



**HAGEN automation**  
**DESKTOP ROBOTS**  
**INDUSTRIAL ROBOTS**  
**3D PRINTING**

## 1. IDENTIFICATION

Material: WS2 Grease - Tungsten Disulphide fortified high temperature grease - Dark Grey Blue Grease - supplied in 50ml metal screw tin.

Supplier: Hagen Automation Ltd

Address:

Hagen Automation, Greybern House, Templars Way, Sharnbrook, MK441PY United Kingdom  
 Emergency Tel: 0044 7739 854 883

## 2. COMPOSITION

Chemical Identity	CAS	Hazard Class	Hazard Statement	Concentration
Lithium 12-Hydroxystearate	7620-77-1	Chronic aquatic tox.,1	H304	5-30%
Lithium Salicylate	552-38-5	Chronic aquatic tox.,1	H304	0.1-1%
Lithium Tetraborate	12007-60-2	Asp. Tox.,2; Eye Dam,2; Skin Corr.,2;	H304 H315 H319	0.1-1%
Mineral Oil	8042-47-5	Asp. Tox.,1 Chronic aquatic tox.,1	H304 H317	50-70%
Poly Alpha Olefin	68649-12-7	Asp. Tox.,1 Chronic aquatic tox.,1	H304 H317	10-40%
Diphenylamine	122-39-4	Asp. Tox.,2; Eye Dam,2; Skin Corr.,2;	H304 H315 H323	0.1-1%
Silicone Oil	63148-62-9	Asp. Tox., 1	H304	1.5-10%
Tungsten Disulfide	12138-09-9	Eye Dam, 2 Skin Corr, 2	H304 H332	2-15%
Graphite	782-42-5	Asp. Tox.,2; Eye Dam,2;	H304 H332	3-25%

## 3. HAZARDS IDENTIFICATION

GHS Classification:

Skin Irritation Category 2.

Eye Damage Category 1.  
Long Term Aquatic Hazard Category 1.

GHS Label Element:

Signal Word: Danger

Hazard Statements:

H315: Causes skin irritation.

H318: Causes serious eye damage.

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

Precautionary Statements:

Prevention:

P264: Wash hands thoroughly after handling.

P280: Wear protective  
gloves/protective clothing/eye protection/face protection.

P273: Avoid release to the environment.

Response: P302+P352: If on skin: Wash with plenty of soap and water.

P332+P313: If skin irritation occurs: Get medical advice/attention.

P362+P364: Take off contaminated clothing and wash it before reuse.

P305+P351+P338: If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P310: Immediately call a poison centre/doctor/...

P391: Collect spillage

Storage: None.

Disposal: P501: Dispose of contents to approved waste facility.

Other Hazards: Not Assessed.

#### 4. FIRST AID MEASURES

**Eyes:** Rinse eyes with plenty of low pressure water for 15 minutes while holding eyelids open. Get medical attention immediately.

**Skin:** Remove contaminated shoes and clothing and cleanse affected area(s) thoroughly by washing with mild soap and water. If irritation or redness develops and persists, seek medical attention.

**Ingestion:** Rinse the mouth with water. Do not induce vomiting. Get immediate medical attention.

**Inhalation:** Remove to fresh air. Seek medical attention if irritation persists.

**Notes to physician:** High-pressure hydrocarbon injuries may produce substantial necrosis of underlying tissue despite an innocuous appearing external wound. Often these injuries require extensive emergency surgical debridement and all injuries should be evaluated by a specialist in order to assess the extent of injury

#### 5. FIRE FIGHTING MEASURES

Flammable Properties:

Flash Point: 245°C

NFPA Flammability Class: No data

LEL%: No data

UEL%: No data

Autoignition Temperature: No data

Unusual Fire & Explosion Hazards: This material may burn, but will not ignite readily. Vapours are heavier than air and can accumulate in low areas. If container is not properly cooled, it can rupture in the heat of a fire.

Extinguishing Media: Dry chemical, carbon dioxide, foam, or water spray is recommended.

Water of foam may cause frothing of materials heated above 212°F. Carbon dioxide can displace oxygen. Use caution when applying carbon dioxide in confined spaces.

Fire Fighting instructions: For fires beyond the incipient stage, emergency responders in the immediate hazard area should wear bunker gear. When the potential chemical hazard is unknown, in enclosed or confined spaces, or when explicitly required by DOT, a self contained breathing apparatus should be worn. In addition, wear other appropriate protective equipment as conditions warrant (see Section 8)

Isolate immediate hazard area, keep unauthorised personnel out. Stop spill/release if it can be done

with minimal risk. Move undamaged containers from immediate hazard area if it can be done with minimal risk.

Water spray may be useful in minimising or dispersing vapours and to protect personnel. Cool equipment exposed to fire with water, if it can be done with minimal risk. Avoid spreading burning liquid with water used for cooling purposes.

## 6. ACCIDENTAL RELEASE MEASURES

Note: Very slippery, proceed with caution!

This material may burn, but will not ignite readily. Keep all sources of ignition away from spill/release, isolate immediate hazard area and keep unauthorised personnel out.

Stop spill/release if it can be done with minimal risk. Wear appropriate protective equipment includes respiratory protection as conditions warrant (see Section 8).

Prevent spilled material from entering sewers, storm drains, other unauthorised drainage systems, and natural waterways. Dike far ahead of spill for later recovery or disposal. Spilled material may be absorbed into an appropriate absorbent material.

Notify fire authorities and appropriate agencies. Immediate cleanup of any spill is recommended. If spill of any amount is made into or upon navigable waters, the contiguous zones, or adjoining shorelines, notify the appropriate national response centre.

Use the PPE (Personal Protective Equipment) as per chapter 8  
(European Union: Note German Technical Regulation on Dangerous Substances No. 200/201)

## 7. HANDLING AND STORAGE

Maintain good housekeeping procedures to prevent accumulation. Do not wear contaminated Shoes or clothing. Use good Hygiene practices.

“Empty” containers retain residue and may be dangerous. Do not pressurise, cut, weld, braze, solder, drill, grind, or expose such containers to heat, flame, sparks, or other sources of ignition. They may explode and cause injury or death. “Empty” drums should be completely drained, properly bunged, and promptly shipped to the supplier or a drum reconditioned. All containers should be disposed of in an environmentally safe manner and in accordance with governmental regulations.

High pressure injection of hydrocarbon fuels, hydraulic oils or greases under the skin may have serious consequences even though no symptoms or injury may be apparent. This can happen accidentally when using high pressure equipment such as high pressure grease guns, fuel injection apparatus or from pinhole leaks in tubing of high pressure hydraulic oil equipment.

Storage: Keep container(s) tightly closed. Store only in approved containers. Used and store this

material in cool, dry, well-ventilated areas away from heat and all sources of ignition. Storage temperatures above 45 degrees C may lead to thermal decomposition, resulting in the generation of hydrogen sulphide and other sulphur containing gases. Keep away from any incompatible material

(see Section 10). Protect container(s) against physical damage.

#### 7.1 Specific End Use(s):

Lubricant

### 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Respiratory Protection: Use an appropriate approved respirator to with filter type P according to DIN EN 143. If airborne levels exceed the TLV, appropriate requirements set forth in 29 CFR 1910.134 should be met.

Wash thoroughly after handling and before eating, smoking and end of work shift. Do not shake clothing to remove dust. Avoid inhalation, ingestion and direct skin contact

Ventilation: Use local exhaust which is adequate to limit exposure levels below TLV.

Gloves: Use gloves impervious to this material to prevent skin contact and possible irritation (see manufactures literature for information on permeability).

Eye Protection: Wear eye goggles to prevent potential eye contact. Depending on conditions of use, a face shield may be necessary

### 9. PHYSICAL AND CHEMICAL PROPERTIES

Note: Unless otherwise stated, values are determined at 20°C (68°F) and 760 mm Hg (1 atm).

Appearance: Black

Physical Form: Semi-solid

Odor: Characteristic petroleum

Odor Threshold: No data

PH: Not applicable

Vapor Pressure (mm Hg) <0.01

Vapor Density (air=1) >5

Boiling Point: No data

Solubility in Water: Insoluble

Partition Coefficient (n-octanol/water); No data

Specific Gravity: 0.92

Bulk Density: 7.82

Bulk Density Units: lbs/gal

Percent Volatile: Negligible

Evaporation Rate (nBuAc=1) <0.01

Flash Point: 245°C

Test Method: (COC)

LEL%: No data

UEL%: No data

Autoignition Temperature: No data

### 10. STABILITY AND REACTIVITY

Stability: Stable

Conditions to avoid: Extended exposure to high temperature may cause decomposition.  
Incompatible Materials to Avoid: Avoid contact with acids, strong oxidising agents.

Hazardous Decomposition Products: Combustion can yield carbon, nitrogen, sulphur, phosphorus, and zinc oxides. Hydrogen sulphide and alkyl mercaptans may also be released. Thermal decomposition may produce hydrogen sulphide and other sulphur-containing gases at temperatures greater than 45 degrees C. Contact with strong acids may generate Hydrogen Sulphide

## 11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure:

Eye: Risk of serious eye damage with possibly permanent injury.

Skin: Contact may cause skin irritation including redness, and a burning sensation. Prolonged or repeated contact can worsen irritation by causing drying and cracking of the skin leading to dermatitis (inflammation). No harmful effects from skin absorption are expected.

Inhalation: No data available. However, inhalation is not an expected route of exposure.

Ingestion (Swallowing): Low degree of toxicity by ingestion but may irritate the mouth, oesophagus and other tissues of digestive system.

Signs and symptoms: Effects of overexposure may include irritation of the nose and throat, irritation of the respiratory tract, irritation of the digestive tract, nausea, and diarrhoea.

Chronic Data:

Cancer: The petroleum base oils contained in this product have been highly refined by a variety of processes including solvent extraction, hydro treating and de waxing to remove aromatics and improve performance characteristics. All of the oils meet the IP-346 criteria or less than 3 percent PAH's and therefore none are listed as a carcinogen by NTP, IARC, or OSHA.

Target Organs: No data available for this material.

Developmental: No data available for this material.

Pre-Existing Medical Conditions: Conditions aggravated by exposure may include skin disorders.

## 12. ECOLOGICAL INFORMATION

**On Product** Prevent entry to sewers and public water ways.

### **Ecological Effects**

**Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.**

## 13. DISPOSAL INFORMATION

**General** Dispose of in a safe manner in accordance with local/national regulations

**Disposal method** In accordance with local/national regulations may be taken to waste disposal site.

**Disposal of used packaging** Use a licensed waste disposal contractor.

## 14. TRANSPORT INFORMATION

Transport: Not classified as hazardous for transport.

## 15. REGULATORY INFORMATION

EC Classification: The material is not dangerous for transport or supply.

Risk Phrases

None

Safety Phrases:

None

## 16. OTHER INFORMATION

Disclaimer of Expressed and implied Warranties:

The information presented in this Safety Data Sheet is based on data believed to be accurate as of the date this Safety Data Sheet was prepared. HOWEVER, NO WARRANTY OF MERCHANTABILITY, FITNESS FOR ANY PARTICULAR PURPOSE, OR ANY OTHER WARRANTY IS EXPRESSED OR IS TO BE IMPLIED REGARDING THE ACCURACY OR COMPLETENESS OF THE INFORMATION PROVIDED ABOVE, THE RESULTS TO BE OBTAINED FROM THE USE OF THIS INFORMATION OR THE PRODUCT, THE SAFETY OF THIS PRODUCT, OR THE HAZARDS RELATED TO ITS USE.

References:

\* European agreement concerning the international carriage of dangerous goods by road (ADR) volumes I & II 1999

\* Commission Directive 93/112/EC of 10/12/93, ( O.J. No. 314 of 16/12/93 pg 38)

\* Council Directive 67/548/EEC and all appropriate A.T.P'S

**[?] Important Note:**

1. Before any product is used the label should be carefully read and current safety literature and information consulted.

2. The product information in this Data Sheet is to the best of Hagen Automation's knowledge correct as at the date of publication. User should contact Hagen Automation for updated advice and in any event satisfy themselves that the product is entirely suitable for their purpose.