SAFETY DATA SHEET

(In accordance with COMMISSION REGULATION (EU) No 453/2010)

SECTION 1: Identification of the substance/mixture and of the company/undertaking

Product identifier

Product code  22416
Product name  Succinimidyl 4-(P-Maleimidophenyl) Butyrate

Chemical Name  Not applicable
REACH registration number  No registration number is given yet for this substance / substances in this mixture since the annual import quantity is less than one tonnage per annum or the transition period for its registration according to Article 23 of REACH has not yet expired.

Relevant identified uses of the substance or mixture and uses advised against

Relevant identified uses  Use as laboratory reagent, Scientific research and development
Use Description Code  Not Available
Uses advised against  Not for consumer use.

Details of the supplier of the safety data sheet

Manufacturer/Supplier
LIFE TECHNOLOGIES EUROPE BV
KWARTSWEG 2
2665 NN BLEISWIJK
NETHERLANDS
31-(0)180 392 400
Email: MSDS@lifetech.com

Thermo Fisher Scientific
Pierce Biotechnology
P.O. Box 117
Rockford, IL 61105
United States
1.815.968.0747 or
1.800.874.3723

24 hour Emergency Response:
866-536-0631
301-431-8585
Outside of the U.S. ++1-301-431-8585

Country specific Emergency Number (if available):
CHEMTREC Ireland (Dublin)  +(353)-19014670 (Greeting Language: English and Irish)
CHEMTREC UK (London)  +(44)-870-8200418 (Greeting Language: English)
SECTION 2: Hazards identification

Classification of the substance or mixture

Classification according to Regulation (EC) No 1272/2008 [CLP]

Physical hazards
Not classified

Health hazards
Skin corrosion/irritation Category 2
Serious eye damage/eye irritation Category 2
Specific target organ toxicity - Single exposure Category 3

Environmental hazards
Not classified

Additional information
No information available

Label elements

Labelling according to Regulation (EC) No 1272/2008 [CLP]

Hazard pictograms

![Hazard Pictogram]

Signal word
Warning

hazard statements
H315 - Causes skin irritation
H319 - Causes serious eye irritation
H335 - May cause respiratory irritation

Precautionary Statements
P302 + P352 - IF ON SKIN: Wash with plenty of soap and water
P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing
P304 + P340 - IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing
P332 + P313 - If skin irritation occurs: Get medical advice/attention
P337 + P313 - If eye irritation persists: Get medical advice/attention
P261 - Avoid breathing dust/fume/gas/mist/vapours/spray

Other Hazards
This mixture does not contain any substances that are assessed to be a PBT or a vPvB
SECTION 3: Composition/information on ingredients

<table>
<thead>
<tr>
<th>Component</th>
<th>CAS-No.</th>
<th>EINECS-No.</th>
<th>Weight percent</th>
<th>REACH registration number</th>
<th>Classification according to Regulation (EC) No 1272/2008 [CLP]</th>
</tr>
</thead>
<tbody>
<tr>
<td>4-(p-Maleimidophenyl)butyric acid N-hydroxysuccinimide ester</td>
<td>79886-55-8</td>
<td>-</td>
<td>98-100</td>
<td>-</td>
<td>Not classified</td>
</tr>
</tbody>
</table>

SECTION 4: First aid measures

Description of first aid measures

Skin contact  
Wash off immediately with plenty of water for at least 15 minutes. Remove and wash contaminated clothing and gloves, including the inside, before re-use. Immediate medical attention is required.

Eye contact  
Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Immediate medical attention is required.

INGESTION  
Never give anything by mouth to an unconscious person. Do not induce vomiting without medical advice. Get medical attention if symptoms occur.

Inhalation  
Remove to fresh air. If not breathing, give artificial respiration. If symptoms persist, call a doctor.

Notes to Physician  
Treat symptomatically.

Most important symptoms and effects, both acute and delayed
H315 - Causes skin irritation. H319 - Causes serious eye irritation. H335 - May cause respiratory irritation.

Indication of any immediate medical attention and special treatment needed
If skin irritation occurs: Get medical advice/attention. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

SECTION 5: Firefighting measures

Extinguishing media

Suitable Extinguishing Media  

Unsuitable Extinguishing Media  
No information available.

Special hazards arising from the substance or mixture  
Not known.

Advice for fire-fighters  
Wear self-contained breathing apparatus and protective suit.
SECTION 6: Accidental release measures

Personal precautions, protective equipment and emergency procedures
Ensure adequate ventilation. Avoid contact with skin, eyes or clothing. Use personal protection equipment. See Section 8 for more detail.

Environmental precautions
No special environmental precautions required.

Methods and material for containment and cleaning up
Take up mechanically, placing in appropriate containers for disposal.

Reference to other sections
See section 8 for more information.

SECTION 7: Handling and storage

Precautions for safe handling
Always wear recommended Personal Protective Equipment. See Section 8 for more detail. Do not get in eyes, on skin, or on clothing. Do not ingest. If during normal use the material presents a respiratory hazard, use adequate ventilation and/or wear appropriate respirator.

Conditions for safe storage, including any incompatibilities
Keep in a dry, cool and well-ventilated place. Keep in properly labelled containers. Store in accordance with local regulations.

Specific end use(s)
Use as laboratory reagent. Scientific research and development.
## SECTION 8: Exposure controls/personal protection

### Control parameters

#### Exposure Limits

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>EU OEL (TWA)</th>
<th>EU OEL (STEL)</th>
<th>EU Skin Notation</th>
</tr>
</thead>
<tbody>
<tr>
<td>4-(p-Maleimidophenyl)butyric acid N-hydroxysuccinimide ester 79886-55-8</td>
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</table>

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>Austria</th>
<th>Belgium (TWA)</th>
<th>Denmark (TWA)</th>
<th>Finland OEL (TWA)</th>
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</thead>
<tbody>
<tr>
<td>4-(p-Maleimidophenyl)butyric acid N-hydroxysuccinimide ester 79886-55-8</td>
<td>None</td>
<td>None</td>
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<td>None</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>France OEL (VME)</th>
<th>Germany OEL (TWA)</th>
<th>Ireland (TWA)</th>
<th>Italy OEL (TWA)</th>
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<tbody>
<tr>
<td>4-(p-Maleimidophenyl)butyric acid N-hydroxysuccinimide ester 79886-55-8</td>
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<td>None</td>
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</table>

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>Sweden - Occupational Exposure Limits - TLVs (LLVs)</th>
<th>Netherlands OEL (MAC)</th>
<th>Spain OEL (TWA)</th>
<th>United Kingdom</th>
</tr>
</thead>
<tbody>
<tr>
<td>4-(p-Maleimidophenyl)butyric acid N-hydroxysuccinimide ester 79886-55-8</td>
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</table>

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>European Union</th>
<th>United Kingdom</th>
<th>France OEL (VME)</th>
<th>Germany OEL (TWA)</th>
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<tbody>
<tr>
<td>4-(p-Maleimidophenyl)butyric acid N-hydroxysuccinimide ester 79886-55-8</td>
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<td>None</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>Italy OEL (TWA)</th>
<th>Portugal</th>
<th>Netherlands OEL (MAC)</th>
<th>Finland OEL (TWA)</th>
</tr>
</thead>
<tbody>
<tr>
<td>4-(p-Maleimidophenyl)butyric acid N-hydroxysuccinimide ester 79886-55-8</td>
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<td>None</td>
<td>None</td>
<td>None</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>Austria</th>
<th>Denmark</th>
<th>Poland</th>
<th>Switzerland</th>
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</thead>
<tbody>
<tr>
<td>4-(p-Maleimidophenyl)butyric acid N-hydroxysuccinimide ester 79886-55-8</td>
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<td>None</td>
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<td>None</td>
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</table>

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>Ireland</th>
<th>Norway</th>
<th>Lithuania OEL (TWA)</th>
<th>Spain OEL (TWA)</th>
</tr>
</thead>
<tbody>
<tr>
<td>4-(p-Maleimidophenyl)butyric acid N-hydroxysuccinimide ester 79886-55-8</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.

### Exposure controls

#### Personal protection equipment

#### Respiratory protection

In case of insufficient ventilation wear respirators and components tested and approved under appropriate government standards.
Hand Protection  
Glove material: Nitrile rubber with thickness (mm): 0.5  
Break through time (hours): 1  
Recommended glove type has not been tested for use with this product  
Information is based on professional knowledge

Eye protection  
Tight sealing safety goggles.

Skin and body protection  
Wear laboratory coat for body protection.

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

Environmental exposure controls  
No special environmental precautions required.

## SECTION 9: Physical and chemical properties

Information on basic physical and chemical properties

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Appearance</td>
<td>powder</td>
</tr>
<tr>
<td>Odour</td>
<td>Mixture has not been tested</td>
</tr>
<tr>
<td>Odour Threshold</td>
<td>Mixture has not been tested</td>
</tr>
<tr>
<td>Melting point / melting range</td>
<td>°C Mixture has not been tested</td>
</tr>
<tr>
<td>Boiling point / boiling range</td>
<td>°C Mixture has not been tested</td>
</tr>
<tr>
<td>Flash point</td>
<td>°C Mixture has not been tested</td>
</tr>
<tr>
<td>Autoignition temperature</td>
<td>°C Mixture has not been tested</td>
</tr>
<tr>
<td>Decomposition temperature</td>
<td>°C Mixture has not been tested</td>
</tr>
<tr>
<td>Evaporation rate</td>
<td>Mixture has not been tested</td>
</tr>
<tr>
<td>Flammability (solid, gas)</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Upper explosion limit</td>
<td>Mixture has not been tested</td>
</tr>
<tr>
<td>Lower explosion limit</td>
<td>Mixture has not been tested</td>
</tr>
<tr>
<td>Vapour Pressure</td>
<td>Mixture has not been tested</td>
</tr>
<tr>
<td>Relative density</td>
<td>Mixture has not been tested</td>
</tr>
<tr>
<td>Specific gravity</td>
<td>Mixture has not been tested</td>
</tr>
<tr>
<td>Solubility</td>
<td>Mixture has not been tested</td>
</tr>
<tr>
<td>Partition coefficient: n-octanol/water</td>
<td>no data available</td>
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<tr>
<td>Viscosity</td>
<td>Mixture has not been tested</td>
</tr>
<tr>
<td>Explosive properties</td>
<td>Mixture has not been tested</td>
</tr>
<tr>
<td>Oxidising properties</td>
<td>Mixture has not been tested</td>
</tr>
</tbody>
</table>

OTHER INFORMATION  
no data available

## SECTION 10: Stability and reactivity

Reactivity  
None known.

Chemical stability  
Stable under normal conditions.

Possibility of hazardous reactions  
Hazardous reaction has not been reported.

Conditions to Avoid  
No information available.

Incompatible Materials  
No dangerous reaction known under conditions of normal use.

Hazardous decomposition products  
No known hazardous decomposition products.
SECTION 11: Toxicological information

Information on toxicological effects

<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>4-(p-Maleimidophenyl)butyric acid N-hydroxysuccinimide ester</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

- **Irritation**
  - Skin irritation, Irritating to eyes

- **Corrosivity**
  - Conclusion but not sufficient for classification

- **Sensitisation**
  - Conclusion but not sufficient for classification

- **STOT - Single Exposure**
  - May cause respiratory irritation

- **STOT - Repeated Exposure**
  - Conclusion but not sufficient for classification

- **Carcinogenicity**
  - Conclusion but not sufficient for classification

- **Mutagenicity**
  - Conclusion but not sufficient for classification

- **Reproductive toxicity**
  - Conclusion but not sufficient for classification

SECTION 12: Ecological information

Toxicity

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>Freshwater Algae Data</th>
<th>Water Flea Data</th>
<th>Freshwater Fish Species Data</th>
<th>Microtox Data</th>
<th>log Pow</th>
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<tbody>
<tr>
<td>4-(p-Maleimidophenyl)butyric acid N-hydroxysuccinimide ester</td>
<td>no data available</td>
<td>no data available</td>
<td>no data available</td>
<td>no data available</td>
<td>no data available</td>
</tr>
</tbody>
</table>

- **Persistence and degradability**
  - No information available.

- **Bioaccumulative potential**
  - No information available.

- **Results of PBT and vPvB assessment**
  - This mixture does not contain any substances that are assessed to be a PBT or a vPvB.

- **Other adverse effects**
  - No information available.

SECTION 13: Disposal considerations

Waste treatment methods
The generation of waste should be avoided or minimized wherever possible. Empty containers or liners may retain some product residues. This material and its container must be disposed of in accordance with approved disposal techniques. Disposal of this product, its solutions or of any by-products, shall comply with the requirements of all applicable local, regional or national/federal regulations.
IATA / ADR / DOT-US / IMDG
Not classified as dangerous in the meaning of transport regulations.

UN Number          Not applicable
UN proper shipping name Not applicable
Transport hazard class(es) Not applicable
Packing group       Not applicable
Environmental Hazards Not applicable
Special precautions for user Not applicable

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code
Not applicable.
SECTION 15: Regulatory information

Safety, health and environmental regulations/legislation specific for the substance or mixture

Substances of Very High Concern
None.

Restricted substances under EC 1907/2006, Annex XVII
None.

Substances listed under Annex I of Regulation (EC) No 689/2008
None.

Restricted substances under Annex V of Regulation (EC) No 689/2008
None.

None.

German Water hazard classes (Wassergefährdungsklassen)
No information available.

Other International Inventories

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>EINECS (European Union)</th>
<th>ELINCS (European List of Notified Chemical Substances)</th>
<th>ENCS (Japan)</th>
<th>PICCS (Philippines)</th>
</tr>
</thead>
<tbody>
<tr>
<td>4-(p-Maleimidophenyl)butyric acid N-hydroxysuccinimide ester</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>AICS (Australia)</th>
<th>South Korea (KECL)</th>
<th>Canada (DSL)</th>
<th>NDSL</th>
</tr>
</thead>
<tbody>
<tr>
<td>4-(p-Maleimidophenyl)butyric acid N-hydroxysuccinimide ester</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>

Chemical Safety Assessment
No Chemical safety assessment has been carried out.
SECTION 16: Other information

Reason for revision

Classification and procedure used to derive the classification for mixtures according to Regulation (EC) 1272/2008 [CLP]:

<table>
<thead>
<tr>
<th>Physical Hazard</th>
<th>Category</th>
<th>Calculation method</th>
</tr>
</thead>
<tbody>
<tr>
<td>Skin corrosion/irritation</td>
<td>Category 2</td>
<td>Calculation method</td>
</tr>
<tr>
<td>Serious eye damage/eye irritation</td>
<td>Category 2</td>
<td>Calculation method</td>
</tr>
<tr>
<td>Specific target organ toxicity - Single exposure</td>
<td>Category 3</td>
<td>Calculation method</td>
</tr>
</tbody>
</table>

*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 SDS DOES NOT CONSTITUTE A WARRENTY, EXPRESSED OR IMPLIED, INCLUDING ANY IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR ANY PARTICULAR PURPOSE*