

SAFETY DATA SHEET

Creation Date 03-May-2012

Revision Date 19-Dec-2025

Revision Number 6

This safety data sheet was created pursuant to the requirements of: US OSHA Hazard Communication Standard 2024 (29 CFR 1910.1200)

1. Identification

Product Name Methyl-5-norbornene-2,3-dicarboxylic anhydride, mixture of isomers

Cat No. : AC216270000; AC216270010; AC216270050; AC216270051; AC216272500

CAS No 25134-21-8

Synonyms Methylbicyclo[2.2.1]hept-5-ene-2,3-dicarboxylic anhydride; Methyl nadic anhydride

Recommended Use Laboratory chemicals.

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

Details of the supplier of the safety data sheet

Company

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

Acros Organics
One Reagent Lane
Fair Lawn, NJ 07410

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

This chemical is considered hazardous according to [US] OSHA (29 CFR 1910.1200, 2024)

| | |
|------------------------------------|------------|
| Acute oral toxicity | Category 4 |
| Acute Inhalation Toxicity - Vapors | Category 3 |
| Skin Corrosion/Irritation | Category 2 |
| Serious Eye Damage/Eye Irritation | Category 1 |
| Respiratory Sensitization | Category 1 |
| Skin Sensitization | Category 1 |

Label Elements

Signal Word

Danger

Hazard Statements

Harmful if swallowed
Causes skin irritation
May cause an allergic skin reaction
Causes serious eye damage
Toxic if inhaled
May cause allergy or asthma symptoms or breathing difficulties if inhaled



Precautionary Statements

Prevention

Wash face, hands and any exposed skin thoroughly after handling
Do not eat, drink or smoke when using this product
Avoid breathing dust/fume/gas/mist/vapors/spray
Use only outdoors or in a well-ventilated area
Wear protective gloves/protective clothing/eye protection/face protection
In case of inadequate ventilation wear respiratory protection
Contaminated work clothing should not be allowed out of the workplace

Inhalation

IF INHALED: Remove person to fresh air and keep comfortable for breathing
Call a POISON CENTER or doctor

Skin

IF ON SKIN: Wash with plenty of soap and water
Take off contaminated clothing
If skin irritation or rash occurs: Get medical advice/attention

Eyes

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 or doctor/physician

Ingestion

IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell
Rinse mouth

Storage

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

Disposal

Dispose of contents/container to an approved waste disposal plant

Hazards not otherwise classified (HNOC)

None identified

Hazards classified under paragraph (d)(1)(ii) of 1910.1200

No information available

3. Composition/information on Ingredients

| Component | CAS No | Weight % |
|---------------------------------|------------|----------|
| Memtetrahydrophthalic anhydride | 25134-21-8 | 100 |

4. First-aid measures

| | |
|--|---|
| General Advice | Show this safety data sheet to the doctor in attendance. Immediate medical attention is required. |
| Eye Contact | Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. In the case of contact with eyes, rinse immediately with plenty of water and seek medical advice. |
| Skin Contact | Wash off immediately with plenty of water for at least 15 minutes. Immediate medical attention is required. |
| 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. |
| Ingestion | Do NOT induce vomiting. Call a physician or poison control center immediately. |
| Most important symptoms and effects | None reasonably foreseeable. . Causes severe eye damage. May cause allergy or asthma symptoms or breathing difficulties if inhaled. May cause allergic skin reaction. Product is a corrosive material. Use of gastric lavage or emesis is contraindicated. Possible perforation of stomach or esophagus should be investigated: Ingestion causes severe swelling, severe damage to the delicate tissue and danger of perforation: 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 |
| Notes to Physician | Treat symptomatically |

5. Fire-fighting measures

| | |
|---|---|
| Suitable Extinguishing Media | Water spray, carbon dioxide (CO ₂), dry chemical, alcohol-resistant foam. |
| Unsuitable Extinguishing Media | No information available |
| Flash Point | 140 °C / 284 °F |
| Method - | No information available |
| Autoignition Temperature | 450 °C / 842 °F |
| Explosion Limits | |
| Upper | No data available |
| Lower | No data available |
| Sensitivity to Mechanical Impact | No information available |
| Sensitivity to Static Discharge | No information available |

Specific Hazards Arising from the Chemical

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

Hazardous Combustion Products

Carbon monoxide (CO). Carbon dioxide (CO₂).

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

NFPA

| | | | |
|---------------|---------------------|--------------------|-------------------------|
| Health | Flammability | Instability | Physical hazards |
| 3 | 1 | 0 | N/A |

6. Accidental release measures

| | |
|----------------------------------|---|
| Personal Precautions | Ensure adequate ventilation. Use personal protective equipment as required. Keep people away from and upwind of spill/leak. Evacuate personnel to safe areas. |
| Environmental Precautions | Should not be released into the environment. |

Methods for Containment and Clean Up Keep in suitable, closed containers for disposal. Soak up with inert absorbent material.

7. Handling and Storage

| | |
|-----------------|---|
| Handling | Do not get in eyes, on skin, or on clothing. Wear personal protective equipment/face protection. Use only under a chemical fume hood. Do not breathe mist/vapors/spray. Do not ingest. If swallowed then seek immediate medical assistance. |
| Storage. | Keep in a dry, cool and well-ventilated place. Keep container tightly closed. Incompatible Materials. Strong oxidizing agents. Strong acids. Strong bases. |

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. |
| Personal Protective Equipment | |
| Eye/face Protection | Wear appropriate protective eyeglasses or chemical safety goggles as described by OSHA's eye and face protection regulations in 29 CFR 1910.133 or European Standard EN166. |
| Skin and body protection | Wear appropriate protective gloves and clothing to prevent skin exposure. |
| Respiratory Protection | 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. |
| Recommended Filter type: | Organic gases and vapours filter. Type A. Brown. conforming to EN14387. |
| Hygiene Measures | Handle in accordance with good industrial hygiene and safety practice. |

9. Physical and chemical properties

| | | |
|---------------------------------|--------------------------|--|
| Appearance | | |
| Physical State | Viscous liquid | Liquid |
| Color | Light yellow | |
| Odor | Irritating | |
| Odor Threshold | No information available | |
| Property | Values | Remarks • Method |
| Melting Point/Range | No data available | |
| Softening Point | No data available | |
| Boiling Point/Range | 275 °C / 527 °F | |
| Flash Point | 140 °C / 284 °F | Method - No information available |
| Flammability (liquid) | No data available | |
| Flammability (solid,gas) | Not applicable | Liquid |
| Explosion Limits | No data available | |

| | | |
|--|--------------------------|-------------|
| Autoignition Temperature | 450 °C / 842 °F | |
| Decomposition Temperature | No data available | |
| pH | No information available | |
| Viscosity | 220-300 mPa.s @ 25°C | |
| Water Solubility | Insoluble | |
| Solubility in other solvents | No information available | |
| Partition Coefficient (n-octanol/water) | | |
| Component | log Pow | |
| Memtetrahydrophthalic anhydride | 1.7 | |
| Vapor Pressure | 5 mmHg @ 120 °C | |
| Density / Specific Gravity | 1.230 | |
| Bulk Density | Not applicable | Liquid |
| Vapor Density | 6.14 | (Air = 1.0) |
| Particle characteristics | Not applicable (liquid) | |
| Other Information | | |
| Molecular Formula | C10 H10 O3 | |
| Molecular Weight | 178.18 | |

10. Stability and reactivity

| | |
|---|---|
| Reactive Hazard | None known, based on information available |
| Stability | Stable under normal conditions. |
| Conditions to Avoid | Incompatible products. Exposure to moist air or water. |
| Incompatible Materials | Strong oxidizing agents, Strong acids, Strong bases |
| Hazardous Decomposition Products | Carbon monoxide (CO), Carbon dioxide (CO ₂) |
| Hazardous Polymerization | No information available. |
| Hazardous Reactions | None under normal processing. |

11. Toxicological information

Information on expected route of exposure

| | |
|-------------------|---|
| Inhalation | May produce an allergic reaction. |
| Ingestion | May cause allergic reaction. May be harmful if swallowed. |
| Eyes | Avoid contact with eyes. Corrosive to the eyes and may cause severe damage including blindness. May cause irritation. Sensitization. |
| Skin | Avoid contact with skin. Skin Corrosion/Irritation. May cause irritation. Repeated or prolonged skin contact may cause allergic reactions with susceptible persons. |

Toxicology data for the components

| Component | LD50 Oral | LD50 Dermal | LC50 Inhalation |
|---------------------------------|--------------------------|---------------------------|------------------------------|
| Memtetrahydrophthalic anhydride | LD50 = 500 mg/kg (Rat) | LD50 = 4920 mg/kg (Rat) | LC50 < 0.75 mg/L (Rat) 4 h |

| | |
|---|--------------------------|
| 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

Category 1

Skin

Category 1

May cause sensitization by skin contact

(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 |
|---------------------------------|------------|------------|------------|------------|------------|------------|
| Memtetrahydrophthalic anhydride | 25134-21-8 | Not listed | Not listed | Not listed | Not listed | Not listed |

(g) reproductive toxicity;

No data available

(h) STOT-single exposure;

No data available

(i) STOT-repeated exposure;

No data available

Target Organs

No information available.

(j) aspiration hazard;

No data available

Symptoms / effects,both acute and delayed

Product is a corrosive material. Use of gastric lavage or emesis is contraindicated. Possible perforation of stomach or esophagus should be investigated. Ingestion causes severe swelling, severe damage to the delicate tissue and danger of perforation. 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.

Other Adverse Effects

The toxicological properties have not been fully investigated.

Endocrine Disrupting Properties

This product does not contain any known or suspected endocrine disruptors.

12. Ecological information

Ecotoxicity

Do not empty into drains. .

Persistence and Degradability

Insoluble in water

Bioaccumulation/ Accumulation

No information available.

Mobility

Is not likely mobile in the environment due its low water solubility.

| Component | log Pow |
|---------------------------------|---------|
| Memtetrahydrophthalic anhydride | 1.7 |

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 UN2810
 Proper Shipping Name Toxic liquid, organic, n.o.s.
 Technical Shipping Name Memtetrahydrophthalic anhydride
 Hazard Class 6.1
 Packing Group III

TDG

UN-No UN2810
 Proper Shipping Name Toxic liquid, organic, n.o.s.
 Technical Shipping Name Memtetrahydrophthalic anhydride
 Hazard Class 6.1
 Packing Group III

IATA

UN-No UN2810
 Proper Shipping Name Toxic liquid, organic, n.o.s.
 Technical Shipping Name Memtetrahydrophthalic anhydride
 Hazard Class 6.1
 Packing Group III

IMDG/IMO

UN-No UN2810
 Proper Shipping Name Toxic liquid, organic, n.o.s.
 Technical Shipping Name Memtetrahydrophthalic anhydride
 Hazard Class 6.1
 Packing Group III

15. Regulatory Information

United States of America Inventory

| Component | CAS No | TSCA | TSCA Inventory notification - Active-Inactive | TSCA - EPA Regulatory Flags |
|---------------------------------|------------|------|--|--------------------------------|
| Memtetrahydrophthalic anhydride | 25134-21-8 | X | ACTIVE | - |

Legend:

TSCA US EPA (TSCA) - Toxic Substances Control Act, (40 CFR Part 710)

X - Listed

'-' - Not Listed

**TSCA - Per 40 CFR 751, Regulation of Certain Chemical
Substances & Mixtures, Under TSCA Section 6(h) (PBT)**

Not applicable

TSCA 12(b) - Notices of Export

Not applicable

International Inventories

Canada (DSL/NDL), Europe (EINECS/ELINCS/NLP), Philippines (PICCS), Japan (ENCS), Japan (ISHL), Australia (AICS), China (IECSC), Korea (KECL).

| Component | CAS No | DSL | NDL | EINECS | PICCS | ENCS | ISHL | AICS | IECSC | KECL |
|---------------------------------|------------|-----|-----|-----------|-------|------|------|------|-------|----------|
| Memtetrahydrophthalic anhydride | 25134-21-8 | X | - | 246-644-8 | X | X | X | X | X | KE-33483 |

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

U.S. Federal Regulations

SARA 313

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product does not contain any chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372

SARA 311/312 Hazard Categories

Should this product meet EPCRA 311/312 Tier reporting criteria at 40 CFR 370, refer to Section 2 of this SDS for appropriate classifications.

CWA (Clean Water Act) Not applicable

Clean Air Act Not applicable

OSHA - Occupational Safety and Health Administration Not applicable

CERCLA

This material, as supplied, does not contain any substances regulated as hazardous substances under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302) or the Superfund Amendments and Reauthorization Act (SARA) (40 CFR 355). There may be specific reporting requirements at the local, regional, or state level pertaining to releases of this material.

California Proposition 65 This product does not contain any Proposition 65 chemicals.

U.S. State Right-to-Know Regulations Not applicable

U.S. Department of Transportation

Reportable Quantity (RQ): N
DOT Marine Pollutant N
DOT Severe Marine Pollutant N

U.S. Department of Homeland Security This product does not contain any DHS chemicals.

Other International Regulations

Mexico - Grade No information available

Authorisation/Restrictions according to EU REACH Not applicable

| Component | CAS No | REACH (1907/2006) - Annex XIV - Substances Subject to Authorization | REACH (1907/2006) - Annex XVII - Restrictions on Certain Dangerous Substances | REACH Regulation (EC 1907/2006) article 59 - Candidate List of Substances of Very High Concern (SVHC) |
|---------------------------------|------------|---|---|---|
| Memtetrahydrophthalic anhydride | 25134-21-8 | - | - | - |

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) |
|---------------------------------|------------|----------------|------------------------------|---------------------------|--|
| Memtetrahydrophthalic anhydride | 25134-21-8 | Not applicable | Not applicable | Not applicable | Not applicable |

Contains component(s) that meet a 'definition' of per & poly fluoroalkyl substance (PFAS)?
Not applicable

Other International Regulations

| 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) |
|---------------------------------|------------|---|--|----------------------------|------------------------------------|
| Memtetrahydrophthalic anhydride | 25134-21-8 | Not applicable | Not applicable | Not applicable | Not applicable |

16. Other Information

Prepared By

Product stewardship (Regulatory Affairs)
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19-Dec-2025

Revision Summary

Updated to the U.S. Department of Labor's Occupational Safety and Health Administration (OSHA) which published its Final Rule in the Federal Register revising the Hazard Communication Standard (HCS/HazCom), 29 CFR 1910.1200 (2024) (HCS §1910.1200, 2024), May 20, 2024, effective July 19, 2024.

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