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

1.1 Product identifier

Trade name: Acrylamide, electrophoresis grade

Stock number: L15075
CAS Number: 79-06-1
EC number: 201-173-7
Index number: 616-003-00-0

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

No further relevant information available.

Identified use:
SU24   Scientific research and development

1.3 Details of the supplier of the safety data sheet

Manufacturer/Supplier:
Thermo Fisher (Kandel) GmbH
Zeppelinstr. 7b
76185 Karlsruhe / Germany
Tel: +49 (0) 721 84007 280
Fax: +49 (0) 721 84007 300
Email: tech@alfa.com
www.alfa.com
Informing department: Product safety Tel + +049 (0) 7275 988687-0

1.4 Emergency telephone number:
Carechem 24: +44 (o) 1235 239 670 (Multi-language emergency number)
Poison Information Center Mainz
www.giftinfo.uni-mainz.de  Telephone: +49(0)6131/19240

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Classification according to Regulation (EC) No 1272/2008

GHS06 skull and crossbones
Acute Tox. 3 H301 Toxic if swallowed.

GHS08 health hazard
Muta. 1B H340 May cause genetic defects.
Carc. 1B H350 May cause cancer.
Repr. 2 H361f Suspected of damaging fertility.
STOT RE 1 H372 Causes damage to the central nervous system, the peripheral nervous system and the brain system through prolonged or repeated exposure. Route of exposure: Oral, Inhalative and Dermal.

GHS07
Acute Tox. 4 H312 Harmful in contact with skin.
Acute Tox. 4 H332 Harmful if inhaled.
Skin Irrit. 2 H315 Causes skin irritation.
Eye Irrit. 2 H319 Causes serious eye irritation.
Skin Sens. 1 H317 May cause an allergic skin reaction.
Muta. 1B H340 May cause genetic defects.
Carc. 1B H350 May cause cancer.
Repr. 2 H361f Suspected of damaging fertility.
STOT RE 1 H372 Causes damage to the central nervous system, the peripheral nervous system and the brain system through prolonged or repeated exposure. Route of exposure: Oral, Inhalative and Dermal.

2.2 Label elements

Labelling according to Regulation (EC) No 1272/2008

The substance is classified and labelled according to the CLP regulation.

Hazard pictograms

GHS06 GHS08

Signal word Danger
Hazard statements
H301 Toxic if swallowed.
H312 Harmful in contact with skin.
H332 Harmful if inhaled.
H315 Causes skin irritation.
H319 Causes serious eye irritation.
H317 May cause an allergic skin reaction.
H340 May cause genetic defects.
H350 May cause cancer.
H361f Suspected of damaging fertility.
H372 Causes damage to the central nervous system, the peripheral nervous system and the brain system through prolonged or repeated exposure. Route of exposure: Oral, Inhalative and Dermal.

Precautionary statements
P260 Do not breathe dust/fume/gas/mist/vapours/spray.
P261 Avoid breathing dust/fume/gas/mist/vapours/spray.
P280 Wear protective gloves/protective clothing/eye protection/face protection.
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.
P362 Take off contaminated clothing and wash before reuse.
P405 Store locked up.
P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

2.3 Other hazards

Results of PBT and vPvB assessment
PBT: Not applicable.
vPvB: Not applicable.
SECTION 3: Composition/information on ingredients

3.1 Substances
CAS# Designation: 79-06-1 Acrylamide
Concentration: ≤100%

Identification number(s):
EC number: 201-173-7
Index number: 616-003-00-0

SECTION 4: First aid measures

4.1 Description of first aid measures
General information
Instantly remove any clothing soiled by the product.
In case of irregular breathing or respiratory arrest provide artificial respiration.

After inhalation
Supply fresh air. If required, provide artificial respiration. Keep patient warm. Consult doctor if symptoms persist.
Seek immediate medical advice.

After skin contact
Instantly wash with water and soap and rinse thoroughly.
Seek immediate medical advice.

After eye contact
Rinse opened eye for several minutes under running water. Then consult doctor.

After swallowing
Do not induce vomiting; instantly call for medical help.

4.2 Most important symptoms and effects, both acute and delayed
Causes skin irritation.
Causes serious eye irritation.
Harmful if inhaled.
Harmful in contact with skin.
Toxic if swallowed.
May cause an allergic skin reaction.
May cause cancer.
May cause genetic defects.
Suspected of damaging fertility or the unborn child.
Causes damage to the central nervous system, the peripheral nervous system and the brain system through prolonged or repeated exposure. Route of exposure: Oral, Inhalative and Dermal.

4.3 Indication of any immediate medical attention and special treatment needed
No further relevant information available.

SECTION 5: Firefighting measures

5.1 Extinguishing media
Suitable extinguishing agents CO2, extinguishing powder or water jet. Fight larger fires with water jet or alcohol-resistant foam.

5.2 Special hazards arising from the substance or mixture
If this product is involved in a fire, the following can be released:
Carbon monoxide and carbon dioxide
Nitrogen oxides (NOx)

5.3 Advice for firefighters
Protective equipment:
Wear self-contained breathing apparatus.
Wear full protective suit.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures
Wear protective equipment. Keep unprotected persons away.
Ensure adequate ventilation

6.2 Environmental precautions: Do not allow material to be released to the environment without proper governmental permits.

6.3 Methods and material for containment and cleaning up:
Dispose of contaminated material as waste according to section 13.
Ensure adequate ventilation.
Prevention of secondary hazards:
No special measures required.

6.4 Reference to other sections
See Section 7 for information on safe handling
See section 8 for information on personal protection equipment.
See Section 13 for information on disposal.

SECTION 7: Handling and storage

7.1 Precautions for safe handling
Handle under dry protective gas.
Keep containers tightly sealed.
Store in cool, dry place in tightly closed containers.
Ensure good ventilation/exhaustion at the workplace.
Open and handle container with care.

Information about protection against explosions and fires:
No information known.

7.2 Conditions for safe storage, including any incompatibilities
Storage
Requirements to be met by storerooms and containers:
No special requirements.

Information about storage in one common storage facility:
Store away from metals.
Store away from air.
Store in the dark.

Further information about storage conditions:
Store under dry inert gas.
This product is air sensitive.
Keep container tightly sealed.
Store in cool, dry conditions in well sealed containers.
Protect from the effects of light.
Store in a locked cabinet or with access restricted to technical experts or their assistants.

7.3 Specific end use(s)
No further relevant information available.

SECTION 8: Exposure controls/personal protection

Additional information about design of technical systems:
Property operating chemical fume hood designed for hazardous chemicals and having an average face velocity of at least 100 feet per minute.

8.1 Control parameters
Components with critical values that require monitoring at the workplace:
79-06-1 Acrylamide (100.0%)

MAK (Germany) vgl.Abschn.XII
Trade name: Acrylamide, electrophoresis grade

Additional information: No data

8.2 Exposure controls
Personal protective equipment
General protective and hygienic measures
The usual precautionary measures should be adhered to in handling the chemicals.
Keep away from foodstuffs, beverages and food.
Instantly remove any soiled and impregnated garments.
Wash hands during breaks and at the end of the work.
Store protective clothing separately.
Avoid contact with the eyes and skin.
Maintain an ergonomically appropriate working environment.
Breathing equipment: Use breathing protection with high concentrations.
Recommended filter device for short term use:
Use a respirator with type P100 (USA) or P3 (EN 143) cartridges as a backup to engineering controls. Risk assessment should be performed to determine if air-purifying respirators are appropriate. Only use equipment tested and approved under appropriate government standards.
Protection of hands:
Check protective gloves prior to each use for their proper condition.
The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer.
Material of gloves: Nitrile rubber, NBR
Glove thickness: 0.11 mm
Eye protection:
Safety glasses
Face protection
Body protection:
Protective work clothing.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties
General Information
Appearance:
Form: Crystalline
Odour: Odourless
Odour threshold: Not determined.

pH-value: Not applicable.

Change in condition
Melting point/Melting range: 82-85 °C
Boiling point/Boiling range: 125 °C (25 mm)
Sublimation temperature / start: Not determined

Flash point: 138 °C
Inflammability (solid, gaseous): Not determined.
Ignition temperature: Not determined.
Decomposition temperature: Not determined.
Self-inflammability: Not determined.

Danger of explosion: Not determined.
Critical values for explosion:
Lower: Not determined.
Upper: Not determined.
Steam pressure at 20 °C: 0.009 hPa
Density at 20 °C: 1.322 g/cm³
Relative density: Not determined.
Vapour density: Not applicable.
Evaporation rate: Not applicable.
Solubility in / Miscibility with
Water: Partially soluble
Partition coefficient (n-octanol/water): Not determined.
Viscosity:
dynamic: Not applicable.
kinematic: Not applicable.
9.2 Other information: No further relevant information available.

SECTION 10: Stability and reactivity

10.1 Reactivity
No information known.
10.2 Chemical stability
Stable under recommended storage conditions.
Thermal decomposition / conditions to be avoided: No decomposition if used and stored according to specifications.
10.3 Possibility of hazardous reactions
No dangerous reactions known.
10.4 Conditions to avoid
No further relevant information available.
10.5 Incompatible materials:
Air
Oxidising agents
Bases
Reducing agents
Light
10.6 Hazardous decomposition products:
Carbon monoxide and carbon dioxide
Nitrogen oxides (NOx)

SECTION 11: Toxicological information

11.1 Information on toxicological effects
Acute toxicity:
Harmful if inhaled.
Harmful in contact with skin.
Toxic if swallowed.
Danger by skin resorption.
The Registry of Toxic Effects of Chemical Substances (RTECS) contains acute toxicity data for this substance.

(Contd. on page 4)
Trade name Acrylamide, electrophoresis grade

LD/LC50 values that are relevant for classification:

<table>
<thead>
<tr>
<th>Route</th>
<th>LD50</th>
<th>LC50</th>
</tr>
</thead>
<tbody>
<tr>
<td>Oral</td>
<td>124 mg/kg (rat)</td>
<td></td>
</tr>
<tr>
<td>Dermal</td>
<td>1680 mL/kg (rabbit)</td>
<td></td>
</tr>
</tbody>
</table>

Skin irritation or corrosion: Causes skin irritation.  
Eye irritation or corrosion: Causes serious eye irritation.  
Sensitization: May cause an allergic skin reaction.  
Germ cell mutagenicity: The Registry of Toxic Effects of Chemical Substances (RTECS) contains mutation data for this substance.  
Carcinogenicity: May cause cancer.  
EPA-L: Likely to produce cancer in humans.  
NTP-R: Reasonably anticipated to be a carcinogen; limited evidence from studies in humans or sufficient evidence from studies in experimental animals.  
ACGIH A3: Animal carcinogen: Agent is carcinogenic in experimental animals at a relatively high dose, by route(s) of administration, at site(s), of histologic type(s), or by mechanism(s) not considered relevant to worker exposure.  
Reproductive toxicity: The Registry of Toxic Effects of Chemical Substances (RTECS) contains reproductive data for this substance.  
Specific target organ system toxicity - repeated exposure: Causes damage to the central nervous system, the peripheral nervous system and the brain system through prolonged or repeated exposure. Route of exposure: Oral, Inhalative and Dermal.  
Specific target organ system toxicity - single exposure: No effects known.  
Aspiration hazard: No effects known.  
Subacute to chronic toxicity: The Registry of Toxic Effects of Chemical Substances (RTECS) contains multiple dose toxicity data for this substance.  
Additional toxicological information: To the best of our knowledge the acute and chronic toxicity of this substance is not fully known.

SECTION 12: Ecological information

12.1 Toxicity  
Aquatic toxicity: No further relevant information available.  
12.2 Persistence and degradability: No further relevant information available.  
12.3 Bioaccumulative potential: No further relevant information available.  
12.4 Mobility in soil: No further relevant information available.

Additional ecological information:  
General notes: Do not allow material to be released to the environment without proper governmental permits.  
Water danger class 3 (Assessment by list): extremely hazardous for water.  
Do not allow product to reach ground water, water bodies or sewage system, even in small quantities.  
Avoid transfer into the environment.  
12.5 Results of PBT and vPvB assessment  
PBT: Not applicable.  
vPvB: Not applicable.  
12.6 Other adverse effects: No further relevant information available.

SECTION 13: Disposal considerations

13.1 Waste treatment methods  
Recommendation: Hand over to disposers of hazardous waste.  
Must be specially treated under adherence to official regulations.  
Consult state, local or national regulations for proper disposal.  
Uncleaned packagings: Disposal must be made according to official regulations.

SECTION 14: Transport information

UN-Number: UN2074  
ADR, IMDG, IATA:  
14.2 UN proper shipping name  
ADR:  
IMDG, IATA:  
14.3 Transport hazard class(es)  
ADR:  
IMDG, IATA:  
Class 6.1 (T2) Toxic substances.  
Class 6.1 Toxic substances.  
Packing group:  
ADR, IMDG, IATA: III  
EMS Number:  
F-A,S-A  
14.5 Environmental hazards: Not applicable.  
14.6 Special precautions for user: Warning: Toxic substances.  
Kemler Number:  
60  
EMS Number:  
F-A,S-A  
14.7 Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code: Not applicable.

Transport/Additional information:  
ADR:  
Limited quantities (LQ):  
5 kg  
Transport category:  
E  
UN "Model Regulation": UN2074, ACRYLAMIDE, SOLID, 6.1, III

(Contd. on page 5)
SECTION 15: Regulatory information

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

Australian Inventory of Chemical Substances: Substance is listed.

Standard for the Uniform Scheduling of Medicines and Poisons: Substance is not listed.

National regulations

Information about limitation of use:

Workers should not be exposed to this hazardous material. Exceptions can be made by the authorities in certain exceptional cases.

Employment restrictions concerning young persons must be observed.

Employment restrictions concerning women of child-bearing age must be observed.

For use only by technically qualified individuals.

Technical instructions (air):

<table>
<thead>
<tr>
<th>Class</th>
<th>Share in %</th>
</tr>
</thead>
<tbody>
<tr>
<td>II</td>
<td>100.0</td>
</tr>
</tbody>
</table>

Water hazard class: Water danger class 3 (Assessment by list): extremely hazardous for water.

Other regulations, limitations and prohibitive regulations

ELINCS (European List of Notified Chemical Substances): Substance is not listed.

Substance of Very High Concern (SVHC) according to the REACH Regulations (EC) No. 1907/2006:

This substance is included in the Candidate List of Substances of Very High Concern (SVHC) according to Regulation (EC) No. 1907/2006 (REACH).

The conditions of restrictions according to Article 67 and Annex XVII of the Regulation (EC) No 1907/2006 (REACH) for the manufacturing, placing on the market and use must be observed.

Annex XIV of the REACH Regulations (requiring Authorisation for use): Substance is not listed.

15.2 Chemical safety assessment:

A Chemical Safety Assessment has not been carried out.

SECTION 16: Other information

Employers should use this information only as a supplement to other information gathered by them, and should make independent judgement of suitability of this information to ensure proper use and protect the health and safety of employees. This information is furnished without warranty, and any use of the product not in conformance with this Safety Data Sheet, or in combination with any other product or process, is the responsibility of the user.

Department issuing SDS: Global Marketing Department

Abbreviations and acronyms:

RID: Règlement international concernant le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail)

ICAO: International Civil Aviation Organization

ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)

IMDG: International Maritime Code for Dangerous Goods

IATA: International Air Transport Association

EINECS: European Inventory of Existing Commercial Chemical Substances

CAS: Chemical Abstracts Service (division of the American Chemical Society)

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

vPvB: very Persistent and very Bioaccumulative

ACGIH: American Conference of Governmental Industrial Hygienists (USA)

OSHA: Occupational Safety and Health Administration (USA)

NTP: National Toxicology Program (USA)

IARC: International Agency for Research on Cancer

EPA: Environmental Protection Agency (USA)

Acute Tox. 3: Acute toxicity, Hazard Category 3

Acute Tox. 4: Acute toxicity, Hazard Category 4

Skin Irrit. 2: Skin corrosion/irritation, Hazard Category 2

Eye Irrit. 2: Serious eye damage/eye irritation, Hazard Category 2

Skin Sens. 1: Sensitisation - Skin, Hazard Category 1

Carc. 1B: Carcinogenicity, Hazard Category 1B

Repr. 2: Reproductive toxicity, Hazard Category 2

STOT RE 1: Specific target organ toxicity - Repeated exposure, Hazard Category 1