

MATERIAL SAFETY DATA SHEET

Legal Disclaimer: MSD SHEET IS EXCLUSIVE TO CANADIAN LABEL FLUID FILM PRODUCTS ONLY!

FLUID FILM "AS" AEROSOL

DATE PREPARED: 09/2016

1. Identification of the Substance/Preparation & Supplier

Name of Supplier:

NLS Products

Box 790, 1 Lakewood Crescent

Bobcaygeon, ON K0M 1A0 Tel: (705) 738-2321 Fax: (705) 738-4550

Product Name: FLUID FILM "AS" Aerosol

Product Type: Liquid, Lubricant, and Corrosion Inhibitor

FLUID FILM MSD SHEET APPLIES ONLY TO CANADIAN LABELLED PRODUCTS.

***CFIA # N184 - Acceptable for Food Plant Use in Canada**

Product "AS" Stock #'s: * # 1450 (145 g), * #3300 (333g), Aerosol Can
FF60SC (60g Sample) Aerosol Can

WHMIS CLASS: B5

T.D.G. CLASS: CONSUMER COMMODITY (AEROSOLS, UN1950, CLASS 2.1).

D.O.T. CLASS: CONSUMER COMMODITY, ORM-D.

2. Composition/Information on Ingredients

CONTAINS NO SOLVENTS, SILICONES, TEFLON OR KNOWN CARCINOGENS.

<u>Hazardous components:</u>	<u>CAS No.</u>	<u>% by weight</u>	<u>Exposure Limit ACGIH / OSHA</u>
Liquefied Petroleum Gas	68476-86-8	27	1000 ppm TLV / PEL
Petroleum Oil	64742-54-7	Non Applicable	5 mg/m ³ TWA (Mist)

Product less propellant contains no solvents or known carcinogens.

3. Hazards Information

Aerosol: Contents under pressure, 70 ± 5 PSIG **Eye Contact:** May cause mild irritation.

Skin Contact: Prolonged contact could cause irritation. **Ingestion:** No information available

Inhalation: Exposure in confined areas, without benefit of protective gear, may result in light-headedness and irritation to respiratory tract.

MATERIAL SAFETY DATA SHEET

Legal Disclaimer: MSD SHEET IS EXCLUSIVE TO CANADIAN LABEL FLUID FILM PRODUCTS ONLY!

Product Name: FLUID FILM Aerosol "AS"

Product Type: Liquid, Lubricant, and Corrosion Inhibitor

4. First Aid Measures

Eye Contact: Flush with plenty of clean water for at least 15 minutes. If irritation persists, obtain medical attention.

Skin Contact: Wipe excess material from the skin with a cloth, followed by washing with soap and water. A waterless skin cleaner is beneficial in removing the material from the skin.

Inhalation: If respiratory symptoms develop, move victim away from source of exposure and into fresh air. If symptoms persist, seek medical attention.

Ingestion: If symptoms develop, seek medical attention.

5. Fire Fighting Measures

Flammability: Flammable

Extinguishing Media: Extinguish with dry chemical, CO₂ or foam

Special Consideration: Aerosol – Contents under pressure, 70 ± 5 PSIG. Fire fighters should enter area wearing positive pressure respiratory protection.

6. Accident Release Measures

Do not allow product to enter drains or watercourses. Transfer bulk of material into another container. Absorb remaining residue with proper absorbents such as earth or vermiculite. Sweep up and dispose of as solid waste in accordance with applicable regulations.

7. Handling and Storage

Storage Temperature: 0 to 49°C

Storage Precautions: No special requirements. Keep in closed containers.

Handling: Avoid contact with skin and eyes. Observe good standards of industrial hygiene.

8. Exposure Controls/Personal Protection

Engineering Measures: Provide forced air ventilation when applying in confined spaces.

Respiratory Protection: Use approved respirator with organic vapor cartridges in tanks and confined spaces.

Eyes: Chemical eye goggles in tanks and confined spaces.

Hands: Non-natural, non-butyl rubber gloves are recommended.

Skin: Use protective clothing. Remove contaminated clothing and wash the affected area with soap and water.

Exposure Limits: Not determined.

9. Typical Physical and Chemical Properties

Appearance: Straw colored liquid. **Odor:** Mild piney odor (less propellant).

Water Solubility: Not soluble. **pH Neat:** 7.8 **Specific Gravity (25°C):** 0.886 (less propellant).

Freezing Point: Not determined. **Vapor Pressure:** Not determined. **Boiling Point:** Not determined.

Flash Point: Propellant -91°C (Closed cup). AS (less propellant) 207°C (COC).

VOC: 237 grams / liter

MATERIAL SAFETY DATA SHEET

Legal Disclaimer: MSD SHEET IS EXCLUSIVE TO CANADIAN LABEL FLUID FILM PRODUCTS ONLY!

10. Stability and Reactivity

Stability: Stable under normal conditions. Hazardous polymerization will not occur.

Hazardous Decomposition Products: Combustion can produce a variety of compounds including oxides of sulfur, oxides of carbon, water vapor and unidentified organic and inorganic compounds, some of which may be toxic.

Conditions to Avoid: Exposed flames, high temperature sources and strong oxidizers.

11. Toxicological Information

LD50 (Animal/Oral): Product less propellant – Greater than 14 Grams/Kilogram

Health Effects: Eyes: Minimally irritating. **Skin:** Prolonged contact could cause skin irritation.

Inhalation: Excessive exposure due to lack of protective gear or proper ventilation could result in pulmonary abnormalities.

Ingestion: Ingestion of this product is not regarded as a significant health hazard likely to arise in normal use.

12. Ecological Information

No data available.

13. Disposal Recommendations

Product should be disposed of via authorized waste disposal contractors in accordance with all local and national regulations.

14. Transportation Information

<u>Mode</u>	<u>Shipping Name</u>	<u>Hazard Class</u>	<u>Number</u>
-------------	----------------------	---------------------	---------------

T.D.G. CLASSIFICATION: CONSUMER COMMODITY (AEROSOLS, UN1950, CLASS 2.1).

D.O.T. CLASSIFICATION: CONSUMER COMMODITY, ORM-D.

15. Regulatory Information

Safety Phrases: **KEEP OUT OF REACH OF CHILDREN**

16. Other Information

Do not mix with other chemicals.

This data sheet does not constitute an assessment of the workplace risks as required under the provisions of the Health & Safety at Work act and the Control of Substances Hazardous to Health (COSHH).

Legal Disclaimer: The information supplied above is based upon the present state of our knowledge of the product at the time of publication. It is given in good faith and no warranty is implied with respect to the specification or quality of the product. The user must satisfy himself that the product is entirely suitable of his purpose. **KEEP OUT OF REACH OF CHILDREN**

TECHNICAL BULLETIN: PRODUCT DATA "AS" # 207 FLUID FILM "AS" AEROSOL

DATE PREPARED: 02/14

FLUID FILM NATIONAL STOCK NUMBERS

*CFIA # N184 - Acceptable for Food Plant Use in Canada

*STOCK "AS" # 1450 145 g 12/CTN. AEROSOL "AS":
*STOCK "AS" # 3300 333 g 12/CTN. AEROSOL "AS": 8030-01-387-1131

"NAS" UNCONTROLLED WHMIS MATERIAL

STOCK "NAS" # 3700 3.78 L "NAS" NON-AEROSOL BULK "NAS": 4/CTN. 8030-01-386-3871
STOCK "NAS" # 4300 18.9 L "NAS" PAIL NON-AEROSOL BULK : 8030-01-387-1070
STOCK "NAS" # 4500 208 L "NAS" DRUM NON-AEROSOL BULK :
STOCK "NAS" # 5207 237 ml "NAS" BRUSH TOP CAN, NON-AEROSOL BULK, 12/CTN.

FLUID FILM Aerosol (AS) and Bulk (NAS) meet and greatly exceed mil spec # C 16173 (Army/Navy), and mil spec # C 81309, C 85054 (Military Aviation). Boeing spec # MB0110-020.

FLUID FILM "AS" & "NAS" LUBRICANTS, PENETRANTS, CORROSION PREVENTION.

Belongs to a family of **FLUID FILM** products that are Environmentally Friendlier, solvent free, non-toxic, long lasting, thixotropic liquids that have been used for over fifty (50) years in the highly corrosive marine environment of ships and offshore drilling rigs. More recently they have been introduced and successfully utilized in the aerospace, aircraft and automobile industries as well as for home maintenance. Facilities where they are used include the following: Government facilities, commercial fishing concerns, gas companies, agriculture, salt plants, municipal plants, power plants, manufacturing plants and pulp and paper mills.

FLUID FILM "AS" & "NAS" are formulated from specially processed wool-wax, highly refined petroleum oils and selected agents to provide corrosion control, penetration, metal wetting and water displacement. These long lasting products contain no solvents, will not dry out and will penetrate through rust to the base metal, providing corrosion protection from both natural and industrial atmospheres. Heavily corroded and/or frozen parts such as nuts, bolts, shafts, etc., that would normally be damaged during maintenance, can be salvaged by applying **FLUID FILM**.

KEEP OUT OF REACH OF CHILDREN

NLS Products Box 790, 1 Lakewood Crescent
Bobcaygeon, ON Canada K0M 1A0
Tel: (705) 738-2321 Fax: (705) 738-4550 www.nlsproducts.ca

FLUID FILM “AS” AEROSOL & “NAS” NON-AEROSOL BULK ENVIRONMENTALLY FRIENDLIER, SOLVENT FREE & NON-TOXIC.

TYPICAL PROPERTIES: Unless designated otherwise, the following data refers to Fluid Film “NAS” or Fluid Film “AS” after the propellant has evaporated away following spray application.

APPEARANCE: Clear, straw colored liquid. **V.O.C.** Less than 1%

FLASH POINT, BULK LIQUID: 207°C (405°F) minimum. ASTM-92) CLEVELAND OPEN CUP

NON-VOLATIVE: 89% minimum (3 hours @ 220°F) **SPECIFIC GRAVITY:** 0.875 -0.885 less propellant

SPECIFIC CONDUCTIVITY: Less than 10^{-9} ohm/cm @ 1mHz.

VISCOSITY: #2 Spindle Brookfield 2-4 reading HBF, 70°F at 2 RPM (3,200 – 6,400cps)

EFFECT ON RUBBER: None on neoprene, buna-n and most synthetics. Some swelling on natural
ASTM D-471 @ \pm 158°F 70 hours

EFFECT ON PAINT: None on most painted surfaces.

EFFECT ON ALUMINUM: No pitting

EXTREME PRESSURE: ASTM D-2782 Timken Method = Fail load – 15 pounds

WEAR PREVENTION - CHARACTERISTICS: ASTM D-220 Four Ball Method = 40 Kg., 1200 RPM for 1 hour @ 167°F.
Results: Scar diameter of 0.49mm

REPAINTABILITY: **CONTAINS NO SILICONES OR TEFLON.** It is recommended that surfaces treated with FLUID FILM are hot water or steam detergent washed (120°F), whichever is most effective.

CORROSION PROTECTION: ASTM D-1735 Humidity Cabinet = Passes 50 days.
ASTM D-1735 Humidity Cabinet = Passes 30 days.
Corrosion Requirement (MIL-C-16173, Grade 3 – Soft Films), passes 5%.
Salt Fog,

WATER REPLACEMENT: Displaces water from all metal surfaces (MIL-C-23411, Paragraph 3.6)

TOXICITY: Non-toxic, LD-50 greater than 3 grams per kilogram. Non-irritating skin Response. Very slight irritation to the eyes. (Toxicity tests preformed according to standard methods by an independent laboratory).

WARNING: “AS”: Extremely flammable. Contents under pressure.
Do not puncture, Incinerate or store above 120°F.
Keep from open flame. Combustible. Do not incinerate.

“NAS”: Combustible. Do not incinerate

SPRAY NOZZLE CLEANING: Turn can upside down, point in a safe direction and spray until only propellant escapes. If spray button becomes clogged during use, Pull it from the can and clean it with a fine wire or needle. Replace the button with a gentle twisting motion, keeping it pointed in a safe direction. Do not stick pins or other objects into nozzle tube.