

Safety Data Sheet

according to UK REACH Regulation

DFO*-Sq

Revision date: 05.04.2023

Product code: 7274

Page 1 of 5

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

DFO*-Sq

Further trade names

N1-(27-((2-ethoxy-3,4-dioxocyclobut-1-en-1-yl)amino)-11,22-dihydroxy-7,10,18,21-tetraoxo-6,11,17,22-tetraazaheptacosyl)-N1-hydroxy-N4-(5-(N-hydroxyacetamido)pentyl)succinamide

synonym: DFO*-squaramide

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

Complexation agent for [89Zr]-Labelling, immuno-PET

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**

This substance is not classified as hazardous in accordance with GB CLP Regulation.

2.2. Label elements**GB CLP Regulation****Precautionary statements**

P280	Wear protective gloves/protective clothing/eye protection/face protection.
P301	IF SWALLOWED:
P310	Immediately call a POISON CENTER/doctor.
P273	Avoid release to the environment.

2.3. Other hazards

Warning - substance not yet tested completely.

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

N1-(27-((2-ethoxy-3,4-dioxocyclobut-1-en-1-yl)amino)-11,22-dihydroxy-7,10,18,21-tetraoxo-6,11,17,22-tetraazaheptacosyl)-N1-hydroxy-N4-(5-(N-hydroxyacetamido)pentyl)succinamide

Sum formula: C40H68N8O14

Molecular weight: 885.03 g/mol

Safety Data Sheet

according to UK REACH Regulation

DFO*-Sq

Revision date: 05.04.2023

Product code: 7274

Page 2 of 5

Hazardous components

none (according to UK REACH Regulation)

SECTION 4: First aid measures**4.1. Description of first aid measures****General information**

Avoid contact with skin, eyes and clothes.

After inhalation

Inhalation of dust may cause irritation of the respiratory system. Provide fresh air. In all cases of doubt, or when symptoms persist, seek medical advice.

After contact with skin

After contact with skin, wash immediately with: Water. Change contaminated clothing. May cause an allergic skin reaction. If skin irritation or rash occurs: Get medical advice/attention.

After contact with eyes

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

After ingestion

If swallowed, immediately drink: Water. Medical treatment necessary.

SECTION 5: Firefighting measures**5.1. Extinguishing media****Suitable extinguishing media**Water spray. Foam. Extinguishing powder. Carbon dioxide (CO₂). ABC powder.**5.2. Special hazards arising from the substance or mixture**In case of fire may be liberated: Carbon dioxide (CO₂). Carbon monoxide Nitrogen oxides (NO_x).**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.

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**

Avoid contact with skin, eyes and clothes. Do not breathe dust. If handled uncovered, arrangements with local exhaust ventilation have to be used.

Safety Data Sheet

according to UK REACH Regulation

DFO*-Sq

Revision date: 05.04.2023

Product code: 7274

Page 3 of 5

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:

at °C: 20 ± 5

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.

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

Physical state:

solid

Colour:

colourless, cream

Auto-ignition temperature:

Decomposition temperature:

Water solubility:

Solubility in other solvents

DMSO

partially soluble

Test method

ASTM D 1929

EC: 440/2008 A.4.

SECTION 10: Stability and reactivity**10.2. Chemical stability**

Thermal decomposition can lead to the escape of irritating gases and vapours.

10.3. Possibility of hazardous reactions

Decomposition under formation of: Carbon dioxide (CO₂). Carbon monoxide Nitrogen oxides (NO_x).

10.4. Conditions to avoid

May cause decomposition by long-term light influence.

Safety Data Sheet

according to UK REACH Regulation

DFO*-Sq

Revision date: 05.04.2023

Product code: 7274

Page 4 of 5

10.5. Incompatible materials

Oxidizing agents, strong. Light.

10.6. Hazardous decomposition products

Thermal decomposition can lead to the escape of irritating gases and vapours.

SECTION 11: Toxicological information**11.1. Information on hazard classes as defined in GB CLP Regulation****Toxicokinetics, metabolism and distribution**

No information available.

Acute toxicity

Toxicological data are not available.

Irritation and corrosivity

No information available.

Sensitising effects

No information available.

Carcinogenic/mutagenic/toxic effects for reproduction

Due to missing data no statement can be made whether the substance fulfills the criteria of CMR categories 1 or 2.

STOT-repeated exposure

Toxicological data are not available.

Specific effects in experiment on an animal

No information available.

11.2. Information on other hazards**Further information**

Toxicological data are not available.

SECTION 12: Ecological information**12.1. Toxicity**

Toxicological data are not available.

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****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

Safety Data Sheet

according to UK REACH Regulation

DFO*-Sq

Revision date: 05.04.2023

Product code: 7274

Page 5 of 5

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

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