



**Silver Fern Chemical, Inc.  
Safety Data Sheet  
Dimethylformamide**

**Revision Date:  
26 August, 2026**

**Section 1. Identification**

**Product Identity**  
**Other means of identification**

Dimethylformamide  
N,N-Dimethyl formamide

**Relevant identified uses of the substance or mixture and uses advised against**

Solvent

**Details of the supplier of the safety data sheet**

**Company Name**

Silver Fern Chemical, Inc.  
121 W. De La Guerra Street, Suite B  
Santa Barbara, CA 93101 USA  
info@silverfernchemical.com  
Website - www.silverfernchemical.com

**24 hour Emergency  
Telephone No.**

**Emergency telephone number:**  
**Infotrac: 1-800-535-5053**  
**Outside USA & Canada +1-352-323-3500**

**Customer Service:**

Customer Service: 1-866-282-3384

**Section 2. Hazard(s) identification**

**Classification of the substance or mixture under OSHA's Hazard Communication Standard (1910.1200) revised 2024 (GHS revision 7)**

Flammable Liquid, category 3;H226  
Acute toxicity(dermal), category 4;H312  
Acute toxicity(inhalation), category 4;H332

Flammable liquid and vapor.  
Harmful in contact with skin.  
Harmful if inhaled.



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Serious eye damage / eye irritation, category 2A;H319  
Reproductive toxicity, category 1B;H360D

Causes serious eye irritation.  
May damage the unborn child.

**Label elements**



**Danger**

H226 Flammable liquid and vapor.  
H312 Harmful in contact with skin.  
H319 Causes serious eye irritation.  
H332 Harmful if inhaled.  
H360D May damage the unborn child.

**[Prevention]**

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 electrical, ventilating, light, equipment.  
P242 Use non-sparking tools.  
P243 Take action to prevent static discharges.

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P261 Avoid breathing dust, fume, gas, mist, vapors, spray.  
P264 Wash thoroughly after handling.  
P271 Use only outdoors or in a well-ventilated area.  
P280 Wear protective gloves, protective clothing, eye protection, face protection.

**[Response]**

P302+352 IF ON SKIN: Wash with plenty of soap and water.  
P303+361+353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water or shower.  
P304+340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.  
P305+351+338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.  
P308+313 IF exposed or concerned: Get medical advice or attention.  
P312 Call a POISON CENTER, doctor or physician if you feel unwell.  
P337+313 If eye irritation persists: Get medical advice or attention.  
P362+364 Take off contaminated clothing and wash it before reuse.  
P370+378 In case of fire: Use extinguishing media listed in section 5 of SDS for extinction.

**[Storage]**

P403+235 Store in a well ventilated place. Keep cool.  
P405 Store locked up.

**[Disposal]**

P501 Dispose of contents or container in accordance with local and national regulations.

**Other hazards**

This product contains no PBT/vPvB/vPvM chemicals.  
This product contains no endocrine disrupting chemicals.

Does NOT contain component(s) that meet a 'definition' of per & poly fluoroalkyl substance (PFAS) per the US EPA PFASMASTER combined list of PFAS chemicals.

|                                                                 |
|-----------------------------------------------------------------|
| <p><b>Section 3. Composition/information on ingredients</b></p> |
|-----------------------------------------------------------------|

This product contains the following substances that present a hazard within the meaning of the OSHA's Hazard Communication Standard (1910.1200) revised 2024



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(GHS revision 7).

|                                                                                                                              |                   |                                                                                                                                                                                                                                                                     |                          |
|------------------------------------------------------------------------------------------------------------------------------|-------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------|
| <b>N,N-Dimethyl formamide</b><br><b>CAS Number: 68-12-2</b><br><b>Synonyms: Formamide, N,N-dimethyl-, Dimethyl formamide</b> | <b>99.9 - 100</b> | <b>Reproductive toxicity, category 1B; H360D</b><br><b>Acute toxicity(inhalation), category 4;H332</b><br><b>Acute toxicity(dermal), category 4;H312</b><br><b>Serious eye damage / eye irritation, category 2;H319</b><br><b>Flammable Liquid, category 3;H226</b> | <b>No data available</b> |
|------------------------------------------------------------------------------------------------------------------------------|-------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------|

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

\*PBT/vPvB - PBT, vPvM or vPvB-substance.

The full texts of the phrases are shown in Section 16.

## **Section 4. First aid measures**

### **Description of first aid measures**

**General** In all cases of doubt, or when symptoms persist, seek medical attention.  
Never give anything by mouth to an unconscious person.

**Inhalation** Remove to fresh air, keep patient warm and at rest. If breathing is irregular or stopped, give artificial respiration. If unconscious, place in the recovery position and obtain immediate medical attention. Give nothing by mouth.

**Eyes** Rinse with plenty of clean water for at least 15 minutes, holding the eyelids apart and seek medical attention.

**Skin** Remove contaminated clothing. Wash skin thoroughly with soap and water or use a recognized skin cleanser.

**Ingestion** If swallowed obtain immediate medical attention. Keep at rest. Do NOT induce vomiting.

### **Most important symptoms and effects, both acute and delayed**

**Overview** No specific symptom data available.  
Reproductive or genetic defect hazard. Treat symptomatically. See section 2 for further details.

**Inhalation** Harmful if inhaled.

**Eyes** Causes serious eye irritation.

**Skin** Harmful in contact with skin.



## Section 5. Fire-fighting measures

### Extinguishing media

Recommended extinguishing media; alcohol resistant foam, CO<sub>2</sub>, powder, water spray.  
Unsuitable extinguishing media: Do not use; water jet.

### Special hazards arising from the substance or mixture

Hazardous decomposition: No hazardous decomposition data available.  
Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No Smoking.  
Keep container tightly closed.  
Keep cool.  
Ground and bond container and receiving equipment.  
Use explosion-proof electrical, ventilating, light, equipment.  
Use non-sparking tools.  
Take action to prevent static discharges.  
Avoid breathing dust, fume, gas, mist, vapors, spray.

### Advice for fire-fighters

As with all fires, wear positive pressure, self-contained breathing apparatus, (SCBA) with a full face piece and protective clothing. Persons without respiratory protection should leave area. Wear SCBA during clean-up immediately after fire. No smoking.

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## Section 6. Accidental release measures

### Personal precautions, protective equipment and emergency procedures

Put on appropriate personal protective equipment (see section 8).  
Use good personal hygiene practices. Wash hands before eating, drinking, smoking or using toilet. Promptly remove soiled clothing and wash thoroughly before reuse.



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**Environmental precautions**

Do not allow spills to enter drains or waterways.

**Methods and material for containment and cleaning up**

Ventilate the area and avoid breathing vapors. Take the personal protective measures listed in section 8.

Contain and absorb spillage with non-combustible materials e.g. sand, earth, and vermiculite. Place in closed containers outside buildings and dispose of according to the Waste Regulations.

|                                               |
|-----------------------------------------------|
| <p><b>Section 7. Handling and storage</b></p> |
|-----------------------------------------------|

**Precautions for safe handling**

Handle containers carefully to prevent damage and spillage.

Wear personal protection equipment.

Avoid contact with eyes, skin and clothing.

Avoid ingestion and inhalation.

Use only in well-ventilated areas.

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.

**Conditions for safe storage, including any incompatibilities**

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.

Incompatible materials:

Strong acids, strong oxidizing agents and halogenated hydrocarbons.

**Specific end use(s)**

No available information



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## Section 8. Exposure controls / personal protection

### Control parameters

### Exposure Limits

| CAS No. | Ingredient             | Source | Value                                     |
|---------|------------------------|--------|-------------------------------------------|
| 68-12-2 | N,N-Dimethyl formamide | OSHA   | 10 ppm, 30 mg/m <sup>3</sup>              |
|         |                        | ACGIH  | TWA: 5 ppm                                |
|         |                        | NIOSH  | TWA 10 ppm (30 mg/m <sup>3</sup> ) [skin] |

### Exposure controls

**Respiratory** If workers are exposed to concentrations above the exposure limit they must use the appropriate, certified respirators.

**Eyes** Wear safety glasses with side shields to protect the eyes. An eye wash station is suggested as a good workplace practice.

**Skin** Avoid skin contact. Protective gloves recommended.

**Engineering Controls** Provide adequate ventilation. Where reasonably practicable this should be achieved by the use of local exhaust ventilation and good general extraction. If these are not sufficient to maintain concentrations of particulates and any vapor below occupational exposure limits suitable respiratory protection must be worn.

**Other Work Practices** Use good personal hygiene practices. Wash hands before eating, drinking, smoking or using toilet. Promptly remove soiled clothing and wash thoroughly before reuse.

See section 2 for further details.

## Section 9. Physical and chemical properties

### Information on basic physical and chemical properties

**Physical State**  
**Color**

Liquid  
Clear, colorless



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|                                                        |                                                 |
|--------------------------------------------------------|-------------------------------------------------|
| <b>Odor</b>                                            | Characteristic Solvent                          |
| <b>Odor threshold</b>                                  | No available information                        |
| <b>Melting point / freezing point</b>                  | -61 °C                                          |
| <b>Initial boiling point and boiling range</b>         | 152°C to 153 °C                                 |
| <b>Flammability (solid, gas)</b>                       | Not Applicable                                  |
| <b>Upper/lower flammability or explosive limits</b>    | Lower Explosive Limit: Log Pow: -0.85           |
|                                                        | Upper Explosive Limit: No available information |
| <b>Flash Point</b>                                     | 57.5 °C                                         |
| <b>Auto-ignition temperature</b>                       | 445 °C                                          |
| <b>Decomposition temperature</b>                       | No available information                        |
| <b>pH</b>                                              | 6.5 to 8.5 (200 g/l)                            |
| <b>Kinematic viscosity</b>                             | No available information                        |
| <b>Solubility in Water</b>                             | >200 g/l ( 20 °C ) Soluble                      |
| <b>Partition coefficient n-octanol/water (Log Kow)</b> | Log Pow: -0.85                                  |
| <b>Vapor pressure (Pa)</b>                             | 3.77 hPa at 20 °C 4.8 hPa at 25 °C              |
| <b>Relative Density</b>                                | 0.949 g/cm <sup>3</sup> at 20 °C                |
| <b>Vapor Density</b>                                   | 2.52                                            |
| <b>Evaporation rate (Ether = 1)</b>                    | No available information                        |
| <b>Oxidizing properties</b>                            | No available information                        |
| <b>Explosive properties</b>                            | 2.2 to 16 % (V)                                 |
| <b>Molecular Weight</b>                                | 73.09 g/mol                                     |
| <b>Other information</b>                               |                                                 |
| No other relevant information.                         |                                                 |

|                                             |
|---------------------------------------------|
| <b>Section 10. Stability and reactivity</b> |
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**Reactivity**

Hazardous Polymerization will not occur.

**Chemical stability**

Stable under normal circumstances.

**Possibility of hazardous reactions**

No available information

**Conditions to avoid**



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Avoid high temperatures and contact with incompatible material

**Incompatible materials**

Strong acids, strong oxidizing agents and halogenated hydrocarbons.

**Hazardous decomposition products**

Carbon oxides, nitrogen oxides, and ammonia.

**Section 11. Toxicological information**

**Acute toxicity**

Note: When no route specific LD50 data is available for an acute toxin, the converted acute toxicity point estimate was used in the calculation of the product's ATE (Acute Toxicity Estimate).

| Ingredient                         | Oral LD50,<br>mg/kg            | Skin LD50,<br>mg/kg               | Inhalation<br>Vapor LC50,<br>mg/L/4hr | Inhalation<br>Dust/Mist<br>LC50,<br>mg/L/4hr | Inhalation<br>Gas LC50,<br>ppm |
|------------------------------------|--------------------------------|-----------------------------------|---------------------------------------|----------------------------------------------|--------------------------------|
| N,N-Dimethyl formamide - (68-12-2) | 2,800.00, Rat -<br>Category: 5 | 1,500.00, Rabbit -<br>Category: 4 | No data<br>available.                 | No data<br>available.                        | No data<br>available.          |

**Carcinogen Data**

| CAS No. | Ingredient             | Source | Value                     |
|---------|------------------------|--------|---------------------------|
| 68-12-2 | N,N-Dimethyl formamide | OSHA   | Regulated Carcinogen: No; |
|         |                        | NTP    | Known: No; Suspected: No; |
|         |                        | IARC   | Group 2a                  |
|         |                        | ACGIH  | A3                        |

| Classification                | Category | Hazard Description             |
|-------------------------------|----------|--------------------------------|
| Acute toxicity (oral)         | ---      | Not Applicable                 |
| Acute toxicity (dermal)       | 4        | Harmful in contact with skin.  |
| Acute toxicity (inhalation)   | 4        | Harmful if inhaled.            |
| Skin corrosion/irritation     | ---      | Not Applicable                 |
| Serious eye damage/irritation | 2A       | Causes serious eye irritation. |
| Respiratory sensitization     | ---      | Not Applicable                 |
| Skin sensitization            | ---      | Not Applicable                 |
| Germ cell mutagenicity        | ---      | Not Applicable                 |
| Carcinogenicity               | ---      | Not Applicable                 |



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|                        |     |                              |
|------------------------|-----|------------------------------|
| Reproductive toxicity  | 1B  | May damage the unborn child. |
| STOT-single exposure   | --- | Not Applicable               |
| STOT-repeated exposure | --- | Not Applicable               |
| Aspiration hazard      | --- | Not Applicable               |

**Possible routes of entry:**

Inhalation, ingestion, skin contact, and skin absorption.

**Symptoms and effects, both acute and delayed:**

No specific symptom data available.

Reproductive or genetic defect hazard. Treat symptomatically.

**Inhalation**

Harmful if inhaled.

**Eyes**

Causes serious eye irritation.

**Skin**

Harmful in contact with skin.

**Ingestion:**

May cause nausea, vomiting and diarrhea.

More severe effects if alcohol is consumed.

**Section 12. Ecological information**

**Toxicity**

No additional information provided for this product. See Section 3 for chemical specific data.

**Aquatic Ecotoxicity**

| Ingredient                         | 96 hr LC50 fish, mg/L                | 48 hr EC50 crustacea, mg/L     | ErC50 algae, mg/L                      |
|------------------------------------|--------------------------------------|--------------------------------|----------------------------------------|
| N,N-Dimethyl formamide - (68-12-2) | 7,100.00, <i>Lepomis macrochirus</i> | 100.00, <i>Crangon crangon</i> | 500.00, <i>Desmodesmus subspicatus</i> |

**Persistence and degradability**

Readily Biodegradable.

**Bioaccumulative potential**

Low potential for bioaccumulation.

**Mobility in soil**

High potential for soil mobility.

**Results of PBT and vPvB assessment**

This product contains no PBT/vPvB/vPvM chemicals.

**Other adverse effects**



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No available information

**Section 13. Disposal considerations**

**Waste treatment methods**

Observe all federal, provincial and local regulations when disposing of this substance.

**Section 14. Transport information**



|                                   | <b>DOT (Domestic Surface Transportation)</b> | <b>IMO / IMDG (Ocean Transportation)</b> | <b>ICAO/IATA</b>                      |
|-----------------------------------|----------------------------------------------|------------------------------------------|---------------------------------------|
| <b>UN number</b>                  | UN2265                                       | UN2265                                   | UN2265                                |
| <b>UN proper shipping name</b>    | N, N-Dimethylformamide                       | N, N-Dimethylformamide                   | N, N-Dimethylformamide                |
| <b>Transport hazard class(es)</b> | Class: 3<br>Sub Class: Not Applicable        | Class: 3<br>Sub Class: Not Applicable    | Class: 3<br>Sub Class: Not Applicable |
| <b>Packing group</b>              | III                                          | III                                      | III                                   |

**Environmental hazards**

IMDG Marine Pollutant: No;



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**Special precautions for user**

No available information

**Section 15. Regulatory information**

**Regulatory Overview** The regulatory data in Section 15 is not intended to be all-inclusive, only selected regulations are represented.

Classification of the substance or mixture under OSHA's Hazard Communication Standard (1910.1200) revised 2024 (GHS revision 7)

**Toxic Substance Control Act (TSCA)**

| CAS Number   | Ingredient             | Toxic Substance Control Act (TSCA) | Comments | Status |
|--------------|------------------------|------------------------------------|----------|--------|
| 0000068-12-2 | N,N-Dimethyl formamide | Yes                                |          | ACTIVE |

The following flags are used:

- Active - indicates commercial status designation of active
- E - indicates a substance that is the subject of a Section 5(e) Consent Order under TSCA.
- F - indicates a substance that is the subject of a Section 5(f) Rule under TSCA.
- N - indicates a polymeric substance containing no free-radical initiator in its Inventory name but is considered to cover the designated polymer made with any free-radical initiator regardless of the amount used.
- P - indicates a commenced Premanufacture Notice (PMN) substance.
- R - indicates a substance that is the subject of a Section 6 risk management rule under TSCA.
- S - indicates a substance that is identified in a final Significant New Uses Rule.
- SP - indicates a substance that is identified in a proposed Significant New Uses Rule.
- T - indicates a substance that is the subject of a final Section 4 test rule under TSCA.
- UVCB Chemical Substances of Unknown or Variable Composition, Complex Reaction Products and Biological Materials •XU - indicates a substance exempt from reporting under the Chemical Data Reporting Rule, (40 CFR 711).
- Y1 - indicates a polymer that has a number-average molecular weight greater than 1,000 and that was exempt under the 1984 polymer exemption rule.
- Y2 - indicates a polymer that is a polyester and that was exempt under the 1984 polymer exemption rule.

**EPCRA 302 Extremely Hazardous:**

To the best of our knowledge, there are no chemicals at levels which require reporting under this statute.

**EPCRA 313 Toxic Chemicals:**

N,N-Dimethyl formamide



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**Proposition 65 - Carcinogens (>0.0%):**

N,N-Dimethyl formamide

**Proposition 65 - Developmental Toxins (>0.0%):**

To the best of our knowledge, there are no chemicals at levels which require reporting under this statute.

**Proposition 65 - Female Repro Toxins (>0.0%):**

To the best of our knowledge, there are no chemicals at levels which require reporting under this statute.

**Proposition 65 - Male Repro Toxins (>0.0%):**

To the best of our knowledge, there are no chemicals at levels which require reporting under this statute.

**Proposition 65 Label Warning:**



WARNING: This product can expose you to chemicals including [N,N-Dimethyl formamide], which is known to the State of California to cause cancer. For more information go to [www.P65Warnings.ca.gov](http://www.P65Warnings.ca.gov).

**Mass RTK Substances (>1%) :**

N,N-Dimethyl formamide

**New Jersey RTK Substances (>1%):**

N,N-Dimethyl formamide

**Pennsylvania RTK Substances (>1%):**

N,N-Dimethyl formamide

**OSHA Process Safety Management Standard Highly Hazardous Chemicals,  
Toxics and Reactives:**

To the best of our knowledge, there are no chemicals at levels which require reporting under this statute.

**US EPA List of Regulated Substances under the Risk Management Plan (RMP)  
Program:**

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To the best of our knowledge, there are no chemicals at levels which require reporting under this statute.

**US EPA Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA) under the Minimum Risk Exemption:**

To the best of our knowledge, there are no chemicals at levels which require reporting under this statute.

**U.S. - DEA List II or Essential Chemicals:**

To the best of our knowledge, there are no chemicals at levels which require reporting under this statute.

**U.S. - DEA - Exempt Chemical Mixtures - List 1 and 2:**

To the best of our knowledge, there are no chemicals at levels which require reporting under this statute.

**US DHS Chemical Facility Anti-Terrorism Standards (CFATS):**

To the best of our knowledge, there are no chemicals at levels which require reporting under this statute.

**CERCLA Chemicals and RQs (lbs):**

N,N-Dimethyl formamide ( 100.00)

|                                      |
|--------------------------------------|
| <b>Section 16. Other information</b> |
|--------------------------------------|

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**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, express 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 damage or expense arising out of or in any way responsibility and expressly disclaim liability for loss, 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.



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product is used as a component in another product, this SDS information may not be applicable.

The full text of the phrases appearing in section 3 is:

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.

**End of Document**