SILVER-FILLED CONDUCTIVE SILICONE GREASE 1110

1. IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

Product Detail : 1110 Silver-Filled Conductive Silicone Grease

Application of the substance / the preparation: Electrically conductive silicone grease . For industrial and professional use only.

Manufacturer / supplier:

Holland Shielding Systems B.V.
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3316 BP Dordrecht
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In an emergency, please contact your local/national poison control center (accessible only to medical personnel).

2. HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture

Product definition : Mixture

Classification according to Regulation (EC) No. 1272/2008 [CLP/GHS]

Aquatic Acute 1, H400
Aquatic Chronic 1, H410
The product is classified as hazardous according to Regulation (EC) 1272/2008 as amended.

Ingredients of unknown toxicity	100 percent of the mixture consists of component(s) of unknown acute oral toxicity 100 percent of the mixture consists of component(s) of unknown acute dermal toxicity 100 percent of the mixture consists of component(s) of unknown acute inhalation toxicity
Ingredients of unknown ecotoxicity	Contains 30 % of components with unknown hazards to the aquatic environment

See Section 16 for the full text of the H statements declared above.
See Section 11 for more detailed information on health effects and symptoms.

2.2 Label elements Hazard pictograms

Hazard pictograms	
Signal word	Warning
	Very toxic to aquatic life with long lasting effects.
	Precautionary statements
Prevention	Avoid release to the environment.
Response	Collect spillage.
Storage	Not applicable.
Disposal	Dispose of contents and container in accordance with all local, regional, national and international regulations.
Supplemental label elements	FOR INDUSTRIAL USE ONLY
Annex XVII- Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles	Not applicable.
	Special packaging requirements
Containers to be fitted with child-resistant fastenings	Not applicable.
Tactile warning of danger	Not applicable.

2.3 Other hazards

Product meets the criteria for PBT or vPvB according to Regulation (EC) No. 1907/2006, Annex XIII	This mixture does not contain any substances that are assessed to be a PBT or a vPvB.
Other hazards which do not result in classification	None known.

3. COMPOSITION/INFORMATION ON INGREDIENTS

3.2 Mixtures : Mixture

Product/ingredient name	Identifiers	%	Classification	Specific Conc. Limits, M-factors and ATEs	Type
Silver	EC: 231-131-3 CAS: 7440-22-4	≥50- ≤75	Aquatic Acute 1, H400 Aquatic Chronic 1, H410 **See Section 16 for the full text of the H statements declared above.**	**M [Acute] = 1000** **M [Chronic] = 1000**	[1] [2]

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment, are PBTs, vPvBs or Substances of equivalent concern, or have been assigned a workplace exposure limit and hence require reporting in this section.

Type
[1] Substance classified with a health or environmental hazard
[2] Substance with a workplace exposure limit
Occupational exposure limits, if available, are listed in Section 8.

4. FIRST AID MEASURES

4.1 Description of first aid measures

Eye contact	Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Get medical attention if irritation occurs.
Inhalation	Remove victim to fresh air and keep at rest in a position comfortable for breathing.
Skin contact	Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur.
Ingestion	Wash out mouth with water. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Do not induce vomiting unless directed to do so by medical personnel.
Protection of first-aiders	No action shall be taken involving any personal risk or without suitable training.

4.2 Most important symptoms and effects, both acute and delayed

Over-exposure signs/symptoms

Eye contact	Adverse symptoms may include the following: Pain or irritation Redness Watering
Inhalation	No specific data.
Skin contact	Adverse symptoms may include the following: irritation
Ingestion	Adverse symptoms may include the following: Ingestion Seek medical attention.

4.3 Indication of any immediate medical attention and special treatment needed

Notes to physician	Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
Specific treatments	No specific treatment.

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5. FIREFIGHTING MEASURES

5.1 Extinguishing media

Suitable extinguishing media	Use an extinguishing agent suitable for the surrounding fire.
Unsuitable extinguishing media	None known.

5.2 Special hazards arising from the substance or mixture

Hazards from the substance or mixture	In a fire or if heated, a pressure increase will occur and the container may burst. This material is very toxic to aquatic life with long lasting effects. Fire water contaminated with this material must be contained and prevented from being discharged to any waterway, sewer or drain.
Hazardous combustion products	Decomposition products may include the following materials: carbon dioxide carbon monoxide metal oxide/oxides

5.3 Advice for firefighters

Special protective actions for fire-fighters	Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training.
Special protective equipment for fire-fighters	Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode. Clothing for fire-fighters (including helmets, protective boots and gloves) conforming to European standard EN 469 will provide a basic level of protection for chemical incidents.

6. ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures

For non-emergency personnel	No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilt material. Put on appropriate personal protective equipment
For emergency responders	If specialised clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel"

6.2 Environmental

Precautions	Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air). Water polluting material. May be harmful to the environment if released in large quantities. Collect spillage.

6.3 Methods and material for containment and cleaning up

Small spill	Stop leak if without risk. Move containers from spill area. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.
Large spill	Stop leak if without risk. Move containers from spill area. Approach the release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Wash spillages into an effluent treatment plant or proceed as follows. Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations. Dispose of via a licensed waste disposal contractor. Contaminated absorbent material may pose the same hazard as the spilt product.

6.4 Reference to other sections

See Section 1 for emergency contact information.
See Section 8 for information on appropriate personal protective equipment.
See Section 13 for additional waste treatment information.

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7. HANDLING AND STORAGE

The information in this section contains generic advice and guidance. The list of Identified Uses in Section 1 should be consulted for any available use-specific information provided in the Exposure Scenario(s).

7.1 Precautions for safe handling

Protective measures	Put on appropriate personal protective equipment (see Section 8). Do not ingest. Avoid contact with eyes, skin and clothing. Avoid breathing vapour or mist. Avoid release to the environment. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Empty containers retain product residue and can be hazardous. Do not reuse container.
Advice on general occupational hygiene	Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.

7.2 Conditions for safe storage, including any incompatibilities

Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabelled containers. Use appropriate containment to avoid environmental contamination. See Section 10 for incompatible materials before handling or use.

Seveso Directive - Reporting thresholds (in tonnes)
Danger criteria

Category	Notification and MAPP threshold	Safety report threshold
E1	100	200

7.3 Specific end use(s)

Recommendations	Not available
Industrial sector specific solutions	Not available

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

The information in this section contains generic advice and guidance. Information is provided based on typical anticipated uses of the product. Additional measures might be required for bulk handling or other uses that could significantly increase worker exposure or environmental releases.

8.1 Control parameters

Occupational exposure limits

Product/ingredient name	Exposure limit values
Silver	**EU OEL (Europe, 1/2022). Notes: list of indicative occupational exposure limit values** TWA: 0.1 mg/m³ 8 hours.

Biological exposure indices

No exposure indices known.

Recommended monitoring procedures	Reference should be made to monitoring standards, such as the following: European Standard EN 689 (Workplace atmospheres- Guidance for the assessment of exposure by inhalation to chemical agents for comparison with limit values and measurement strategy) European Standard EN 14042 (Workplace atmospheres- Guide for the application and use of procedures for the assessment of exposure to chemical and biological agents) European Standard EN 482 (Workplace atmospheres- General requirements for the performance of procedures for the measurement of chemical agents) Reference to national guidance documents for methods for the determination of hazardous substances will also be required.

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Product/ingredient name	Type	Exposure	Value	Population	Effects
silver	DNEL	Long term Inhalation	0.04 mg/m³	General population	Systemic
	DNEL	Long term Inhalation	0.1 mg/m³	Workers	Systemic
	DNEL	Long term Oral	1.2 mg/kg bw/day	General population	Systemic

PNECs
No PNECs available

8.2 Exposure controls

Appropriate engineering controls	Good general ventilation should be sufficient to control worker exposure to airborne ontaminants.
	Individual protection measures
Hygiene measures	Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.
Eye/face protection	Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: safety glasses with side-shields.
	Skin protection
Hand protection	Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary. Considering the parameters specified by the glove manufacturer, check during use that the gloves are still retaining their protective properties. It should be noted that the time to breakthrough for any glove material may be different for different glove manufacturers. In the case of mixtures, consisting of several substances, the protection time of the gloves cannot be accurately estimated
Body protection	Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.
Other skin protection	Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.
Respiratory protection	Based on the hazard and potential for exposure, select a respirator that meets the appropriate standard or certification. Respirators must be used according to a respiratory protection program to ensure proper fitting, training, and other important aspects of use.
Environmental exposure controls	Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

9. PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties

	Appearance
Physical state	Liquid
Colour	Grey. [Light]
Odour	Not available.
Odour threshold	Not available.
Melting point/freezing point	Not available.
Initial boiling point and boiling range	Not available.
Flammability	Not available.
Lower and upper explosion limit	Not available.
Flash point	[Product does not sustain combustion.]
Auto-ignition temperature	Not available.
Decomposition temperature	Not available.
pH	Not available.

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Viscosity	Not available.
Solubility in water	Not available.
Partition coefficient: n-octanol/water	Not available.
Vapour pressure	Not available.
Relative density	2.5
Vapour density	Not available.
Particle characteristics	
Median particle size	Not available.

9.2 Other information

9.2.1 Information with regard to physical hazard classes

Explosive properties	Non-explosive in the presence of the following materials or conditions: open flames, sparks and static discharge, heat, shocks and mechanical impacts, oxidising materials, reducing materials, combustible materials, organic materials, metals, acids, alkalis and moisture.
Oxidising properties	Not available.

9.2.2 Other safety characteristics

Miscible with water	Not available.
Evaporation rate	Not available.

10. STABILITY AND REACTIVITY

10.1 Reactivity
No specific test data related to reactivity available for this product or its ingredients.

10.2 Chemical stability
The product is stable.

10.3 Possibility of hazardous reactions
Under normal conditions of storage and use, hazardous reactions will not occur.

10.4 Conditions to avoid
No specific data.

10.5 Incompatible materials
No specific data.

10.6 Hazardous decomposition products
Under normal conditions of storage and use, hazardous decomposition products should not be produced.

11. TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects

Acute toxicity	
Conclusion/Summary	Not available.
Acute toxicity estimates	Not available.
Irritation/Corrosion	
Conclusion/Summary	Not available.
Sensitisation	
Conclusion/Summary	Not available.

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Mutagencity	
Conclusion/Summary	Not available.

Carcinogenicity	
Conclusion/Summary	Not available.

Reproductive toxicity	
Conclusion/Summary	Not available.

Teraogenicity	
Conclusion/Summary	Not available.

Specific target organ toxicity (single exposure)	Not available.
Specific target organ toxicity (repeated exposure)	Not available.
Aspiration hazard	Not available.
Information on likely routes of exposure	Not available.

Potential acute health effects	
Eye contact	May cause eye irritation.
Inhalation	No known significant effects or critical hazards.
Skin contact	May cause skin irritation.
Ingestion	Do not ingest. If swallowed then seek immediate medical assistance

Symptoms related to the physical, chemical and toxicological characteristics	
Eye contact	Adverse symptoms may include the following: pain or irritation redness watering
Inhalation	No specific data.
Skin contact	Adverse symptoms may include the following: irritation
Ingestion	Adverse symptoms may include the following: argyria Ingestion Seek medical attention.

Delayed and immediate effects as well as chronic effects from short and long-term exposure	
Short term exposure	
Potential immediate effects	Not available
Potential delayed effects	Not available
Long term exposure	
Potential immediate effects	Not available
Potential delayed effects	Not available
Potential chronic health effects	Not available
Conclusion/Summary	Not available.
General	No known significant effects or critical hazards.
Carcinogenicity	No known significant effects or critical hazards.
Mutagenicity	No known significant effects or critical hazards.
Reproductive toxicity	No known significant effects or critical hazards.

11.2 Information on other hazards

11.2.1 Endocrine disrupting properties
Not available

11.2.2 Other information
Not available

12. ECOLOGICAL INFORMATION

12.1 Toxcity

Product/ingredient name	Result	Species	Exposure
Silver	Acute EC50 1.4 µg/l Marine water Acute EC50 0.24 µg/l Fresh water Acute LC50 11 µg/l Fresh water Acute LC50 2.13 µg/l Fresh waterChronic NOEC 5 mg/l Marine water	Algae- Chroomonas sp. Daphnia- Daphnia magna Crustaceans- Gammarus pseudolimnaeus Fish- Pimephales promelas Algae- Glenodinium halli	4 days 48 hours 48 hours 96 hours 72 hours

Conclusion/Summary: Not available.

12.2 Persistence and degradability

Conclusion/Summary : Not available.

12.3 Bioaccumulative potential

Product/ingredient name	$LogP_{ow}$	BCF	Potential
Silver	-	70	Low

12.4 Mobility in soil

Soil/water partition coefficient (KOC)	Not available.
Mobility	Not available.

12.5 Results of PBT and vPvB assessment

This mixture does not contain any substances that are assessed to be a PBT or a vPvB.

12.6 Other adverse effects

Not available.

12.7 Other adverse effects

No known significant effects or critical hazards.

13. DISPOSAL CONSIDERATIONS

The information in this section contains generic advice and guidance. The list of Identified Uses in Section 1 should be consulted for any available use-specific information provided in the Exposure Scenario(s).

	Product
Methods of disposal	The generation of waste should be avoided or minimised wherever possible. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and nonrecyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction.
Hazardous waste	The classification of the product may meet the criteria for a hazardous waste.
	Packaging
Methods of disposal	The generation of waste should be avoided or minimised wherever possible. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible
Special precautions	This material and its container must be disposed of in a safe way. Care should be taken when handling emptied containers that have not been cleaned or rinsed out. Empty containers or liners may retain some product residues. Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers

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14. TRANSPORT INFORMATION

	ADR/RID	ADN	IMDG	IATA
14.1 UN number	Not regulated	Not regulated	Not regulated	Not regulated
14.2 UN proper shipping name	-	-	Adhesives	Adhesives
14.3 Transport hazard class(es)	-	-	-	-
14.4 Packing group	-	-	-	-
14.5 Environmental hazards	No.	No.	No.	No.

Additional information	
IATA	The environmentally hazardous substance mark may appear if required by other transportation regulations.
14.6 Special precautions for user	**Transport within user's premises:** always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or spillage.
14.7 Maritime transport in bulk according to IMO instruments	: Not available. Not available.

15. REGULATORY INFORMATION

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture EU Regulation (EC) No. 1907/2006 (REACH)

Annex XIV- List of substances subject to authorisation	
Annex XIV	None of the components are listed.
Substances of very high concern	None of the components are listed.
Annex XVII- Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles	Not applicable.

Other EU regulations	
Industrial emissions (integrated pollution prevention and control)- Air	Listed
Industrial emissions (integrated pollution prevention and control)- Water	Listed
Ozone depleting substances (1005/2009/EU)	Not listed.
Prior Informed Consent (PIC) (649/2012/EU)	Not listed.
Seveso Directive	This product is controlled under the Seveso Directive.
Danger criteria	
Category	E1

International regulations	
Chemical Weapon Convention List Schedules I, II & III Chemicals	Not listed.
Montreal Protocol	Not listed.
Stockholm Convention on Persistent Organic Pollutants	Not listed.
Rotterdam Convention on Prior Informed Consent (PIC)	Not listed.
UNECE Aarhus Protocol on POPs and Heavy Metals	Not listed.

	International lists
Australia	All components are listed or exempted.
Canada	All components are listed or exempted.
China	All components are listed or exempted.
Eurasian Economic Union	Russian Federation inventory: All components are listed or exempted.
Japan	Japan inventory (ENCS): Not determined. Japan inventory (ISHL): Not determined.
New Zealand	All components are listed or exempted.
Philippines	All components are listed or exempted.
Republic of Korea	All components are listed or exempted.
Taiwan	All components are listed or exempted.
Thailand	All components are listed or exempted.
Turkey	Not determined.
United States	All components are listed or exempted.
Viet Nam	All components are listed or exempted.

15.2 Chemical safety assessment

This product contains substances for which Chemical Safety Assessments are still required.

16. OTHER INFORMATION

This product contains substances for which Chemical Safety Assessments are still required.

Abbreviations and acronyms	ATE = Acute Toxicity Estimate CLP = Classification, Labelling and Packaging Regulation [Regulation (EC) No. 1272/2008] DMEL = Derived Minimal Effect Level DNEL = Derived No Effect Level EUH statement = CLP-specific Hazard statement N/A = Not available PBT = Persistent, Bioaccumulative and Toxic PNEC = Predicted No Effect Concentration RRN = REACH Registration Number SGG = Segregation Group vPvB = Very Persistent and Very Bioaccumulative

Procedure used to derive the classification according to Regulation (EC) No. 1272/2008 [CLP/GHS]

Classification	Justification
Aquatic Acute 1, H400	Calculation method
Aquatic Chronic 1, H410	Calculation method

Full text of abbreviated H statements

H400	Very toxic to aquatic life.
H410	Very toxic to aquatic life with long lasting effects.

Full text of classifications [CLP/GHS]

Aquatic Acute 1, H400	ACUTE AQUATIC HAZARD- Category 1
Aquatic Chronic 1, H410	LONG-TERM AQUATIC HAZARD- Category 1

To the best of our knowledge, the information contained herein is accurate. However, neither the above named supplier, nor any of its subsidiaries, assumes any liability whatsoever for the accuracy or completeness of the information contained herein. Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.

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