SAFETY DATA SHEET

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

Identification of the substance/preparation

<table>
<thead>
<tr>
<th>Product code</th>
<th>A30005</th>
</tr>
</thead>
<tbody>
<tr>
<td>Product name</td>
<td>Alexa Fluor® 488 carboxylic acid, 2,3,5,6-tetrafluorophenyl ester (Alexa Fluor® 488 5-TFP) &quot;5-isomer*</td>
</tr>
</tbody>
</table>

Company/Undertaking Identification

<table>
<thead>
<tr>
<th>Life Technologies</th>
<th>5250 Mainway Drive</th>
</tr>
</thead>
<tbody>
<tr>
<td>5791 Van Allen Way</td>
<td>Burlington, ONT</td>
</tr>
<tr>
<td>PO Box 6482</td>
<td>CANADA L7L 6A4</td>
</tr>
<tr>
<td>Carlsbad, CA 92008</td>
<td>800/263-6236</td>
</tr>
</tbody>
</table>
+1 760 603 7200

24 hour Emergency Response:

<table>
<thead>
<tr>
<th>866-536-0631</th>
</tr>
</thead>
<tbody>
<tr>
<td>301-431-8585</td>
</tr>
<tr>
<td>Outside of the U.S. +1-301-431-8585</td>
</tr>
</tbody>
</table>

For research use only. Not intended for human or animal diagnostic or therapeutic uses.

2. Hazards identification

GHS - Classification

Signal Word
not hazardous

Health Hazard
not hazardous

Physical Hazards
not hazardous

Principle Routes of Exposure/
Potential Health effects

<table>
<thead>
<tr>
<th>Eyes</th>
<th>May cause eye irritation with susceptible persons.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Skin</td>
<td>May cause skin irritation in susceptible persons.</td>
</tr>
<tr>
<td>Inhalation</td>
<td>May be harmful by inhalation.</td>
</tr>
</tbody>
</table>
Ingestion May be harmful if swallowed.

Specific effects
- Carcinogenic effects None
- Mutagenic effects None
- Reproductive toxicity None
- Sensitization None

Target Organ Effects No known effects under normal use conditions.

HMIS

<table>
<thead>
<tr>
<th></th>
<th>Health</th>
<th>Flammability</th>
<th>Reactivity</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
</tbody>
</table>

3. Composition/information on ingredients

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>CAS-No</th>
<th>EINECS-No</th>
<th>Weight %</th>
</tr>
</thead>
<tbody>
<tr>
<td>Alexa Fluor® 488 5-TFP</td>
<td>NA</td>
<td>-</td>
<td>60-100</td>
</tr>
</tbody>
</table>

We recommend handling all chemicals with caution.

4. First aid measures

Skin contact Rinse with plenty of water. If symptoms arise, call a physician.
Eye contact Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. If symptoms persist, call a physician.
Ingestion Never give anything by mouth to an unconscious person. If symptoms persist, call a physician. Do not induce vomiting without medical advice.
Inhalation Move to fresh air. If symptoms persist, call a physician. If not breathing, give artificial respiration.
Notes to physician Treat symptomatically.

5. Fire-fighting measures

Special protective equipment for firefighters Wear self-contained breathing apparatus and protective suit.

6. Accidental release measures

Personal precautions Use personal protective equipment.
Methods for cleaning up Take up mechanically and collect in suitable container for disposal.

Environmental precautions

Prevent further leakage or spillage if safe to do so.

See Section 12 for additional information.
7. Handling and storage

Handling
Always wear recommended Personal Protective Equipment. No special handling advice required.

Storage
Keep in a dry, cool and well-ventilated place.

8. Exposure controls/personal protection

Exposure limits

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>OSHA PEL</th>
<th>OSHA PEL (Ceiling)</th>
<th>ACGIH OEL (TWA)</th>
<th>ACGIH OEL (STEL)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Alexa Fluor® 488 5-TFP</td>
<td>none</td>
<td>none</td>
<td>none</td>
<td>none</td>
</tr>
</tbody>
</table>

Engineering measures
Ensure adequate ventilation, especially in confined areas.

Personal protective equipment

Personal Protective Equipment requirements are dependent on the user institution’s risk assessment and are specific to the risk assessment for each laboratory where this material may be used.

Hand protection
Impervious gloves.

Eye protection
Safety glasses with side-shields.

Skin and body protection
Lightweight protective clothing.

Hygiene measures
Handle in accordance with good industrial hygiene and safety practice.

Environmental exposure controls
Prevent product from entering drains.

9. Physical and chemical properties

General Information

Form
solid

Appearance
No information available

Odor
No information available

Boiling Point/Range
°C no data available

Melting point/range
°C no data available

Flash point
°C no data available

Autoignition temperature
°C no data available

Oxidizing properties
No information available.

Water solubility
no data available

10. Stability and reactivity

Stability
Stable under normal conditions.

Materials to avoid
No dangerous reaction known under conditions of normal use.

Hazardous decomposition products
None under normal use

polymerization
Hazardous polymerisation does not occur.
11. Toxicological information

**Acute toxicity**

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>LD50 (oral, rat/mouse)</th>
<th>LD50 (dermal, rat/rabbit)</th>
<th>LC50 (inhalation, rat/mouse)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Alexa Fluor® 488 5-TFP</td>
<td>no data available</td>
<td>no data available</td>
<td>no data available</td>
</tr>
</tbody>
</table>

**Principle Routes of Exposure/ Potential Health effects**

- **Eyes**: May cause eye irritation with susceptible persons.
- **Skin**: May cause skin irritation in susceptible persons.
- **Inhalation**: May be harmful by inhalation.
- **Ingestion**: May be harmful if swallowed.
- **Carcinogenic effects**: none
- **Mutagenic effects**: none
- **Reproductive toxicity**: none
- **Sensitization**: none
- **Target Organ Effects**: No known effects under normal use conditions.

12. Ecological information

- **Ecotoxicity effects**: No information available.
- **Mobility**: No information available.
- **Biodegradation**: Inherently biodegradable
- **Bioaccumulation**: Does not bioaccumulate.

13. Disposal considerations

Dispose of in accordance with local regulations.

14. Transport information

- **IATA Proper shipping name**: Not classified as dangerous in the meaning of transport regulations
- **Hazard class**: none
- **Subsidiary Class**: none
- **Packing group**: none
- **UN-No**: None
15. Regulatory information

<table>
<thead>
<tr>
<th>Component</th>
<th>TSCA</th>
</tr>
</thead>
<tbody>
<tr>
<td>Alexa Fluor® 488 5-TFP NA (60-100)</td>
<td>-</td>
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</table>

U.S. Federal Regulations

SARA 313
This product is not regulated by SARA.

Clean Air Act, Section 112 Hazardous Air Pollutants (HAPs) (see 40 CFR 61)
This product does not contain HAPs.

U.S. State Regulations

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>Massachusetts - RTK</th>
<th>New Jersey - RTK</th>
<th>Pennsylvania - RTK</th>
<th>Illinois - RTK</th>
<th>Rhode Island - RTK</th>
</tr>
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<tbody>
<tr>
<td>Alexa Fluor® 488 5-TFP</td>
<td>-</td>
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</table>

California Proposition 65
This product does not contain chemicals listed under Proposition 65

WHMIS Hazard Class
Non-controlled

This product has been classified according to the hazard criteria of the CPR and the MSDS contains all of the information required by the CPR

16. Other information

Reason for Revision
(M)SDS sections updated.

For research use only. Not intended for human or animal diagnostic or therapeutic uses.

The above information was acquired by diligent search and/or investigation and the recommendations are based on prudent application of professional judgment. The information shall not be taken as being all inclusive and is to be used only as a guide. All materials and mixtures may present unknown hazards and should be used with caution. Since the Company cannot control the actual methods, volumes, or conditions of use, the Company shall not be held liable for any damages or losses resulting from the handling or from contact with the product as described herein. THE INFORMATION IN THIS MSDS DOES NOT CONSTITUTE A WARRENTY, EXPRESSED OR IMPLIED, INCLUDING ANY IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR ANY PARTICULAR PURPOSE.

End of Safety Data Sheet