SAFETY DATA SHEETS

According to Globally Harmonized System of Classification and Labelling of Chemicals (GHS) - Sixth revised edition

Version: 1.0

Creation Date: Aug 14, 2017

Revision Date: Aug 14, 2017

1.Identification

1.1GHS Product identifier

| Product name | flucarbazone-sodium |
|--------------|---------------------|
|--------------|---------------------|

1.20ther means of identification

| Produ ct numb er | _ |
|---------------------------|--|
| Other names | sodium [(4,5-dihydro-3-methoxy-4-methyl-5-oxo-1H-1,2,4-triazol-1-yl)carbonyl]{[2-(trifluoromethoxy)phenyl]sulfonyl}azanide |

1.3Recommended use of the chemical and restrictions on use

| Identified uses | For industry use only. |
|----------------------|------------------------|
| Uses advised against | no data available |

2.Hazard identification

2.1 Classification of the substance or mixture

no data available

2.2GHS label elements, including precautionary statements

| Pictogram(s) | no data available |
|---------------------|-------------------|
| Signal word | no data available |
| Hazard statement(s) | no data available |

| Precautionary statement(s) | |
|----------------------------|-------------------|
| Prevention | no data available |
| Response | no data available |
| Storage | no data available |
| Disposal | no data available |

2.3Other hazards which do not result in classification

no data available

3.Composition/information on ingredients

3.1Substances

| Chemical name | Common names and synonyms | CAS number | EC number | Concentration |
|---------------------|---------------------------|---------------|--------------|---------------|
| flucarbazone-sodium | flucarbazone-sodium | 181274-17-9 | none | 100% |

4.First-aid measures

4.1Description of necessary first-aid measures

General advice

Consult a physician. Show this safety data sheet to the doctor in attendance.

If inhaled

If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician.

In case of skin contact

Wash off with soap and plenty of water. Consult a physician.

In case of eye contact

Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician.

If swallowed

Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

4.2Most important symptoms/effects, acute and delayed

no data available

4.3Indication of immediate medical attention and special treatment needed, if necessary

5.Fire-fighting measures

5.1Extinguishing media

Suitable extinguishing media

Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

5.2Specific hazards arising from the chemical

no data available

5.3Special protective actions for fire-fighters

Wear self-contained breathing apparatus for firefighting if necessary.

6.Accidental release measures

6.1Personal precautions, protective equipment and emergency procedures

Use personal protective equipment. Avoid dust formation. Avoid breathing vapours, mist or gas. Ensure adequate ventilation. Evacuate personnel to safe areas. Avoid breathing dust. For personal protection see section 8.

6.2Environmental precautions

Prevent further leakage or spillage if safe to do so. Do not let product enter drains. Discharge into the environment must be avoided.

6.3 Methods and materials for containment and cleaning up

Pick up and arrange disposal. Sweep up and shovel. Keep in suitable, closed containers for disposal.

7.Handling and storage

7.1Precautions for safe handling

Avoid contact with skin and eyes. Avoid formation of dust and aerosols. Avoid exposure - obtain special instructions before use. Provide appropriate exhaust ventilation at places where dust is formed. For precautions see section 2.2.

7.2Conditions for safe storage, including any incompatibilities

Store in cool place. Keep container tightly closed in a dry and well-ventilated place.

8.Exposure controls/personal protection

8.1Control parameters

Occupational Exposure limit values

no data available

Biological limit values

no data available

8.2Appropriate engineering controls

Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.

8.3Individual protection measures, such as personal protective equipment (PPE)

Eye/face protection

Safety glasses with side-shields conforming to EN166. Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).

Skin protection

Wear impervious clothing. The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace. Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique(without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands. The selected protective gloves have to satisfy the specifications of EU Directive 89/686/EEC and the standard EN 374 derived from it.

Respiratory protection

Wear dust mask when handling large quantities.

Thermal hazards

no data available

9. Physical and chemical properties

| Physical state | no data available |
|--|--------------------|
| Colour | no data available |
| Odour | no data available |
| Melting point/ freezing point | no data available |
| Boiling point or initial boiling point and boiling range | 463.7°C at 760mmHg |
| Flammability | no data available |
| Lower and upper explosion limit / flammability limit | no data available |
| Flash point | 234.2°C |
| Auto-ignition temperature | no data available |
| Decomposition temperature | no data available |

| рН | no data available |
|---|----------------------|
| Kinematic viscosity | no data available |
| Solubility | no data available |
| Partition coefficient n-octanol/water (log value) | no data available |
| Vapour pressure | 2.14E-09mmHg at 25°C |
| Density and/or relative density | no data available |
| Relative vapour density | no data available |
| Particle characteristics | no data available |

10.Stability and reactivity

10.1Reactivity

no data available

10.2Chemical stability

Stable under recommended storage conditions.

10.3Possibility of hazardous reactions

no data available

10.4Conditions to avoid

no data available

10.5Incompatible materials

no data available

10.6Hazardous decomposition products

no data available

11.Toxicological information

Acute toxicity

- Oral: no data available
- Inhalation: no data available

| • | Dermal: no data available |
|---------|--|
| | Skin corrosion/irritation |
| | no data available |
| | Serious eye damage/irritation |
| | no data available |
| | Respiratory or skin sensitization |
| | no data available |
| | Germ cell mutagenicity |
| | no data available |
| | Carcinogenicity |
| | no data available |
| | Reproductive toxicity |
| | |
| | no data available |
| | STOT-single exposure |
| | no data available |
| | STOT-repeated exposure |
| | no data available |
| | Aspiration hazard |
| | no data available |
| 12.Ecol | ogical information |
| 12.1Tox | xicity |
| • | Toxicity to fish: no data available |
| • | Toxicity to daphnia and other aquatic invertebrates: no data available |
| • | Toxicity to algae: no data available |
| • | Toxicity to microorganisms: no data available |
| 12.2Per | rsistence and degradability |
| | no data available |
| 12.3Bio | accumulative potential |
| | no data available |
| 12.4Mo | bility in soil |
| | no data available |
| 2.5Ωth | ner adverse effects |
| 12.50H | |
| | no data available |

13.Disposal considerations

13.1Disposal methods

Product

The material can be disposed of by removal to a licensed chemical destruction plant or by controlled incineration with flue gas scrubbing. Do not contaminate water, foodstuffs, feed or seed by storage or disposal. Do not discharge to sewer systems.

Contaminated packaging

Containers can be triply rinsed (or equivalent) and offered for recycling or reconditioning. Alternatively, the packaging can be punctured to make it unusable for other purposes and then be disposed of in a sanitary landfill. Controlled incineration with flue gas scrubbing is possible for combustible packaging materials.

14.Transport information

14.1UN Number

ADR/RID: no data available IMDG: no data available IATA: no data available

14.2UN Proper Shipping Name

ADR/RID: no data available

IMDG: no data available

IATA: no data available

14.3Transport hazard class(es)

ADR/RID: no data available IMDG: no data available IATA: no data available

14.4Packing group, if applicable

ADR/RID: no data available IMDG: no data available IATA: no data available

14.5Environmental hazards

ADR/RID: no IMDG: no IATA: no

14.6Special precautions for user

no data available

14.7Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

no data available

15.Regulatory information

15.1Safety, health and environmental regulations specific for the product in question

| Chemical name | Common names and synonyms | CAS number | EC number |
|--|---|---------------------------------|-------------|
| flucarbazone-sodium | flucarbazone-sodium | flucarbazone-sodium 181274-17-9 | |
| European Inventory o | of Existing Commercial Chemical | Substances (EINECS) | Not Listed. |
| | EC Inventory | | Not Listed. |
| United 9 | United States Toxic Substances Control Act (TSCA) Inventory | | Not Listed. |
| China Catalog of Hazardous chemicals 2015 | | Not Listed. | |
| New Zealand Inventory of Chemicals (NZIoC) | | Not Listed. | |
| Philippines Inventory of Chemicals and Chemical Substances (PICCS) | | Not Listed. | |
| | Vietnam National Chemical Inventory | | Not Listed. |
| Chinese Chemical Inventory of Existing Chemical Substances (China IECSC) | | Not Listed. | |

16.Other information

Information on revision

| Creation Date | Aug 14, 2017 |
|---------------|--------------|
| Revision Date | Aug 14, 2017 |

Abbreviations and acronyms

- CAS: Chemical Abstracts Service
- ADR: European Agreement concerning the International Carriage of Dangerous Goods by Road
- RID: Regulation concerning the International Carriage of Dangerous Goods by Rail
- IMDG: International Maritime Dangerous Goods
- IATA: International Air Transportation Association
- TWA: Time Weighted Average
- STEL: Short term exposure limit
- LC50: Lethal Concentration 50%
- LD50: Lethal Dose 50%
- EC50: Effective Concentration 50%

References

- IPCS The International Chemical Safety Cards (ICSC), website: http://www.ilo.org/dyn/icsc/showcard.home
- HSDB Hazardous Substances Data Bank, website: https://toxnet.nlm.nih.gov/newtoxnet/hsdb.htm
- IARC International Agency for Research on Cancer, website: http://www.iarc.fr/
- eChemPortal The Global Portal to Information on Chemical Substances by OECD, website: http://www.echemportal.org/echemportal/index?pageID=0&request_locale=en
- CAMEO Chemicals, website: http://cameochemicals.noaa.gov/search/simple
- ChemIDplus, website: http://chem.sis.nlm.nih.gov/chemidplus/chemidlite.jsp
- ERG Emergency Response Guidebook by U.S. Department of Transportation, website: http://www.phmsa.dot.gov/hazmat/library/erg
- Germany GESTIS-database on hazard substance, website: http://www.dguv.de/ifa/gestis/gestis-stoffdatenbank/index-2.jsp
- ECHA European Chemicals Agency, website: https://echa.europa.eu/

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