

**Safety Data Sheet**

according to UK REACH Regulation

**MMSE (GMP)**

Revision date: 24.03.2022

Product code: 1901

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

MMSE (GMP)

**Further trade names**

CA index name: Estra-1,3,5(10)-triene-16,17-diol, 3-(methoxymethoxy)-, cyclic sulfate, (16beta,17beta)

3-(Methoxymethoxy)-1,3,5(10)-gonatriene-16beta,17beta diol-16,17-cyclic sulfate; 3-O-(Methoxymethyl)-16,17-O-sulfuryl-16-epiestriol; 3-Methoxymethyl-16beta,17beta-epiestriol-O-cyclic sulfone; FES precursor

CAS No: 177714-21-5

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

Precursor for 16alpha-[18F]Fluoroestradiol

**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****2.3. Other hazards**

Warning - substance not yet tested completely.

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

Sum formula:	C20H26O6S
Molecular weight:	394.48

**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.

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**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. If eye irritation persists: Get medical advice/attention.

**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 (CO<sub>2</sub>). ABC powder.

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

In case of fire may be liberated: Carbon dioxide (CO<sub>2</sub>). Carbon monoxide Sulfur oxides.

**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.

**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.

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**Further information on storage conditions**

storage temperature:

of °C: +2

up to °C: +8

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:	white
Odour:	odourless

**Changes in the physical state**

Melting point/freezing point: 158-159 °C

Water solubility: insoluble

**Solubility in other solvents**

Chloroform, ACN

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

Thermal decomposition can lead to the escape of irritating gases and vapours. The product can hydrolyse. The stated effect can be caused partly by the decomposition products.

**10.3. Possibility of hazardous reactions**Decomposition under formation of: Carbon dioxide (CO<sub>2</sub>). Carbon monoxide Sulfur oxides.**10.4. Conditions to avoid**

May cause decomposition by long-term light influence.

**10.5. Incompatible materials**

Oxidizing agents, strong. Water.

**10.6. Hazardous decomposition products**

Thermal decomposition can lead to the escape of irritating gases and vapours. Decomposition under formation of: Carbon dioxide (CO<sub>2</sub>). Carbon monoxide Sulfur oxides.

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**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****Other information**

Harmful if inhaled. Harmful if swallowed. Harmful in contact with skin.

**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.

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

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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**