

Material Safety Data Sheet

According to Regulation (EC) No. 1907/2006 (REACH)

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

1.1 Identification of the substance or preparation:

METAFECTENE® µ Fluor

REACH Registration No:

1.2 Use of the substance or preparation:

Identified uses:

In compliance with the conditions described in the annex to this safety data sheet.

1.3 Company/undertaking identification:

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Supplier (manufacturer/importer/downstream user/distributor):

E-Mail (competent person):

Information contact:

1.4 Emergency Telephone:

Centre of detoxification

Germany:

Mainz +49-6131-232466 or -232467
Munich +49-89-19240

US or Canada:

+1-800-424-9300

International:

+1-703-527-3887

2. Hazards Identifications

2.1 Classification:

There is at present no information or indication of hazardous properties. The usual precautions taken when handling chemicals should be observed. Slightly hazardous to water and ground.

2.2 Informations pertaining to special dangers for human and environment:

Adverse physicochemical effects:

Adverse human health effects and symptoms:

Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea. Contact with eyes may cause irritation

Adverse environmental effects:

Other adverse hazards:

3. Composition/Information on ingredients

3.1 Chemical characterisation:

CAS.-No.:

EC-No.:

INDEX-No.:

Purity:

Synonymes:

Stabilisers:

Hazard impurities:

3.2 Hazard ingredients:

Labelling not required. Contains no hazardous substances in concentrations to be declared.

3.3 Additional information:

4. First Aid Measures

4.1 General informations:

4.2 In case of inhalation:

Remove victim to fresh air, if necessary seek medical advice. If not breathing, give artificial respiration. If breathing is difficult, give oxygen.

4.3 In case of skin contact:

Wash skin with water thoroughly.

4.4 In case of eye contact:

Wash eyes promptly with water for at least 20 minutes, if necessary seek medical advice.

4.5 In case of ingestion:

If malaise develops seek medical advice. Do not induce vomiting without medical advice.

4.6 Self-protection of the first aider:

4.7 Information to physician:

Symptoms:

Hazards:

Treatment:

Symptomatic treatment by a physician.

5. Fire-Fighting Measures

5.1 Suitable extinguishing media:

No restriction.

5.2 Extinguishing media which must not be used for safety reasons:

No restriction.

5.3 Special exposure hazards arising from the substance or preparation itself, combustion products, resulting gases:

Dangerous decomposition is not anticipated.

5.4 Special protective equipment for fire-fighters:

5.5 Additional information:

6. Accidental Release Measures

6.1 Personal precautions:

6.2 Environmental precautions:

Prevent further leakage or spillage if safe to do so. Prevent product from entering drains. Additional special actions to limit damages are not necessary

6.3 Methods for cleaning up:

Dilute spilled liquids with plenty of water and adsorb. Sweep or vacuum (if powder) or soak up with inert adsorbent material (if liquid), then replace into a suitable clean, dry, closed container and label for disposal.

6.4 Additional information:

Never return spills in original containers for re-use

7. Handling and Storage

7.1 Handling:

Advices on safe handling:

Protective measures:

Technical measures:

Measures to prevent aerosol and dust generation:

Measures required to protect the environment:

Specific requirements or handling rules:

Protect from contamination. Wear personal protective equipment.

Precautions against fire and explosion:

The product itself does not burn.

Further informations:

7.2 Storage:

Technical measures and storage conditions:

METAFFECTENE® µ FluoR is delivered non-chilled and should be stored in a freezer at $\leq -15^{\circ}\text{C}$ immediately after receipt.

Packaging materials:

Requirements for storage rooms and vessels:

There is no restriction for storage with other materials.

Hints on storage assembly:

Storage class:

Further information on storage conditions:

Freezing minimizes the natural ageing process of the liposomes. Storage for several days at room temperature is no a problem provided that the reagent is subsequently stored again at $\leq -15^{\circ}\text{C}$; the number of times the product is thawed for use and re-frozen is irrelevant.

7.3 Specific uses:

Recommendations:

Industrial sector specific solutions:

8. Exposure Controls / Personal Protection

8.1 Exposure limit values:

Occupational exposure limits:

Biological limit values:

DNEL/DMEL and PNEC-value(s):

8.2 Exposure controls:

Occupational exposure controls:

Technical measures to prevent exposure:

Personal protection equipment:

Respiratory protection:

No personal respiratory protective equipment required

Hand protection:

Protective gloves

Eye protection:

Safety glasses

Body protection:

Wash hands before breaks and at end of workday

Environmental exposure controls:

Water (incl. sewage plant):

Air:

Soil:

Final user exposure controls by substances released from articles:

9. Physical and Chemical Properties

9.1 Appearance:

Physical state:

liquid

Colour:

colourless

Odour:

odourless

9.2 Important health, safety and environmental information:

Safety relevant basic data:

pH (20 °C):

6.0

Melting point/range (°C):

Boiling point/range (°C):

ca. 100°C

Flash point (°C):

Ignition temperature (°C):

Vapour pressure (°C):

Density (g/cm³):

Bulk density (kg/m³):

Water solubility (20°C in g/l):

completely

Partition coefficient:

n-Octanol/Water (log Po/w):

Viscosity, dynamic (mPa·s):

Dust explosion hazard:

Explosion limits:

Substance groups relevant properties:

9.3 Other informations:

Substance does not have any oxidizing properties.

Surface tension:

10. Stability and Reactivity

10.1 Conditions to avoid:

10.2 Materials to avoid:

10.3 Hazardous decomposition products:

11. Toxicological Information

11.1 Toxicokinetics, metabolism and distribution:

11.2 Acute effects (toxicity tests):

Acute toxicity:

Intoxication has so far not become known.

Specific symptoms in animal studies:

In case of ingestion:

In case of skin contact:

In case of inhalation:

In case of eye contact:

Irritant and corrosive effects:

Sensitisation:

In case of skin contact:

In case of inhalation:

Remark:

CMR effects (carcinogenicity, mutagenicity and toxicity for reproduction):

Summarised evaluation of the CMR properties:

11.3 Experiences made in practice:

Observations relevant to classification:

Other observations:

11.4 General remarks:

12. Ecological information

12.1 Ecotoxicity:

12.2 Mobility:

Known or predicted distribution to environmental compartments:

12.3 Persistence and degradability:

Abiotic Degradation:

Physical- and photo-chemical elimination:

Biodegradation:

Bioaccumulative potential:

12.4 Results of PBT assessment:

12.5 Other adverse effects:

12.6 Further ecological information:

13. Disposal Considerations

13.1 Appropriate disposal / Product:

Small quantities may be disposed off in waste water.

13.2 Waste codes / waste designations according to EWC / AVV:

13.3 Appropriate packaging:

Dispose of empty packs via local recycling or waste disposal routes-if necessary, clean them beforehand.

13.4 Additional information:

Waste disposal must be in accordance with appropriate Federal, State, and local regulations. This product, if unaltered by use, may be disposed of by treatment at a permitted facility or as advised by your local hazardous waste regulatory authority. Residue from fires extinguished with this material may be hazardous.

14. Transport Information

Is not subject to current regulations for transportation of dangerous goods (ADR/RID, IMDG, IATA/ICAO). Product is not hazardous to ship.

14.1 Land transport (ADR/RID/GGVSE):

Official transport designation:

Class:

Classification Code:

UN-No.:

Packing group:

Hazard label:

Tunnel restriction code:

Special provisions:

14.2 Sea transport (IMDG-Code/GGVSee):

Proper Shipping Name:

Class:

UN-No.:

Packing group:

EmS:

Marine Pollutant:

Special provisions:

14.3 Air transport (ICAO-IATA/DGR):

Proper Shipping Name:

Class:

UN-No.:

Packing group:

Special provisions:

15. Regulatory Information

15.1 EU regulations:

Chemical Safety Assessment:

Labelling:

This products has not to be labelled in accordance with EEC directive 67/548 and 99/45.

Hazard symbols and hazard statements:

Hazard components for labelling:

R-Phrases:

S-Phrases:

Special provisions concerning the labelling of certain preparations:

Other EU regulations:

Informations according 1999/13/EC about limitation of emissions of volatile organic compounds (VOC-guideline):

15.2 National regulations (Germany):

Is not subject of the German regulations for flammable liquids (BetriebssicherheitsVO).

Restrictions of occupation:

Störfallverordnung (12. BImSchV):

Wassergefährdungsklasse (water hazard class):

1

Technische Anleitung Luft (TA-Luft):

Other regulations, restrictions and prohibition regulations:

16. Other Information

16.1 Relevant R-phrases (Number and full text):

16.2 Training instructions:

16.3 Recommended Restriction of Appliance:

16.4 Further information:

Disclaimer:

The information, data and recommendations contained herein are based upon information believed by Biontex Laboratories GmbH (Biontex), after reasonable investigation and research, to be accurate. However, Biontex does not warrant the accuracy of this information. All materials and mixtures may present unknown hazards and should be used with caution. When necessary or appropriate, independent opinions regarding the risk of handling or exposure should be obtained from trained professionals. Biontex disclaims any warranty against patent infringement and the implied warranties of merchantability and fitness for a particular purpose. Customer's sole and exclusive remedy shall be replacement of the product or return of the product and refund of the purchase price, at Biontex's option. In no case shall Biontex be liable for incidental or consequential damages, including lost profits.

16.5 Data sources:

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