

MATERIAL SAFETY DATA SHEET

PRODUCT NAME : SILICONE HIGH VACUUM GREASE

1. Product and Company Identification

Product name: Silicone high vacuum grease
Synonyms: Dow Corning high vacuum grease
Item Numbers: H024-00-036, H112-51-015

European Contact Details

Edwards, Manor Royal, Crawley
West Sussex, RH10 9LW, England
E-mail: info@edwardsvacuum.com

General enquiries

UK : +44 (0)1293 528844
France : +(33) 1 47 98 24 01
Germany : +(49) 6420-82-410
Italy : +(39) 0248-4471

US Contact Details

Edwards, Three Highwood Drive, Suite 3-10E,
Highwood Office Park, Tewksbury, MA 01876

General enquiries

+(1) 978-658-5410
Toll Free: 1-800-848-9800

24 h Emergency telephone number:

Chemtrec: 1-800-424-9300

2. Hazards Identification

EMERGENCY OVERVIEW

This material when properly handled according to good working and hygienic practices is not dangerous to human health and the environment. The product may emit formaldehyde vapours at high temperatures.

For short and long term exposure effects see Section 11 Toxicological data.

Eye Effects: Direct eye contact may cause temporary discomfort.

Skin Effects: No significant irritation expected from a single short term exposure.

Ingestion/Oral Effects: Small amounts transferred to the mouth by the fingers during use should not injure. Swallowing large amounts may cause digestive discomfort.

Inhalation Effects: Extremely low volatility makes inhalation an unlikely hazard in normal use at room temperature.
This product contains powders which are hazardous by inhalation. This is not relevant to the current physical form of the product, which is not in a respirable form.

MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE: None known.

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NFPA Hazard codes		HMIS Hazard codes		Rating System
Health	0	Health	0	0 = No Hazard 1 = Slight Hazard 2 = Moderate Hazard 3 = Serious Hazard 4 = Severe Hazard
Flammability	1	Flammability	1	
Instability	0	Reactivity	0	

3. Composition/Information on Ingredients

Ingredient	% Weight	CAS No	Hazard class*	Risk phrase*
Silica (amorphous)	7-13	7631-86-9	Not applicable	Not applicable
Polydimethylsiloxane	> 60	63148629	Not applicable	Not applicable
Dimethyl siloxane (hydroxyterminated)	7-13	70131678	Not applicable	Not applicable

*Hazard class & Risk phrase. These columns are only completed for ingredients which are classified as hazardous under EU Directive No 1272/2008 (as amended) and are present in sufficient concentration to make the overall substance hazardous. In all other situations, the column will be completed as "Not applicable".

4. First Aid Measures

Eyes: Immediately flush with water.

Skin: No first aid should be needed.

Ingestion/Oral: No first aid should be needed.

Inhalation: No first aid should be needed. If high concentrations of mists or fumes are inhaled, remove to fresh air. If breathing problems occur, a qualified individual should administer oxygen or artificial respiration as indicated. Seek immediate medical attention.

Other Information: Treat symptomatically.

5. Fire Fighting Measures

Extinguishing Media: Carbon dioxide, dry powder, foam, fine water spray.

Fire and Explosion Hazard: No known unusual hazards. Hazardous decomposition products: silicon dioxide (silica), carbon monoxide, carbon dioxide and traces of incompletely burned carbon products. The product may emit formaldehyde vapours at temperatures above 150 °C/302 °F in the presence of air. Direct water stream may cause violent frothing.

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Special Protective Equipment for Fire Fighters: In confined spaces or for large fires, fire fighters should wear a self-contained breathing apparatus (SCBA) which meets appropriate standards operated in positive pressure mode, and full turnout gear.

Instructions to Fire Fighters Determine the need to evacuate or isolate the area according to your local emergency plan. Keep containers cool with water spray until well after the fire is out.

For Flammability Properties - see Section 9.

6. Accidental Release Measures

Spillage: Use personal protection equipment as recommended in Section 8. Prevent the material from spreading.

Clean up the spilled material with a suitable absorbent and dispose of appropriately with regard to laws and regulations relating to material release and disposal.

Clean the area since silicone materials, even in small quantities, may present a slip hazard. Final cleaning may require the use of steam, solvents or detergents.

7. Handling and Storage

Handling: General ventilation is recommended. Avoid eye contact.

Storage: Keep container closed, and store away from water, moisture and oxidising materials.

8. Exposure Controls/Personal Protection

Exposure Limits:

Ingredient	ACGIH - TLV -	OSHA - PEL	Occupational Exposure Limits EH40 (UK)
Silica ⁽¹⁾	10 mg/m ³ (total dust) TWA ⁽²⁾ 3 mg/m ³ (inhalable dust) ⁽¹⁾	15 mg/m ³ (total dust) TWA 5 mg/m ³ (respirable dust)	6 mg/m ³ (total dust) TWA 3 mg/m ³ (respirable dust)

(1) Free silica dust is only likely to be present as a result of thermal destruction of the grease.

(2) Value for particulate matter containing no asbestos and < 1% crystalline silica.

Personal Protection:

Engineering Measures: General ventilation is recommended.

Respiratory Protection: None required.

Hand/Skin Protection: No special protection required.

Eye/Face Protection: Wear safety glasses.

Hygiene Measures: Practice good workplace hygiene. Do not eat or smoke when handling. Wash hands after handling and before eating.

Other/General Protection: These precautions are for room temperature handling. When the product is used at elevated temperature and/or for aerosol/spray applications, added precautions may be required.

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9. Physical and Chemical Properties

Appearance and Odour	Translucent white grease. Odourless.	Boiling point	> 150 / 302	°C/°F
pH (as supplied)	No data available	Freezing Point	No data available	°C/°F
Solubility in Water	< 0.1%	Auto Ignition	No data available	°C/°F
Volatile Content by Volume	< 5%	Flash Point	100 / 212	°C/°F
Specific Gravity	1.10 @ 25 °C/77 °F			
Vapour Pressure (mbar)	< 1 x 10 ⁻⁶ @ 20 °C	Vapour Pressure (Torr)	< 1 x 10 ⁻⁶ @ 68 °F	

10. Stability and Reactivity

Stability: Stable under normal conditions of use.

Material/Conditions to Avoid: Strong oxidising agents.

Hazardous Decomposition: Silicon dioxide (silica), carbon monoxide, carbon dioxide and traces of incompletely burned carbon products. The product may emit formaldehyde vapours at temperatures above 150 °C/302 °F in the presence of air.

Hazardous Polymerisation: No data available.

11. Toxicological Information

For a comprehensive description for the various toxicological (health) effects which may arise if the user comes into contact with the substance or preparation refer to Section 2 Hazards Identification.

Animal data:

LD50 value: No data available.

LC50 value: No data available.

Carcinogenicity:

No known carcinogenic, teratogenic or mutagenic hazards. Contains no known reproductive toxins.

12. Ecological Information

Persistence and atmospheric pollution effects are all unknown. There are no known ecotoxicity effects in water.

The product has no bioaccumulation potential.

Degradability: The material degrades in the environment by chemical and physical processes.

Mobility: The material is insoluble in water.

Ecotoxicity

No adverse effects on aquatic organisms are predicted.

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13. Disposal Considerations

Dispose of product and packaging in accordance with local regulations. According to the European Waste Catalogue, Waste Codes are not product specific, but application specific. Waste codes should be assigned by the user, preferably in discussion with the waste disposal authorities.

14. Transport Information

This product is not classified as dangerous under transport regulations.

PARAMETER	EUROPEAN	CANADIAN TDG	UNITED STATES DOT
Proper Shipping Name	Not applicable	Not applicable	Not applicable
Hazard Class	Not applicable	Not applicable	Not applicable
Identification Number	Not applicable	Not applicable	Not applicable
Shipping Label	Not applicable	Not applicable	Not applicable

15. Regulatory Information

European Regulatory Information

This product has been classified in accordance with EU Regulation No 1272/2008 (as amended) on the Classification, Labelling and Packaging of Substances and Mixtures.

Classified as dangerous to supply : No.

Risk Phrases : Not applicable.

Safety Phrases : Not applicable.

Symbols : None.

United States Regulatory Information

All materials contained in this product are included on the US Toxic Substances Control Act (TSCA).

SARA TITLE III - SECTION 313 SUPPLIER NOTIFICATION:

This product does not contain toxic chemicals subject to the reporting requirements of Section 313 of the Emergency Planning and Community Right-to-Know Act (EPCRA) of 1986 and 40 CFR Part 372.

California Proposition 65: This product does not contain chemicals known to the State of California to cause cancer or reproductive toxicity.

Canadian Regulatory Information

Product is not subject to WHMIS Regulations.

All ingredients in this product are included in the Canadian DSL.

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16. Other Information

This MSDS is compiled in accordance with ANSI Z400.1 and Regulation (EC) No 1907/2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH).

Sources of information for this data sheet:

- Dow Corning "High vacuum grease" Product Safety Data Sheet. Version : 1.6. Revision date : 06.06.2007.
- National Library of Medicine (NLM) electronic databases (HSDB, RTECS, CHEMID, Toxline).

Glossary:

ACGIH - American Conference of Governmental Industrial Hygienists; ANSI - American National Standards Institute; Canadian TDG - Canadian Transportation of Dangerous Goods; CAS - Chemical Abstracts Service; CERCLA - Comprehensive Environmental Response, Compensation, and Liability Act; CHEMID - Chemical Identification Database; Chemtrec - Chemical Transportation Emergency Center (US); DSL - Domestic Substances List; EH40 (UK) - HSE Guidance Note EH40 Occupational exposure limits; EPA - Environmental Protection Agency; HMIS - Hazardous Material Information Service; HSDB - Hazardous Substances Data Base; LC - Lethal Concentration; LD - Lethal Dose; NFPA - National Fire Protection Association; NLM - National Library of Medicine; OSHA - Occupational Safety and Health Administration, US department of Labour; PEL - Permissible exposure limit; RTECS - Registry of Toxic Effects of Chemical Substances; SARA (Title III) - Superfund Amendments and Reauthorization Act; SCBA - Self-Contained Breathing Apparatus; STEL - Short Term Exposure Limit; TLV - Threshold Limit Value; TSCA - Toxic Substances Control Act Public Law 94-469; TWA - Time-Weighted Average; US DOT - US Department of Transportation; WHMIS - Workplace Hazardous Materials Information System.

Revisions:

October 2010 - Data Sheet updated to reflect the latest regulatory and supplier safety information.

Although the information and recommendations in this data sheet are to the best of our knowledge correct, it is recommended that you make your own determination of the material's suitability for your purpose before you use it. The information contained in this data sheet has been reproduced from the manufacturers data; the accuracy of this information is the responsibility of the manufacturer. Edwards accept no responsibility for damage of any nature resulting from the use of, or the reliance upon, this data sheet.