHTERS SHOULD WEAR SELF-CONTAINED BREATHING APPARATUS DUE TO THERMAL

DECOMPOSITION PRODUCTS AND PROTEDTIVE CLOTHING SHOULD BE WORN.

Unusual Fire and Explosion Hazards  
VAPORS ARE HEAVIER THAN AIR AND CAN TRAVEL ALONG THE GROUND TO REMOTE AREAS.

**Section V — Reactivity Data**

Stability	Unstable		Conditions to Avoid	Not Applicable
	Stable	XX		

**Incompatibility (Materials to Avoid)**  
Oxidizing and caustic alkalis can cause a reaction under certain conditions.

**Hazardous Decomposition or Byproducts**  
Silicon dioxide, carbon dioxide and incompletely burned carbon products.

Hazardous Polymerization	May Occur		Conditions to Avoid	Not Applicable
	Will Not Occur	XX		

**Section VI — Health Hazard Data**

**Route(s) of Entry:** Inhalation? Skin? Ingestion?  
**EYE:** Direct contact irritates slightly with redness and swelling.  
**Health Hazards (Acute and Chronic)** The degree of injury depends on the duration of exposure.  
**INHALATION:** Vapors may injure lungs, blood, liver, kidneys and nervous system.  
**SKIN:** A single relatively short exposure irritates. Repeated prolonged contact irritates seriously. Overexposure may irritate internally.  
**INGESTION:** Small amounts transferred to the mouth by fingers should not injure. Swallowing large amounts may injure seriously.  
**Carcinogenicity:** NTP? Not Determined IARC Monographs? OSHA Regulated?

**Signs and Symptoms of Exposure**  
Prolonged overexposure may injure lungs, kidneys, liver, blood and nervous system and aggravate existing eye, skin and respiratory disorders.

**Medical Conditions**  
Generally Aggravated by Exposure Short vapor exposure may cause drowsiness and irritate throa

**Emergency and First Aid Procedures** SKIN: Wipe off and flush with water.  
**EYES:** Immediately flush with water for 15 minutes.  
**INHALATION:** Remove to fresh air. Get medical attention if symptoms persist.  
**INGESTION:** Get medical attention. Do not induce vomiting. Prevent aspiration.

**Section VII — Precautions for Safe Handling and Use** of liquid into lungs.

**Steps to Be Taken in Case Material Is Released or Spilled** Use absorbant material to collect and contain for salvage or disposal. Remove all sources of ignition and wear protective equipment. Use chemical worker goggles. Use respiratory protection unless local exhaust ventilation is adequate or air sampling data exposures are within TLV and PEL guidelines. Rubber or plastic gloves are recommended. Remove contaminated clothing and shoes as soon as practical and clean before reuse.

**Waste Disposal Method**  
All local, state and federal regulations concerning health and pollution should be reviewed to determine approved disposal procedures.

**Precautions to Be Taken in Handling and Storing**  
Keep container closed and away from heat.

**Other Precautions** When processing at elevated temperatures, provide ventilation to control exposures within OSHA and ACGIH limits. Aerosol or spray applications may require added precautions. Evolution rate is highest during the first few hours then subsequently approaches zero.

**Section VIII — Control Measures**

**Respiratory Protection (Soecity Type)**  
Use respiratory protection unless local exhaust ventilation is adequate.

Ventilation	Local Exhaust	Recommended	Special	Organic vapor type
	Mecnanical (General)	Recommended	Other	Suitable respirator

**Protective Gloves** Rubber or plastic gloves recommended **Eye Protection** Use proper protection

**Other Protective Clothing or Equipment**  
Change as soon as practical and clean thoroughly after use.

**Work Hygienic Practices** Good practice requires that gross amounts of any chemical be removed from the skin as soon as practical and before eating or smoking.