

# SAFETY DATA SHEET

Creation Date 19-December-2006

Revision Date 18-December-2025

Revision Number 6

This safety data sheet was created pursuant to the requirements of: Canada WHMIS 2015 which includes the amended Hazardous Products Act (HPA) and the Hazardous Products Regulation (HPR) - SOR 2022-272

## 1. Identification

**Product Name** Formamidinesulfinic acid

**Cat No. :** AC119720000; AC119720100; AC119721000; AC119725000

**CAS-No** 1758-73-2

**Synonyms** Aminoiminomethanesulfinic acid; Thiourea dioxide

**Recommended Use** Laboratory chemicals.

**Uses advised against** Food, drug, pesticide or biocidal product use.

### Details of the supplier of the safety data sheet

#### Company

**Importer/Distributor**  
Fisher Scientific  
112 Colonnade Road,  
Ottawa, ON K2E 7L6,  
Canada  
Tel: 1-800-234-7437

Acros Organics  
One Reagent Lane  
Fair Lawn, NJ 07410

**Manufacturer**  
Fisher Scientific Company  
One Reagent Lane  
Fair Lawn, NJ 07410  
Tel: (201) 796-7100

#### **Emergency Telephone Number**

For information **US** call: 001-800-227-6701 / **Europe** call: +32 14 57 52 11  
Emergency Number **US**:001-201-796-7100 / **Europe**: +32 14 57 52 99  
**CHEMTREC** Tel. No. **US**:001-800-424-9300 / **Europe**:001-703-527-3887

## 2. Hazard(s) identification

### Classification

**WHMIS 2015 Classification** This product is hazardous in accordance with the Canada Hazardous Products Act (HPA) and Hazardous Products Regulation (HPR), as amended (SOR/2022-272)

<b>Self-heating substances and mixtures</b>	Category 2
<b>Acute oral toxicity</b>	Category 4
<b>Acute Inhalation Toxicity</b>	Category 4
<b>Skin Corrosion/Irritation</b>	Category 2
<b>Serious Eye Damage/Eye Irritation</b>	Category 1
<b>Specific target organ toxicity (single exposure)</b>	Category 3
Target Organs - Respiratory system.	
<b>Specific target organ toxicity - (repeated exposure)</b>	Category 2
Target Organs - Blood.	
<b>Physical Hazards Not Otherwise Classified</b>	Category 1
Risk of explosion if heated under confinement	

**Label Elements****Signal Word**

Danger

**Hazard Statements**

Self-heating in large quantities; may catch fire

Harmful if swallowed or if inhaled

Causes skin irritation

Causes serious eye damage

May cause respiratory irritation

May cause damage to organs through prolonged or repeated exposure

Harmful if inhaled

Risk of explosion if heated under confinement

**Precautionary Statements****Prevention**

Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking

Keep cool. Protect from sunlight

Do not breathe dust/fumes/gas/mist/vapours/spray

Wash face, hands and any exposed skin thoroughly after handling

Do not eat, drink or smoke when using this product

Use only outdoors or in a well-ventilated area

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

**Response**

Explosion risk

IF ON SKIN: Wash with plenty of soap and water

IF INHALED: Remove person to fresh air and keep comfortable for breathing

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

Immediately call a POISON CENTER/doctor

Rinse mouth

Take off contaminated clothing and wash it before reuse

**Storage**

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

Store locked up

Store separately

**Disposal**

Dispose of contents/container to an approved waste disposal plant

**3. Composition/Information on Ingredients**

Component	CAS-No	Weight %
Methanesulfonic acid, aminoimino-	1758-73-2	>95

**4. First-aid measures****Eye Contact**

Immediate medical attention is required. Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes.

<b>Skin Contact</b>	Wash off immediately with soap and plenty of water while removing all contaminated clothes and shoes. Immediate medical attention is required.
<b>Inhalation</b>	Remove from exposure, lie down. Remove to fresh air. If breathing is difficult, give oxygen. If not breathing, give artificial respiration. Immediate medical attention is required.
<b>Ingestion</b>	Call a physician immediately. Clean mouth with water.
<b>Most important symptoms/effects Notes to Physician</b>	Causes eye burns. Treat symptomatically

## 5. Fire-fighting measures

<b>Suitable Extinguishing Media</b>	Water spray. Carbon dioxide (CO <sub>2</sub> ). Dry chemical. Chemical foam.
<b>Unsuitable Extinguishing Media</b>	No information available
<b>Flash Point</b>	No information available
<b>Method -</b>	No information available
<b>Autoignition Temperature</b>	No information available
<b>Explosion Limits</b>	
<b>Upper</b>	No data available
<b>Lower</b>	No data available
<b>Sensitivity to Mechanical Impact</b>	No information available
<b>Sensitivity to Static Discharge</b>	No information available

### Specific Hazards Arising from the Chemical

Keep product and empty container away from heat and sources of ignition.

### Hazardous Combustion Products

Nitrogen oxides (NO<sub>x</sub>). Carbon monoxide (CO). Carbon dioxide (CO<sub>2</sub>). Sulfur oxides.

### Protective Equipment and Precautions for Firefighters

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

### NFPA

<b>Health</b> 4	<b>Flammability</b> 3	<b>Instability</b> 3	<b>Physical hazards</b> N/A
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## 6. Accidental release measures

<b>Personal Precautions</b>	Ensure adequate ventilation. Use personal protective equipment as required.
<b>Environmental Precautions</b>	See Section 12 for additional Ecological Information. Do not flush into surface water or sanitary sewer system.

<b>Methods for Containment and Clean Up</b>	Avoid dust formation. Wear self-contained breathing apparatus and protective suit. Sweep up and shovel into suitable containers for disposal. Do not let this chemical enter the environment.
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## 7. Handling and storage

<b>Handling</b>	Do not breathe dust. Do not get in eyes, on skin, or on clothing. Do not ingest. If swallowed then seek immediate medical assistance. Handle product only in closed system or provide appropriate exhaust ventilation.
<b>Storage.</b>	Keep in a dry place. Keep container tightly closed. Keep under nitrogen. Keep refrigerated. Incompatible Materials. Bases. Strong oxidizing agents. Strong acids.

## 8. Exposure controls / personal protection

### Exposure Guidelines

This product does not contain any hazardous materials with occupational exposure limits established by the region specific regulatory bodies.

### 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

Glove material	Breakthrough time	Glove thickness	Glove comments
Nitrile rubber	See manufacturers recommendations	-	Splash protection only
Neoprene			
Natural rubber			
PVC			

Inspect gloves before use. observe the instructions regarding permeability and breakthrough time which are provided by the supplier of the gloves. (Refer to manufacturer/supplier for information) 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. gloves with care avoiding skin contamination.

#### **Respiratory Protection**

When workers are facing concentrations above the exposure limit they must use appropriate certified respirators. Follow the OSHA respirator regulations found in 29 CFR 1910.134 or European Standard EN 149. Use a NIOSH/MSHA or European Standard EN 149 approved respirator if exposure limits are exceeded or if irritation or other symptoms are experienced.

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

**Recommended Filter type:** Particulates filter conforming to EN 143

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

### Environmental exposure controls

Prevent product from entering drains.

### Hygiene Measures

Handle in accordance with good industrial hygiene and safety practice. Keep away from food, drink and animal feeding stuffs. Do not eat, drink or smoke when using this product. Remove and wash contaminated clothing and gloves, including the inside, before re-use. Wash hands before breaks and after work.

## 9. Physical and chemical properties

### Appearance

#### **Physical State**

Powder Solid

#### **Color**

White

#### **Odor**

Odorless

#### **Odor Threshold**

No information available

<u>Property</u>	<u>Values</u>	<u>Remarks</u>	<u>• Method</u>
Melting Point/Range	126 °C / 258.8 °F		
Softening Point	No data available		
Boiling Point/Range	No information available		
Flash Point	No information available		
Flammability (liquid)	Not applicable		
Flammability (solid,gas)	No information available		
Explosion Limits	No data available		
Autoignition Temperature	No data available		
Decomposition Temperature	> 123°C		
pH	4	10 g/L aq.sol.(20°C)	
Viscosity	Not applicable	Solid	
Water Solubility	30 g/L (20°C)		
Solubility in other solvents	No information available		
Partition Coefficient (n-octanol/water)			
Component	<b>log Pow</b>		
Methanesulfonic acid, aminoimino-	3.23		
Vapor Pressure	No data available		
Density / Specific Gravity	No data available		
Bulk Density	No data available		
Vapor Density	Not applicable	Solid	
Particle characteristics	No data available		
<b>Other Information</b>			
Molecular Formula	C H4 N2 O2 S		
Molecular Weight	108.11		
Evaporation Rate	Not applicable - Solid		

## 10. Stability and reactivity

Reactive Hazard	Yes
Stability	Heating may cause an explosion. Moisture sensitive.
Conditions to Avoid	Incompatible products. Exposure to moist air or water. Heat.
Incompatible Materials	Bases, Strong oxidizing agents, Strong acids
Hazardous Decomposition Products	Nitrogen oxides (NOx), Carbon monoxide (CO), Carbon dioxide (CO <sub>2</sub> ), Sulfur oxides
Hazardous Polymerization	No information available.
Hazardous Reactions	None under normal processing.

## 11. Toxicological information

### Information on expected route of exposure

Inhalation	Harmful by inhalation. Avoid breathing dust or spray mist.
Ingestion	May be harmful if swallowed.
Eyes	Avoid contact with eyes. Corrosive to the eyes and may cause severe damage including blindness. May cause irritation.
Skin	Avoid contact with skin. Skin Corrosion/Irritation. May cause irritation.

### Toxicology data for the components

Component	LD50 Oral	LD50 Dermal	LC50 Inhalation
Methanesulfonic acid, aminoimino-	LD50 = 1120 mg/kg ( Rat )	LD50 > 2000 mg/kg ( Rat )	LC50 = 0.164 mg/L ( Rat ) 4 h

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**Toxicologically Synergistic Products** No information available

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

**(c) serious eye damage/irritation;** Category 1

**(d) respiratory or skin sensitization;**  
**Respiratory** No data available  
**Skin** No data available

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

**(f) carcinogenicity;**  
 The table below indicates whether each agency has listed any ingredient as a carcinogen

Component	CAS-No	IARC	NTP	ACGIH	OSHA	Mexico
Methanesulfonic acid, aminoimino-	1758-73-2	Not listed	Not listed	Not listed	Not listed	Not listed

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

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

**(i) STOT-repeated exposure;** Category 2  
**Route of exposure** Oral  
**Target Organs** Blood.

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

**Other Adverse Effects** The toxicological properties have not been fully investigated. See actual entry in RTECS for complete information

**Symptoms / effects,both acute and delayed** No information available.

**Other Adverse Effects** The toxicological properties have not been fully investigated. See actual entry in RTECS for complete information.

**Endocrine Disrupting Properties** This product does not contain any known or suspected endocrine disruptors.

**12. Ecological information**

**Ecotoxicity**

Do not empty into drains. Contains a substance which is: Harmful to aquatic organisms. The product contains following substances which are hazardous for the environment.

Component	Freshwater Algae	Freshwater Fish	Microtox	Water Flea

Methanesulfonic acid, aminoimino-	EC50: = 32 mg/L, 72h (Desmodesmus subspicatus)	LC50: = 416 mg/L, 96h semi-static (Poecilia reticulata)	Not listed	Not listed
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**Persistence and Degradability** Soluble in water Persistence is unlikely based on information available.

**Bioaccumulation/ Accumulation** No information available.

**Mobility** . Will likely be mobile in the environment due to its water solubility.

Component	log Pow
Methanesulfonic acid, aminoimino-	3.23

### 13. Disposal considerations

**Waste Disposal Methods** Chemical waste generators must determine whether a discarded chemical is classified as a hazardous waste. Chemical waste generators must also consult local, regional, and national hazardous waste regulations to ensure complete and accurate classification.

### 14. Transport information

#### DOT

UN-No UN3341  
 Proper Shipping Name THIOUREA DIOXIDE  
 Hazard Class 4.2  
 Packing Group II

#### TDG

UN-No UN3341  
 Proper Shipping Name THIOUREA DIOXIDE  
 Hazard Class 4.2  
 Packing Group II

#### IATA

UN-No UN3341  
 Proper Shipping Name THIOUREA DIOXIDE  
 Hazard Class 4.2  
 Packing Group II

#### IMDG/IMO

UN-No UN3341  
 Proper Shipping Name THIOUREA DIOXIDE  
 Hazard Class 4.2  
 Packing Group II

### 15. Regulatory information

#### International Inventories

Component	CAS-No	DSL	NDSL	TSCA	TSCA Inventory notification - Active-Inactive	EINECS	ELINCS	NLP
Methanesulfonic acid, aminoimino-	1758-73-2	X	-	X	ACTIVE	217-157-8	-	-

Component	CAS-No	IECSC	KECL	ENCS	ISHL	TCSI	AICS	NZIoC	PICCS
Methanesulfonic acid, aminoimino-	1758-73-2	X	KE-17232	X	X	X	X	X	X

#### Legend:

X - Listed '-' - Not listed

**KECL** - NIER number or KE number (<http://ncis.nier.go.kr/en/main.do>)

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

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

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

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

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

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

AICS - Australian Inventory of Chemical Substances  
 PICCS - Philippines Inventory of Chemicals and Chemical Substances

### Canada

SDS in compliance with provisions of information as set out in Canadian Standard - Part 4, Schedule 1 and 2 of the Hazardous Products Regulations (HPR) and its amendments and meets the requirements of the HPR (Paragraph 13(1)(a) of the revised Hazardous Products Act (HPA)).

### Other International Regulations

Authorisation/Restrictions according to EU REACH Not applicable

### Contains component(s) that meet a 'definition' of per & poly fluoroalkyl substance (PFAS)?

Not applicable

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

Component	CAS-No	OECD HPV	Persistent Organic Pollutant	Ozone Depletion Potential	Restriction of Hazardous Substances (RoHS)
Methanesulfonic acid, aminoimino-	1758-73-2	Listed	Not applicable	Not applicable	Not applicable

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)
Methanesulfonic acid, aminoimino-	1758-73-2	Not applicable	Not applicable	Not applicable	Not applicable

## 16. Other information

**Prepared By** Product stewardship (Regulatory Affairs)  
 Thermo Fisher Scientific  
 email - begel.sdsdesk@thermofisher.com

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**Revision Summary** This document has been updated to comply with the requirements of WHMIS 2015 which includes the amended Hazardous Products Act (HPA) and the Hazardous Products Regulation (HPR) to align with the Globally Harmonised System (GHS) (V7/8) for the Classification and Labelling of Chemicals.

### 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 SDS**