



Silver Fern Chemical, Inc.

SAFETY DATA SHEET

Dimethylformamide

Section 1: Identification

Product Name: Dimethylformamide (DMF)
Synonyms: N,N-Dimethyl formamide
CAS #: 68-12-2
Chemical Formula: C₃H₇NO
Company: Silver Fern Chemical, Inc.
 2226 Queen Anne Avenue North, Seattle, WA 98109
Customer Service: 866-282-3384 / info@silverfernchemical.com
Recommended Use: Solvent.
Restrictions on Use: No data available.

Emergency Number:
Infotrac : 800-535-5053
Outside USA & Canada: 352-323-3500

Section 2: Hazard Identification

GHS Label elements:

GHS Classification

Acute toxicity, dermal
 Acute toxicity, inhalation
 Flammable liquid
 Reproductive toxicity
 Serious eye damage/irritation

Category

4
 4
 3
 1
 2A

Pictogram:



Signal Word: **Danger**

| Code | Hazard Statement |
|------|--|
| H226 | Flammable liquid and vapor |
| H312 | Harmful in contact with skin |
| H319 | Causes serious eye irritation |
| H332 | Harmful if inhaled |
| H360 | May damage fertility or the unborn child |

| Code | Precautionary Statement |
|------|--|
| P201 | Obtain special instructions before use. |
| P202 | Do not handle until all safety precautions have been read and understood. |
| P210 | Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. |
| P233 | Keep container tightly closed. |
| P235 | Keep cool. |
| P240 | Ground and bond container and receiving equipment. |

| | |
|------------------|--|
| P241 | Use explosion proof equipment. |
| P242 | Use non-sparking tools. |
| P243 | Take action to prevent static discharges. |
| P261 | Avoid breathing dust/fumes/gas/mist/vapor/spray. |
| P264 | Wash thoroughly after handling. |
| P271 | Use only outdoors or in a well-ventilated area. |
| P280 | Wear protective gloves/clothing and eye/face protection. |
| P302+ P352 | IF ON SKIN: Wash with plenty of water. |
| P303+ P361+ P353 | IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse with water [or shower]. |
| P304+ P340 | IF INHALED: Remove person to fresh air and keep comfortable for breathing. |
| P305+ P351+ P338 | IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. |
| P308+ P313 | IF exposed or concerned: Get medical advice/attention. |
| P312 | Call A POISON CENTER/doctor, if you feel unwell. |
| P337+ P313 | If eye irritation persists: Get medical advice/attention. |
| P362+ P364 | Take off contaminated clothing and wash it before reuse. |
| P370+ P378 | In case of fire: Use water spray, dry chemical, carbon dioxide, or alcohol resistant foam to extinguish. |
| P403 | Store in a well-ventilated place. |
| P405 | Store locked up. |
| P501 | Dispose of contents/container in accordance with local/regional regulations. |

Other classifications:

NFPA Rating:

Health: 2
 Fire: 2
 Reactivity: 0

HMIS Rating:

Health: 2
 Flammability: 2
 Physical: 0

Section 3: Composition / Information on Ingredients

| Component | CAS Number | Concentration | EC Number |
|-------------------|------------|---------------|-----------|
| Dimethylformamide | 68-12-2 | 99.9 - 100 % | 200-679-5 |

Section 4: First Aid Measures

Inhalation:

Remove to fresh air.
 If breathing is difficult, give oxygen provided a qualified individual is present.
 If not breathing, apply artificial respiration.
 Get immediate medical attention.

Ingestion:

Do NOT induce vomiting unless directed to do so by medical personnel.
 If vomiting occurs naturally, have victim lean forward to reduce risk of aspiration.
 If victim is conscious and alert, rinse mouth with water, and give plenty of water to drink.
 Never give anything by mouth to an unconscious person.
 Get immediate medical attention.

Skin Contact:

Flush skin with plenty of soap and water for at least 15 minutes while removing contaminated clothing and shoes.
 Wash clothing before reuse or discard if they cannot be thoroughly cleaned.
 Get medical attention.



Eve Contact: Flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids. Remove contact lenses, if present and easy to do so.
Get medical assistance if irritation persists.

Note to Physician: Treat symptomatically and supportively.

Section 5: Fire Fighting Measures

Extinguishing Media: Use water spray, dry chemical, carbon dioxide, or alcohol resistant foam.
Do NOT use solid water stream as it may spread fire.
Use water to cool exposed containers.
Containers may explode in the heat of a fire.
Move fire-exposed containers, if safe to do so.

Special Protective Equipment: Wear a self-contained breathing apparatus MSHA/NIOSH (approved or equivalent), and full protective gear.

Specific Hazards: Flammable liquid and vapor.
Fire residues and contaminated water must be disposed of in accordance with local regulations.
Evacuate personnel upwind in-order to avoid inhalation of irritating/harmful fumes and smoke.
Fight fire from maximum distance or use unmanned hose holders or monitor nozzles.
Vapors are heavier than air and may travel along surfaces to remote ignition sources and flash back.
Vapors may form explosive mixture with air.

Section 6: Accidental Release Measures

Emergency Procedures: Wear personal protection equipment.
Avoid contact with skin, eyes and clothing.
Avoid breathing vapors, mist or gas.
Ensure adequate ventilation.
Remove all sources of ignition.

Environmental Precautions: Prevent further leakage or spillage if safe to do so.
Do not let product enter water or sanitary sewer system.

Methods of containment/cleanup: Absorb with inert materials and place into appropriate containers for disposal.
Wash residual traces with water.
Notify appropriate authorities and dispose of in accordance with applicable requirements.

Section 7: Handling and Storage

Handling: Wear personal protection equipment.
Avoid contact with eyes, skin and clothing.
Avoid ingestion and inhalation.
Use only in well-ventilated area.
Wash thoroughly after handling.
Empty containers retain product residue (liquid and/or vapor), and can be dangerous.
Do not pressurize, cut, weld, braze, solder, drill, grind, or expose empty containers to sources of ignition.
Ground and bond containers when transferring material to avoid static discharges.
Use spark-proof tools and explosion-proof equipment.
Take precautionary measures against static discharge.

Storage: Store tightly closed container in a cool, dry, well-ventilated area.
Keep isolated from incompatible materials.
Keep away from heat, sparks, flame and other sources of ignition.

Section 8: Exposure Controls / Personal Protection

| Exposure Limits: | Regulator: | Test: | Allowance: |
|------------------|------------|-------|------------|
| | ACGIH | TWA | 10 ppm |
| | NIOSH | TWA | 10 ppm |
| | OSHA | TWA | 10 ppm |

Engineering Controls: Use adequate ventilation to keep airborne concentrations low.
An emergency eye wash/shower must be readily accessible to the work area.

Personal Protective Equipment:

Respirators: Follow the OSHA respirator regulations found in 29 CFR 1910.134. In confined areas, use a self-contained breathing apparatus.

Skin Protection: Wear appropriate protective gloves and clothing to prevent skin exposure.

Recommended glove material: Rubber/neoprene

Eye Protection: Wear appropriate protective eyeglasses or chemical safety goggles as described by OSHA's eye and face protection regulations in 29 CFR 1910.133.

Section 9: Physical and Chemical Properties

| | |
|--|---------------------------------------|
| Physical State: | Liquid |
| Color: | Clear, colorless |
| Odor: | Characteristic |
| Odor Threshold: | No data available |
| pH: | 6.5 to 8.5 (200 g/l) |
| Melting/Freezing Point: | -61 °C |
| Boiling Point: | 152°C to 153 °C |
| Decomposition Temperature: | No data available |
| Flash Point: | 57.5 °C |
| Auto-ignition Temperature: | 445 °C |
| Flammability/Explosive Limits: | 2.2 to 16 % (V) |
| Vapor Pressure: | 3.77 hPa at 20 °C 4.8 hPa at 25 °C |
| Vapor Density (air=1): | 2.52 |
| Relative Density (water=1): | 0.949 g/cm ³ at 20 °C |
| Solubility (in water): | Soluble; 200 g/L at 20 °C |
| Partition coefficient: n-Octanol/water: | Log Pow: -0.85 |
| Evaporation Rate (Butyl Acetate=1) | No data available |
| Kinematic Viscosity | No data available |
| Molecular Weight: | 73.09 g/mol |

Section 10: Stability and Reactivity

Stability: Stable at room temperature and under normal conditions.

Hazardous Reactions: Thermally stable at typical use temperatures.
Polymerization will not occur.

Conditions to Avoid: Avoid heat, sparks, open flames and other sources of ignition.
Take precautions against static discharge.

Incompatible Materials: Strong acids, strong oxidizing agents and halogenated hydrocarbons.

Decomposition Products: Carbon oxides, nitrogen oxides, and ammonia.

Section 11: Toxicological Information

Potential Health Effects:

Inhalation: Harmful if inhaled.

Skin Contact: Harmful in contact with skin

Eye Contact: Causes serious eye irritation

Ingestion: May cause nausea, vomiting and diarrhea.
More severe effects if alcohol is consumed.

Numerical Measures of Acute Toxicity:

| Route | Test | Subject | Value | Time |
|------------|-------|---------|---------------|----------|
| Dermal | LD 50 | Rabbit | > 3,160 mg/kg | |
| Inhalation | LC 50 | Rat | > 5.85 mg/l | 4 hours |
| Oral | LD 50 | Rat | 3,010 mg/kg | 48 hours |

Additional Information:

RTEC #: LQ2100000

Aspiration Toxicity: Not classified based on available information.

Carcinogenicity: This product is not classified as a carcinogen by IARC or U.S. ACGIH, NTP or OSHA.

Germ cell mutagenicity: Did not show mutagenic effects in animal experiments.

Reproductive toxicity: May damage fertility or the unborn child.

Sensitization: Not classified based on available information.

STOT - Repeated Exposure: Not classified based on available information.

STOT - Single Exposure: Not classified based on available information.

Section 12: Ecological Information

| Ecotoxicity | Group | Test | Subject | Value | Time |
|-------------|------------------------|-------|---------------|--------------|-----------|
| | Fish: | LC 50 | | 7,100 mg/L | 96 hours |
| | Aquatic invertebrates: | EC 50 | Daphnia magna | 13,100 mg/L | 48 hours |
| | Aquatic plants: | EC 50 | Algae | > 1,000 mg/L | 72 hours |
| | Micro-organisms: | EC 50 | Bacterial | 12,300 mg/L | 5 minutes |

Persistence and Degradability: Readily Biodegradable.

Bioaccumulative Potential: Low potential for bioaccumulation.

Mobility in Soil: High potential for soil mobility.

Section 13: Disposal Considerations

Packaging: Empty containers may retain product residue, follow label warnings even after container is emptied.

Disposal: Dispose of according to Federal, State, and Local Regulations.

Section 14: Transportation Information

The information in this section is for reference only and should not take the place of a bill of lading specific to an order.

UN #: UN2265
Proper Shipping Name: N, N-Dimethylformamide

Transport Hazard Class: 3
Packing Group: III
Labels & Placards: FLAMMABLE
Marine Pollutant: No
Reportable Quantity: 100 lbs.
EMS: F-E, S-D

Section 15: Regulatory Information

US Federal - TSCA: This product is listed on the TSCA active inventory.

California - Prop 65:



This product can expose you to chemicals, including N, N-Dimethylformamide (CAS: 68-12-2), which is known to the State of California to cause birth defects or other reproductive harm. For more information go to www.P65Warnings.ca.gov.

Section 16: Other Information

Revision Date: Wednesday, February 26, 2020

DISCLAIMER OF RESPONSIBILITY

The information on this SDS was obtained from sources which we believe are reliable. However, the information is provided without any warranty, expressed or implied, regarding its correctness. Some information presented and conclusions drawn herein are from sources other than direct test data on the substance itself. The conditions or methods of handling, storage, use and disposal of the product are beyond our control and may be beyond our knowledge. For this and other reasons, we do not assume responsibility and expressly disclaim liability for loss, damage, or expense arising out of or in any way connected with handling, storage, use, or disposal of this product. If the product is used as a component in another product, this SDS information may not be applicable.

<end of document>