

**Safety Data Sheet**

according to UK REACH Regulation

**MFBG-SPIAd precursor**

Revision date: 17.03.2025

Product code: 7038

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

MFBG-SPIAd precursor

**Further trade names**

N,N',N'',N'''-tetra(tert-butoxy)carbonyl-meta-(spiroadamantyl-1,3-dioxane-4,6-dione-5-ylidene)iodobenzylguanidine

synonym:

[<sup>18</sup>F]MFBG-SPIAd precursor; Iodonium, [3-[[[bis[(1,1-dimethylethoxy)carbonyl]amino][[(1,1-dimethylethoxy)carbonyl]imino]methyl] [(1,1-dimethylethoxy)carbonyl]amino]methyl]phenyl] (4,6-dioxospiro[1,3-dioxane-2,2'-tricyclo[3.3.1.1<sup>3,7</sup>]decan]-5-yl)-, inner salt (ACI)

Substance name: MFBG-SPIAd precursor

CAS No: 2097077-66-0

**1.2. Relevant identified uses of the substance or mixture and uses advised against****Use of the substance/mixture**Precursor for meta-[<sup>18</sup>F]Fluorobenzylguanidine**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; H302

Eye Dam. 1; H318

Full text of hazard statements: see SECTION 16.

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

Signal word: Danger

Pictograms:

**Hazard statements**

H302

Harmful if swallowed.

H318

Causes serious eye damage.

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**Precautionary statements**

P264	Wash hands thoroughly after handling.
P270	Do not eat, drink or smoke when using this product.
P280	Wear protective gloves/protective clothing/eye protection/face protection/hearing protection.
P301+P312	IF SWALLOWED: Call a POISON CENTER/doctor if you feel unwell.
P330	Rinse mouth.
P305+P351+P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P310	Immediately call a POISON CENTER/doctor.
P501	Dispose of contents/container to ....

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

N,N',N'',N''?-tetra(tert-butoxy)carbonyl-meta-(spiroadamantyl-1,3-dioxane-4,6-dione-5-ylidene)iodobenzylguanidine

Sum formula: C<sub>41</sub>H<sub>56</sub>N<sub>3</sub>O<sub>12</sub>

Molecular weight: 909.81 g/mol

**Relevant ingredients**

CAS No	Chemical name			Quantity
	EC No	Index No	REACH No	
	Classification (GB CLP Regulation)			
2097077-66-0	MFBG-SPIAd precursor			95 - < 100 %
	Acute Tox. 4, Eye Dam. 1; H302 H318			

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	
2097077-66-0		MFBG-SPIAd precursor	95 - < 100 %
		oral: ATE = 500 mg/kg	

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

Provide fresh air. In case of irregular breathing or respiratory arrest provide artificial respiration. If experiencing respiratory symptoms: Call a doctor.

**After contact with skin**

IF ON SKIN: Take off immediately all contaminated clothing. Immediately rinse with water for several minutes. If skin irritation occurs: Get medical help.

**After contact with eyes**

In case of contact with eyes, rinse immediately with plenty of flowing water for 10 to 15 minutes holding eyelids apart. Subsequently consult an ophthalmologist.

**After ingestion**

Rinse mouth thoroughly with water.  
If swallowed, immediately drink: Water. Medical treatment necessary.  
IF SWALLOWED: Call a doctor if you feel unwell.

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

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Treat symptomatically.

**SECTION 5: Firefighting measures****5.1. Extinguishing media****Suitable extinguishing media**Suitable extinguishing media: Foam., Extinguishing powder., Carbon dioxide (CO<sub>2</sub>)., Water.**5.2. Special hazards arising from the substance or mixture**

In case of fire may be liberated: Gases/vapours, irritant

**5.3. Advice for firefighters**

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

Use of protective clothing

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

Do not breathe dust. Avoid contact with skin, eyes and clothes. Wear personal protection equipment. Provide adequate ventilation.

**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. Clear contaminated areas thoroughly.

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

If handled uncovered, arrangements with local exhaust ventilation have to be used. Do not breathe dust. When using do not eat, drink, smoke, sniff. Wash hands before breaks and after work. Do not get in eyes, on skin, or on clothing.

**Advice on general occupational hygiene**

Remove contaminated, saturated clothing immediately. Protect skin by using skin protective cream. After work, wash hands and face. When using do not eat or drink.

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

Keep container tightly closed in a cool, well-ventilated place. Store in a place accessible by authorized persons only. Restrict access to stockrooms.

**Further information on storage conditions**

storage temperature:

of °C: - 15

up to °C: - 25

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.

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**8.2. Exposure controls****Appropriate engineering controls**

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

**Individual protection measures, such as personal protective equipment****Eye/face protection**

Tightly sealed safety glasses.

**Hand protection**

Single-use gloves. NBR (Nitrile rubber), PVC (polyvinyl chloride) NR (natural rubber, Natural latex)

**Skin protection**

Lab apron. Chemical resistant safety shoes.

**Respiratory protection**

Do not breathe dusts or mists.

If handled uncovered, arrangements with local exhaust ventilation have to be used.

**Environmental exposure controls**

Do not empty into drains.

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

Physical state:	solid
Colour:	white , cream

Solubility in other solvents

Methanol , Dimethylsulfoxide (DMSO)

Bulk density:

**Test method**

DIN EN ISO 1183

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

The product is stable under storage at normal ambient temperatures.

**10.3. Possibility of hazardous reactions**

No hazardous reaction when handled and stored according to provisions.

**10.4. Conditions to avoid**

Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. , Avoid high temperatures or direct sunlight.

**10.5. Incompatible materials**Oxidizing agents, strong.  
water**SECTION 11: Toxicological information****11.1. Information on hazard classes as defined in GB CLP Regulation****Acute toxicity**

Harmful if swallowed.

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CAS No	Chemical name				
	Exposure route	Dose	Species	Source	Method
2097077-66-0	MFBG-SPIAd precursor				
	oral	ATE 500 mg/kg			

**Irritation and corrosivity**

Serious eye damage/eye irritation: Causes serious eye damage.

Skin corrosion/irritation: Based on available data, the classification criteria are not met.

**Sensitising effects**

Based on available data, the classification criteria are not met.

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

Germ cell mutagenicity: Based on available data, the classification criteria are not met.

Carcinogenicity: Based on available data, the classification criteria are not met.

Reproductive toxicity: Based on available data, the classification criteria are not met.

**STOT-single exposure**

Based on available data, the classification criteria are not met.

**STOT-repeated exposure**

Based on available data, the classification criteria are not met.

**Aspiration hazard**

Based on available data, the classification criteria are not met.

**11.2. Information on other hazards****Endocrine disrupting properties**

This product does not contain a substance that has endocrine disrupting properties with respect to humans as no components meets the criteria.

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

Based on available data, the classification criteria are not met.

**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.

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

Dispose of waste according to applicable legislation.

Send to a hazardous waste incinerator facility under observation of official regulations.

Do not empty into drains.

**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

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**SECTION 14: Transport information****Land transport (ADR/RID)**

<b><u>14.1. UN number or ID number:</u></b>	UN 3077
<b><u>14.2. UN proper shipping name:</u></b>	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (N,N',N',N"-tetra(tert-butoxy)carbonyl-meta- (spiroadamantyl-1,3-dioxane-4,6-dione-5-ylidene)iodobenzylguanidine)
<b><u>14.3. Transport hazard class(es):</u></b>	9
<b><u>14.4. Packing group:</u></b>	III
Hazard label:	9
Classification code:	M7
Special Provisions:	274 335 375 601
Limited quantity:	5 kg
Excepted quantity:	E1
Transport category:	3
Hazard No:	90
Tunnel restriction code:	-

**Inland waterways transport (ADN)**

<b><u>14.1. UN number or ID number:</u></b>	UN 3077
<b><u>14.2. UN proper shipping name:</u></b>	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (N,N',N',N"-tetra(tert-butoxy)carbonyl-meta- (spiroadamantyl-1,3-dioxane-4,6-dione-5-ylidene)iodobenzylguanidine)
<b><u>14.3. Transport hazard class(es):</u></b>	9
<b><u>14.4. Packing group:</u></b>	III
Hazard label:	9
Classification code:	M7
Special Provisions:	274 335 375 601
Limited quantity:	5 kg
Excepted quantity:	E1

**Marine transport (IMDG)**

<b><u>14.1. UN number or ID number:</u></b>	UN 3077
<b><u>14.2. UN proper shipping name:</u></b>	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (N,N',N',N"-tetra(tert-butoxy)carbonyl-meta- (spiroadamantyl-1,3-dioxane-4,6-dione-5-ylidene)iodobenzylguanidine)
<b><u>14.3. Transport hazard class(es):</u></b>	9
<b><u>14.4. Packing group:</u></b>	III
Hazard label:	9
Special Provisions:	274 335 966 967 969
Limited quantity:	5 kg
Excepted quantity:	E1
EmS:	F-A, S-F

**Air transport (ICAO-TI/IATA-DGR)**

<b><u>14.1. UN number or ID number:</u></b>	UN 3077
<b><u>14.2. UN proper shipping name:</u></b>	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (N,N',N',N"-tetra(tert-butoxy)carbonyl-meta- (spiroadamantyl-1,3-dioxane-4,6-dione-5-ylidene)iodobenzylguanidine)
<b><u>14.3. Transport hazard class(es):</u></b>	9
<b><u>14.4. Packing group:</u></b>	III
Hazard label:	9
Special Provisions:	A97 A158 A179 A197 A215
Limited quantity Passenger:	30 kg G
Passenger LQ:	Y956
Excepted quantity:	E1

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IATA-packing instructions - Passenger:	956
IATA-max. quantity - Passenger:	400 kg
IATA-packing instructions - Cargo:	956
IATA-max. quantity - Cargo:	400 kg

**14.5. Environmental hazards**

ENVIRONMENTALLY HAZARDOUS: Yes

**Other applicable information**

Hazchem code: 2Z

**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

**15.2. Chemical safety assessment**

For this substance a chemical safety assessment has not been carried out.

**SECTION 16: Other information****Abbreviations and acronyms**

Acute Tox: Acute toxicity

Eye Dam: Eye damage

**Relevant H and EUH statements (number and full text)**

H302 Harmful if swallowed.

H318 Causes serious eye damage.