

MATERIAL SAFETY DATA SHEET (MSDS)

VALVE FLUSH (Seal-Tite Sealant)

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Seal-Tite
International
Engineered Sealing Solutions

Seal-Tite Sealant

STI MSDS Number 013

Valve Flush

Revision Date: November 1, 2007

SECTION 1: CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Manufacturer: Seal-Tite International
500 Deer Cross Drive
Madisonville, LA 70447

Contact: Vic Groomer
Emergency Number: (888) 674-3385
Office Number: (985) 875-1292
FAX Number: (985) 875-0687
E-Mail: msds@seal-tite.com
Website: www.seal-tite.com

Tradename: Valve Flush
Product Identifier: Valve Flush
General Use: All purpose cleaner/degreaser
Chemical Family: Glycol Ethers

Section 2: COMPOSITION / INFORMATION ON INGREDIENTS

Component	Percent Contained	CAS Number	OSHA PEL	ACGIH TLV
Butyl Cellosolve	N/A	111-76-2	25 PPM (skin)	25 PPM (skin)

"TLV" means the Threshold Limit Value exposure (eight-hour, time-weighted average, unless otherwise noted) established by the American Conference of Governmental Industrial Hygienists. "STEL" indicates a short-term exposure limit. "PEL" indicates the OSHA Permissible Exposure Limits. "N/E" indicates that no exposure limit has been established. "N/A" indicates not applicable.

Material is not known to contain Toxic Chemicals under Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 and 40 CFR Part 372.

Section 3: HAZARD IDENTIFICATION

Appearance, form, odor: Translucent green liquid with sassafras odor

Route of Entry: Inhalation, Ingestion, Skin Absorption

Target Organ: No known chronic effects.

Inhalation:	Exposure to concentrated mist may cause mild irritation of nasal passages or throat.
Skin Contact:	Contact may cause minimal effects, if any. Reddening may result in some dermal-sensitive users.
Eye Contact:	Contact with mist or liquid may cause irritation.
Ingestion:	Essentially non-toxic. If stomach upset results, see a physician.

SECTION 4: FIRST AID MEASURES

Inhalation:	Move victim to fresh air. If irritation occurs, seek medical attention.
Skin Contact:	Immediately flush skin with plenty of soap and water for at least 15 minutes. Remove all contaminated clothing. If irritation occurs, seek medical attention.
Eye Contact:	Flush eye with clean water for at least 15 minutes while gently holding eyelids open. Seek medical attention if irritation persists.
Ingestion:	If swallowed, give several glasses of water to dilute. If stomach upset results, get medical attention.

Medical conditions aggravated by exposure:
Any respiratory or skin condition.

SECTION 5: FIRE-FIGHTING MEASURES

Extinguishing Media: N/A. Product is stable, and will not burn. Product does not have any unusual hazards.

SECTION 6: ACCIDENTAL RELEASE MEASURES

Spill control:	Recover usable material by convenient method.
Containment:	Residue may be removed by wiping or a wet mop.
Cleanup:	Unrecoverable material may be washed to a drain with large quantities of water.

SECTION 7: HANDLING AND STORAGE

Handling Precautions:	No special precautions are needed. Product is non-hazardous..
Storage Requirements:	No special requirements.

SECTION 8: EXPOSURE CONTROLS AND PERSONAL PROTECTION

Engineering Controls: Ventilation is not normally required when used according to label directions.

Personal Protective Equipment:

Respiratory Protection

Respiratory protection is not normally required. For locations where levels may exceed established exposure limits by no more than a factor of ten, trained users should utilize proper NIOSH / MSHA (or equivalent) approved air purifying respirators equipped with

organic vapor cartridges with mist pre-filters. For concentrations higher than the protection capabilities of air purifying respirators, supplied air respiratory protection is required. All respiratory protection should be used in accordance with 29 CFR, OSHA 1910.134 Respiratory Protection.

Eye Protection

Product is a mild eye irritant. Avoid contact with eyes. For liquid splash protection utilize chemical goggles, or a full face splash shield. If fine aerosolized mist is present, utilize a full-face respirator.

Skin Protection

For dermal sensitive persons, wear appropriate chemical resistant clothing, rubber boots, and gloves made of nitrile or neoprene. Refer to manufacture information for specific information regarding chemical resistance.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

Appearance:	Translucent Green liquid	Physical State:	Liquid
Odor:	Sassafras odor	PH (5% solution):	9.5
Vapor Pressure:	22 mm Hg @ 25 F	Evaporation Rate:	>1
Vapor Density:	1.3	Specific Gravity:	1.0257
Boiling Point:	231 F	Melting Point:	N/D
Solubility:	Soluble in water	Ash Content:	at 600 F, 1.86% by weight
Nutrient Content:	Nitrogen - <1.0% by weight, Phosphorus – 0.3% by formula, Sulfur – 0.6% by weight.		
VOC Composite Partial Pressure:	0.006 mm Hg@ 20 C.		

VOCs: 7.96 g/l per ASTM method 3960-90. Per California AQMDs VOC test method, product must be diluted at least 2 parts of water to 1 part Valve Flush in order to meet SCAQMD Rule 1171 & Rule 1122 and BAAQMD Regulation 8-16 VOC requirements for solvent cleaning operations.

'N/D' = not determined

SECTION 10: STABILITY AND REACTIVITY

Stability: Material is stable even under fire conditions, and will not react with water or oxidizers..

Hazardous Polymerization: Hazardous polymerization will not occur.

SECTION 11: TOXICOLOGICAL INFORMATION

Non-Human Toxicity

Acute Mortality Studies:

Oral LC 50 (rat): >5.0 g/kg body weight
 Dermal LD 50 (rabbit): >2.0 g/kg body weight

Dermal Irritation: Only mild, but reversible, irritation was found in a standard 72 hour test on rabbits. A value of 0.2 (non-irritating) was found on a scale of 8.

Eye Irritation: With or without rinsing with water, the irritation scores in rabbits at 24 hours did not exceed 15 (mild irritant) on a scale of 110.

Sub Chronic Dermal Effects: No adverse effects, except reversible dermal irritation, were found in rabbits exposed to Valve Flush (up to 2.0 g/kg/day for 13 weeks) applied to the skin of 25 males and 25 females. Only female body weight gain was affected. Detailed microscopic examination of all major tissues showed no adverse changes.

Fertility Assessment by Continuous Breeding: The Valve Flush formulation had no adverse effect on fertility and reproduction in CED-1 mice with continuous administration for 18 weeks, and had no adverse effect on the reproductive performance of their offspring.

Upon completion of the manufacturing process, Valve Flush does not possess the occupational health risks associated with exposure to undiluted Butyl Cellosolve. Verification of this is contained in the independent test results detailed in this section.

The Butyl Cellosolve in Valve Flush is part of a chemical category (glycol ethers) regulated by the Emergency Planning and Community Right to Know Act (SARA, Title III, Section 313); there, a reporting requirement exists. Based on chemical analysis, Valve Flush contains no known EPA priority pollutants, heavy metals, or chemicals listed under RCRA, CERCLA, or CWA. Analysis by TCPL (Toxicity Characteristic Leaching Procedure) according to RCRA revealed no toxic organic or inorganic constituents.

All components of Valve Flush are listed on the TSCA Chemical Substance Inventory.

None of the components present in this material at concentrations equal to or greater than 0.1%, are listed with by IARC (International Agency for Research on Cancer), NTP (National Toxicology Program), OSHA (Occupational Safety and Health Administration), or ACGIH (American Conference of Governmental Industrial Hygienists) as a carcinogen.

Mutagens: No

Teratogens: No

Carcinogens: No

SECTION 12: ECOLOGICAL INFORMATION

Biodegradability:

Valve Flush is readily decomposed by naturally occurring microorganisms. The biological oxygen demand (BOD), as a percentage of the chemical oxygen demand (COD, after 4, 7, and 11 days was 56%, 60%, and 70%, respectively. Per OECD Closed Bottle Test, Valve Flush meets OECD and EPA recommendations for ready biodegradability.

In a standard biodegradation test with soils from three different countries, Butyl Cellosolve reached 50% degradation in 6 to 23 days, depending upon soil type, and exceeded the rate of degradation for glucose which was used as a control for comparison.

Environmental Toxicity Information:

Valve Flush is considered practically non-toxic per EPA's aquatic toxicity scale. Valve Flush is non-lethal to any of the marine and estuarine test animals listed in the following table at concentrations below 200 mg/L (0.02%). This table shows the Valve Flush concentrations that are likely to be lethal to 50% of the exposed organisms.

	<u>LC50 in mg/L (ppm)</u>	
Marine Fish:	48-hr	96-hr
Mud minnow (<i>Fundulus heteroclitus</i>)	1690	1574

Whitebait (<i>Galazias maculates</i>)	210	210
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Marine/Estuarine Invertebrates:

Brine Shrimp (<i>Artemia salina</i>)	610	399
Grass Shrimp (<i>Palaemonetes pugio</i>)	270	220
Green-lipped Mussel (<i>Perna canaliculus</i>)	220	220
Mud Snail (<i>Potamopyrgus estuarinus</i>)	410	350

SECTION 13: DISPOSAL CONSIDERATIONS

Valve Flush is fully water soluble and biodegradable and will not harm sewage-treatment microorganisms if disposal by sewer or drain is necessary. Valve Flush residues can be completely removed by rinsing with water; the container may be recycled or applied to other uses. Dispose of in accordance with all applicable local, state, and federal laws.

Containers should be either reconditioned by CERTIFIED firms or properly disposed of by APPROVED firms. Disposal of containers should be in accordance with applicable laws and regulations. EMPTY drums should not be given to individuals. Serious accidents have resulted from the misuse of EMPTIED containers (drums, pails, etc.).

SECTION 14: TRANSPORT INFORMATION

No special precautions are required. This product is non-hazardous for transport according to the U. S. Department of Transportation Regulations. Valve Flush requires no special labeling or placarding to meet U. S. Department of Transportation requirements.

Regulatory

Information: DOT

UN Number: Non-regulated **Schedule "B" Export Code:** 2905310000

Proper Shipping

Name: Not applicable **Packing Group:** Not applicable

Other Information: Not applicable **Class:** Not Applicable

This product is not regulated by DOT.

SECTION 15: REGULATORY INFORMATION

This product is not regulated under Section 302 of SARA and 40 CFR Part 355. This product does not contain any hazardous ingredients at or above regulated thresholds.

SECTION 16: OTHER INFORMATION**Hazardous Materials Identification System (HMIS) ratings:**

HEALTH HAZARD	FIRE HAZARD	REACTIVITY HAZARD	SPECIAL HAZARDS
1	0	0	0

Containers should be either reconditioned by CERTIFIED firms or properly disposed of by APPROVED firms. Disposal of containers should be in accordance with applicable laws and regulations. EMPTY drums should not be given to individuals. Serious accidents have resulted from the misuse of EMPTY containers such as drums.

DISCLAIMER: The information contained herein is based upon data available to us and reflects our best professional judgment. Since it is impossible to anticipate the conditions under which our products may be used, we cannot guarantee that the recommendations will be adequate for all individuals and situations. Each user of this product should determine the suitability of the product for his particular purpose and should comply with all environmental regulations. Our goal is to manufacture products with zero or minimum hazards. Our products are improved daily as up to date information and research is received from our suppliers to use products with little or no hazards. Please feel free to contact us for current information.