

Safety Data Sheet

according to 29 CFR 1910.1200(g)

SynOil, M10.120.08

Revision date: 07/21/2023

Page 1 of 9

1. Identification**Product identifier**

SynOil, M10.120.08

Recommended use of the chemical and restrictions on use**Use of the substance/mixture**

Heat transfer oil

Uses advised against

Any non-intended use.

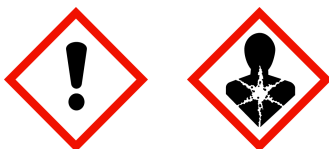
Details of the supplier of the safety data sheet

Company name: Huber USA Inc.
Street: 1101 Nowell Rd Suite 110
Place: USA-NC 27607 Raleigh
Telephone: 800-726-4877
E-mail: info@huber-online.com
Internet: www.huber-usa.com

Emergency phone number: Toll Free: 1-800-424-9300; Local: +1-703-527-3887**2. Hazard(s) identification****Classification of the chemical****29 CFR Part 1910.1200**

Acute toxicity: Acute Tox. 4 (inhalation)

Aspiration hazard: Asp. Tox. 1

Label elements**29 CFR Part 1910.1200****Signal word:** Danger**Pictograms:****Hazard statements**

May be fatal if swallowed and enters airways

Harmful if inhaled

Precautionary statements

Avoid breathing dust/fume/gas/mist/vapors/spray.

Use only outdoors or in a well-ventilated area.

If swallowed: Immediately call a poison center/doctor.

Do NOT induce vomiting.

If inhaled: Remove person to fresh air and keep comfortable for breathing.

Call a poison center/doctor if you feel unwell.

Store locked up.

Dispose of contents/container to local/regional/national/international regulations.

Hazards not otherwise classified

The components in this formulation do not meet the criteria for classification as PBT or vPvB.

3. Composition/information on ingredients**Mixtures**

Safety Data Sheet

according to 29 CFR 1910.1200(g)

SynOil, M10.120.08

Revision date: 07/21/2023

Page 2 of 9

Hazardous components

CAS No	Components	Quantity
68649-11-6	Dec-1-ene, dimers, hydrogenated	100 %

4. First-aid measures**Description of first aid measures****General information**

In case of accident or unwellness, seek medical advice immediately (show directions for use or safety data sheet if possible).

After inhalation

In case of accident by inhalation: remove casualty to fresh air and keep at rest. In case of respiratory tract irritation, consult a physician.

After contact with skin

Gently wash with plenty of soap and water. Remove contaminated clothing immediately. In case of skin irritation consult a doctor.

After contact with eyes

Remove contact lenses, if present and easy to do. Continue rinsing. Rinse cautiously with water for several minutes. In case of troubles or persistent symptoms, consult an ophthalmologist.

After ingestion

Rinse mouth thoroughly with water. Let water be drunken in little sips (dilution effect). Do NOT induce vomiting. In all cases of doubt, or when symptoms persist, seek medical advice.

Most important symptoms and effects, both acute and delayed

See sections 2 and 11

Indication of any immediate medical attention and special treatment needed

Treat symptomatically.

5. Fire-fighting measures**Extinguishing media****Suitable extinguishing media**

Carbon dioxide (CO₂). Dry extinguishing powder. Alcohol resistant foam. Atomized water.

Unsuitable extinguishing media

High power water jet.

Specific hazards arising from the chemical

Can be released in case of fire: Carbon monoxide (CO), Carbon dioxide (CO₂).

Special protective equipment and precautions for fire-fighters

In case of fire: Wear self-contained breathing apparatus. Wear chemical resistant suit. Cool endangered containers with water spray jet.

Additional information

Collect contaminated fire extinguishing water separately. Do not allow entering drains or surface water. Co-ordinate fire-fighting measures to the fire surroundings.

6. Accidental release measures**Personal precautions, protective equipment and emergency procedures****General advice**

See protective measures under point 7 and 8.

For non-emergency personnel

Wear personal protection equipment (refer to section 8).

Safety Data Sheet

according to 29 CFR 1910.1200(g)

SynOil, M10.120.08

Revision date: 07/21/2023

Page 3 of 9

For emergency responders

No special measures are necessary.

Environmental precautions

Discharge into the environment must be avoided. Prevent spread over a wide area (e.g. by containment or oil barriers). Do not empty into drains.

Methods and material for containment and cleaning up

For containment

Absorb with liquid-binding material (e.g. sand, diatomaceous earth, acid- or universal binding agents).
Treat the recovered material as prescribed in the section on waste disposal.

For cleaning up

Clean contaminated objects and areas thoroughly observing environmental regulations.

Reference to other sections

Safe handling: see section 7

Personal protection equipment: see section 8

Disposal: see section 13

7. Handling and storage

Precautions for safe handling

Advice on safe handling

Wear suitable protective clothing. (See section 8.)

Advice on protection against fire and explosion

Keep away from heat/sparks/open flames/hot surfaces. - No smoking. Take precautionary measures against static discharge. Usual measures for fire prevention.

Advice on general occupational hygiene

Always close containers tightly after the removal of product. When using do not eat, drink or smoke. Wash hands before breaks and after work. Do not inhale vapors. Wash soiled clothing immediately.

Further information on handling

General protection and hygiene measures: See section 8.

Conditions for safe storage, including any incompatibilities

Requirements for storage rooms and vessels

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

Hints on joint storage

Do not store together with: Explosives. Oxidizing solids. Oxidizing liquids. Radioactive substances. Infectious substances. Food and animal feedingstuff.

Further information on storage conditions

Keep the packing dry and well sealed to prevent contamination and absorption of humidity.

Recommended storage temperature: 20 °C

Protect against: frost. UV-radiation/sunlight. heat. Humidity

8. Exposure controls/personal protection

Control parameters

Additional advice on limit values

The following constituents are the only constituents of the product which have a PEL, TLV or other recommended exposure limit. At this time, the other constituents have no known exposure limits.

Exposure controls

Safety Data Sheet

according to 29 CFR 1910.1200(g)

SynOil, M10.120.08

Revision date: 07/21/2023

Page 4 of 9

**Appropriate engineering controls**

Technical measures and the application of suitable work processes have priority over personal protection equipment.

Provide adequate ventilation.

Individual protection measures, such as personal protective equipment**Eye/face protection**

Wear safety glasses; chemical goggles (if splashing is possible). Standards: EN 166 or 29 CFR 1910.133

Hand protection

Wear suitable gloves.

Suitable material:

FKM (fluororubber). - Thickness of the glove material 0,4 mm

Breakthrough time \geq 8 h

Butyl rubber. - Thickness of the glove material 0,5 mm

Breakthrough time \geq 8 h

CR (polychloroprenes, Chloroprene rubber). - Thickness of the glove material 0,5 mm

Breakthrough time \geq 8 h

NBR (Nitrile rubber). - Thickness of the glove material 0,35 mm

Breakthrough time \geq 8 h

PVC (Polyvinyl chloride). - Thickness of the glove material 0,5 mm

Breakthrough time \geq 8 h

For special purposes, it is recommended to check the resistance to chemicals of the protective gloves mentioned above together with the supplier of these gloves.

The selected protective gloves should satisfy the specifications of standards like EN 374.

Before using check leak tightness / impermeability. In the case of wanting to use the gloves again, clean them before taking off and air them well.

Skin protection

Suitable protective clothing: Lab apron.

Respiratory protection

With correct and proper use, and under normal conditions, breathing protection is not required.

Respiratory protection necessary at:

Exceeding exposure limit values

Suitable respiratory protective equipment: half-mask with filter EN 149 or 29 CFR 1910.134 .

The filter class must be suitable for the maximum contaminant concentration (gas/vapour/aerosol/particulates) that may arise when handling the product. If the concentration is exceeded, self-contained breathing apparatus must be used.

Environmental exposure controls

No special precautionary measures are necessary.

9. Physical and chemical properties**Information on basic physical and chemical properties**

Physical state:	liquid
Color:	colourless
Odor:	odourless

Test method

Melting point/freezing point:	-73 °C
Boiling point or initial boiling point and boiling range:	223 °C

Safety Data Sheet

according to 29 CFR 1910.1200(g)

SynOil, M10.120.08

Revision date: 07/21/2023

Page 5 of 9

Lower explosion limits:	not determined
Upper explosion limits:	not determined
Flash point:	> 150 °C
Auto-ignition temperature:	324 °C
Decomposition temperature:	not determined
pH-Value:	not applicable
Viscosity / kinematic: (at 40 °C)	5 mm ² /s ASTM D 445
Water solubility:	Immiscible
Solubility in other solvents not determined	
Partition coefficient n-octanol/water:	SECTION 12: Ecological information
Vapor pressure: (at 20 °C)	< 0,1 hPa
Density (at 20 °C):	0,794 g/cm ³
Relative vapour density:	not determined

Other information**Information with regard to physical hazard classes**

Explosive properties none	
Sustaining combustion:	Not sustaining combustion
Self-ignition temperature Gas:	not determined
Oxidizing properties none	

Other safety characteristics

Evaporation rate:	not determined
Solvent separation test:	not determined
Solvent content:	not determined
Solid content:	not determined
Sublimation point:	not determined
Softening point:	not determined
Pour point:	not determined
Viscosity / dynamic:	not determined
Flow time:	not determined

10. Stability and reactivity**Reactivity**

No information available.

Chemical stability

Stability: Stable

The product is chemically stable under recommended conditions of storage, use and temperature.

Possibility of hazardous reactions

Hazardous reactions: Will not occur

No information available.

Conditions to avoid

Protect against: UV-radiation/sunlight. heat.

Incompatible materials

Materials to avoid: Oxidizing agents, strong. Reducing agents, strong.

Safety Data Sheet

according to 29 CFR 1910.1200(g)

SynOil, M10.120.08

Revision date: 07/21/2023

Page 6 of 9

Hazardous decomposition productsCan be released in case of fire: Carbon monoxide, Carbon dioxide (CO₂).**Further information**

It should be noted that the heat transfer fluid has a limited lifespan and its condition must be checked regularly.

11. Toxicological information**Route(s) of Entry**

Ingestion: May be harmful if swallowed. Inhalation: May be harmful if inhaled. Skin contact: May cause irritation. Eye contact: May cause irritation.

Information on toxicological effects**Toxicokinetics, metabolism and distribution**

No data available.

Acute toxicity

Harmful if inhaled

ATEmix calculated

ATE (oral) > 2000 mg/kg; ATE (dermal) 2500 mg/kg; ATE (inhalation vapour) 11,00 mg/l; ATE (inhalation dust/mist) 1,500 mg/l

CAS No	Components				
	Exposure route	Dose	Species	Source	Method
68649-11-6	Dec-1-ene, dimers, hydrogenated				
	oral	LD50 > 5000 mg/kg	Rat	Study report (1994)	OECD Guideline 401
	dermal	LD50 > 2000 mg/kg	Rat	Study report (1995)	OECD Guideline 402
	inhalation vapour	ATE 11 mg/l			
	inhalation dust/mist	ATE 1,5 mg/l			

Irritation and corrosivity

Based on available data, the classification criteria are not met.

Sensitizing effects

Based on available data, the classification criteria are not met.

Carcinogenic/mutagenic/toxic effects for reproduction

Based on available data, the classification criteria are not met.

Specific target organ toxicity (STOT) - single exposure

Based on available data, the classification criteria are not met.

Specific target organ toxicity (STOT) - repeated exposure

Based on available data, the classification criteria are not met.

Carcinogenicity (OSHA): No ingredient of this mixture is listed.

Carcinogenicity (IARC): No ingredient of this mixture is listed.

Carcinogenicity (NTP): No ingredient of this mixture is listed.

Aspiration hazard

May be fatal if swallowed and enters airways

Specific effects in experiment on an animal

No data available.

Information on other hazards**Endocrine disrupting properties**

No data available.

Safety Data Sheet

according to 29 CFR 1910.1200(g)

SynOil, M10.120.08

Revision date: 07/21/2023

Page 7 of 9

12. Ecological information**Ecotoxicity**

The product has not been tested.

Persistence and degradability

The product has not been tested.

Bioaccumulative potential

No indication of bioaccumulation potential.

Mobility in soil

No data available.

Endocrine disrupting properties

This product does not contain a substance that has endocrine disrupting properties with respect to non-target organisms as no components meets the criteria.

The aforementioned statement applies to substances contained in the product with a minimum content of 0.1%.

Other adverse effects

No data available.

Further information

Do not allow to enter into surface water or drains.

13. Disposal considerations**Waste treatment methods****Disposal recommendations**

Observe in addition any national regulations! Consult the local waste disposal expert about waste disposal.
Non-contaminated packages may be recycled.

RCRA Hazardous wastes (Resource Conservation and Recovery Act)

None

Contaminated packaging

Handle contaminated packages in the same way as the substance itself.

14. Transport information**U.S. DOT 49 CFR 172.101****Proper shipping name:**

Not a hazardous material with respect to these transport regulations. &&
Not controlled under DOT

Marine transport (IMDG)**UN number or ID number:**

No dangerous good in sense of this transport regulation.

UN proper shipping name:

No dangerous good in sense of this transport regulation.

Transport hazard class(es):

No dangerous good in sense of this transport regulation.

Packing group:

No dangerous good in sense of this transport regulation.

Air transport (ICAO-TI/IATA-DGR)**UN number or ID number:**

No dangerous good in sense of this transport regulation.

UN proper shipping name:

No dangerous good in sense of this transport regulation.

Transport hazard class(es):

No dangerous good in sense of this transport regulation.

Packing group:

No dangerous good in sense of this transport regulation.

Environmental hazards

ENVIRONMENTALLY HAZARDOUS: No

Special precautions for user

See section 8.

Safety Data Sheet

according to 29 CFR 1910.1200(g)

SynOil, M10.120.08

Revision date: 07/21/2023

Page 8 of 9

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

not relevant

15. Regulatory information**U.S. Regulations****National Inventory TSCA**

Dec-1-ene, dimers, hydrogenated listed in the TSCA inventory 8 (b): (x) active,
Dec-1-ene, dimers, hydrogenated not listed under TSCA 12(b)

National regulatory information

SARA Section 311/312 Hazards:

Dec-1-ene, dimers, hydrogenated (68649-11-6): Immediate (acute) health hazard

State Regulations**Safe Drinking Water and Toxic Enforcement Act of 1986 (Proposition 65, State of California)**

This product can not expose you to chemicals known to the State of California to cause cancer, birth defects or other reproductive harm.

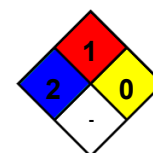
This preparation is hazardous in the sense of regulation 29 CFR Part 1910.1200.

16. Other information**Hazardous Materials Identification System (HMIS)**

Health:	2
Flammability:	1
Physical Hazard:	0
Personal Protection:	B

NFPA Hazard Ratings

Health:	2
Flammability:	1
Reactivity:	0
Unique Hazard:	-

**Changes**

Revision date:	07/21/2023
Revision No:	4,0
Rev. 1,0; Initial release:	29,09.2020
Rev. 2,0; 27,09.2021, Revision	
Rev. 3,0; 30,09.2021, Revision 2-16	
Rev. 4,0; 21.07.2023, Revision	

Abbreviations and acronyms

ACGIH: American Conference of Governmental Industrial Hygienists
 ASTM: American Society for Testing and Materials.
 ATE: acute toxicity estimate
 BCF: Bio concentration factor
 ECHA: European Chemicals Agency
 CAS: Chemical Abstracts Service
 CFR: Code of Federal Regulations
 DOT: Department of Transportation
 d: days
 EC50: Half maximal effective concentration
 EN: European Norm
 EPA: Environmental Protection Agency
 GHS: Globally Harmonized System of Classification and Labelling of Chemicals
 h: hours

Safety Data Sheet

according to 29 CFR 1910.1200(g)

SynOil, M10.120.08

Revision date: 07/21/2023

Page 9 of 9

HMIS: Hazardous Materials Identification System
IARC: INTERNATIONAL AGENCY FOR RESEARCH ON CANCER
IBC: Intermediate Bulk Container
IMDG: International Maritime Code for Dangerous Goods
IATA: International Air Transport Association
IATA-DGR: Dangerous Goods Regulations by the "International Air Transport Association" (IATA)
ICAO: International Civil Aviation Organization
ICAO-TI: Technical Instructions by the "International Civil Aviation Organization" (ICAO)
GHS: Globally Harmonized System of Classification and Labelling of Chemicals
LOAEL: Lowest observed adverse effect level
LOAEC: Lowest observed adverse effect concentration
LC50: Lethal concentration, 50 percent
LD50: Lethal dose, 50 percent
MARPOL: marine pollution
NOAEL: No observed adverse effect level
NOAEC: No observed adverse effect concentration
NTP: National Toxicology Program
N/A: not applicable
NFPA: National Fire Protection Association
UN: United Nations
OECD: Organisation for Economic Co-operation and Development
OSHA: Occupational Safety and Health Administration
PBT: Persistent bioaccumulative toxic
RTECS: Registry of Toxic Effects of Chemical Substances
REACH: Registration, Evaluation, Authorisation and Restriction of Chemicals
SARA: Superfund Amendments and Reauthorization Act
STEL: short-term exposure limits
TSCA: Toxic Substances Control Act
TWA: time weighted average
VOC: Volatile Organic Compounds

Other data

Classification according 29 CFR Part 1910.1200: - Classification procedure:
Health hazards: Calculation method.
Environmental hazards: Calculation method.
Physical hazards: On basis of test data and / or calculated and / or estimated.

The above information describes exclusively the safety requirements of the product and is based on our present-day knowledge. The information is intended to give you advice about the safe handling of the product named in this safety data sheet, for storage, processing, transport and disposal. The information cannot be transferred to other products. In the case of mixing the product with other products or in the case of processing, the information on this safety data sheet is not necessarily valid for the new made-up material.

(The data for the hazardous ingredients were taken respectively from the last version of the sub-contractor's safety data sheet.)