

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

General enquiries

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Chemtrec: 1-800-424-9300

2. 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 (67/548/EEC, 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".

3. 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 with mild redness.
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.

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MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE: None known.

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

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.

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.

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 spilt 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.

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7. Handling and Storage

Handling: General ventilation is required. Avoid eye contact.

Storage: No special measures required. Store away from 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: None.

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	

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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 3 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.
- The material contains no ozone depleting chemicals.

13. Disposal Considerations

Dispose of the product and any packaging in accordance with local and national regulations.

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

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15. Regulatory Information

European Regulatory Information

This product has been classified in accordance with the Dangerous Substances Directive (67/548/EEC, as amended) and the Preparations Directive (88/379/EEC, as amended), implemented in the UK as the Chemical (Hazard Information and Packing) Regulations 1994 (CHIP, as amended).

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 on the U.S. Toxic Substances Control Act (TSCA).

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

EPA SARA Title III chemical listings:

Section 302 Extremely Dangerous Substances: None.

Section 304 CERCLA Hazardous Substances: None.

Section 312 Hazard Class:

Acute: No

Chronic: No

Fire: No

Pressure: No

Reactive: No

Section 313 Toxic Chemicals: None present or none present in regulated quantities.

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 the EU Safety Data Sheet Directive 91/155/EEC.

Sources of information for this data sheet:

- Dow Corning "High vacuum grease" Product Safety Data. Version : 1.5. Revision date : 15.11.2004.
- 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); CHIP - Chemical (Hazard Information and Packing); 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:

Nov 2007 - Data Sheet updated to reflect the latest 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.