

Powers Fasteners, Inc. • 2 Powers Lane, Brewster • NY, U.S.A. 10509 • Phone (914) 235-6300

MATERIAL SAFETY DATA SHEET

SECTION 1 — PRODUCT AND COMPANY IDENTIFICATION

Product identifier: POWERSTICK

Product use: Adhesive and sealant

Chemical Family: Mixture of polymers, silane and other organic materials.

Supplier's name and address:

Powers Fasteners, Inc.

2 Powers Lane
Brewster, NY, U.S.A.
10509

Phone: 914-235-6300 (8 AM to 8 PM EST, Monday to Thursday; 8 AM to 7 PM EST, Friday)

Emergency Tel.#: CHEMTREC – 800-424-9300

Manufacturer's name and address:

Refer to supplier.

SECTION 2 — COMPOSITION/INFORMATION ON INGREDIENTS

<u>Ingredients</u>	<u>CAS #</u>	<u>% (weight)</u>	<u>ACGIH TLV</u>		<u>OSHA PEL</u>	
			<u>TWA</u>	<u>STEL</u>	<u>PEL</u>	<u>STEL</u>
Bis (2,2,6,6,-tetramethyl-4-piperidyl) sebacate	52829-07-9	0.1 – 1.0	N/Av	N/Av	N/Av	N/Av
Distillates (petroleum), hydrotreated middle	64742-46-7	1 – 5	*5 mg/m ³	*10 mg/m ³	*5 mg/m ³	N/Av
Trimethoxyvinylsilane	2768-02-7	1 - 5	N/Av	N/Av	N/Av	N/Av
3-(trimethoxysilyl) propylamine	13822-56-5	1 - 5	N/Av	N/Av	N/Av	N/Av

*Note: The ACGIH TLV and OSHA PEL listed above for Distillates (petroleum), hydrotreated middle, is 'As Oil mist, mineral'.

This material is classified as hazardous under OSHA regulations (29CFR 1910.1200).

SECTION 3 — HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW

Red paste. Characteristic odor.

Warning! Causes eye irritation. May cause skin and respiratory tract irritation.

Inhalation could cause headache, nausea, dizziness or other central nervous system.

POTENTIAL HEALTH EFFECTS

Target organs: Eyes, skin, respiratory system, digestive system, central nervous system.

Routes of exposure: Skin contact, eye contact, inhalation, ingestion.

Signs and symptoms of short-term (acute) exposure:

Inhalation: Inhalation may cause irritation to the nose, throat and upper respiratory tract. Symptoms may include headache, nausea, vomiting, dizziness, drowsiness and other central nervous system effects. Inhalation of high concentrations of fumes, dusts or mists could also cause a burning sensation, coughing and wheezing.

Skin: Direct skin contact may cause moderate to severe irritation.

Eyes: Direct eye contact may cause severe irritation.

Ingestion: Ingestion may cause severe irritation and/or corrosive damage in the mouth, throat and stomach. Symptoms may include sore throat, abdominal pain, nausea, vomiting and diarrhea. This product may present an aspiration hazard if swallowed in large amounts. Aspiration into the lungs, could cause life-threatening lung injury.

Chronic effects: Repeated or prolonged skin exposure may result in drying, cracking and defatting of the skin (dermatitis).

Conditions aggravated by exposure: May aggravate pre-existing skin, eye and respiratory problems.

Carcinogenic status: See TOXICOLOGICAL INFORMATION, Section 11.

Additional health hazards: For further information, see TOXICOLOGICAL INFORMATION, Section 11.

Potential environmental effects: See ECOLOGICAL INFORMATION (Section 12).

SECTION 4 — FIRST AID MEASURES

- Inhalation:** Immediately remove person to fresh air. If breathing has stopped, begin artificial respiration. If breathing is difficult, administer oxygen. Obtain medical attention.
- Skin contact:** Wash skin thoroughly with mild soap and water, while removing contaminated clothing. Obtain medical attention. Launder clothing before reuse.
- Eye contact:** Immediately flush eyes with running water for a minimum of 15 minutes. Obtain medical attention immediately.
- Ingestion:** Do not induce vomiting. Obtain medical attention immediately. Never give anything by mouth to an unconscious or convulsing person.

SECTION 5 — FIRE FIGHTING MEASURES

- Fire hazards/conditions of flammability:** Not considered flammable. Contact with moisture may release small amounts of Methanol. Methanol vapors are flammable. Closed containers may explode if exposed to excess heat or flame, due to a build-up of internal pressure.
- Flammability classification (OSHA 29 CFR 1910.1200):** Non-flammable.
- Flash point (Method):** N/Av
- Auto-ignition temperature:** N/Av
- Lower flammable limit (% by vol.):** N/Av
- Upper flammable limit (% by vol.):** N/Av
- Explosion data:** *Sensitivity to mechanical impact / static discharge:* Not expected to be sensitive.
- Oxidizing properties:** None known.
- Suitable extinguishing media:** Use foam, carbon dioxide or dry chemical. Avoid use of water, as this material may release flammable Methanol, on contact with moisture
- Special fire-fighting procedures/equipment:** Do not enter fire area without proper protection. Firefighters should wear proper protective equipment and self-contained breathing apparatus with full facepiece. Move containers from fire area if it can be done without risk. Water spray may be useful in cooling equipment exposed to heat and flame.
- Hazardous combustion products:** Carbon oxides, silicon oxide, nitrogen oxides, hydrogen cyanide, hydrogen chloride and other irritating fumes and smoke.

SECTION 6 — ACCIDENTAL RELEASE MEASURES

- Personal precautions:** Restrict access to area until completion of clean-up. Ensure clean-up is conducted by trained personnel only. All persons dealing with clean-up should wear the appropriate chemically protective equipment. Keep all other personnel upwind and away from the spill/release. Refer to Section 8, EXPOSURE CONTROLS AND PERSONAL PROTECTION, for additional information on acceptable personal protective equipment.
- Environmental precautions:** Ensure spilled product does not enter drains, sewers, waterways or confined spaces. Dike far ahead of large spills with inert, non-combustible materials.
- Spill response/Cleanup:** Eliminate all sources of heat and flame. Ventilate area of release. Stop leak if you can do so without risk. Cover spilled material with non-combustible absorbent material, such as vermiculite or sand, then shovel into a container for later disposal (see Section 13). Contaminated absorbent material may pose the same hazards as the spilled product. Notify the appropriate authorities as required.
- Prohibited materials:** None known.
- Special spill response procedures:** In case of a transportation accident, contact CHEMTREC at 1-800-424-9300 or International at 1-703-527-3887. If a spill/release in excess of EPA reportable quantity is made into the environment, immediately notify the national response center in the United States (phone: 1-800-424-8002).
DOT/CERCLA Reportable quantity (RQ): None reported

SECTION 7 — HANDLING AND STORAGE

- Safe handling procedures:** This material is a harmful paste. Wear protective equipment during handling. Use in a well-ventilated area. Avoid breathing fumes and vapors. Avoid contact with eyes, skin and clothing. Keep away from heat and flame. Keep away from moisture and incompatibles. Use caution when opening cap. Keep container closed when not in use. Assume empty containers contain residues, which are hazardous. Wash hands before eating, drinking, smoking or use of toilet facilities. Launder contaminated clothing before reuse.

SECTION 7 — HANDLING AND STORAGE Continued

Storage requirements: Store in a cool, dry, well-ventilated area away from sources of heat. Keep away from moisture and other incompatibles. Shelf life of 1 year, provided recommended storage requirements are met. Storage area should be clearly identified, clear of obstruction and accessible only to trained and authorized personnel. Inspect periodically for damage or leaks. No smoking in the area.

Special packaging materials: Always keep in containers made of the same materials as the supply container.

SECTION 8 — EXPOSURE CONTROLS AND PERSONAL PROTECTION

Ventilation and engineering controls: Use adequate ventilation to maintain air contaminants below exposure limits. Local and/or general exhaust may be required

Respiratory protection: Respiratory protection is required if the airborne concentration exceeds exposure limits. When concentrations exceed the exposure limits specified, use NIOSH/MSHA-approved respirators. Advice should be sought from respiratory protection specialists.

Skin protection and other protective equipment: Protective gloves impervious to the material should be worn during use. Advice should be sought from glove suppliers. Additional protective clothing, such as long sleeve shirts or coveralls, are recommended to prevent skin contact. An eyewash station and safety shower should be made available in the immediate working area.

Eye / face protection: Use chemical splash goggles. Contact lenses should not be worn.

General hygiene considerations: Avoid excessive inhalation of vapors and fumes. Avoid contact with eyes, skin and clothing. Do not eat, drink or smoke when working. Upon completion of work, wash hands before eating, drinking, smoking or use of toilet facilities. Remove soiled clothing and wash it thoroughly before reuse.

Permissible exposure levels: For individual ingredient exposure levels, see Section 2.

SECTION 9 — PHYSICAL AND CHEMICAL PROPERTIES

Physical state, odor and appearance: Red paste. Characteristic odor.

Specific gravity: 1.5 @ 68°F / 20°C.

Vapor pressure: N/Av.

Boiling point: N/Av.

Evaporation rate (n-Butyl acetate = 1): N/Av.

Coefficient of water/oil distribution: N/Av

Odor threshold: N/Av.

Solubility in water: Insoluble.

Vapor density (Air = 1): N/Av

Freezing point: N/Av.

pH: N/Av

Volatiles (% by weight): 4.

SECTION 10 — REACTIVITY AND STABILITY DATA

Stability and reactivity: Stable under the recommended storage and handling conditions. Contact with moisture may release small amounts of Methanol.

Hazardous polymerization: Will not occur.

Conditions to avoid: Heat, open flame and contamination with water.

Materials to avoid (incompatibles): Water, strong oxidizers (e.g. Chlorine, Peroxides, etc.), acids.

Hazardous decomposition products: Methanol. Refer to Section 5 for additional 'Hazardous combustion products'.

SECTION 11 — TOXICOLOGICAL INFORMATION

Toxicological data: There is no available data for the product itself, only for the ingredients. See below for individual ingredient acute toxicity data.

Ingredients	LC ₅₀ (4hr) inh, rat	LD ₅₀ (mg/kg)	
		oral, rat	dermal, rabbit
Bis (2,2,6,6,-tetramethyl-4-piperidyl) sebacate	500 mg/m ³	Not available	Not available
Distillates (petroleum), hydrotreated middle	Not available	Not available	Not available
Trimethoxyvinylsilane	2773 ppm	7340 µL/kg	3360 µL/kg
3-(trimethoxysilyl) propylamine	Not available	Not available	Not available

Carcinogenic status: None of the ingredients listed are classified as carcinogenic by IARC, ACGIH, NTP or OSHA.

Reproductive effects, Teratogenicity, Mutagenicity: None known.

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SECTION 11 — TOXICOLOGICAL INFORMATION Continued

Sensitization to material: None known.

Other important hazards: CNS depression may result from exposure.

Synergistic materials: Not available.

SECTION 12 — ECOLOGICAL INFORMATION

Chemical fate information: The ecological characteristics of this product have not been fully investigated. The product should not be allowed to enter drains or water courses, or be deposited where it can affect ground or surface waters. Do not discharge product unmonitored into the environment.

Ecotoxicological information: There is no data available on the product itself. However, acute toxicity data on some of the ingredients is presented below:

A. *Bis (2,2,6,6,-tetramethyl-4-piperidyl) sebacate* acute toxicity:

Fish – 96-Hr LC₅₀, Zebra fish (*Brachydanio rerio*) = 4.4 mg/L.

Invertebrates – 24-Hr EC₅₀, Daphnids (*Daphnia sp.*) = 17 mg/L.

Aquatic plants - EC₅₀, Algae = 1.9 mg/L.

B. *Trimethoxyvinylsilane* acute toxicity:

Fish – 96-Hr LC₅₀, Zebra fish (*Brachydanio rerio*) = ≥ 100 mg/L.

Invertebrates – 48-Hr EC₅₀, Daphnids (*Daphnia magna*) = 168.7 mg/L.

SECTION 13 — DISPOSAL CONSIDERATIONS

Handling for disposal: Empty containers may contain product residue or vapors. Handle according to recommendations listed in Section 7.

Methods of disposal: Dispose in accordance with all applicable federal, state, provincial and/or local regulations. Contact your local, state, provincial and/or federal environmental agency for specific rules.

RCRA: If this product, as supplied, becomes a waste, it is not expected to meet the criteria of a hazardous waste as defined under RCRA, Title 40 CFR 261. However, under the RCRA, it is the responsibility of the waste generator to determine the proper waste identification and disposal method. For disposal of unused or waste material, check with local, state and federal environmental agencies.

SECTION 14 — TRANSPORTATION INFORMATION

US 49 CFR information: Not regulated for shipments by ground within the continental United States.

Canadian Transportation of Dangerous Goods Regulations (TDGR) information: Not regulated for transport by ground within Canada.

International IATA / ICAO information: Not regulated for international shipments by air.

International IMO/IMDG information: Not regulated for international shipments by ocean.

SECTION 15 — REGULATORY INFORMATION

US Federal Information:

TSCA information: All ingredients are listed on the TSCA inventory.

CERCLA Reportable Quantity (RQ) (40 CFR 117.302): None reported.

SARA TITLE III:

Sec. 302, Extremely Hazardous Substances, 40 CFR 355: No Extremely Hazardous Substances are present.

Sec. 311 and 312, MSDS Requirements, 40 CFR 370 Hazard Classes: Immediate (Acute); Delayed (Chronic).

Under SARA Sections 311 and 312, the EPA has established threshold quantities for the reporting of hazardous chemicals. The current thresholds are 500 pounds for the threshold planning quantity (TPQ), whichever is lower, for extremely hazardous substances and 10,000 pounds for all other hazardous chemicals.

Sec. 313, Toxic Chemicals Notification, 40 CFR 372: This material is not subject to the TSCA notification requirements, since it does not contain any Toxic Chemical constituents above de minimus concentration.

US State Right to Know Laws:

California Proposition 65: To the best of our knowledge, this product does not contain any chemicals known to the State of California to cause cancer or reproductive harm.

SECTION 15 — REGULATORY INFORMATION Continued

US State Right to Know Laws (Continued):

New Jersey Labeling Requirements: This product contains the following substances that may be required to be disclosed on product labeling:

Chemical Name	CAS #	% (weight)	New Jersey Hazardous Substance
Bis (2,2,6,6,-tetramethyl-4-piperidyl) sebacate	52829-07-9	0.1 – 1.0	No
Distillates (petroleum), hydrotreated middle	64742-46-7	1 - 5	No
Trimethoxyvinylsilane	2768-02-7	1 – 5	No
3-(trimethoxysilyl) propylamine	13822-56-5	1 - 5	No

International Information:

Canadian WHMIS Classification: Class D2B (Materials Causing Other Toxic Effects, Toxic Material).

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations (CPR) and this MSDS contains all the information required by the CPR.

Canadian CEPA information: All ingredients listed are present on the DSL.

SECTION 16 — OTHER INFORMATION

NFPA Rating:

0 - Minimal 1 - Slight 2 - Moderate 3 - Serious 4 – Severe
Health: 2 Flammability: 1 Instability: 1 Special Hazard: None

HMIS Rating:

* - Chronic hazard 0 - Minimal 1 – Slight 2 - Moderate 3 - Serious 4 – Severe
Health: *2 Flammability: 1 Reactivity: 1

Legend:

ACGIH: American Conference of Governmental Industrial Hygienists
CAS: Chemical Abstract Services
CERCLA: US Comprehensive Environmental Response, Compensation, and Liability Act of 1980
CFR: US Code of Federal Regulations
DOT: US Department of Transportation
DSL: Canadian Domestic Substances List
EPA: US Environmental Protection Agency
HMIS: Hazardous Materials Identification System
IARC: International Agency for Research on Cancer
IATA: International Air Transport Association
ICAO: International Civil Aviation Organization
IMDG: International Maritime Dangerous Goods
IMO: International Maritime Organization
N/Ap: not applicable
N/Av: not available
NFPA: National Fire Protection Association
NIOSH: National Institute of Occupational Safety and Health
NTP: National Toxicology Program
OSHA: Occupational Safety and Health Administration
PEL: Permissible Exposure Limit
RCRA: US Resource Conservation and Recovery Act
SARA: US Superfund Amendments & Reauthorization Act
STEL: Short Term Exposure Limit
TLV: Threshold Limit Values
TSCA: Toxic Substance Control Act
WHMIS: Canadian Workplace Hazardous Materials Identification System

SECTION 16 — OTHER INFORMATION Continued

Prepared by: Powers Fasteners, Inc.

Telephone No.: 914-235-6300

Preparation date: December 1, 2005

Revision date: April 13, 2007

Revision information: - IMO/IMDG information added to Section 14.

- References:**
1. ACGIH, Threshold Limit Values and Biological Exposure Indices for 2006.
 2. International Agency for Research on Cancer Monographs, searched 2007.
 3. Canadian Centre for Occupational Health and Safety, CCInfoWeb databases, 2007 (Chempendium and RTECs).
 4. Material Safety Data Sheet from manufacturer.
 5. US EPA Title III List of Lists – January 27, 2005 version.
 6. California Proposition 65 List – December 8, 2006 version.

DISCLAIMER OF LIABILITY

The information in this MSDS was obtained from sources, which we believe are reliable. However, the information is provided without any warranty, express or implied, regarding its correctness. This MSDS was prepared, and is to be used, for this product only. If the product is used as a component in another product, this information may not be applicable. This document is generated for the purpose of distributing occupational health, safety and environmental data.

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