# Chemical Safety Data Sheet MSDS / SDS

# MONO-FMOC ETHYLENE DIAMINE HYDROCHLORIDE

Revision Date: 2023-12-09 Revision Number: 1

# SECTION 1: Identification of the substance/mixture and of the company/undertaking

#### **Product identifier**

Product name : MONO-FMOC ETHYLENE DIAMINE HYDROCHLORIDE

CBnumber : CB32446399 CAS : 391624-46-7

Synonyms: N-(9-Fluorenylmethoxycarbonyl)-1,2-diaminoethane hydrochloride,N-FMoc-ethylenediaMine HCl

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

Relevant identified uses : For R&D use only. Not for medicinal, household or other use.

Uses advised against : none

### **Company Identification**

Company : Chemicalbook

Address : Building 1, Huihuang International, Shangdi 10th Street, Haidian District, Beijing

Telephone : 400-158-6606

# SECTION 2: Hazards identification

#### Classification of the substance or mixture

Hazardous to the aquatic environment, long-term (Chronic) - Category Chronic 1

### Label elements

### Pictogram(s)

\_. .

Signal word Warning

### Hazard statement(s)

H410 Very toxic to aquatic life with long lasting effects

### Precautionary statement(s)

#### Prevention

P273 Avoid release to the environment.

# Response

P391 Collect spillage.

### Storage

none

#### Disposal

P501 Dispose of contents/container to an appropriate treatment and disposal facility in accordance with applicable laws and regulations, and product characteristics at time of disposal.

#### Other hazards

no data available

# SECTION 3: Composition/information on ingredients

### **Substance**

Product name : MONO-FMOC ETHYLENE DIAMINE HYDROCHLORIDE

Synonyms: N-(9-Fluorenylmethoxycarbonyl)-1,2-diaminoethane hydrochloride,N-FMoc-ethylenediaMine HCl

CAS : 391624-46-7
MF : C17H19CIN2O2

MW : 318.8

# SECTION 4: First aid measures

### Description of first aid measures

### If inhaled

Move the victim into fresh air. If breathing is difficult, give oxygen. If not breathing, give artificial respiration and consult a doctor immediately. Do not use mouth to mouth resuscitation if the victim ingested or inhaled the chemical.

#### Following skin contact

Take off contaminated clothing immediately. Wash off with soap and plenty of water. Consult a doctor.

### Following eve contact

Rinse with pure water for at least 15 minutes. Consult a doctor.

### Following ingestion

Rinse mouth with water. Do not induce vomiting. Never give anything by mouth to an unconscious person. Call a doctor or Poison Control Center immediately.

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

no data available

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

no data available

# SECTION 5: Firefighting measures

### **Extinguishing media**

Use dry chemical, carbon dioxide or alcohol-resistant foam.

### Specific Hazards Arising from the Chemical

no data available

### Advice for firefighters

Wear self-contained breathing apparatus for firefighting if necessary.

# SECTION 6: Accidental release measures

### Personal precautions, protective equipment and emergency procedures

Avoid dust formation. Avoid breathing mist, gas or vapours. Avoid contacting with skin and eye. Use personal protective equipment. Wear chemical impermeable gloves. Ensure adequate ventilation. Remove all sources of ignition. Evacuate personnel to safe areas. Keep people away from and upwind of spill/leak.

### **Environmental precautions**

Prevent further spillage or leakage if it is safe to do so. Do not let the chemical enter drains. Discharge into the environment must be avoided.

### Methods and materials for containment and cleaning up

Collect and arrange disposal. Keep the chemical in suitable and closed containers for disposal. Remove all sources of ignition. Use spark-proof tools and explosion-proof equipment. Adhered or collected material should be promptly disposed of, in accordance with appropriate laws and regulations.

# SECTION 7: Handling and storage

### Precautions for safe handling

Handling in a well ventilated place. Wear suitable protective clothing. Avoid contact with skin and eyes. Avoid formation of dust and aerosols. Use non-sparking tools. Prevent fire caused by electrostatic discharge steam.

### Conditions for safe storage, including any incompatibilities

Store the container tightly closed in a dry, cool and well-ventilated place. Store apart from foodstuff containers or incompatible materials.

# SECTION 8: Exposure controls/personal protection

### **Control parameters**

### Occupational Exposure limit values

no data available

### **Biological limit values**

no data available

### **Exposure controls**

Ensure adequate ventilation. Handle in accordance with good industrial hygiene and safety practice. Set up emergency exits and the riskelimination area.

#### Individual protection measures

# Eye/face protection

Wear tightly fitting safety goggles with side-shields conforming to EN 166(EU) or NIOSH (US).

#### Skin protection

Wear fire/flame resistant and impervious clothing. Handle with gloves. Gloves must be inspected prior to use. Wash and dry hands. The selected protective gloves have to satisfy the specifications of EU Directive 89/686/EEC and the standard EN 374 derived from it.

### Respiratory protection

If the exposure limits are exceeded, irritation or other symptoms are experienced, use a full-face respirator.

### Thermal hazards

no data available

# SECTION 9: Physical and chemical properties

# Information on basic physicochemical properties

Colour no data available Odour no data available Melting point/freezing point no data available Boiling point or initial boiling point and boiling range Flammability no data available Lower and upper explosion no data available limit/flammability limit Flash point no data available Auto-ignition temperature no data available Decomposition temperature no data available pH no data available Kinematic viscosity no data available Solubility no data available Partition coefficient n-octanol/water no data available Partition coefficient n-octanol/water no data available Pensity and/or relative density no data available Relative vapour density no data available	Physical state	no data available
Melting point/freezing point on data available Boiling point or initial boiling point and no data available boiling range Flammability no data available Lower and upper explosion no data available limit/flammability limit Flash point no data available Auto-ignition temperature no data available Decomposition temperature no data available pH no data available Kinematic viscosity no data available Solubility no data available Partition coefficient n-octanol/water no data available Vapour pressure no data available Density and/or relative density no data available Relative vapour density no data available	Colour	no data available
Boiling point or initial boiling point and boiling point and boiling range  Flammability no data available Lower and upper explosion no data available limit/flammability limit  Flash point no data available Auto-ignition temperature no data available Decomposition temperature no data available pH no data available Kinematic viscosity no data available Solubility no data available Partition coefficient n-octanol/water no data available Vapour pressure no data available Density and/or relative density no data available Relative vapour density no data available Relative vapour density no data available	Odour	no data available
boiling range Flammability no data available Lower and upper explosion no data available limit/flammability limit Flash point no data available Auto-ignition temperature no data available Decomposition temperature no data available pH no data available Kinematic viscosity no data available Solubility no data available Partition coefficient n-octanol/water no data available Partition coefficient n-octanol/water no data available Density and/or relative density no data available Relative vapour density no data available	Melting point/freezing point	no data available
Flammability no data available Lower and upper explosion no data available limit/flammability limit  Flash point no data available Auto-ignition temperature no data available Decomposition temperature no data available pH no data available Kinematic viscosity no data available Solubility no data available Partition coefficient n-octanol/water no data available Vapour pressure no data available Density and/or relative density no data available Relative vapour density no data available	Boiling point or initial boiling point and	no data available
Lower and upper explosion no data available limit/flammability limit  Flash point no data available Auto-ignition temperature no data available Decomposition temperature no data available pH no data available Kinematic viscosity no data available Solubility no data available Partition coefficient n-octanol/water no data available Vapour pressure no data available Density and/or relative density no data available Relative vapour density no data available	boiling range	
limit/flammability limit  Flash point no data available Auto-ignition temperature no data available Decomposition temperature no data available pH no data available Kinematic viscosity no data available Solubility no data available Partition coefficient n-octanol/water no data available Vapour pressure no data available Density and/or relative density no data available Relative vapour density no data available	Flammability	no data available
Flash point no data available Auto-ignition temperature no data available Decomposition temperature no data available pH no data available Kinematic viscosity no data available Solubility no data available Partition coefficient n-octanol/water no data available Vapour pressure no data available Density and/or relative density no data available Relative vapour density no data available Relative vapour density no data available	Lower and upper explosion	no data available
Auto-ignition temperature no data available Decomposition temperature no data available pH no data available Kinematic viscosity no data available Solubility no data available Partition coefficient n-octanol/water no data available Vapour pressure no data available Density and/or relative density no data available Relative vapour density no data available	limit/flammability limit	
Decomposition temperature no data available  pH no data available  Kinematic viscosity no data available  Solubility no data available  Partition coefficient n-octanol/water no data available  Vapour pressure no data available  Density and/or relative density no data available  Relative vapour density no data available	Flash point	no data available
pH no data available Kinematic viscosity no data available Solubility no data available Partition coefficient n-octanol/water no data available Vapour pressure no data available Density and/or relative density no data available Relative vapour density no data available	Auto-ignition temperature	no data available
Kinematic viscosity no data available  Solubility no data available  Partition coefficient n-octanol/water no data available  Vapour pressure no data available  Density and/or relative density no data available  Relative vapour density no data available	Decomposition temperature	no data available
Solubility no data available  Partition coefficient n-octanol/water no data available  Vapour pressure no data available  Density and/or relative density no data available  Relative vapour density no data available	рН	no data available
Partition coefficient n-octanol/water no data available  Vapour pressure no data available  Density and/or relative density no data available  Relative vapour density no data available	Kinematic viscosity	no data available
Vapour pressure no data available  Density and/or relative density no data available  Relative vapour density no data available	Solubility	no data available
Density and/or relative density no data available  Relative vapour density no data available	Partition coefficient n-octanol/water	no data available
Relative vapour density no data available	Vapour pressure	no data available
	Density and/or relative density	no data available
	Relative vapour density	no data available
Particle characteristics no data available	Particle characteristics	no data available

# SECTION 10: Stability and reactivity

# Reactivity

no data available

### **Chemical stability**

no data available

### Possibility of hazardous reactions

no data available

#### Conditions to avoid

no data available

# Incompatible materials

no data available

# Hazardous decomposition products

no data available

# **SECTION 11: Toxicological information**

# **Acute toxicity**

• Oral: no data available

• Inhalation: no data available

• Dermal: no data available

### Skin corrosion/irritation

no data available

# Serious eye damage/irritation

no data available

# Respiratory or skin sensitization

no data available

### Germ cell mutagenicity

no data available

# Carcinogenicity

no data available

# Reproductive toxicity

no data available

# STOT-single exposure

no data available

# STOT-repeated exposure

no data available

# **Aspiration hazard**

no data available

# **SECTION 12: Ecological information**

# **Toxicity**

Toxicity to fish: no data available

Toxicity to daphnia and other aquatic invertebrates: no data available

Toxicity to algae: no data available

Toxicity to microorganisms: no data available

### Persistence and degradability

no data available

### Bioaccumulative potential

no data available

### Mobility in soil

no data available

#### Other adverse effects

no data available

# SECTION 13: Disposal considerations

# Disposal methods

# Product

The material can be disposed of by removal to a licensed chemical destruction plant or by controlled incineration with flue gas scrubbing. Do not contaminate water, foodstuffs, feed or seed by storage or disposal. Do not discharge to sewer systems.

# Contaminated packaging

Containers can be triply rinsed (or equivalent) and offered for recycling or reconditioning. Alternatively, the packaging can be punctured to make it unusable for other purposes and then be disposed of in a sanitary landfill. Controlled incineration with flue gas scrubbing is possible for combustible packaging materials.

# **SECTION 14: Transport information**

### **UN Number**

ADR/RID: no data available IMDG: no data available IATA: no data available

### **UN Proper Shipping Name**

ADR/RID: no data available

IMDG: no data available

IATA: no data available

### Transport hazard class(es)

ADR/RID: no data available

IMDG: no data available

IATA: no data available

# Packing group, if applicable

ADR/RID: no data available

IMDG: no data available

IATA: no data available

### **Environmental hazards**

ADR/RID: Yes

IMDG: Yes

IATA: Yes

# Special precautions for user

no data available

### Transport in bulk according to IMO instruments

no data available

# **SECTION 15: Regulatory information**

### Safety, health and environmental regulations specific for the product in question

**European Inventory of Existing Commercial Chemical Substances (EINECS)** 

Not Listed.

**EC Inventory** 

Not Listed.

United States Toxic Substances Control Act (TSCA) Inventory

Not Listed.

China Catalog of Hazardous chemicals 2015

Not Listed.

New Zealand Inventory of Chemicals (NZIoC)

Not Listed.

PICCS

Not Listed.

**Vietnam National Chemical Inventory** 

Not Listed.

IECSC

Not Listed.

Korea Existing Chemicals List (KECL)

# SECTION 16: Other information

#### Abbreviations and acronyms

CAS: Chemical Abstracts Service

ADR: European Agreement concerning the International Carriage of Dangerous Goods by Road

RID: Regulation concerning the International Carriage of Dangerous Goods by Rail

IMDG: International Maritime Dangerous Goods

IATA: International Air Transportation Association

TWA: Time Weighted Average

STEL: Short term exposure limit

LC50: Lethal Concentration 50%

LD50: Lethal Dose 50%

EC50: Effective Concentration 50%

#### References

IPCS - The International Chemical Safety Cards (ICSC), website: http://www.ilo.org/dyn/icsc/showcard.home

HSDB - Hazardous Substances Data Bank, website: https://toxnet.nlm.nih.gov/newtoxnet/hsdb.htm

IARC - International Agency for Research on Cancer, website: http://www.iarc.fr/

eChemPortal - The Global Portal to Information on Chemical Substances by OECD, website: http://www.echemportal.org/echemportal/index?pageID=0&request\_locale=en

CAMEO Chemicals, website: http://cameochemicals.noaa.gov/search/simple

ChemlDplus, website: http://chem.sis.nlm.nih.gov/chemidplus/chemidlite.jsp

ERG - Emergency Response Guidebook by U.S. Department of Transportation, website: http://www.phmsa.dot.gov/hazmat/library/erg

Germany GESTIS-database on hazard substance, website: http://www.dguv.de/ifa/gestis/gestis-stoffdatenbank/index-2.jsp

ECHA - European Chemicals Agency, website: https://echa.europa.eu/

### Disclaimer:

The information in this MSDS is only applicable to the specified product, unless otherwise specified, it is not applicable to the mixture of this product and other substances. This MSDS only provides information on the safety of the product for those who have received the appropriate professional training for the user of the product. Users of this MSDS must make independent judgments on the applicability of this SDS. The authors of this MSDS will not be held responsible for any harm caused by the use of this MSDS.