

Material Safety Data Sheet



FERROCENE 98% FOR SYNTHESIS

VERSION : 01
DATE OF ISSUE :22-03-2025
SUPERSEDES : New

Product Code : 14490

Page 1 of 8

1. Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier

Trade name : FERROCENE 98% FOR SYNTHESIS
Product code : 14490
Identification of the product : FERROCENE 98% FOR SYNTHESIS
CAS No : 102-54-5

1.2. Relevant identified uses of the substance or mixture and uses advised against

Identified uses : Laboratory chemicals, Manufacture of substances

1.3. Details of the supplier of the safety data sheet

Company identification : MOLYCHEM
Office: 78/80 Babu Genu Road, Souri Bldg., 2nd Floor,
Mumbai – 400 002 (INDIA)
Tel:+91 22 4066 8111, 2205 7772 . Fax: + 91 22 2203 4442.
Email : info@molychem.net
Works: Plot No. B/9, Badlapur M.I.D.C.,OPP.Shobhavat
Textile Co.,Kulgaon, Badlapur (E), Dist.-Thane-421 503.

1.4. Emergency telephone number

Emergency number : +91 22 4066 8111 (10:00am - 6:00 pm)

2. Hazards identification –DSD

2.1. Classification of the substance or mixture

Flammable solids, (Category 1)	H228: Flammable solid.
Acute toxicity, (Category 4)	H302: Harmful if swallowed.
Acute toxicity, (Category 4)	H332: Harmful if inhaled.
Reproductive toxicity, (Category 1B)	H360FD: May damage fertility. May damage the unborn child.
Specific target organ toxicity – repeated exposure, (Category 2), Liver	H373: May cause damage to organs through prolonged or repeated exposure if inhaled.
Long-term (chronic) aquatic hazard, (Category 1)	H410: Very toxic to aquatic life with long lasting effects.

2.2. Label elements

Labelling according Regulation (EC) No 1272/2008

Pictogram



Signal Word : Danger

Hazard Statements

H228 : Flammable solid.
H302 + H332 : Harmful if swallowed or if inhaled.

Material Safety Data Sheet



FERROCENE 98% FOR SYNTHESIS

VERSION : 01
DATE OF ISSUE :22-03-2025
SUPERSEDES : New

Product Code : 14490

Page 2 of 8

H360FD	May damage fertility. May damage the unborn child.
H373	May cause damage to organs (Liver) through prolonged or repeated exposure if inhaled.
H410	Very toxic to aquatic life with long lasting effects.
Precautionary Statements	
P202	Do not handle until all safety precautions have been read and understood.
P210	Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P273	Avoid release to the environment.
P301 + P312	IF SWALLOWED: Call a POISON CENTER/ doctor if you feel unwell.
P304 + P340 + P312	IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER/ doctor if you feel unwell.
P308 + P313	IF exposed or concerned: Get medical advice/ attention.
Supplemental Hazard Statements	none

2.3. Other hazards : This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

3.Composition/information on ingredients

3.1 Substances

Synonyms	: Bis(cyclopentadienyl)iron Di(cyclopentadienyl)iron
Formula	: C ₁₀ H ₁₀ Fe
Molecular weight	: 186.03 g/mol
CAS-No.	: 102-54-5
EC-No.	: 203-039-3

Component	Classification	Concentration
Ferrocene		
CAS-No. 102-54-5	Flam. Sol. 1; Acute Tox. 4;	<= 100 %
EC-No. 203-039-3	Repr. 1B; STOT RE 2; Aquatic Chronic 1; H228, H302, H332, H360FD, H373, H410 M-Factor – Aquatic Chronic: 10	

4. First aid measures

4.1. Description of first aid measures

General advice

Material Safety Data Sheet



FERROCENE 98% FOR SYNTHESIS

VERSION : 01
DATE OF ISSUE :22-03-2025
SUPERSEDES : New

Product Code : 14490

Page 3 of 8

Show this material safety data sheet to the doctor in attendance.

If inhaled

After inhalation: fresh air. Immediately call in physician. If breathing stops: immediately apply artificial respiration, if necessary also oxygen.

In case of skin contact

In case of skin contact: Take off immediately all contaminated clothing. Rinse skin with water/ shower. Consult a physician.

In case of eye contact

After eye contact: rinse out with plenty of water. Call in ophthalmologist. Remove contact lenses.

If swallowed

After swallowing: immediately make victim drink water (two glasses at most). Consult a physician.

4.2. Most important symptoms and effects, both acute and delayed

The most important known symptoms and effects are described in the labelling (see section 2.2) and/or in section 11

4.3. Indication of any immediate medical attention and special treatment needed

No data available

5. Fire-fighting measures

5.1. Extinguishing media

Suitable extinguishing media

Water Foam Carbon dioxide (CO₂) Dry powder

Unsuitable extinguishing media

For this substance/mixture no limitations of extinguishing agents are given.

5.2. Special hazards arising from the substance or mixture

Carbon oxides

Iron oxides

Combustible.

Development of hazardous combustion gases or vapours possible in the event of fire.

5.3. Advice for fire-fighters

Stay in danger area only with self-contained breathing apparatus. Prevent skin contact by keeping a safe distance or by wearing suitable protective clothing.

5.4 Further information

Suppress (knock down) gases/vapors/mists with a water spray jet. Prevent fire extinguishing water from contaminating surface water or the ground water system.

6. Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Advice for non-emergency personnel: Avoid inhalation of dusts. Avoid substance contact. Ensure adequate ventilation. Keep away from heat and sources of ignition. Evacuate the danger area, observe emergency procedures, consult an expert. For personal protection see section 8.

6.2. Environmental precautions

Material Safety Data Sheet



FERROCENE 98% FOR SYNTHESIS

VERSION : 01
DATE OF ISSUE :22-03-2025
SUPERSEDES : New

Product Code : 14490

Page 4 of 8

Do not let product enter drains. Risk of explosion.

6.3. Methods and material for containment and cleaning up

Cover drains. Collect, bind, and pump off spills. Observe possible material restrictions (see sections 7 and 10). Take up carefully. Dispose of properly. Clean up affected area. Avoid generation of dusts.

6.4. Reference to other sections

For disposal see section 13.

7. Handling and storage

7.1. Precautions for safe handling

Work under hood. Do not inhale substance/mixture.

Advice on protection against fire and explosion

Keep away from open flames, hot surfaces and sources of ignition. Take precautionary measures against static discharge.

Hygiene measures

Immediately change contaminated clothing. Apply preventive skin protection. Wash hands and face after working with substance. For precautions see section 2.2.

7.2. Conditions for safe storage, including any incompatibilities

Storage conditions

Tightly closed. Keep away from heat and sources of ignition. Keep locked up or in an area accessible only to qualified or authorized persons.

Storage stability Recommended storage temperature

2 - 8 °C

Air, light, and moisture sensitive. Heat sensitive.

Storage class

Storage class (TRGS 510): 4.1B: Flammable solid hazardous materials

7.3. Specific end use(s)

Apart from the uses mentioned in section 1.2 no other specific uses are stipulated

8. Exposure controls/personal protection

8.1. Exposure controls

- Personal protection : Avoid all unnecessary exposure.
- Respiratory protection : Wear approved mask.
- Hand protection : Wear protective gloves.
- Skin protection : Wear suitable protective clothing.
- Eye protection : Chemical goggles or safety glasses.
- Others : When using, do not eat, drink or smoke.

8.2. Control parameters

Occupational Exposure Limits : No data available.

Material Safety Data Sheet



FERROCENE 98% FOR SYNTHESIS

VERSION : 01
DATE OF ISSUE :22-03-2025
SUPERSEDES : New

Product Code : 14490

Page 5 of 8

9. Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	crystalline
Color	orange to brown
Odor	No data available
Melting point/freezing point	Melting point/range: 172 - 174 °C - lit.
Initial boiling point and boiling range	249 °C - lit.
Flammability (solid, gas)	The substance or mixture is a flammable solid with the category 1. - Regulation (EC) No. 440/2008, Annex, A.10
Upper/lower flammability or explosive limits	No data available
Flash point	Not applicable
Autoignition temperature	No data available
Decomposition temperature	No data available
pH	No data available
Viscosity	Viscosity, kinematic : No data available Viscosity, dynamic : No data available
Water solubility	0.0001 g/l at 20 °C - slightly soluble
Partition coefficient: n-octanol/water	log Pow: 3,711 at 22 °C - Bioaccumulation is not expected.
Vapor pressure	< 0,1 hPa at 40 °C
Density	1.49 g/cm ³ at 20 °C
Relative density	No data available
Relative vapor density	No data available
Particle characteristics	No data available
Explosive properties	No data available
Oxidizing properties	None

9.2. Other information

No data available

10. Stability and reactivity

10.1. Reactivity

The following applies in general to flammable organic substances and mixtures: in correspondingly fine distribution, when whirled up a dust explosion potential may generally be assumed.

10.2. Chemical stability

The product is chemically stable under standard ambient conditions (room temperature) .

10.3. Possibility of hazardous reactions

Violent reactions possible with:

Material Safety Data Sheet



FERROCENE 98% FOR SYNTHESIS

VERSION : 01
DATE OF ISSUE :22-03-2025
SUPERSEDES : New

Product Code : 14490

Page 6 of 8

perchlorates
Strong oxidizing agents

10.4. Conditions to avoid

no information available

10.5. Incompatible materials

No data available

10.6. Hazardous decomposition products

In the event of fire: see section 5

11. Toxicological information

11.1. Information on toxicological effects

Acute toxicity : Oral: Harmful if swallowed.
Skin corrosion/irritation : No data available
Serious eye damage/irritation : No data available.
Respiratory or skin sensitisation : Not classified
Germ cell mutagenicity : Not classified
Carcinogenicity : Not classified
Reproductive toxicity : Not classified
STOT-single exposure : No data available
STOT-repeated exposure : Not classified
Aspiration hazard : Not classified

12. Ecological information

12.1. Toxicity

No data available

12.2 Persistence and degradability

No data available

12.3 Bioaccumulative potential

No data available

12.4 Mobility in soil

No data available

12.5 Results of PBT and vPvB assessment

This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

12.6 Endocrine disrupting properties

Product:

Assessment : The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

Material Safety Data Sheet



FERROCENE 98% FOR SYNTHESIS

VERSION : 01
DATE OF ISSUE :22-03-2025
SUPERSEDES : New

Product Code : 14490

Page 7 of 8

12.7 Other adverse effects

No data available

13. Disposal considerations

13.1. Waste treatment methods

No data available

14. Transport information

14.1. UN number

ADR/RID: 1325

IMDG : 1325

IATA: 1325

14.2. UN proper shipping name

ADR/RID :

FLAMMABLE SOLID, ORGANIC, N.O.S. (ferrocene)

IMDG:

FLAMMABLE SOLID, ORGANIC, N.O.S. (ferrocene)

IATA:

Flammable solid, organic, n.o.s. (ferrocene)

14.3. Transport hazard class(es)

ADR/RID : 4.1

IMDG : 4.1

IATA : 4.1

14.4. Packaging group

ADR/RID : II

IMDG : II

IATA : II

14.5 Environmental hazards

ADR/RID : yes

IMDG : Marine pollutant: yes

IATA : no

14.6 Special precautions for user

Tunnel restriction code : (E)

Further information : No data available

15. Regulatory information

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

This material safety data sheet complies with the requirements of Regulation (EC) No. 1907/2006.

National legislation

Seveso III: Directive 2012/18/EU of the European Parliament and of the Council on the control of major-accident hazards involving dangerous substances.

E1

ENVIRONMENTAL HAZARDS

Other regulations

Observe work restrictions regarding maternity protection in accordance to Dir 92/85/EEC or stricter national regulations where applicable.

Take note of Dir 94/33/EC on the protection of young people at work.

15.2. Chemical Safety Assessment

For this product a chemical safety assessment was not carried out

Material Safety Data Sheet



FERROCENE 98% FOR SYNTHESIS

VERSION : 01
DATE OF ISSUE :22-03-2025
SUPERSEDES : New

Product Code : 14490

Page 8 of 8

16. Other information

Abbreviations and acronyms :

PBT : persistent, bioaccumulative and toxic.

vPvB: very persistent and very bioaccumulative

Sources of key data used : REGULATION (EC) No 1272/2008 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 16 December 2008 on classification, labelling and packaging of substances and mixtures, amending and repealing Directives 67/548/EEC and 1999/45/EC, and amending Regulation (EC) No 1907/2006

Further information : None.

In accordance with REACH Regulation (CE) N° 1907/2006 and with CLP Regulation (CE) N° 1272/2008
DISCLAIMER OF LIABILITY The information in this SDS was obtained from sources which we believe are reliable. However, the information is provided without any warranty, express or implied, regarding its correctness. The conditions or methods of handling, storage, use or disposal of the product are beyond our control and may be beyond our knowledge. For this and other reasons, we do not assume responsibility and expressly disclaim liability for loss, damage or expense arising out of or in any way connected with the handling, storage, use or disposal of the product. This MSDS was prepared and is to be used only for this product. If the product is used as a component in another product, this MSDS information may not be applicable.

End of document

Prepared by: MOLYCHEM (INDIA)

For questions contact: MOLYCHEM

Office: Maker Tower 'E', 41-A2, 4th Floor, Above Maker Arcade,
Cuffe Parade, Mumbai 400 005 (INDIA)
Tel: +91 22 4066 8111, 2205 7772 . Fax: + 91 22 2203 4442.

Email : info@molychem.net

Works: Plot No. B/9, Badlapur M.I.D.C., OPP. Shobhavat Textile Co.,
Kulgaon, Badlapur (E), Dist.-Thane-421 503

(The statements contained herein are offered for informational purposes only and are based upon technical data that MOLYCHEM believes to be accurate. It is intended for use only by persons having the necessary technical skills and at their own discretion and risk. Since conditions and manner of use are outside our control, we make NO WARRANTY, EXPRESS OR IMPLIED, OF MERCHANTABILITY, FITNESS OR OTHERWISE.)