

Safety Data Sheet

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Section 1: Manufacturer and Product Identification

Manufacturer/Supplier/SDS Preparer:

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Product information:

AtomLube® Dielectric Grease

Recommended Use:

Industrial Dielectric Lubricant

Section 2: Hazards Identification

Hazard Classification:

Health Hazards:

Skin Corrosion/Irritation
Eye Damage/Irritation

Category 2
Category 2B

Warning Label Items:

Pictogram(s):



Signal Word(s): WARNING

Hazard Statement(s):

Causes skin irritation.
Causes eye irritation.

Precautionary Statement(s):

Wash exposed areas that have come in contact with material thoroughly after handling.
Wear protective gloves.
If on skin: wash with plenty of water.

Specific treatment (see first aid measures on this SDS).
If skin irritation occurs: get medical advice/attention.
Take off contaminated clothing and wash it before reuse.
If in eyes: rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
If eye irritation persists: Get medical advice/attention.

Hazards Not Otherwise Classified:

None known.

Percentage of Ingredients with Unknown Toxicity:

Zero

Section 3: Composition / Information on Ingredients

	Chemical Identity ¹	Concentration (%)
Component A	Synthetic Fluoropolymer	0 – 10
Component B	Inorganic Silica-Based Grease Mixture	90 – 100

The specific chemical identities and exact percentages (concentrations) of composition have been withheld as trade secrets.

Section 4: First-aid Measures

After inhalation:

Supply fresh air. If required, provide artificial respiration. Keep patient warm. Seek immediate medical advice if breathing difficulties continue.

After skin contact:

Immediately wash with water and soap and rinse thoroughly. If symptoms persist, get medical attention.

After eye contact:

Rinse opened eye for at least 15 minutes under running water. If symptoms persist, get medical attention.

After ingestion:

Get medical attention if symptoms occur. Do not induce vomiting.

Most important symptoms/effects, acute and delayed:

Causes skin and eye irritation.

¹ The classification of each of the components of AtomLube® Ultra Dielectric Grease is confidential to NanoMech, Inc. and should not be disclosed to any other parties.

Immediate medical attention required:

None needed.

Section 5: Fire-fighting Measures

Flammability:

May burn, but does not ignite readily.

Means of Extinction:

Use dry chemical, foam, halon, or CO₂. Move container from fire area if you can do it without risk. Apply cold water to sides of container that are exposed to flames until well after the fire is out. Keep distance from the fire and the container.

Flashpoint (°C) and Method:

315°C (ASTM D-92)

Upper Flammable Limit (% by volume):

Not determined

Lower Flammable Limit (% by volume):

Not determined

Autoignition Temperature (°C):

>300°C

Explosion Data – Sensitivity to Impact:

Not determined

Explosion Data – Sensitivity to Static Discharge:

Not determined

Hazardous combustion products:

Oxides of carbon, smoke, and irritating vapors.

Protective equipment:

Wear self-contained respirator. Wear fully protective impervious suit.

Section 6: Accidental Release Measures

Small spills:

Absorb with diatomaceous earth, sand or other non-combustible material and transfer to containers for later disposal. Use clean non-sparking tools to collect absorbed material.

Large spills:

Enclose the spill area for later disposal.

Person related safety precautions:

Wear protective equipment. Keep unprotected persons away. Ensure adequate ventilation.

Measures for environmental protection:

Do not allow material to be released to the environment without proper governmental permits.

Measures for cleaning/collecting:

Ensure adequate ventilation.

Section 7: Handling and Storage**Handling****Information for safe handling:**

Keep container tightly sealed. Slowly open the container. Ensure good ventilation at the workplace.

Storage**Requirements to be met by storerooms and receptacles:**

Store in cool, dry place in tightly closed containers. Keep away from freezing. Protect material from direct sunlight.

Information about storage in one common storage facility:

Store away from strong acids and oxidizing agents.

Section 8: Exposure Controls and Personal Protection

<u>Chemical Identity</u>	<u>ACGIH TLV</u>	<u>OSHA PEL</u>
Component A	10 mg/m ³ TWA	15 mg/m ³ TWA
Component B	None	20 million particles/foot ³ TWA

Specific Engineering Controls:

Provide sufficient mechanical ventilation to maintain exposure below TLV(s). Overexposures to vapors and mists may be prevented by ensuring ventilation controls, local exhaust and/or fresh air entry.

Eye Protection:

Vapor tight chemical-type splash goggles should be worn when the possibility exists for eye contact due to splashing or spraying of liquid or the generation of airborne particles or vapors.

Skin protection:

Wear protective clothing.

General protective and hygienic measures:

The usual precautionary measures for handling chemicals should be followed. Keep away from foodstuffs, beverages and feed. Remove all soiled and contaminated clothing immediately. Wash hands before breaks and at the end of work. Avoid contact with the eyes and skin.

Respiratory protection:

Use NIOSH-approved respirator if there is potential to exceed exposure limits.

Protection of hands:

Wear impervious gloves. Check protective gloves prior to each use for their proper condition. The selection of suitable gloves not only depends on the material, but also on quality. Quality will vary from manufacturer to manufacturer.

Section 9: Physical and Chemical Properties

General Information

Physical state: Paste

Color/Appearance: White

Odor: Moderate

Odor threshold: Not determined

Specific gravity: 1.06

Vapor density: Not determined

Vapor pressure: Not determined

Evaporation rate: Not determined

Boiling point: Not determined

Freezing point: Not determined

pH: Not determined

Coefficient of Water/Oil Distribution: Not determined

Melting point/Melting range: Not determined

Sublimation temperature / start: Not determined

Flash point: 315°C

Autoignition temperature: > 300°C

Decomposition temperature: Not determined

Danger of explosion: Product does not present an explosion hazard.

Explosion limits:

Lower: Not determined

Upper: Not determined

Solubility in / Miscibility with Water: Insoluble

Viscosity: 350 cSt

Section 10: Stability and Reactivity

Reactivity:

Not reactive if used and stored according to specifications.

Chemical Stability:

Stable under normal conditions.

Possibility of Hazardous Reactions:

Dangerous reactions and decomposition will not occur if used and stored according to specifications.

Conditions to Avoid:

Keep away from freezing. Protect material from direct sunlight. Store away from strong acids and oxidizing agents.

Incompatibility with Other Substances:

Strong acids and oxidizing agents.

Hazardous Decomposition Products:

Oxides of carbon, smoke, and irritating vapors.

Section 11: Toxicological Information

Effects of Acute Exposure:

Slightly irritating to skin, eyes, and respiratory tract.

Effects of Chronic Exposure:

No known significant chronic effects.

Irritancy of Product:

Slightly irritating to skin and eyes.

Skin and Respiratory Sensitization:

No known sensitizing effects.

Carcinogenicity (NTP, IARC, ACGIH or OSHA):

None of the components are classified as carcinogens by NTP, IARC, ACGIH or OSHA.

Reproductive Toxicity:

No known reproductive effects.

Teratogenicity:

No known teratogenic effects.

Embryotoxicity:

No known embryotoxic effects.

Mutagenicity:

No known mutagenic effects.

Name of Synergistic Products/Effects:

None known.

Acute toxicity:**LD/LC50 values that are relevant for classification:**

Oral: LD: Not Determined

Dermal: LD: Not Determined

Inhalative: LC50/4H: Not Determined

Section 12: Ecological Information

General notes:

Do not allow material to be released to the environment without proper governmental permits.

Section 13: Disposal Considerations

General notes:

Consult state, local or national regulations to ensure proper disposal. Disposal must be made according to official regulations.

Section 14: Transport Information

Special Shipping Information:

Not regulated.

DOT regulations:

Hazard class: None

Land transport ADR/RID (cross-border)

ADR/RID class: None

Maritime transport IMDG:

IMDG Class: None

Air transport ICAO-TI and IATA-DGR:

ICAO/IATA Class: None

Transport/Additional information:

Not dangerous according to the above specifications. Keep separated from foodstuff.

Section 15: Regulatory Information

National Regulations:

All components of this product are listed on the TSCA Inventory.

WHMIS Classification:

D2B.

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

Information about limitation of use:

For use only by technically qualified individuals.

Section 16: Other Information

Hazardous Material Identification System (HMIS) Classification:

Health: 1
Flammability: 1
Reactivity: 0

Employers should use this information only as a supplement to other information gathered by them, and should make independent judgment of suitability of this information to ensure proper use and protect the health and safety of employees. This information is furnished without warranty, and any use of the product not in conformance with this Safety Data Sheet, or in combination with any other product or process, is the responsibility of the user.

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