

# SAFETY DATA SHEET

fluorochem.

## 1. Identification of Substance / Mixture

### Product Identifier

1.1.2 Product Name	(R)-Methyl oxazaborolidine 1M in toluene
1.1.2 Other Names	
1.1.1 Product Code	F043435
1.1.3 CAS	112022-83-0
1.1.4 MDL	MFCD00078440
1.1.5 EINECS	N/A
1.1.6 REACH Registration Number	
1.2.1 Relevant Uses	For research and development purposes only.
1.2.2 Uses Advised Against	No uses advised against.

### 1.3 Supplier Details

1.3.1 Company	Fluorochem Ltd
1.3.2 Address	Unit 14, Graphite Way Hadfield Glossop Derbys. SK13 1QH United Kingdom
1.3.3 Telephone	01457 860111
1.3.4 Email	sds@fluorochem.co.uk
1.4.1 Emergency Telephone	+44 20 3807 3798

## 2. Hazards Identification

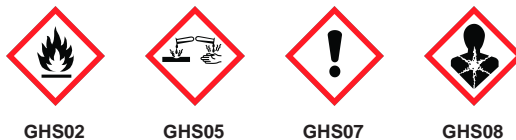
### 2.1.1 Classification

Aquatic Chronic 3  
Asp. Tox. 1  
Eye Dam. 1  
Flam. Liq. 2  
Repr. 2  
Skin Irrit. 2  
STOT RE 2  
STOT SE 3

### 2.2.1 Signal Word

**Danger**

### 2.2.2 Pictograms



### 2.2.3 Hazards

H225 Highly flammable liquid and vapour.  
H304 May be fatal if swallowed and enters airways.  
H315 Causes skin irritation.  
H318 Causes serious eye damage.  
H336 May cause drowsiness or dizziness.  
H361d Suspected of damaging the unborn child.  
H373 May cause damage to organs through prolonged or repeated exposure.  
H412 Harmful to aquatic life with long lasting effects.

### 2.2.4 Precautions

**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.  
**P233** Keep container tightly closed.  
**P235** Keep cool.  
**P240** Ground and bond container and receiving equipment.  
**P241.1** Use explosion-proof equipment.  
**P242** Use non-sparking tools.  
**P243** Take action to prevent static discharges.  
**P260.1** Do not breathe dust/fume/gas/mist/vapours/spray.  
**P264** Wash hands thoroughly after handling.  
**P271** Use only outdoors or in a well-ventilated area.  
**P273** Avoid release to the environment.  
**P280.4** Wear protective gloves/protective clothing and eye/face protection.  
**P301+P310.1** IF SWALLOWED: Immediately call a POISON CENTER/doctor.  
**P302+P352.1** IF ON SKIN: Wash with plenty of water.  
**P303+P361+P353.1** IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water.  
**P304+P340** IF INHALED: Remove person to fresh air and keep comfortable for breathing.  
**P305+P351+P338** IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.  
**P308+P313** IF exposed or concerned: Get medical advice/attention.  
**P314** Get medical advice/attention if you feel unwell.  
**P321** Specific treatment.  
**P331** Do NOT induce vomiting.  
**P332+P313** If skin irritation occurs: Get medical advice/attention.  
**P362+P364** Take off contaminated clothing and wash it before reuse.  
**P370+P378.1** In case of fire: Use dry sand to extinguish.  
**P391** Collect spillage.  
**P403+P233** Store in a well-ventilated place. Keep container tightly closed.  
**P405** Store locked up.  
**P501.2** Dispose of contents/container to an appropriate recycling or disposal facility.

### 2.2.5 Other Classification Hazards

## 3. Composition of Ingredients

### MIXTURE

3.1.1 Name	3.1.2 CAS	Einecs	3.1.3 Composition	Hazards
(R)-Methyl oxazaborolidine	112022-83-0	N/A	20%	H225 Flam. Liq. 2 H304 Asp. Tox. 1 H315 Skin Irrit. 2 H318 Eye Dam. 1 H336 STOT SE 3 H361d Repr. 2 H373 STOT RE 2 H412 Aquatic Chronic 3
Toluene	108-88-3	N/A	80%	H225 Flam. Liq. 2 H304 Asp. Tox. 1 H315 Skin Irrit. 2 H336 STOT SE 3 H361d Repr. 2 H373 STOT RE 2 H412 Aquatic Chronic 3

## 4. First Aid Measures

4.1.1 Eye contact	Where Diphoterine is not available, rinse eyes with copious amounts of water for at least 20 minutes. Protect uninjured eye. Remove contact lenses if present and easy to do. Continue rinsing and seek immediate medical attention.
4.1.2 Ingestion	Where Diphoterine is not available, rinse mouth with copious amounts of water. Seek urgent medical advice.
4.1.3 Inhalation	Remove person to fresh air and keep comfortable for breathing. If breathing is irregular or stopped, administer artificial respiration and seek immediate medical attention.
4.1.4 Skin Contact	Where Diphoterine is not available, wash immediately with plenty of water and soap. Remove contaminated clothing immediately. Immediately seek medical attention.
4.1.5 General Advice	No additional advice.
4.2.1 Most Important Symptoms and Effects	No known symptoms or effects.
4.3.1 Immediate First Aid Measures	No special immediate treatment required

## 5. Fire Fighting Measures

5.1.1 Suitable Fire Extinguishing Media	Carbon dioxide, alcohol resistant foam or dry chemical powder.
5.1.2 Unsuitable Fire Extinguishing Media	No known unsuitable media.
5.2.1 Special Hazards	In combustion toxic fumes may form.

**5.3.1 Advice for Fire Fighters** As in any fire, wear self-contained breathing apparatus and full protective gear.

## 6. Accidental Release Measures

**6.1.1 Personal Precautions** Use personal protective equipment. Avoid dust formation. Avoid breathing vapours, mist or gas. Ensure adequate ventilation. Keep personnel away from spill/leak.

**6.2.1 Environmental Precautions** Prevent further leakage if safe to do so. Prevent product from entering drains. Do not let product enter waterways or sewer systems. Discharge into the environment must be avoided.

**6.3.1 Containment - Methods and Materials** Absorb the spilled material with an inert absorbent (e.g. sand, silica gel, rag, vermiculite) before transferring into an airtight container. Remove all sources of ignition. Dispose of appropriately according to local regulations.

**6.4.1 Referenced SDS Sections** For personal protection see section 8. For disposal see section 13.

## 7. Handling and Storage

### Personal Precautions

**7.1.1 Safe Handling** Wear appropriate personal protective equipment. Use only under a chemical fume hood. Keep away from heat/sparks/open flame/hot surfaces. Take measures to prevent the build-up of electrostatic charge. Ensure adequate exhaust ventilation, especially if dust, aerosol or fumes will be generated. Avoid contact with skin, eyes and clothing. For precautions see section 2.2.

**7.1.2 Protection Against Explosion and Fire** Where possible, use anti static and spark proof equipment when handling.

**7.1.3 General Occupational Hygiene** Handle in accordance with good industrial hygiene and safety practice. Wash hands before and after use. Do not eat, drink or smoke when using this product. Remove and wash contaminated clothing before re-use.

### Conditions for Safe Storage and Incompatibilities

**7.2.1 Managing Storage Risks** Keep container tightly closed and upright. Store in a cool, dry and well-ventilated place.

**7.2.2 Storage Controls** Store under inert gas and protect from moisture. Keep container tightly closed in a cool area away from sunlight or heat sources.

**7.2.3 Maintaining Integrity** Store under inert gas and protect from moisture. Keep container tightly closed in a cool area away from sunlight or heat sources.

**7.2.4 Other Advice** No other specific advice available.

**7.3.1 Specific End Use(s)** No specific end uses are advised. The products supplied are for research purposes only.

## 8. Exposure Controls / Personal Protection

**8.1.1 Control Parameters** United Kingdom  
Substance: Toluene  
WEL TWA (ppm): 50 ppm  
WEL TWA (mg/m3): 191 mg/m3  
WEL STWA (ppm): 100 ppm  
WEL STWA (mg/m3): 384 mg/m3  
Comments:  
Sk (Can be absorbed through the skin. The assigned substances are those for which there are concerns that dermal absorption will lead to systemic toxicity)

**8.2.1 Engineering Measures** Use only under a chemical fume hood ensuring adequate ventilation, especially in confined areas. Use explosion-proof electrical/ventilating/lighting/equipment. Ensure that eyewash stations and safety showers are close to the workstation location.

**8.2.2 Face Protection** Wear tightly fitting safety goggles which adhere to European standard EN 166. Ensure eye bath is to hand.

**8.2.3 Hand Protection** Handle with impermeable gloves. Inspect gloves before use. Gloves must satisfy the specifications of EU Directive 89/686/EEC and the standard EN374 derived from it. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.

**8.2.4 Skin Protection** Wear appropriate protective clothing ensuring all skin is covered. Wear safety shoes that meet at least S1 standards. The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

**8.2.5 Respiratory Protection** Product should be handled in a fume cupboard with adequate extraction. No respiratory equipment is needed under normal use conditions.

**8.2.6 Hygiene Protection** Ensure hair or skin particles cannot enter the chemical container.

**8.2.7 Environment Exposure Controls** Avoid discharge into the environment, see section 6.2.

## 9. Physical and Chemical Properties

**9.1.1 State** Liquid

**9.1.2 Appearance** Clear

**9.1.3 Odour** No data available.

<b>9.1.4 Odour Threshold</b>	No data available.
<b>9.1.5 pH</b>	No data available.
<b>9.1.6 Melting Point / Freezing Point</b>	No data available.
<b>9.1.7 Initial Boiling Point</b>	111°C
<b>9.1.8 Boiling Range</b>	No data available.
<b>9.1.9 Flash Point</b>	No data available.
<b>9.1.10 Evaporation Rate</b>	No data available.
<b>9.1.11 Flammability</b>	No data available.
<b>9.1.12 Upper / Lower Flammability or Explosion Limits</b>	No data available.
<b>9.1.13 Vapour Pressure</b>	No data available.
<b>9.1.14 Vapour Density</b>	No data available.
<b>9.1.15 Relative Density</b>	0.95 g/cm <sup>3</sup> at 25°C
<b>9.1.16 Solubility</b>	
<b>9.1.17 Partition Coefficient</b>	No data available.
<b>9.1.18 Auto Ignition Temperature</b>	No data available.
<b>9.1.19 Decomposition Temperature</b>	No data available.
<b>9.1.20 Viscosity</b>	No data available.
<b>9.1.21 Explosive Properties</b>	No data available.
<b>9.1.22 Oxidising Properties</b>	No data available.
<b>9.2.1 Other information</b>	No additional information available.

## 10. Stability and Reactivity

<b>10.1.1 Reactivity</b>	No known reactivity, based on information available.
<b>10.2.1 Stability</b>	Stable under recommended storage conditions.
<b>10.3.1 Possibility of Hazardous Reactions</b>	None under normal storage conditions.
<b>10.4.1 Conditions To Avoid</b>	Heat, sparks, open flames, sources of ignition. Exposure to moisture.
<b>10.5.1 Incompatible Materials</b>	Strong oxidising agents
<b>10.6.1 Hazardous Decomposition Products</b>	In combustion emits toxic fumes of boron oxides. In combustion emits toxic fumes of carbon dioxide / carbon monoxide. In combustion nitrogen oxides (NOx) may form.

## 11. Toxicology Information

<b>11.1.1 Acute Toxicity</b>	No Toxicology data available for this product.
<b>11.1.2 Skin Corrosion / Irritation</b>	No Toxicology data available for this product.
<b>11.1.3 Serious Eye Damage / Irritation</b>	Causes serious eye damage.
<b>11.1.4 Respiratory or Skin Sensitisation</b>	May be fatal if swallowed and enters airways.
<b>11.1.5 Germ Cell Mutagenicity</b>	No Toxicology data available for this product.
<b>11.1.6 Carcinogenicity</b>	No Toxicology data available for this product.
<b>11.1.7 Reproductive Toxicity</b>	Suspected of damaging the unborn child.
<b>11.1.8 STOT-single Exposure</b>	May cause drowsiness or dizziness.
<b>11.1.9 STOT-repeated Exposure</b>	May cause damage to organs through prolonged or repeated exposure.
<b>11.1.10 Aspiration Hazard</b>	No Toxicology data available for this product.
<b>11.2.1 Additional Toxicology Information</b>	No Toxicology data available for this product.

## 12. Ecological Information

<b>12.1.1 Toxicity</b>	No Ecological data available for this product.
<b>12.2.1 Persistence and Degradability</b>	No Ecological data available for this product.
<b>12.3.1 Bio-Accumulative Potential</b>	No Ecological data available for this product.
<b>12.4.1 Mobility in Soil</b>	No Ecological data available for this product.
<b>12.5.1 Results of PBT and vPvB assessment</b>	No Ecological data available for this product.
<b>12.7.1 Endocrine Disrupting Properties</b>	Avoid release to the environment.
<b>12.6.1 Other Adverse Effects</b>	Harmful to aquatic life with long lasting effects.

## 13. Disposal Considerations

**13.1.1 Disposal Operations**

Ensure product is disposed of by licensed waste carriers.

**13.1.2 Disposal of Packaging**

Ensure INNER PACKAGING is disposed of by licensed waste carriers. Some OUTER PACKAGING MAY be recyclable if not contaminated.

**14. Transport Information**

<b>IATA UN Number</b>	1294	<b>ADR UN Number</b>	1294	<b>IMDG UN Number</b>	1294
<b>14.1.2 IATA Proper Shipping Name</b>	Toluene ((R)-Methyl oxazaborolidine 1M in toluene)	<b>ADR Proper Shipping Name</b>	Toluene ((R)-Methyl oxazaborolidine 1M in toluene)	<b>IMDG Proper Shipping Name</b>	Toluene ((R)-Methyl oxazaborolidine 1M in toluene)
<b>IATA Packing Group</b>	II	<b>ADR Packing Group</b>	II	<b>IMDG Packing Group</b>	II
<b>14.1.4 IATA Hazard Class</b>	3	<b>ADR Hazard Class</b>	3	<b>IMDG Hazard Class</b>	3
<b>14.1.5 IATA Sub Class</b>	- None -	<b>ADR Sub Class</b>	- None -	<b>IMDG Sub Class</b>	- None -

**15. Regulatory Information****15.1.1 Regulatory Information** As far as Fluorochem is aware, there are no further regulations controlling this product.**15.2.1 Chemical Safety Assessment** No Chemical Safety Assessment is available for this product.**16. Other Information****16.1.2 Information Not Covered in Other Sections**

ADR: Accord Europeen sur le transport des marchandises Dangereuses par Route(European Agreement concerning the International Carriage of Dangerous Goods by road)  
 RID:Reglement International concernant le transport des marchandises dangereuses par chemin de fer (Regulations concerning the International transport of Dangerous Goods by Rail)  
 IMDG: International Maritime Code for Dangerous Goods  
 IATA: International Air Transport Association  
 IATA-DGR: Dangerous Goods Regulations by the International Air Transport Association ICAO:International Civil Aviation Organization  
 ICAO-TI: Technical Instructions by the ICAO  
 GHS: Globally Harmonized System of Classification and Labelling of Chemicals  
 CAS:Chemical Abstracts Service

**Revision**

1

**Date Modified**

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**16.1.1 Disclaimer**

The product listed is for research and development purposes only and not for human or animal use. As such, in most cases, the toxicological, ecological and physicochemical properties have not been fully determined and the product should be treated with respect and always handled under suitable conditions by appropriately qualified personnel. The responsible party shall use this datasheet only in conjunction with other sources of information gathered by them, and should make an independent judgement of suitability, to ensure proper use and protect the health and safety of employees. This information is furnished without warranty and any use of the product not in conformance with this material safety data sheet, or in combination with any other product or process, is the responsibility of the user. This SDS adheres to Regulation (EC) No 1907/2006, and as of 13th April 2023, also conforms to EU Regulation 2020/878.