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

1.1 Product details
- Component name: Fluorescein
- Product name: Fluorescein additive
- Catalog number: RT-FLUO-ADD

1.2 Relevant identified uses of the substance/preparation and uses advised against
For laboratory use only.

1.3 Manufacturer/Supplier:
Kaneka Eurogentec s.a.
Parc Scientifique du Sart Tilman 4102
Seraing Belgium
Tel +32-4-3727400
Fax +32-4-2640788
E-mail scientific.support@eurogentec.com
Kaneka Eurogentec Helpdesk
Tel. +32-4-3727665

1.4 Emergency information
Please contact the regional Kaneka Eurogentec representation in your country or Kaneka Eurogentec S.A. directly (from 8 am to 6 pm).

MSDS-Nr.: MSDS-FLUOAD-V2

2. Hazards identification

2.1 Classification of the substance or mixture:
Not a hazardous substance or mixture according to Regulation (EC) No. 1272/2008.

2.2 Label elements: None

2.3 Other hazards:
This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

3. Composition/information on ingredients

3.1 Substance:
Pure dimethyl sulfoxide

<table>
<thead>
<tr>
<th>Name</th>
<th>CE-No.</th>
<th>CAS-No.</th>
<th>Composition</th>
</tr>
</thead>
<tbody>
<tr>
<td>DMSO</td>
<td>200-664-3</td>
<td>67-68-5</td>
<td>100%</td>
</tr>
</tbody>
</table>

3.2 Mixture: Not applicable
All others ingredients in this product are not dangerous and not classified by GHS standard.

4. First-aid measures

4.1 Description of first aid measures:
- After inhalation: Fresh air. Consult a doctor in case of complaints.
- After skin contact: Wash off with soap and plenty of water.
- After eye contact: Rinse out with plenty of water.
- After swallowing: Wash out mouth with water. Never give anything by mouth to an unconscious person. Consult a doctor if feeling unwell.

4.2 Most important symptoms and effects: See section 11

4.3 Immediate medical attention and special treatment needed: No data available
5. Fire-fighting measures

5.1 Suitable extinguishing agents: Water, CO2, powder.
5.2 Special hazards: No data available.
5.3 Advice for firefighters: Wear self-contained breathing apparatus for firefighting if necessary.

6. Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures: Avoid contact with skin, avoid breathing vapors or mist.
6.2 Environmental precautions: Prevent further leakage or spillage if safe to do so. Do not let enter drains.
6.3 Measures and materials for containment and cleaning up: Absorb with liquid-binding material.
6.4 Reference to other sections: For disposal see section 13.

7. Handling and storage

7.1 Precautions for safe handling: Wear laboratory gloves, avoid inhalation of vapour or mist
7.2 Conditions for safe storage, incl. any incompatibilities: Store in cool place.
7.3 Specific end use(s): see section 1.2, no other use stipulated

8. Exposure controls/personal protection

8.1 Control parameters: -
8.2 Exposure controls: -
Appropriate engineering controls: General laboratory hygiene practice
Personal protective equipment: General laboratory hygiene practice
Eye-face protection: Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).
Skin protection: Handle with gloves, preferentially nitrile rubber gloves.
Body protection: Laboratory coat.
Respiratory protection: Not required under normal use.
Control of environmental exposure: Do not let product enter drains.

9. Physical and chemical properties

9.1 Information on basic physical and chemical properties:

a. Appearance: Fluid
b. Color: Colorless
c. Odor: Sulphurous
d. Odor threshold: No data available
e. pH: No data available
f. Melting point/range: 16 – 19 °C
g. Boiling point/range: 189 °C
h. Flash point: 87°C
i. Self-igniting: 300-302°C
j. Danger of explosion: No explosion hazard
k. Density: 1.1 mg/ml
l. Solubility in water: Fully soluble
m. Miscibility with water: Fully miscible

9.2 Other safety information: No data available
10. Stability and reactivity

10.1 Reactivity: No data available
10.2 Chemical stability: Stable under recommended storage conditions.
10.3 Possibility of hazardous reactions: No data available
10.4 Conditions to avoid: Excess heat, incompatible materials, water/moisture
10.5 Incompatible materials: Acid chlorides, Phosphorus halides, Strong acids, Strong oxidizing agents, Strong reducing agents.
10.6 Hazardous decomposition products: No data available.

11. Toxicological information

11.1 Information on toxicological effects:
Acute toxicity: LD50 Oral-Rat-14.500 mg/kg
LC50 Inhalation-Rat-4 h-40250 ppm
LD50 Dermal-Rabbit-> 5.000 mg/kg
Skin corrosion/irritation: Irritant to skin and mucous membranes
Serious eye damage/irritation: Irritating effect
Respiratory or skin sensitization: Possible
Germ cell mutagenicity: No data available
Carcinogenicity: No data available
Reproductive toxicity: No data available
Specific target organ toxicity-single exposure: No data available
Specific target organ toxicity-repeated exposure: No data available
Aspiration hazard: No data available
Additional toxicological information: The product should be handled with the usual care when dealing with chemicals.

12. Ecological information

12.1 Toxicity: LC50-Pimephales promelas (fathead minnow)-34.000 mg/l-96 h
LC50-Oncorhynchus mykiss (rainbow trout)-35.000 mg/l-96 h.
12.2 Persistence and degradability: Biodegradability Result: 31 %-According to the results of tests of biodegradability this product is not readily biodegradable. (OECD Test Guideline 301D)
12.3 Bioaccumulative potential: No data available.
12.4 Mobility in soil: No data available.
12.5 Results of PBT and vPvB assessment: No data available.
12.6 Other adverse effects: No data available.

13. Disposal considerations

13.1 Waste treatment methods:
Product: Dispose as special waste in compliance with official regulations.
Do not allow product to reach sewage system.
Uncleaned packaging: Dispose as special waste in compliance with official regulations.

14. Transport information

14.1 UN number: ADR/RID: - IMDG: - IATA: -
14.2 UN proper shipping name: Not dangerous goods.
14.3 Transport hazard class(es): ADR/RID: - IMDG: - IATA: -
14.4 Packaging group: ADR/RID: - IMDG: - IATA: -
14.5 Environmental hazards:
ADR/RID: no  IMDG: no  IATA: no.

14.6 Special precautions for user: None

15. Regulation information

15.1 Safety, health and environmental regulations/legislation specific for the substance/mixture: none
15.2 Chemical safety assessment: For this substance/mixture a chemical safety assessment was not done

16. Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

The information in this document is intended only as a guide to the appropriate precautionary handling of this material by a person trained in, or supervised by a person trained in chemical handling. The user is responsible for determining the precautions and danger of this chemical material in his application. This material may react with other substances and since potential users are so varied, Kaneka Eurogentec S.A., cannot warn of all potential dangers. Therefore, Kaneka Eurogentec S.A., will not assume responsibility and expressly disclaims liability for loss, damage, or expense arising from the use, handling, storage, or disposal of this product. Kaneka Eurogentec S.A. urges each user to carefully read the MSDS prior to using the product and become aware of the adverse health effects associated with this product. While the information provided in the MSDS is believed to be correct, the information is provided without any warranty expressed or implied, regarding its corrective uses.

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