

**Safety Data Sheet**

according to UK REACH Regulation

**Fluoromisonidazole**

Revision date: 22.03.2022

Product code: 1410

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**SECTION 1: Identification of the substance/mixture and of the company/undertaking****1.1. Product identifier**

Fluoromisonidazole

**Further trade names**

1H-Imidazole-1-ethanol, alpha-(fluoromethyl)-2-nitro-

**Synonyms:**

1-Fluoro-3-(2-nitro-imidazol-1-yl)-propan-2-ol; FMISO

CAS No: 13551-89-8

**1.2. Relevant identified uses of the substance or mixture and uses advised against****Use of the substance/mixture**Reference standard for [<sup>18</sup>F]FMISO  
([<sup>18</sup>F]Fluoromisonidazole)**1.3. Details of the supplier of the safety data sheet**

Company name:	ABX advanced biochemical compounds		
	Biomedizinische Forschungsreagenzien GmbH		
Street:	Heinrich-Gläser-Straße 10-14		
Place:	01454 Radeberg		
Telephone:	+49 3528 4041 60	Telefax:	+49 3528 4041 65
e-mail:	info@abx.de		
Contact person:	Dr. Christoph Meyer	Telephone:	+49 3528 4041 8732
e-mail:	meyer@abx.de		
Internet:	http://www.abx.de		

**1.4. Emergency telephone number:**

+49 3528 4041 60

**SECTION 2: Hazards identification****2.1. Classification of the substance or mixture****GB CLP Regulation**

Acute Tox. 4; H332

Acute Tox. 4; H312

Acute Tox. 4; H302

Full text of hazard statements: see SECTION 16.

**2.2. Label elements****GB CLP Regulation****Signal word:** Warning**Pictograms:****Hazard statements**

H302 Harmful if swallowed.

H312 Harmful in contact with skin.

H332 Harmful if inhaled.

**Precautionary statements**

P261 Avoid breathing dust/fume/gas/mist/vapours/spray.

P270 Do not eat, drink or smoke when using this product.

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P280	Wear protective gloves/protective clothing/eye protection/face protection/hearing protection.
P302+P352	IF ON SKIN: Wash with plenty of water.
P312	Call a POISON CENTER/doctor if you feel unwell.
P363	Wash contaminated clothing before reuse.

**SECTION 3: Composition/information on ingredients****3.1. Substances**

Sum formula:	C6H8FN3O3
Molecular weight:	189.14

**Hazardous components**

CAS No	Chemical name			Quantity
	EC No	Index No	REACH No	
	Classification (GB CLP Regulation)			
13551-89-8	Fluoromisonidazole			95 - < 100 %
	Acute Tox. 4, Acute Tox. 4, Acute Tox. 4; H332 H312 H302			

Full text of H and EUH statements: see section 16.

**Specific Conc. Limits, M-factors and ATE**

CAS No	EC No	Chemical name	Quantity
		Specific Conc. Limits, M-factors and ATE	
13551-89-8		Fluoromisonidazole	95 - < 100 %
		inhalation: ATE = 11 mg/l (vapours); inhalation: ATE = 1,5 mg/l (dusts or mists); dermal: ATE = 1100 mg/kg; oral: LD50 = 900 mg/kg	

**SECTION 4: First aid measures****4.1. Description of first aid measures****After inhalation**

Provide fresh air.

**After contact with skin**

After contact with skin, wash immediately with: Water. Change contaminated clothing.

**After contact with eyes**

Rinse immediately carefully and thoroughly with eye-bath or water.

**After ingestion**

Rinse mouth immediately and drink plenty of water. Medical treatment necessary.

**SECTION 5: Firefighting measures****5.1. Extinguishing media****Suitable extinguishing media**

Water spray. Foam. Extinguishing powder. Carbon dioxide (CO2).

**5.2. Special hazards arising from the substance or mixture**

In case of fire may be liberated: Carbon dioxide (CO2). Carbon monoxide Nitrogen oxides (NOx). Fluorhydric acid.

**5.3. Advice for firefighters**

In case of fire: Wear self-contained breathing apparatus.

**Additional information**

Contaminated fire-fighting water must be collected separately. Do not allow to enter into surface water or drains.

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**SECTION 6: Accidental release measures****6.1. Personal precautions, protective equipment and emergency procedures****General advice**

Wear personal protection equipment. Provide adequate ventilation. Avoid dust formation.

**6.2. Environmental precautions**

Do not allow to enter into surface water or drains.

**6.3. Methods and material for containment and cleaning up****Other information**

Take up mechanically. Treat the recovered material as prescribed in the section on waste disposal.

**SECTION 7: Handling and storage****7.1. Precautions for safe handling****Advice on safe handling**

Do not breathe dust. If handled uncovered, arrangements with local exhaust ventilation have to be used.

**Advice on general occupational hygiene**

Change contaminated clothing. Wash hands before breaks and after work. When using do not eat or drink.

Protect skin by using skin protective cream.

**Further information on handling**

When using do not eat, drink, smoke, sniff.

**7.2. Conditions for safe storage, including any incompatibilities****Requirements for storage rooms and vessels**

Keep container dry. Keep container tightly closed.

**Further information on storage conditions**

storage temperature:

of °C: -25

up to °C: -15

Protect against: Light.

Store under (Gas): argon. Nitrogen.

**SECTION 8: Exposure controls/personal protection****8.1. Control parameters****Additional advice on limit values**

To date, no national critical limit values exist.

**8.2. Exposure controls****Individual protection measures, such as personal protective equipment****Eye/face protection**

Eye protection: Tightly sealed safety glasses.

**Hand protection**

Tested protective gloves are to be worn: Single-use gloves. NBR (Nitrile rubber).

**Skin protection**

Body protection: Lab apron. Chemical resistant safety shoes.

**Respiratory protection**

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

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**SECTION 9: Physical and chemical properties****9.1. Information on basic physical and chemical properties**

Physical state: solid  
 Colour: light yellow

**Changes in the physical state**

Melting point/freezing point: 137 - 141 °C

**Solubility in other solvents**

dimethylsulphoxide (DMSO).

**SECTION 10: Stability and reactivity****10.4. Conditions to avoid**

Light.

**10.6. Hazardous decomposition products**

Carbon dioxide. Carbon monoxide. Fluorines-carbon-hydrogens. Nitrogen oxides (NO<sub>x</sub>).

**SECTION 11: Toxicological information****11.1. Information on hazard classes as defined in GB CLP Regulation****Acute toxicity**

CAS No	Chemical name				
	Exposure route	Dose	Species	Source	Method
13551-89-8	Fluoromisonidazole				
	oral	LD50 900 mg/kg	Mouse.		
	dermal	ATE 1100 mg/kg			
	inhalation vapour	ATE 11 mg/l			
	inhalation dust/mist	ATE 1,5 mg/l			

**Carcinogenic/mutagenic/toxic effects for reproduction**

No information available.

**Additional information on tests**

The classification was carried out according to the calculation method of the Preparations Directive (1999/45/EC).

**SECTION 12: Ecological information****12.5. Results of PBT and vPvB assessment**

This substance does not meet the PBT/vPvB criteria of UK REACH.

**12.6. Endocrine disrupting properties**

This substance does not have endocrine disrupting properties with respect to non-target organisms.

**Further information**

Do not allow to enter into surface water or drains. The classification was carried out according to the calculation method of the Preparations Directive (1999/45/EC).

**SECTION 13: Disposal considerations****13.1. Waste treatment methods**

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**Disposal recommendations**

Do not allow to enter into surface water or drains. Dispose of waste according to applicable legislation.

**List of Wastes Code - residues/unused products**

160508 WASTES NOT OTHERWISE SPECIFIED IN THE LIST; gases in pressure containers and discarded chemicals; discarded organic chemicals consisting of or containing hazardous substances; hazardous waste

**List of Wastes Code - used product**

160508 WASTES NOT OTHERWISE SPECIFIED IN THE LIST; gases in pressure containers and discarded chemicals; discarded organic chemicals consisting of or containing hazardous substances; hazardous waste

**List of Wastes Code - contaminated packaging**

150110 WASTE PACKAGING; ABSORBENTS, WIPING CLOTHS, FILTER MATERIALS AND PROTECTIVE CLOTHING NOT OTHERWISE SPECIFIED; packaging (including separately collected municipal packaging waste); packaging containing residues of or contaminated by hazardous substances; hazardous waste

**Contaminated packaging**

Non-contaminated packages may be recycled. Handle contaminated packages in the same way as the substance itself.

**SECTION 14: Transport information****Other applicable information**

No dangerous good in sense of these transport regulations.

**SECTION 15: Regulatory information****15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture****National regulatory information**

Water hazard class (D): 3 - highly hazardous to water

**SECTION 16: Other information****Relevant H and EUH statements (number and full text)**

H302	Harmful if swallowed.
H312	Harmful in contact with skin.
H332	Harmful if inhaled.