

# SAFETY DATA SHEET

according to 1907/2006/EC, Article 31

Printing date 21.05.2010

Sheet n° 270

Revision: 21.05.2010

## 1 Identification of the substance/preparation and of the company/undertaking

### · Product details

· **Trade name:** *sulphur hexafluoride*

· **Application of the substance / the preparation** Pharmaceutical preparation

### · Manufacturer/Supplier:

Bracco Imaging S.p.A.

Via E. Folli, 50

20134 Milano

tel. +39 (0)2 21771

· **Further information obtainable from:** hse@bracco.com

### · Information in case of emergency:

Emergency contact:

Ospedale Niguarda Ca' Granda - Milano

Antivenoms Centre: +39 (0)2 66101029

In case of need, call any emergency telephone number available.

## 2 Hazards identification

· **Hazard description:** Not applicable.

· **Information concerning particular hazards for human and environment:**

See also Sections 11 and 12.

### · GHS label elements



**Warning**

H280 - Contains gas under pressure; may explode if heated.

### · Storage:

P410+P403 Protect from sunlight. Store in a well-ventilated place.

## 3 Composition/information on ingredients

### · Chemical characterization:

· **CAS No. Description**

2551-62-4 sulphur hexafluoride

· **Identification number(s)**

· **EINECS Number:** 219-854-2

## 4 First aid measures

· **General information:** See also Sections 2 and 11.

### · After inhalation:

Supply fresh air. If required, provide artificial respiration. Keep patient warm. Consult doctor if symptoms persist.

In case of unconsciousness place patient stably in side position for transportation.

### · After skin contact:

In cases of frost bites, rinse with plenty of water. Do not remove clothing.

Cover wound with a sterile dressing.

### · After eye contact:

Rinse opened eye for several minutes under running water.

Seek medical treatment.

· **After swallowing:** If symptoms persist consult a doctor.

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- **Information for doctor:**
- **Hazards** Danger of impaired breathing.

### 5 Fire-fighting measures

- **Suitable extinguishing agents:**  
CO2, powder or water spray. Fight larger fires with water spray or alcohol resistant foam.  
Extinguishing agent depending on the other materials involved in the fire.
- **For safety reasons unsuitable extinguishing agents:** Unknown.
- **Special hazards caused by the substance, its products of combustion or resulting gases:**  
During heating or in case of fire poisonous gases are produced.
- **Protective equipment:**  
Firefighters should wear adequate personal protective equipment with protection of respiratory tract (self-contained breathing apparatus).  
See also Section 8.

### 6 Accidental release measures

- **Person-related safety precautions:**  
Wear protective equipment. Keep unprotected persons away.  
See also Section 8.  
Keep out from the area.  
Ensure adequate ventilation indoors.
- **Measures for environmental protection:**  
Prevent seepage into sewage system, workpits and cellars.  
Contain the outflow with inert material.
- **Measures for cleaning/collecting:** Ensure adequate ventilation.

### 7 Handling and storage

- **Handling:**
- **Information for safe handling:**  
Ensure good ventilation/exhaustion at the workplace.  
Ensure good interior ventilation, especially at floor level. (Fumes are heavier than air).  
Operate only in authorized areas.
- **Information about fire - and explosion protection:**  
Pressurized container: protect from sunlight and do not expose to temperatures exceeding 50°C, i.e. electric lights. Do not pierce or burn, even after use.  
Do not spray onto a naked flame or any incandescent material.  
Keep ignition sources away - Do not smoke.
- **Storage:**
- **Requirements to be met by storerooms and receptacles:**  
Store in a cool location.  
Protect from potential sources of damage.
- **Information about storage in one common storage facility:** Not required.
- **Further information about storage conditions:**  
Store receptacle in a well ventilated area.  
Avoid contact with air / oxygen.

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### 8 Exposure controls/personal protection

· **Additional information about design of technical facilities:** No further data; see Section 7.

· **Ingredients with limit values that require monitoring at the workplace:**

**2551-62-4 sulphur hexafluoride**

TWA (Italy) 1000 ppm

· **Additional information:** Valid data and limit values in date of revision were used as basis.

· **Personal protective equipment:**

· **General protective and hygienic measures:**

The usual precautionary measures are to be adhered to when handling chemicals.  
Keep away from foodstuffs, beverages and feed.

· **Respiratory protection:**

Short term filter device:

Filter P3

Use suitable respiratory protective device in case of insufficient ventilation.

· **Protection of hands:**



Protective gloves

· **Material of gloves**

Rubber gloves

PVC or PE gloves

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer.

· **Penetration time of glove material**

The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

· **Eye protection:**



Tightly sealed goggles

· **Body protection:** Normal working clothes.

· **Limitation and supervision of exposure into the environment** See also Section 7.1

### 9 Physical and chemical properties

· **General Information**

<b>Form:</b>	Gaseous
<b>Colour:</b>	Colourless
<b>Odour:</b>	Odourless

· **Change in condition**

**Melting point/Melting range:** -50,7°C

**Boiling point/Boiling range:** -63,7 subl.°C

· **Flash point:** Not applicable.

· **Danger of explosion:** Product does not present an explosion hazard.

· **Vapour pressure at 20°C:** 21,4 hPa

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- |  |                        |
|--|------------------------|
| <b>· Density:</b>                                | Not determined.        |
| <b>· Relative density</b>                        | 5,04 g/cm <sup>3</sup> |
| <b>· Solubility in / Miscibility with water:</b> | 41 mg/l                |

### 10 Stability and reactivity

- **Thermal decomposition / conditions to be avoided:**  
No decomposition if used and stored according to specifications.
- **Materials to be avoided:**
- **Dangerous reactions** No dangerous reactions known.
- **Dangerous decomposition products:**  
Hydrogen fluoride  
Sulphur dioxide

### 11 Toxicological information

- **Acute toxicity:**
- **LD/LC50 values relevant for classification:** Not available.
- **Primary irritant effect:**
- **on the skin:** Not available.
- **on the eye:** Not available.
- **Sensitization:** No sensitizing effects known.
- **Additional toxicological information:**  
When used and handled according to specifications, the product does not have any harmful effects to our experience and the information provided to us.

### 12 Ecological information

- **Additional ecological information:**
- **General notes:**  
Avoid transfer into the environment.  
Avoid emission into atmosphere. Product shows a highatmospheric residence time and is justified suspected to influence the O2/O3 balance in the stratosphere.

### 13 Disposal considerations

- **Product:**
- **Recommendation**  
Product's surplus or waste resulting from use must be handled according to precautions and individual protective measures as indicated under Sections 7 and 8.
- **Uncleaned packaging:**
- **Recommendation:** Disposal must be made according to official regulations.

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### 14 Transport information

· **Land transport ADR/RID (cross-border)**



- **ADR/RID class:** 2 2A Gases.
- **Danger code (Kemler):** 20
- **UN-Number:** 1080
- **Packaging group:** -
- **Hazard label:** 2.2
- **Description of goods:** 1080 SULPHUR HEXAFLUORIDE
- **Tunnel restriction code** C/E

· **Maritime transport IMDG:**



- **IMDG Class:** 2.2
- **UN Number:** 1080
- **Label** 2.2
- **Packaging group:** -
- **EMS Number:** F-C,S-V
- **Proper shipping name:** SULPHUR HEXAFLUORIDE

· **Air transport ICAO-TI and IATA-DGR:**



- **ICAO/IATA Class:** 2
- **UN/ID Number:** 1080
- **Label** 2.2
- **Packaging group:** -
- **Proper shipping name:** SULPHUR HEXAFLUORIDE

- **UN "Model Regulation":** UN1080, SULPHUR HEXAFLUORIDE, 2.2

### 15 Regulatory information

- **Labelling according to EU guidelines:** Observe the general safety regulations when handling chemicals.
- **Code letter and hazard designation of product:**  
Labelling not required, according to the Directive 67/548/CEE
- **National regulations:** D.lgs. n°152/2006 and subsequent amendments.

### 16 Other information

This information is based on our present knowledge; it is believed to be accurate and represent the best available set of data at the date of revision. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.  
This sheet voids and takes over any other MSDS' previous release concerning this product.

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**· Training hints**

All persons handling this product should be informed on the existence of the hazard, on any possible risk they might be subjected to and about all required protective measures to prevent such a damage or to reduce the exposition.

**· Department issuing MSDS:** HSE Department - Bracco Group**· Contact:** Ing. Daniela Arnoldi**· Abbreviations and acronyms:**

ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)

RID: Règlement 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" (IATA)

ICAO: International Civil Aviation Organization

ICAO-TI: Technical Instructions by the "International Civil Aviation Organization" (ICAO)

GHS: Globally Harmonized System of Classification and Labelling of Chemicals

EINECS: European Inventory of Existing Commercial Chemical Substances

CAS: Chemical Abstracts Service (division of the American Chemical Society)

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

**· Sources** - Database ChemGes®**· \* Data compared to the previous version altered.**

- data updating on the basis of the latest amendments.

- adaptation of the form according to Regulation 1907/2006/CE.

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