miller-stephenson

SDS
Safety Data Sheet

Irst page.1. CHEMICAL PRODUCT/COMPANY IDENTIFICATION

Product Name: MS-3230MD
Advanced Medical Lubricant

Product Use: Medical Lubricant

MANUFACTURER/DISTRIBUTOR:

Miller-Stephenson Chemical
55 Backus Ave,
Danbury, Conn. 06810 USA
(203) 743-4447

Emergency Phone Number:
(800) 424-9300

Restrictions for use: Do not use in medical applications involving implantation in the human body or contact with tissues or any bodily fluids.

2. HAZARDS IDENTIFICATION

GHS classification in accordance with the OSHA Hazard Communication Standard (29 CFR 1910.1200)
Not a hazardous substance or mixture.

GHS Label elements:

Hazard Symbol: None
Signal word: None
Hazard Statements: None
Precautionary Statements: None

Other hazards:
The thermal decomposition vapors of fluorinated plastics may cause polymer fume fever with flu-like symptoms in humans, especially when smoking contaminated tobacco.

3. INGREDIENTS

Substance/Mixture: Mixture

Material (s)	CAS No.	Approximate %
Calcium nitrite	13780-06-8	>=0.1 - <=1*

*The actual concentration or concentration range is withheld as a trade secret.

4. FIRST AID MEASURES

Inhalation: Remove patient to fresh air. Get medical attention if necessary.

Eye: In case of contact, flush eyes with water. Get medical attention if irritation develops and persists.

Skin: Wash skin with water and soap after contact. Get medical attention if symptoms occur.

Oral: If swallowed, DO NOT induce vomiting. Get medical attention if symptoms occur. Rinse mouth thoroughly with water.

Most important symptoms and effects, both acute and delayed:
Inhalation may provoke the following symptoms: Irritation, Lung edema, Shortness of breath
Skin contact may provoke the following symptoms: Irritation, Redness
Eye contact may provoke the following symptoms: Blurred vision, Discomfort, Lachrymation

Notes to Physician: Treat symptomatically and supportively.

5. FIRE FIGHTING MEASURES

Flash Point: Not applicable

Method: Pensky-Martens Close Cup

Upper explosion limit: No data available.

Lower explosion limit: No data available.

Suitable Extinguishing Media: Not applicable. Will not burn.

Unsuitable extinguishing media: Not applicable. Will not burn.

Specific hazards during fire-fighting: Exposure to combustion products may be a hazard to health.

Hazardous combustion products: Hydrogen fluoride, Carbonyl fluoride, Carbon oxides, Potentially toxic fluorinated compounds.

Special Fire Fighting Instruction: Use extinguishing measures that are appropriate to local circumstances and the surrounding environment. Use water spray to cool unopened containers. Remove undamaged containers from fire area if it is safe to do so. Evacuate personnel to safe area. Wear self-contained breathing apparatus (SCBA) if necessary. Use personal protective equipment.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures: Review FIRE FIGHTING MEASURES and HANDLING (PERSONNEL) sections before proceeding with clean-up. Use appropriate PERSONAL PROTECTIVE EQUIPMENT during clean-up.

Environmental precautions: Discharge into the environment must be avoided. Prevent further leakage or spillage if safe to do so. Retain and dispose of contaminated wash water. Local authorities should be advised if significant spillage cannot be contained.

Methods and materials for containment and clean up: Soak up with inert absorbent material. Store recovered material in appropriate container. Local or national regulations may apply to releases and disposal of this material, as well as those materials used in the cleanup of releases. You will need to determine which regulations are applicable. Sections 13 and 15 of this SDS provide information regarding certain local or national requirements.

7. HANDLING AND STORAGE

Handling: See Engineering measures under EXPOSURE CONTROLS/PERSONAL PROTECTION section. Handle in accordance with good industrial hygiene and safety practice, based on the results of the workplace exposure assessment. Take care to prevent spills, waste and minimize release to the environment.

Storage Conditions: No special restrictions on storage conditions required. Keep container closed to prevent contamination. Store in accordance with the national regulations. No decomposition if stored and applied as directed.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Engineering controls: In the event that the polymer is heated above 572°F/300ºC, local ventilation should be used to avoid exposure to fumes.

Respiratory Protection: General and local exhaust ventilation is recommended to maintain vapor exposures below recommended limits. Where concentrations are above recommended limits or are unknown, appropriate respiratory protection should be worn. Follow OSHA respirator regulations (29 CFR 1910.134) and use NIOSH/MSHA approved respirators. Protection provided by air purifying respirators against exposure to any hazardous chemical is limited. Use a positive pressure air supplied respirator if there is any potential for uncontrolled release, exposure levels are unknown, or any other circumstance where air purifying respirators may not provide adequate protection.

Eye Protection: Avoid eye contact. Use chemical goggles or safety glasses with side shields.

Skin Protection: Wash skin after contact.

Hygiene measures: Do not eat, drink or smoke when using this product. Avoid contact with skin, eyes, or clothing. Wash exposed areas thoroughly after contact.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance/Physical State:	Grease
Color:	White
Odor:	Odorless
pH:	7
Melting point:	608°F/320°C
Boiling point/boiling range:	No data available
Flammability:	Will not burn
Evaporation rate:	Not applicable
Vapor pressure:	Not applicable
Vapor density:	Not applicable
Specific gravity:	1.86 – 1.93 at 75°F/24°C
Water solubility:	Insoluble
Partition coefficient: n-Octanol/water:	Not applicable
Auto-ignition temperature:	No data available
Decomposition temperature:	572°F/300°C
Explosive properties:	Not explosive
Oxidizing properties	Not classified as oxidizing.

10. STABILITY AND REACTIVITY

Reactivity: Not classified as a reactivity hazard.

Chemical Stability: Stable under normal conditions.

Possibility of hazardous Reactions: Hazardous decomposition products will be formed at elevated temperatures.

Conditions to avoid: None known.

Incompatible Materials: None.

Hazardous decomposition Products: Hydrogen fluoride, Carbonyl difluoride, Carbon dioxide, Carbon monoxide

11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure: Skin contact, ingestion, eye contact. Acute toxicity: Not classified based on available information.

Product:
Acute oral toxicity: Acute toxicity estimated: >5,000 mg/kg. Method: Calculation method

Calcium nitrite

Acute oral toxicity: LD50 (Rat): 283mg/kg
Skin corrosion/irritation: Not classified based on available information. Species: Rabbit. Method: Directive 67/548/EEC, Annex V, B.4. Result: No skin irritation.
Serious eye damage/eye irritation: Not classified based on available information. Species: Rabbit. Irritation to eyes, reversing within 21 days. Method: Directive 67/548/EEC, Annex V, B.5.
Respiratory or skin sensitization: Skin sensitization: not classified based on available information. Respiratory sensitization: not classified based on available information. Test type: Maximization Test. Routes of exposure: Skin contact. Species: Guinea pig. Results: negative.
Germ cell mutagenicity: Not classified based on available information.
Genotoxicity in vitro: Test type: Bacterial reverse mutation assay (AMES). Results: positive. Test type: Chromosome aberration test in vitro. Results: positive. Remarks: based on data from similar materials. Test type: In vitro mammalian cell gene mutation test. Result: positive. Remarks: Based on data from similar materials.
Genotoxicity in vivo: Test type: Mammalian erythrocyte micronucleus test (in vivo cytogenetic assay). Species: Rat. Application route: Intraperitoneal injection. Result: negative. Remarks: Based on data from similar materials.
Carcinogenicity: Not classified based on available information. Species: Rat. Application route: Ingestion. Exposure time: 2 years. Result: negative. Remarks: based on data from similar materials.
Reproductive toxicity: Not classified based on available information. Effects on fertility: Test type: Two-generation reproduction toxicity study. Species: mouse. Application route: Ingestion. Results: negative. Remarks: Based on data from similar materials.
Effects on fetal development: Test Type: Embryo-fetal development. Species: Rat. Application route: Ingestion. Results: negative. Remarks: Based on data from similar materials.
STOT-single exposure: Not classified based on available information.
STOT-repeated exposure: Not classified based on available information.
Repeated dose toxicity: Species: Rat. NOAEL: 130 mg/kg. Application route: Ingestion. Exposure time: 2 y. Remarks: Based on data from similar materials.
Aspiration toxicity: Not classified based on available information.

IARC No ingredient of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

OSHA No component of this product present at levels greater than or equal to 0.1% is on OSHA's list of regulated carcinogens

NTP No ingredient of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.

12. ECOLOGICAL INFORMATION

Calcium nitrite

Toxicity to fish: LC50 (Oncorhynchus mykiss (rainbow trout)): > 100 mg/l
Exposure time: 96 h
Method: OECD Test Guideline 203

Toxicity to daphnia and other aquatic invertebrates: EC50 (Daphnia magna (Water flea)): > 45 mg/l
Exposure time: 48 h
Method: OECD Test Guideline 202
Remarks: Based on data from similar materials

Toxicity to algae/aquatic plants: ErC50 (Desmodesmus subspicatus (green algae)): > 100 mg/l
Exposure time: 72 h
Method: OECD Test Guideline 201
Remarks: Based on data from similar materials

NOEC (Desmodesmus subspicatus (green algae)): > 1 mg/l
Exposure time: 72 h
Method: OECD Test Guideline 201
Remarks: Based on data from similar materials

Toxicity to fish (Chronic toxicity): NOEC (Cyprinus carpio (Carp)): > 1 mg/l
Exposure time: 30 d
Method: OECD Test Guideline 210
Remarks: Based on data from similar materials

Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity): NOEC (Penaeid Shrimp): > 1 mg/l
Exposure time: 80 d
Remarks: Based on data from similar materials

Toxicity to microorganisms: EC50: > 100 mg/l
Exposure time: 180 min
Method: OECD Test Guideline 209
Remarks: Based on data from similar materials

Persistence and degradability: No data available.
Bioaccumulative potential: No data available.

Mobility in soil: No data available
Other adverse effects: No data available

13. DISPOSAL CONSIDERATIONS

Disposal methods-Product: Dispose of in accordance with local regulations. Do not dispose of waste into sewer.

Contaminated packaging: Empty containers should be taken to an approved waste handling site for recycling or disposal.
If not otherwise specified: Dispose of as unused product.

14. TRANSPORT INFORMATION

Not regulated as a dangerous good by DOT, IATA and IMDG.

15. REGULATORY INFORMATION

U.S. Federal Regulations

TSCA: On the inventory, or in compliance with the inventory.

CERCLA Reportable Quantity: This material does not contain any components with a CERCLA RQ.

SARA 304 Extremely Hazardous Substances Reportable Quantity: This material does not contain any components with a section 304 EHS RQ.

SARA 302 Extremely Hazardous Substances Threshold Planning Quantity: This material does not contain any components with a section 302 EHS TPQ.

SARA 311/312 Hazards: No SARA Hazards

SARA 313: This product contains the following chemicals subject to the reporting requirements of section 313 of the Emergency Planning and Community Right-to-Know Act of 1986. They may not be intentionally present in the product; however, it is possible that these may be present as an impurity and the exact concentration may vary between lots:
3,3,4,4,5,5,6,6,7,7,8,8,8-Tridecafluorooctanesulphonic acid, CAS No.: 27619-97-2, <1126 ppb
Perfluorobutanoic acid, CAS No.: 375-22-4, < 3 ppb
Perfluorohexanoic acid, CAS No.: 307-24-4, < 238 ppb
Hexafluoropropylene oxide dimer acid, CAS No.: 13252-13-6, < 461 ppb

U.S. State Regulations

Pennsylvania Right to Know
PFPE fluid: Trade Secret
Fluoropolymer: Trade Secret

California Proposition 65
WARNING: This product can expose you to chemicals including Pentadecafluorooctanoic acid, which is/are known to the State of California to cause cancer and Carbon monoxide, which is/are known to the State of California to cause birth defects or other reproductive harm. For more information go to www.P65Warnings.ca.gov. Note to User: This product is not made with PFOA nor is

PFOA intentionally present in the product; however, it is possible that PFOA may be present as an impurity at background (environmental) levels.

16. OTHER INFORMATION

HMIS Rating:

Health	- 0
Flammability	- 0
Reactivity	- 0

REVISION DATE: June 26, 2025

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text. Final determination of suitability of any material is the sole responsibility of the user.