1. PRODUCT AND COMPANY IDENTIFICATION

<table>
<thead>
<tr>
<th>Field</th>
<th>Information</th>
</tr>
</thead>
<tbody>
<tr>
<td>Product name</td>
<td>Acrylamide/bis-acrylamide, 40% solution</td>
</tr>
<tr>
<td>Product Number</td>
<td>A7802</td>
</tr>
<tr>
<td>Brand</td>
<td>Sigma</td>
</tr>
<tr>
<td>Supplier</td>
<td>Sigma-Aldrich Corporation</td>
</tr>
<tr>
<td>Telephone</td>
<td>+1 800-325-5832</td>
</tr>
<tr>
<td>Fax</td>
<td>+1 800-325-5052</td>
</tr>
<tr>
<td>Emergency Phone # (For both supplier and manufacturer)</td>
<td>(314) 776-6555</td>
</tr>
<tr>
<td>Preparation Information</td>
<td>Sigma-Aldrich Corporation</td>
</tr>
</tbody>
</table>

2. HAZARDS IDENTIFICATION

**Emergency Overview**

**OSHA Hazards**
Respiratory sensitiser, Skin sensitiser, Carcinogen, Target Organ Effect, Toxic by inhalation., Toxic by ingestion, Toxic by skin absorption, Irritant, Teratogen, Reproductive hazard, Mutagen

**Target Organs**
Nerves., Kidney

**GHS Classification**
Acute toxicity, Oral (Category 3)
Acute toxicity, Inhalation (Category 2)
Acute toxicity, Dermal (Category 3)
Skin irritation (Category 2)
Eye irritation (Category 2A)
Respiratory sensitization (Category 1)
Skin sensitization (Category 1)
Germ cell mutagenicity (Category 1B)
Carcinogenicity (Category 1B)
Reproductive toxicity (Category 2)
Acute aquatic toxicity (Category 3)

**GHS Label elements, including precautionary statements**

<table>
<thead>
<tr>
<th>Pictogram</th>
<th>Signal word</th>
<th>Hazard statement(s)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Danger</td>
<td>H301 + H311 Toxic if swallowed or in contact with skin</td>
</tr>
<tr>
<td></td>
<td></td>
<td>H315 Causes skin irritation.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>H317 May cause an allergic skin reaction.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>H319 Causes serious eye irritation.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>H330 Fatal if inhaled.</td>
</tr>
</tbody>
</table>
H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.
H340 May cause genetic defects.
H350 May cause cancer.
H361 Suspected of damaging fertility or the unborn child.
H402 Harmful to aquatic life.

Precautionary statement(s)
P201 Obtain special instructions before use.
P260 Do not breathe dust/fume/gas/mist/vapours/spray.
P280 Wear protective gloves/protective clothing.
P284 Wear respiratory 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.
P310 Immediately call a POISON CENTER or doctor/physician.

HMIS Classification
Health hazard: 2
Chronic Health Hazard: *
Flammability: 0
Physical hazards: 1

NFPA Rating
Health hazard: 2
Fire: 0
Reactivity Hazard: 0

Potential Health Effects
Inhalation Toxic if inhaled. Causes respiratory tract irritation.
Skin Toxic if absorbed through skin. Causes skin irritation.
Eyes Causes eye irritation.
Ingestion Toxic if swallowed.

3. COMPOSITION/INFORMATION ON INGREDIENTS

<table>
<thead>
<tr>
<th>Component</th>
<th>Classification</th>
<th>Concentration</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acrylamide</td>
<td></td>
<td></td>
</tr>
<tr>
<td>CAS-No.</td>
<td>79-06-1</td>
<td></td>
</tr>
<tr>
<td>EC-No.</td>
<td>201-173-7</td>
<td></td>
</tr>
<tr>
<td>Index-No.</td>
<td>616-003-00-0</td>
<td></td>
</tr>
<tr>
<td>Registration number</td>
<td>01-2119463260-48-XXXX</td>
<td></td>
</tr>
<tr>
<td>Carc.</td>
<td>1B; Muta. 1B; Repr. 2; Acute Tox. 3; STOT RE 1; Acute Tox. 4; Eye Irrit. 2; Skin Irrit. 2; Skin Sens. 1; H372, H319, H315, H301, H312, H317, H332, H340, H350, H361f</td>
<td>30 - 60 %</td>
</tr>
</tbody>
</table>

| N,N'-Methylene diacrylamide |                |               |
| CAS-No.                     | 110-26-9       |               |
| EC-No.                      | 203-750-9      |               |
| Acute Tox.                  | 4; H302, H332  | 5 - 10 %       |

For the full text of the H-Statements and R-Phrases mentioned in this Section, see Section 16

4. FIRST AID MEASURES

General advice
Consult a physician. Show this safety data sheet to the doctor in attendance. Move out of dangerous area.

If inhaled
If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician.

In case of skin contact
Wash off with soap and plenty of water. Take victim immediately to hospital. Consult a physician.

In case of eye contact
Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician.
If swallowed
Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

5. FIREFIGHTING MEASURES

Conditions of flammability
Not flammable or combustible.

Suitable extinguishing media
Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

Special protective equipment for firefighters
Wear self contained breathing apparatus for fire fighting if necessary.

Hazardous combustion products
Hazardous decomposition products formed under fire conditions. - Carbon oxides, nitrogen oxides (NOx), Ammonia
Hazardous decomposition products formed under fire conditions. - Carbon oxides, nitrogen oxides (NOx)

6. ACCIDENTAL RELEASE MEASURES

Personal precautions
Wear respiratory protection. Avoid breathing vapors, mist or gas. Ensure adequate ventilation. Evacuate personnel to safe areas.

Environmental precautions
Prevent further leakage or spillage if safe to do so. Do not let product enter drains. Discharge into the environment must be avoided.

Methods and materials for containment and cleaning up
Soak up with inert absorbent material and dispose of as hazardous waste. Keep in suitable, closed containers for disposal.

7. HANDLING AND STORAGE

Precautions for safe handling
Avoid contact with skin and eyes. Avoid inhalation of vapour or mist.

Conditions for safe storage
Keep container tightly closed in a dry and well-ventilated place. Containers which are opened must be carefully resealed and kept upright to prevent leakage.
Recommended storage temperature: 2 - 8 °C
Light sensitive. Store under inert gas.

8. EXPOSURE CONTROLS/PERSOAL PROTECTION

Components with workplace control parameters

<table>
<thead>
<tr>
<th>Components</th>
<th>CAS-No.</th>
<th>Value</th>
<th>Control parameters</th>
<th>Basis</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acrylamide</td>
<td>79-06-1</td>
<td>TWA</td>
<td>0.3 mg/m³</td>
<td>USA. Occupational Exposure Limits (OSHA) - Table Z-1 Limits for Air Contaminants</td>
</tr>
<tr>
<td>Remarks</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>TWA</td>
<td>USA. OSHA - TABLE Z-1 Limits for Air Contaminants - 1910.1000</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>USA. ACGIH Threshold Limit Values (TLV)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Central Nervous System impairment Confirmed animal carcinogen with unknown relevance to humans Danger of cutaneous absorption</td>
</tr>
</tbody>
</table>

USA. NIOSH Recommended Exposure Limits
Potential Occupational Carcinogen See Appendix A Potential for dermal absorption

<table>
<thead>
<tr>
<th></th>
<th>TWA</th>
<th>0.03 mg/m³</th>
<th>USA. ACGIH Threshold Limit Values (TLV)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Central Nervous System impairment</td>
<td>Confirmed animal carcinogen with unknown relevance to humans</td>
<td>Danger of cutaneous absorption</td>
<td></td>
</tr>
</tbody>
</table>

Personal protective equipment

**Respiratory protection**
Where risk assessment shows air-purifying respirators are appropriate use a full-face respirator with multi-purpose combination (US) or type ABEK (EN 14387) respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

**Hand protection**
Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove’s outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.

**Eye protection**
Face shield and safety glasses Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).

**Skin and body protection**
Complete suit protecting against chemicals, The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

**Hygiene measures**
Avoid contact with skin, eyes and clothing. Wash hands before breaks and immediately after handling the product.

9. PHYSICAL AND CHEMICAL PROPERTIES

**Appearance**
- Form: liquid
- Colour: no data available

**Safety data**
- pH: no data available
- Melting point/freezing point: no data available
- Boiling point: no data available
- Flash point: no data available
- Ignition temperature: no data available
- Autoignition temperature: no data available
- Lower explosion limit: no data available
- Upper explosion limit: no data available
- Vapour pressure: no data available
- Density: no data available
- Water solubility: no data available
- Partition coefficient: n-octanol/water: no data available
- Relative vapour density: no data available

---

Sigma - A7802
10. STABILITY AND REACTIVITY

Chemical stability
Stable under recommended storage conditions.

Possibility of hazardous reactions
no data available

Conditions to avoid
no data available

Materials to avoid
Acids, Bases, Oxidizing agents, Reducing agents, Iron and iron salts., Copper, Aluminum, Brass, Free radical initiators

Hazardous decomposition products
Hazardous decomposition products formed under fire conditions. - Carbon oxides, nitrogen oxides (NOx), Ammonia
Hazardous decomposition products formed under fire conditions. - Carbon oxides, nitrogen oxides (NOx)
Other decomposition products - no data available

11. TOXICOLOGICAL INFORMATION

Acute toxicity

Oral LD50
no data available

Inhalation LC50
no data available

Dermal LD50
no data available

Other information on acute toxicity
no data available

Skin corrosion/irritation
no data available

Serious eye damage/eye irritation
Eyes: no data available

Respiratory or skin sensitization
May cause allergic respiratory reaction.

Germ cell mutagenicity
no data available

Carcinogenicity

IARC: 2A - Group 2A: Probably carcinogenic to humans (Acrylamide)

NTP: Reasonably anticipated to be a human carcinogen (Acrylamide)

OSHA: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.

Reproductive toxicity
no data available

Teratogenicity
Specific target organ toxicity - single exposure (Globally Harmonized System)
no data available

Specific target organ toxicity - repeated exposure (Globally Harmonized System)
no data available

Aspiration hazard
no data available

Potential health effects
- **Inhalation**: Toxic if inhaled. Causes respiratory tract irritation.
- **Ingestion**: Toxic if swallowed.
- **Skin**: Toxic if absorbed through skin. Causes skin irritation.
- **Eyes**: Causes eye irritation.

Signs and Symptoms of Exposure
Acrylamide toxicity is manifested as a sensorimotor peripheral neuropathy.

Synergistic effects
no data available

Additional Information
RTECS: Not available

12. ECOLOGICAL INFORMATION

Toxicity
no data available

Persistence and degradability
no data available

Bioaccumulative potential
no data available

Mobility in soil
no data available

PBT and vPvB assessment
no data available

Other adverse effects
An environmental hazard cannot be excluded in the event of unprofessional handling or disposal.
Harmful to aquatic life.

13. DISPOSAL CONSIDERATIONS

Product
Contact a licensed professional waste disposal service to dispose of this material. Dissolve or mix the material with a combustible solvent and burn in a chemical incinerator equipped with an afterburner and scrubber. Offer surplus and non-recyclable solutions to a licensed disposal company.

Contaminated packaging
Dispose of as unused product.

14. TRANSPORT INFORMATION

DOT (US)
UN number: 3426 Class: 6.1 Packing group: III
Proper shipping name: Acrylamide solution
Marine pollutant: No
Poison Inhalation Hazard: No
IMDG
UN number: 3426   Class: 6.1   Packing group: III   EMS-No: F-A, S-A
Proper shipping name: ACRYLAMIDE SOLUTION
Marine pollutant: No

IATA
UN number: 3426   Class: 6.1   Packing group: III
Proper shipping name: Acrylamide solution

15. REGULATORY INFORMATION

OSHA Hazards
Respiratory sensitiser, Skin sensitiser, Carcinogen, Target Organ Effect, Toxic by inhalation., Toxic by ingestion, Toxic by skin absorption, Irritant, Teratogen, Reproductive hazard, Mutagen

SARA 302 Components
The following components are subject to reporting levels established by SARA Title III, Section 302:

<table>
<thead>
<tr>
<th>CAS-No.</th>
<th>Revision Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acrylamide</td>
<td>79-06-1 2007-07-01</td>
</tr>
</tbody>
</table>

SARA 313 Components
The following components are subject to reporting levels established by SARA Title III, Section 313:

<table>
<thead>
<tr>
<th>CAS-No.</th>
<th>Revision Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acrylamide</td>
<td>79-06-1 2007-07-01</td>
</tr>
</tbody>
</table>

SARA 311/312 Hazards
Acute Health Hazard, Chronic Health Hazard

Massachusetts Right To Know Components

<table>
<thead>
<tr>
<th>CAS-No.</th>
<th>Revision Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acrylamide</td>
<td>79-06-1 2007-07-01</td>
</tr>
</tbody>
</table>

Pennsylvania Right To Know Components

<table>
<thead>
<tr>
<th>CAS-No.</th>
<th>Revision Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>Water</td>
<td>7732-18-5</td>
</tr>
<tr>
<td>N,N'-Methylenediacrylamide</td>
<td>110-26-9</td>
</tr>
<tr>
<td>Acrylamide</td>
<td>79-06-1 2007-07-01</td>
</tr>
</tbody>
</table>

New Jersey Right To Know Components

<table>
<thead>
<tr>
<th>CAS-No.</th>
<th>Revision Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>Water</td>
<td>7732-18-5</td>
</tr>
<tr>
<td>N,N'-Methylenediacrylamide</td>
<td>110-26-9</td>
</tr>
<tr>
<td>Acrylamide</td>
<td>79-06-1 2007-07-01</td>
</tr>
</tbody>
</table>

California Prop. 65 Components
WARNING! This product contains a chemical known to the State of California to cause cancer.

<table>
<thead>
<tr>
<th>CAS-No.</th>
<th>Revision Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acrylamide</td>
<td>79-06-1 2007-09-28</td>
</tr>
</tbody>
</table>

16. OTHER INFORMATION

Text of H-code(s) and R-phrase(s) mentioned in Section 3

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acute Tox.</td>
<td>Acute toxicity</td>
</tr>
<tr>
<td>Carc.</td>
<td>Carcinogenicity</td>
</tr>
<tr>
<td>Eye Irrit.</td>
<td>Eye irritation</td>
</tr>
<tr>
<td>H301</td>
<td>Toxic if swallowed.</td>
</tr>
<tr>
<td>H302</td>
<td>Harmful if swallowed.</td>
</tr>
<tr>
<td>H312</td>
<td>Harmful in contact with skin.</td>
</tr>
<tr>
<td>H315</td>
<td>Causes skin irritation.</td>
</tr>
<tr>
<td>H317</td>
<td>May cause an allergic skin reaction.</td>
</tr>
<tr>
<td>H319</td>
<td>Causes serious eye irritation.</td>
</tr>
<tr>
<td>H332</td>
<td>Harmful if inhaled.</td>
</tr>
</tbody>
</table>
H340 May cause genetic defects.
H350 May cause cancer.
H361f Suspected of damaging fertility.
H372 Causes damage to organs through prolonged or repeated exposure.
Muta. Germ cell mutagenicity
Repr. Reproductive toxicity
Skin Irrit. Skin irritation
Skin Sens. Skin sensitization
STOT RE Specific target organ toxicity - repeated exposure

Further information
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