AtomLube® Dielectric Grease (Spray)

Safety Data Sheet

Date of issue: 3/30/2018 Date of Revision: ----------

Section 1: Manufacturer and Product Identification

Manufacturer/Supplier/SDS Preparer:
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Fax: (479) 756-9919
Primary Emergency Phone: 1-479-695-8100
Secondary* Emergency Phone: 1-800-424-9300 (CHEMTREC, CCN 793730)
*In case of emergency, call primary number first. If call goes unanswered, then call CHEMTREC.

Product information:
AtomLube® Dielectric Grease (Spray)

Recommended Use:
Industrial Dielectric Lubricant

Section 2: Hazards Identification

Hazard Classification:

Health Hazards:

Aspiration Hazard	Category 1
Flammable Liquids	Category 2
Skin Corrosion/Irritation	Category 2
Eye Damage/Irritation	Category 2B
Specific Target Organ Toxicity (Single Exposure) [Narcotic Effects]	Category 3

Warning Label Items:

Pictogram(s):

Signal Word(s): DANGER

Hazard Statement(s):
May be fatal if swallowed and enters airways.
Highly flammable liquid and vapor.

Causes skin irritation.
Causes eye irritation.
May cause drowsiness or dizziness.

Precautionary Statement(s):

Prevention:

Keep away from heat/sparks/open flames/hot surfaces. – No smoking.
Keep container tightly closed.
Ground/bond container and receiving equipment.
Use explosion-proof electrical/ventilating/lighting/equipment.
Use only non-sparking tools.
Take precautionary measures against static discharge.
Wear protective gloves/eye protection/face protection.
Wash exposed areas that have come in contact with material thoroughly after handling.
Avoid breathing dust/fumes/gas/mist/vapors/spray.
Use only outdoors or in a well-ventilated area.

Response:

If swallowed: Immediately call a poison center or doctor.
Do NOT induce vomiting.
If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.
In case of fire: Use dry chemical, foam, halon, or CO_2 to extinguish.
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.
If inhaled: Remove person to fresh air and keep comfortable for breathing.
Call a poison center or doctor if you feel unwell.

Storage:

Store locked up.
Store in a well-ventilated place. Keep cool.
Keep container tightly closed.

Disposal:

Dispose of contents/container in accordance with local, regional, and national regulations.

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 – 5
Component B	Inorganic Silica-Based Grease Mixture	45 – 55
Component C	Petroleum Distillate (CAS #64742-49-0)	45 – 55

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.

Immediate medical attention required:

If swallowed, immediately call poison center or physician. Do not induce vomiting.

Section 5: Fire-fighting Measures

Flammability:

Flammable liquid and vapor.

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

Means of Extinction:
Use dry chemical, foam, halon, or CO_2. 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:[2]
-9°C (Closed cup, Tagliabue ASTM D-56)

Upper Flammable Limit (% by volume):
6.7%

Lower Flammable Limit (% by volume):
1%

Autoignition Temperature (°C):
246°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.

[2] The flammability characteristics in Section 5 and Section 9 are based solely on the properties of the solvent (carrier) fluid, as it alone will evaporate upon applying the spray. The solvent is commonly referred to as commercial heptane, though it is technically naphtha (petroleum), hydrotreated light. When well mixed, Dielectric Grease spray will have a higher flash point and autoignition temperature. When the solvent fully evaporates, the remaining grease mixture will not exhibit any flammability characteristics.

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

Chemical Identity	ACGIH TLV	OSHA PEL
Component A	10 mg/m^3 TWA (Inhalable)	15 mg/m^3 TWA (Total) 5 mg/m^3 (Respirable)
Component B	None	20 million particles/foot^3 TWA
Component C	400 ppm TWA	500 ppm 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[3]

General Information
Physical state: Liquid
Color/Appearance: White
Odor: Moderate petroleum
Odor threshold: Not determined
Specific gravity: 0.84
Vapor density: 3 (Air=1)
Vapor pressure: 6 kPa (room temperature)
Evaporation rate: Not determined
Boiling point: 93-99°C
Freezing point: Not determined
pH: Neutral
Coefficient of Water/Oil Distribution: Not determined
Melting point/Melting range: Not determined
Sublimation temperature / start: Not determined
Flash point: < -9°C
Autoignition temperature: 246°C
Decomposition temperature: Not determined
Danger of explosion: Product can form a flammable mixture in air
Explosion limits:
Lower: 1%

[3] The flammability characteristics in Section 5 and Section 9 are based solely on the properties of the solvent (carrier) fluid, as it alone will evaporate upon applying the spray. The solvent is commonly referred to as commercial heptane, though it is technically naphtha (petroleum), hydrotreated light. When well mixed, Dielectric Grease spray will have a higher flash point and autoignition temperature. When the solvent fully evaporates, the remaining grease mixture will not exhibit any flammability characteristics.

Upper: 6.7%
Solubility in / Miscibility with Water: Insoluble
Viscosity: Not determined

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:

	DOT Classification	TDG Classification	IATA	IMDG
UN Number	UN1993	UN1993	UN1993	UN1993
UN Proper Shipping Name	Flammable liquids, n.o.s. (Petroleum Distillates)	Flammable liquids, n.o.s. (Petroleum Distillates)	Flammable liquids, n.o.s. (Petroleum Distillates)	Flammable liquids, n.o.s. (Petroleum Distillates)

Transport Hazard Class	3 	3 	3 	3 
Packing Group	II	II	II	II
Additional Information	Special Provisions: Limited Quantity	Special Provisions: Limited Quantity	Special Provisions: Limited Quantity	Emergency Schedules: Limited Quantity

Transport/Additional information:
Keep separated from foodstuff.

Section 15: Regulatory Information

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

State Regulations:
Massachusetts: The following components are listed: HEPTANE (N-HEPTANE)
New York: None of the components are listed.
New Jersey: The following components are listed: n-HEPTANE; HEPTANE
Pennsylvania: The following components are listed: HEPTANE

California Prop 65:
Warning: This product contains less than 0.1% of a chemical known to the State of California to cause cancer.
Warning: This product contains less than 1.0% of a chemical known to the State of California to cause birth defects or other reproductive harm.

Ingredient Name	%	Cancer	Reproductive
Toluene	<0.1	No	Yes
Ethylbenzene	<0.001	Yes	No

Cumene	<0.001	Yes	No
Benzene	<0.001	Yes	Yes
Naphthalene	<0.0001	Yes	No

WHMIS Classification:
Class B-2: Flammable liquid.
Class D-2B: Material causing other toxic effects (Toxic).

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

National Fire Protection Association (NFPA) Classification:

Health: 1
Flammability: 3
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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