

## SECTION 1: IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

**Product Identifier**

**Product Description:** 1-Fluoro-2,4-dinitrobenzene  
**Cat No. :** A11871  
**Synonyms** 1-Fluoro-2,4-dinitrobenzene; DNF; Sanger's Reagent  
**CAS No** 70-34-8  
**Molecular Formula** C6 H3 F N2 O4

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

**Recommended Use** Laboratory chemicals.  
**Uses advised against** No Information available

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

|   |   |
|---|---|
| <b>Importer</b><br>Fisher Scientific Korea<br>D5,D6, Incheon Airport Logistics Complex<br>150, Gonghangdong-Ro 296 Beon-Gil<br>Jung-Gu, Incheon<br>Tel: +82-1661-9555<br>Fax: +82-2-2023-0603 | <b>Supplier</b><br>Thermo Fisher Scientific Chemicals, Inc.<br>30 Bond Street<br>Ward Hill, MA 01835-8099 |
|---|---|

**E-mail address** Chem.KR@thermofisher.com

**Emergency Telephone Number**

Emergency telephone: Medical: +(82) 070-7686-0086 or + 1-703-741-5970  
 CHEMTREC: 080 822 1374 (Local), CHEMTREC: 1-800-424-9300 or + 1-703-527-3887  
 Korea: 00-308-13-2549 (24 hours a day, 7 days a week)

## SECTION 2: HAZARDS IDENTIFICATION

**Classification of the substance or mixture**
**Physical hazards**

Based on available data, the classification criteria are not met

**Health hazards**

|  |            |
|--|------------|
| Acute Oral Toxicity                                  | Category 3 |
| Acute Dermal Toxicity                                | Category 3 |
| Acute Inhalation Toxicity - Dusts and Mists          | Category 3 |
| Skin Corrosion/Irritation                            | Category 2 |
| Serious Eye Damage/Eye Irritation                    | Category 2 |
| Skin Sensitization                                   | Category 1 |
| Specific target organ toxicity - (single exposure)   | Category 3 |
| Specific target organ toxicity - (repeated exposure) | Category 2 |

# SAFETY DATA SHEET

1-Fluoro-2,4-dinitrobenzene

Revision Date 08-Jun-2024

## Environmental hazards

Based on available data, the classification criteria are not met

## Label Elements



Signal Word

Danger

## Hazard Statements

H315 - Causes skin irritation

H317 - May cause an allergic skin reaction

H319 - Causes serious eye irritation

H335 - May cause respiratory irritation

H373 - May cause damage to organs through prolonged or repeated exposure

H301 + H311 + H331 - Toxic if swallowed, in contact with skin or if inhaled

## Precautionary Statements

### Prevention

P264 - Wash hands and face thoroughly after handling

P270 - Do not eat, drink or smoke when using this product

P280 - Wear protective gloves/protective clothing/eye protection/face protection

P261 - Avoid breathing dust/fume/gas/mist/vapors/spray

P271 - Use only outdoors or in a well-ventilated area

P272 - Contaminated work clothing should not be allowed out of the workplace

P260 - Do not breathe dust/fume/gas/mist/vapors/spray

### Response

P301 + P310 - IF SWALLOWED: Immediately call a POISON CENTER or doctor

P330 - Rinse mouth

P321 - Specific treatment (see supplemental first aid instructions on this label)

P302 + P352 - IF ON SKIN: Wash with plenty of soap and water

P312 - Call a POISON CENTER or doctor if you feel unwell

P361 + P364 - Take off immediately all contaminated clothing and wash it before reuse

P304 + P340 - IF INHALED: Remove person to fresh air and keep comfortable for breathing

P311 - Call a POISON CENTER or doctor

P332 + P313 - If skin irritation occurs: Get medical advice/attention

P362 + P364 - Take off contaminated clothing and wash it before reuse

P333 + P313 - If skin irritation or rash occurs: Get medical advice/attention

P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing

P337 + P313 - If eye irritation persists: Get medical advice/attention

P314 - Get medical advice/attention if you feel unwell

### Storage

P405 - Store locked up

P403 + P233 - Store in a well-ventilated place. Keep container tightly closed

### Disposal

P501 - Dispose of contents/ container to an approved waste disposal plant

## Other Hazards

Toxic to terrestrial vertebrates

This product does not contain any known or suspected endocrine disruptors

# SAFETY DATA SHEET

1-Fluoro-2,4-dinitrobenzene

Revision Date 08-Jun-2024

## NFPA

Health  
3

Flammability  
1

Instability  
0

Physical hazards  
N/A

## SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

### 3.1. Substances

| Component                      | Common Name  | CAS No  | Index No   | Weight % |
|--------------------------------|--|---------|------------|----------|
| Benzene, 1-fluoro-2,4-dinitro- | 1-Fluoro-2,4-dinitrobenzene; DNF; Sanger's Reagent | 70-34-8 | Not listed | 99 - 100 |

## SECTION 4: FIRST AID MEASURES

### Description of first aid measures

#### General Advice

Show this safety data sheet to the doctor in attendance. Immediate medical attention is required.

#### Eye Contact

In the case of contact with eyes, rinse immediately with plenty of water and seek medical advice. Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes.

#### Skin Contact

Wash off immediately with plenty of water for at least 15 minutes. Immediate medical attention is required.

#### Ingestion

Do NOT induce vomiting. Call a physician or poison control center immediately.

#### Inhalation

Remove to fresh air. If not breathing, give artificial respiration. Do not use mouth-to-mouth method if victim ingested or inhaled the substance; give artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device. Immediate medical attention is required.

#### Self-Protection of the First Aider

Ensure that medical personnel are aware of the material(s) involved, take precautions to protect themselves and prevent spread of contamination.

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

None reasonably foreseeable. May cause allergic skin reaction. Symptoms of allergic reaction may include rash, itching, swelling, trouble breathing, tingling of the hands and feet, dizziness, lightheadedness, chest pain, muscle pain or flushing.

### Indication of any immediate medical attention and special treatment needed

#### Notes to Physician

Treat symptomatically.

## SECTION 5: FIREFIGHTING MEASURES

### Extinguishing media

#### Suitable Extinguishing Media

Water spray. Carbon dioxide (CO<sub>2</sub>). Dry chemical. Chemical foam.

#### Extinguishing media which must not be used for safety reasons

No information available.

### Special hazards arising from the substance or mixture

ALFAAA11871

# SAFETY DATA SHEET

1-Fluoro-2,4-dinitrobenzene

Revision Date 08-Jun-2024

Thermal decomposition can lead to release of irritating gases and vapors.

## Hazardous Combustion Products

Nitrogen oxides (NOx), Carbon monoxide (CO), Carbon dioxide (CO<sub>2</sub>), Gaseous hydrogen fluoride (HF).

## Advice for fire-fighters

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear. Thermal decomposition can lead to release of irritating gases and vapors.

## SECTION 6: ACCIDENTAL RELEASE MEASURES

### Personal Precautions, Protective Equipment and Emergency Procedures

Ensure adequate ventilation. Use personal protective equipment as required. Avoid dust formation. Keep people away from and upwind of spill/leak. Evacuate personnel to safe areas.

### Environmental precautions

Should not be released into the environment.

### Methods and Material for Containment and Cleaning Up

Sweep up and shovel into suitable containers for disposal. Avoid dust formation.

### Reference to Other Sections

Refer to protective measures listed in Sections 8 and 13.

## SECTION 7: HANDLING AND STORAGE

### Precautions for Safe Handling

Do not get in eyes, on skin, or on clothing. Wear personal protective equipment/face protection. Avoid dust formation. Use only under a chemical fume hood. Do not breathe (dust, vapor, mist, gas). Do not ingest. If swallowed then seek immediate medical assistance.

### Conditions for Safe Storage, Including any Incompatibilities

Keep in a dry, cool and well-ventilated place. Keep container tightly closed.

### Specific End Uses

Use in laboratories.

## SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

### Control Parameters

| Component                         | CAS No  | Korea      | ACGIH TLV  | OSHA PEL   |
|-----------------------------------|---------|------------|------------|------------|
| Benzene,<br>1-fluoro-2,4-dinitro- | 70-34-8 | Not listed | Not listed | Not listed |

| Component                         | CAS No  | European Union | The United Kingdom | Germany    |
|-----------------------------------|---------|----------------|--------------------|------------|
| Benzene,<br>1-fluoro-2,4-dinitro- | 70-34-8 | Not listed     | Not listed         | Not listed |

### ACGIH - Biological Exposure Indices

| Component | CAS No  | ACGIH - Biological Exposure Indices |
|-----------|---------|-------------------------------------|
| Benzene,  | 70-34-8 | Not listed                          |

# SAFETY DATA SHEET

1-Fluoro-2,4-dinitrobenzene

Revision Date 08-Jun-2024

|                       |  |  |
|-----------------------|--|--|
| 1-fluoro-2,4-dinitro- |  |  |
|-----------------------|--|--|

## Exposure Controls

### Engineering Measures

Ensure adequate ventilation, especially in confined areas. Ensure that eyewash stations and safety showers are close to the workstation location.

Wherever possible, engineering control measures such as the isolation or enclosure of the process, the introduction of process or equipment changes to minimise release or contact, and the use of properly designed ventilation systems, should be adopted to control hazardous materials at source

### Personal protective equipment

#### **Eye Protection**

Goggles

#### **Hand Protection**

Protective gloves

#### **Skin and body protection**

Wear appropriate protective gloves and clothing to prevent skin exposure

Inspect gloves before use.

Please observe the instructions regarding permeability and breakthrough time which are provided by the supplier of the gloves. (Refer to manufacturer/supplier for information)

Ensure gloves are suitable for the task: Chemical compatability, Dexterity, Operational conditions, User susceptibility, e.g. sensitisation effects, also take into consideration the specific local conditions under which the product is used, such as the danger of cuts, abrasion.

Remove gloves with care avoiding skin contamination.

#### **Personal protective equipment**

#### **Respiratory Protection**

Use only those certified by the Korea Occupational Safety and Health Administration.

When workers are facing concentrations above the exposure limit they must use appropriate certified respirators

#### **Recommended Filter type:**

Particulates filter conforming to EN 143

To protect the wearer, respiratory protective equipment must be the correct fit and be used and maintained properly

When RPE is used a face piece Fit Test should be conducted

### Hygiene Measures

Handle in accordance with good industrial hygiene and safety practice

### Environmental exposure controls

No information available

## SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

### Information on basic physical and chemical properties

**Appearance (Physical State, Color, etc.)** Dark yellow Solid

#### **Odor**

pungent

#### **Odor Threshold**

No data available

#### **pH**

Not applicable 4444

#### **Melting Point/Range**

23 - 26 °C / 73.4 - 78.8 °F

#### **Softening Point**

No data available

#### **Boiling Point/Range**

296 °C / 564.8 °F

#### **Flash Point**

> 164 °C / > 327.2 °F

**Method -** No information available

#### **Evaporation Rate**

Not applicable

Solid

#### **Flammability (solid,gas)**

No information available

#### **Explosion Limits**

No data available

# SAFETY DATA SHEET

1-Fluoro-2,4-dinitrobenzene

Revision Date 08-Jun-2024

|                              |                          |       |
|------------------------------|--------------------------|-------|
| Vapor Pressure               | 1 mbar @ 20 °C           |       |
| Vapor Density                | Not applicable           | Solid |
| Specific Gravity / Density   | 1.480                    |       |
| Bulk Density                 | No data available        |       |
| Water Solubility             | Insoluble                |       |
| Solubility in other solvents | No information available |       |

## Partition Coefficient (n-octanol/water)

| Component                      | CAS No  | log Pow           |
|--------------------------------|---------|-------------------|
| Benzene, 1-fluoro-2,4-dinitro- | 70-34-8 | No data available |

|                           |                          |       |
|---------------------------|--------------------------|-------|
| Autoignition Temperature  | No data available        |       |
| Decomposition Temperature | No data available        |       |
| Viscosity                 | Not applicable           | Solid |
| Explosive Properties      | No information available |       |
| Oxidizing Properties      | No information available |       |

|                   |               |
|-------------------|---------------|
| Molecular Formula | C6 H3 F N2 O4 |
| Molecular Weight  | 186.1         |

## SECTION 10: STABILITY AND REACTIVITY

**Reactivity**

None known, based on information available

**Chemical Stability**

Stable under normal conditions.

### Possibility of Hazardous Reactions

|                          |  |
|--------------------------|--|
| Hazardous Polymerization | Hazardous polymerization does not occur. |
| Hazardous Reactions      | None under normal processing.            |

**Conditions to Avoid**

Keep away from open flames, hot surfaces and sources of ignition. Excess heat.  
Incompatible products.

**Incompatible Materials**

Strong oxidizing agents. Strong bases.

### Hazardous Decomposition Products

Nitrogen oxides (NO<sub>x</sub>). Carbon monoxide (CO). Carbon dioxide (CO<sub>2</sub>). Gaseous hydrogen fluoride (HF).

## SECTION 11: TOXICOLOGICAL INFORMATION

### 11.1. Information on hazard classes as defined in Regulation (EC) No 1272/2008

#### Product Information

# SAFETY DATA SHEET

1-Fluoro-2,4-dinitrobenzene

Revision Date 08-Jun-2024

## Information on expected route of exposure

**Inhalation** Not an expected route of exposure.  
**Ingestion** May be harmful if swallowed.  
**Eyes** Avoid contact with eyes. Irritating to eyes.  
**Skin** Avoid contact with skin. May cause irritation. Harmful in contact with skin.

## Information on Health Hazards

### (a) acute toxicity;

**Oral** Category 3  
**Dermal** Category 3  
**Inhalation** Category 3

| Component                      | CAS No  | LD50 Oral         | LD50 Dermal       | LC50 Inhalation   |
|--------------------------------|---------|-------------------|-------------------|-------------------|
| Benzene, 1-fluoro-2,4-dinitro- | 70-34-8 | No data available | No data available | No data available |

**(b) skin corrosion/irritation;** Category 2

**(c) serious eye damage/irritation;** Category 2

### (d) respiratory or skin sensitization;

**Respiratory** No data available  
**Skin** Category 1

| Component                      | CAS No  | Test method       | Test species      | Study result      |
|--------------------------------|---------|-------------------|-------------------|-------------------|
| Benzene, 1-fluoro-2,4-dinitro- | 70-34-8 | No data available | No data available | No data available |

No information available

**(e) germ cell mutagenicity;** No data available

| Component                      | CAS No  | Test method       | Test species      | Study result      |
|--------------------------------|---------|-------------------|-------------------|-------------------|
| Benzene, 1-fluoro-2,4-dinitro- | 70-34-8 | No data available | No data available | No data available |

**(f) carcinogenicity;** No data available

| Component                      | CAS No  | Test method       | Test species / Duration | Study result      |
|--------------------------------|---------|-------------------|-------------------------|-------------------|
| Benzene, 1-fluoro-2,4-dinitro- | 70-34-8 | No data available | No data available       | No data available |

There are no known carcinogenic chemicals in this product

| Component                      | CAS No  | IARC       | NTP        | ACGIH      | OSHA       | UK         |
|--------------------------------|---------|------------|------------|------------|------------|------------|
| Benzene, 1-fluoro-2,4-dinitro- | 70-34-8 | Not listed | Not listed | Not listed | Not listed | Not listed |

**(g) reproductive toxicity;** No data available

| Component                      | CAS No  | Test method       | Test species / Duration | Study result      |
|--------------------------------|---------|-------------------|-------------------------|-------------------|
| Benzene, 1-fluoro-2,4-dinitro- | 70-34-8 | No data available | No data available       | No data available |

**(h) STOT-single exposure;  
Results / Target organs** Category 3  
Respiratory system.

**(i) STOT-repeated exposure;** Category 2

**Target Organs** Kidney.

**(j) aspiration hazard;** Not applicable

# SAFETY DATA SHEET

1-Fluoro-2,4-dinitrobenzene

Revision Date 08-Jun-2024

Solid

## Other Adverse Effects

Symptoms of allergic reaction may include rash, itching, swelling, trouble breathing, tingling of the hands and feet, dizziness, lightheadedness, chest pain, muscle pain or flushing.

| Component                      | CAS No  | EU - Endocrine Disruptors Candidate List | EU - Endocrine Disruptors - Evaluated Substances | Japan - Endocrine Disruptor Information |
|--------------------------------|---------|--|--|---|
| Benzene, 1-fluoro-2,4-dinitro- | 70-34-8 | Not applicable                           | Not applicable                                   | Not applicable                          |

## SECTION 12: ECOLOGICAL INFORMATION

### Ecotoxicity effects

Contains no substances known to be hazardous to the environment or that are not degradable in waste water treatment plants.

| Component                      | CAS No  | Freshwater Fish   | Water Flea        | Freshwater Algae  | Microtox          |
|--------------------------------|---------|-------------------|-------------------|-------------------|-------------------|
| Benzene, 1-fluoro-2,4-dinitro- | 70-34-8 | No data available | No data available | No data available | No data available |

### Persistence and degradability

#### Persistence

Persistence is unlikely, based on information available, Insoluble in water.

### Bioaccumulative potential

May have some potential to bioaccumulate

### Mobility in soil

Spillage unlikely to penetrate soil The product is insoluble and sinks in water Is not likely mobile in the environment due its low water solubility.

### Ozone Depletion Potential

| Component                      | CAS No  | Ozone Depletion Potential |
|--------------------------------|---------|---------------------------|
| Benzene, 1-fluoro-2,4-dinitro- | 70-34-8 | Not listed                |

### Other adverse effects

No information available

## SECTION 13: DISPOSAL CONSIDERATIONS

### Waste treatment methods

#### Waste from Residues/Unused Products

Waste is classified as hazardous. Dispose in accordance with the Wastes Control Act (폐기물관리법).

#### Contaminated Packaging

Dispose of this container to hazardous or special waste collection point.

#### Other Information

Waste codes should be assigned by the user based on the application for which the product was used. Do not empty into drains.

## SECTION 14: TRANSPORT INFORMATION

### Road and Rail Transport

UN-No UN2811  
Proper Shipping Name Toxic solid, organic, n.o.s.  
Technical Shipping Name 2,4-Dinitrofluorobenzene  
Hazard Class 6.1  
Packing Group II

### IATA

UN-No UN2811  
Proper Shipping Name TOXIC SOLID, ORGANIC, N.O.S.\*

ALFAAA11871



# SAFETY DATA SHEET

1-Fluoro-2,4-dinitrobenzene

Revision Date 08-Jun-2024

**Technical Shipping Name** 2,4-Dinitrofluorobenzene  
**Hazard Class** 6.1  
**Packing Group** II

## IMDG/IMO

**UN-No** UN2811  
**Proper Shipping Name** Toxic solid, organic, n.o.s.  
**Technical Shipping Name** 2,4-Dinitrofluorobenzene  
**Hazard Class** 6.1  
**Packing Group** II  
**Marine Pollutant** No hazards identified

**Special Precautions for User** No special precautions required

## SECTION 15: REGULATORY INFORMATION

### Safety, health and environmental regulations/legislation specific for the substance or mixture

**Legend:** X - Listed '-' - Not Listed

### International Inventories

| Component                      | CAS No  | KECL | TSCA | EINECS    | IECSC | DSL | NDSL | PICCS | ENCS | ISHL | AICS |
|--------------------------------|---------|------|------|-----------|-------|-----|------|-------|------|------|------|
| Benzene, 1-fluoro-2,4-dinitro- | 70-34-8 | -    | X    | 200-734-3 | X     | X   | -    | X     | X    | X    | X    |

| Component                      | CAS No  | Seveso III Directive (2012/18/EC) - Qualifying Quantities for Major Accident Notification | Seveso III Directive (2012/18/EC) - Qualifying Quantities for Safety Report Requirements | Rotterdam Convention (PIC) | Basel Convention (Hazardous Waste) |
|--------------------------------|---------|---|--|----------------------------|------------------------------------|
| Benzene, 1-fluoro-2,4-dinitro- | 70-34-8 | Not applicable  | Not applicable   | Not applicable             | Not applicable                     |

| Component                      | CAS No  | OECD HPV       | Persistent Organic Pollutant | Ozone Depletion Potential |
|--------------------------------|---------|----------------|------------------------------|---------------------------|
| Benzene, 1-fluoro-2,4-dinitro- | 70-34-8 | Not applicable | Not applicable               | Not applicable            |

### Korean National Regulations

| Component                      | CAS No  | Act on Registration and Evaluation of Chemical Substances (K-REACH) | Authorised Chemicals | Existing Substances Subject to Registration |
|--------------------------------|---------|---|----------------------|---|
| Benzene, 1-fluoro-2,4-dinitro- | 70-34-8 | Not applicable  | Not applicable       | Not applicable                              |

| Component                      | CAS No  | Chemical Control Act - Toxic Chemicals | Chemical Control Act - Prohibited Chemicals | Chemical Control Act - Use Restricted Chemicals |
|--------------------------------|---------|--|---|---|
| Benzene, 1-fluoro-2,4-dinitro- | 70-34-8 | Not applicable                         | Not applicable                              | Not applicable                                  |

| Component                      | CAS No  | Chemical Control Act - Accident Precaution Chemicals (% in mixtures) | Chemical Control Act - Accident Precaution Chemicals - Quantity limits Storage (% in mixtures) | Chemical Control Act - Accident Precaution Chemicals - Quantity limits Manufacture/Use (% in mixtures) |
|--------------------------------|---------|--|--|--|
| Benzene, 1-fluoro-2,4-dinitro- | 70-34-8 | Not applicable   | Not applicable   | Not applicable   |

| Component                      | CAS No  | Waste Control Law | Ministry of Environment - CMR risk | Ministry of Environment - Critically Controlled Substance |
|--------------------------------|---------|-------------------|------------------------------------|---|
| Benzene, 1-fluoro-2,4-dinitro- | 70-34-8 | Not applicable    | Not applicable                     | Not applicable  |

ALFAAA11871

# SAFETY DATA SHEET

1-Fluoro-2,4-dinitrobenzene

Revision Date 08-Jun-2024

| Component                      | CAS No  | ISHA - Harmful Agents Subject to Work Environment Monitoring | ISHA - Prohibited substances | ISHA - Substances requiring permission |
|--------------------------------|---------|--|------------------------------|--|
| Benzene, 1-fluoro-2,4-dinitro- | 70-34-8 | Not applicable   | Not applicable               | Not applicable                         |

| Component                      | CAS No  | ISHA - Substances subject to control | ISHA - Harmful Agents Requiring Health Examination | ISHA - Permissible Exposure Limits |
|--------------------------------|---------|--------------------------------------|--|------------------------------------|
| Benzene, 1-fluoro-2,4-dinitro- | 70-34-8 | Not applicable                       | Not applicable                                     | Not applicable                     |

| Component                      | CAS No  | ISHA - Subject to Process Safety Reports (minimum quantity) | ISHA - Threshold Limit Values (TLVs) Chemicals | ISHA - Special management materials |
|--------------------------------|---------|---|--|-------------------------------------|
| Benzene, 1-fluoro-2,4-dinitro- | 70-34-8 | Not applicable  | Not applicable                                 | Not applicable                      |

**National Fire Association - Dangerous Substances** Minimum quantity requiring a permit

| Component                      | CAS No  | Class 1 - Oxidising solids | Class 2 - Flammable solid   | Class 3 - Spontaneously Combustible Substances and Dangerous Substances When Wet | Class 4 - Flammable liquids | Class 5 - Self-reactive substances | Class 6 - Oxidising liquids |
|--------------------------------|---------|----------------------------|-----------------------------|--|-----------------------------|------------------------------------|-----------------------------|
| Benzene, 1-fluoro-2,4-dinitro- | 70-34-8 | Not applicable             | 9. Flammable solids 1000 kg | Not applicable   | Not applicable              | Not applicable                     | Not applicable              |

## Control Parameters

| Component                      | CAS No  | Korea      | ACGIH - Biological Exposure Indices |
|--------------------------------|---------|------------|-------------------------------------|
| Benzene, 1-fluoro-2,4-dinitro- | 70-34-8 | Not listed | Not listed                          |

## US Management Information

OSHA - Occupational Safety and Health Administration  
Not applicable

| Component                      | CAS No  | Specifically Regulated Chemicals | Highly Hazardous Chemicals |
|--------------------------------|---------|----------------------------------|----------------------------|
| Benzene, 1-fluoro-2,4-dinitro- | 70-34-8 | Not applicable                   | Not applicable             |

**CERCLA** Not applicable

| Component                      | CAS No  | CERCLA Extremely Hazardous Substances RQs | Hazardous Substances RQs | SARA 313 - Threshold Values % |
|--------------------------------|---------|---|--------------------------|-------------------------------|
| Benzene, 1-fluoro-2,4-dinitro- | 70-34-8 | Not applicable                            | Not applicable           | Not applicable                |

## GHS Classification - According to GB-CLP Regulations UK SI 2019/720 and UK SI 2020/1567

Danger.

H301 + H311 + H331 - Toxic if swallowed, in contact with skin or if inhaled. H315 - Causes skin irritation. H317 - May cause an allergic skin reaction. H319 - Causes serious eye irritation. H335 - May cause respiratory irritation. H373 - May cause damage to organs through prolonged or repeated exposure.

P280 - Wear protective gloves/protective clothing/eye protection/face protection. P301 + P330 + P331 - IF SWALLOWED: rinse mouth. Do NOT induce vomiting. P302 + P352 - IF ON SKIN: Wash with plenty of soap and water. 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. P311 - Call a POISON CENTER or doctor/physician.

# SAFETY DATA SHEET

1-Fluoro-2,4-dinitrobenzene

Revision Date 08-Jun-2024

## SECTION 16: OTHER INFORMATION

### Legend

**CAS** - Chemical Abstracts Service

**EINECS/ELINCS** - European Inventory of Existing Commercial Chemical Substances/EU List of Notified Chemical Substances

**PICCS** - Philippines Inventory of Chemicals and Chemical Substances

**IECSC** - Chinese Inventory of Existing Chemical Substances

**KECL** - Korean Existing and Evaluated Chemical Substances

**TSCA** - United States Toxic Substances Control Act Section 8(b) Inventory

**DSL/NDL** - Canadian Domestic Substances List/Non-Domestic Substances List

**ENCS** - Japanese Existing and New Chemical Substances

**AICS** - Australian Inventory of Chemical Substances

**NZIoC** - New Zealand Inventory of Chemicals

**WEL** - Workplace Exposure Limit

**ACGIH** - American Conference of Governmental Industrial Hygienists

**RPE** - Respiratory Protective Equipment

**LC50** - Lethal Concentration 50%

**POW** - Partition coefficient Octanol:Water

**TWA** - Time Weighted Average

**IARC** - International Agency for Research on Cancer

**LD50** - Lethal Dose 50%

**EC50** - Effective Concentration 50%

**ADR** - European Agreement Concerning the International Carriage of Dangerous Goods by Road

**IMO/IMDG** - International Maritime Organization/International Maritime Dangerous Goods Code

**OECD** - Organisation for Economic Co-operation and Development

**BCF** - Bioconcentration factor

**ICAO/IATA** - International Civil Aviation Organization/International Air Transport Association

**MARPOL** - International Convention for the Prevention of Pollution from Ships

**ATE** - Acute Toxicity Estimate

**VOC** - (Volatile Organic Compound)

### **Key literature references and sources for data**

<https://echa.europa.eu/information-on-chemicals>

Suppliers safety data sheet, Chemadvisor - LOLI, Merck index, RTECS

### **Training Advice**

Chemical hazard awareness training, incorporating labelling, Safety Data Sheets (SDS), Personal Protective Equipment (PPE) and hygiene.

Use of personal protective equipment, covering appropriate selection, compatibility, breakthrough thresholds, care, maintenance, fit and standards.

First aid for chemical exposure, including the use of eye wash and safety showers.

### **Prepared By**

Health, Safety and Environmental Department

### **Creation Date**

22-Sep-2009

### **Revision Date**

08-Jun-2024

### **Revision Number**

6

### **Revision Summary**

New emergency telephone response service provider.

## **MOEL's Public Notice No. 2023-9 (Standards for Classification and Labeling of Chemical Substances and Safety Data Sheets)**

### **Disclaimer**

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

**End of Safety Data Sheet**