

**Material Safety Data Sheet**  
acc. to ISO/DIS 11014

Printing date 02/10/2011

Reviewed on 02/01/2011

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

**Product identifier**

**Trade name:** Acrylamide Solution, 40%

**Article number:** H5181

**Relevant identified uses of the substance or mixture and uses advised against**  
**Application of the substance / the preparation** Laboratory chemicals

**Details of the supplier of the safety data sheet**  
**Manufacturer/Supplier:**

Promega Corporation  
2800 Woods Hollow Road  
Madison, WI 53711  
U.S.A.  
1-800-356-9526 or (608)-274-4330

**Information department:** MSDS author: Regulatory.Affairs@promega.com

**Emergency telephone number:**

For Chemical Emergency ONLY (spill, leak, fire, exposure or accident), call CHEMTREC at 1-800-424-9300  
For call originating outside the United States dial 001-703-527-3887

**2 Composition/information on ingredients**

**Chemical characterization: Mixtures**

**Description:** Mixture of the substances listed below with nonhazardous additions.

**Dangerous components:**

79-06-1	acrylamide	25-50%
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**SVHC**

79-06-1	acrylamide
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**Additional information:** For the wording of the listed risk phrases refer to section 15.

**3 Hazards identification**

**Classification of the substance or mixture**

**Classification according to Directive 67/548/EEC or Directive 1999/45/EC**



**Toxic**

May cause cancer. May cause heritable genetic damage. Toxic if swallowed. Toxic: danger of serious damage to health by prolonged exposure through inhalation, in contact with skin and if swallowed.



**Harmful**

Harmful by inhalation and in contact with skin. Possible risk of impaired fertility.



**Irritant**

Irritating to eyes and skin. May cause sensitization by skin contact.

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**Classification system:**

The classification was made according to the latest editions of international substances lists, and is expanded upon by company and technical literature data.

**Label elements****Labelling according to EU guidelines:**

The product has been classified and marked in accordance with directives on hazardous materials.

**Code letter and hazard designation of product:**

T Toxic

**Hazard-determining components of labelling:**

acrylamide

**Risk phrases:**

May cause cancer.

May cause heritable genetic damage.

Also harmful by inhalation and in contact with skin.

Also toxic if swallowed.

Irritating to eyes and skin.

May cause sensitization by skin contact.

Also toxic: danger of serious damage to health by prolonged exposure through inhalation, in contact with skin and if swallowed.

Possible risk of impaired fertility.

**Safety phrases:**

Avoid exposure - obtain special instructions before use.

Keep container in a well-ventilated place.

When using do not eat or drink.

Wear suitable protective clothing, gloves and eye/face protection.

In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).

This material and its container must be disposed of as hazardous waste.

**Classification system:****NFPA ratings (scale 0 - 4)**

Health = 3

Fire = 0

Reactivity = 0

**HMIS-ratings (scale 0 - 4)**

Health = \*3

Fire = 0

Reactivity = 0

**OSHA Hazard Overview (Criteria according to 29CFR1910.1200):**

Highly Toxic

Irritant

Sensitizer

Reproductive Hazard

Suspected Carcinogen

**Primary route(s) of entry:**

Dermal

Inhalation

Oral

**Target Organ(s):** May affect Nervous system (Neurotoxin)

**Other hazards** Product has been observed to have sensitizing effects.

**Results of PBT and vPvB assessment**

**PBT:** Not applicable.

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vPvB: Not applicable.

## 4 First aid measures

### Description of first aid measures

#### General information:

Immediately remove any clothing soiled by the product.

Symptoms of poisoning may even occur after several hours; therefore medical observation for at least 48 hours after the accident.

In case of irregular breathing or respiratory arrest provide artificial respiration.

Do not leave affected persons unattended.

Seek medical treatment.

Provide oxygen treatment if affected person has difficulty breathing.

Medical supervision for at least 48 hours.

#### After inhalation:

Supply fresh air. If required, provide artificial respiration. Keep patient warm. Consult doctor if symptoms persist.

In case of unconsciousness place patient stably in side position for transportation.

Seek medical treatment in case of complaints.

#### After skin contact:

Immediately wash with water and soap and rinse thoroughly.

If skin irritation continues, consult a doctor.

#### After eye contact:

Rinse opened eye for several minutes under running water. If symptoms persist, consult a doctor.

**After swallowing:** Do not induce vomiting; immediately call for medical help.

#### Information for doctor:

**Most important symptoms and effects, both acute and delayed** Allergic reactions

**Indication of any immediate medical attention and special treatment needed**

No further relevant information available.

## 5 Firefighting measures

### Extinguishing media

#### Suitable extinguishing agents:

CO<sub>2</sub>, extinguishing powder or water spray. Fight larger fires with water spray or alcohol resistant foam.

**Special hazards arising from the substance or mixture** None known

#### Advice for firefighters

No special advice

In the case of fire, wear respiratory protective equipment and chemical protective suit.

**Protective equipment:** Mouth respiratory protective device.

## 6 Accidental release measures

**Personal precautions, protective equipment and emergency procedures** Wear protective clothing.

**Environmental precautions:** Do not allow to enter sewers/ surface or ground water.

#### Methods and material for containment and cleaning up:

Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).

Dispose contaminated material as waste according to item 13.

Ensure adequate ventilation.

#### Reference to other sections

See Section 7 for information on safe handling.

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See Section 13 for disposal information.

## \* 7 Handling and storage

### Handling:

#### Precautions for safe handling

Keep receptacles tightly sealed.

Ensure good ventilation/exhaustion at the workplace.

Open and handle receptacle with care.

Prevent formation of aerosols.

#### Information about protection against explosions and fires:

Keep respiratory protective device available.

The product is not flammable.

#### Conditions for safe storage, including any incompatibilities

#### Storage:

**Requirements to be met by storerooms and receptacles:** No special requirements.

**Information about storage in one common storage facility:** Not required.

**Further information about storage conditions:** Keep receptacle tightly sealed.

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

## \* 8 Exposure controls/personal protection

### Control parameters

#### Components with limit values that require monitoring at the workplace:

#### 79-06-1 acrylamide

PEL	0.3 mg/m <sup>3</sup> Skin
REL	0.03 mg/m <sup>3</sup> Skin
TLV	0.03* mg/m <sup>3</sup> Skin; *inhalable fraction and vapor

**Additional information:** The lists that were valid during the creation were used as basis.

### Exposure controls

#### Personal protective equipment:

#### General protective and hygienic measures:

Keep away from foodstuffs, beverages and feed.

Immediately remove all soiled and contaminated clothing.

Wash hands before breaks and at the end of work.

Store protective clothing separately.

Avoid contact with the eyes and skin.

Pregnant women should strictly avoid inhalation or skin contact.

Do not eat or drink while working.

Clean skin thoroughly immediately after handling the product.

Ensure that washing facilities are available at the work place.

#### Breathing equipment:

In case of brief exposure or low pollution use respiratory filter device. In case of intensive or longer exposure use respiratory protective device that is independent of circulating air.

#### Protection of hands:

Protective gloves

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.

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*Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation*

### **Material of gloves**

*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. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.*

**Eye protection:** Tightly sealed goggles

## 9 Physical and chemical properties

### **Information on basic physical and chemical properties**

#### **General Information**

#### **Appearance:**

<b>Form:</b>	Fluid
<b>Color:</b>	Colorless
<b>Odor:</b>	Characteristic
<b>Odour threshold:</b>	Not determined.

**pH-value:** Not determined.

#### **Change in condition**

<b>Melting point/Melting range:</b>	Undetermined.
<b>Boiling point/Boiling range:</b>	100°C (212 °F)

**Flash point:** Not applicable.

**Flammability (solid, gaseous):** Not applicable.

#### **Ignition temperature:**

**Decomposition temperature:** Not determined.

**Auto igniting:** Product is not selfigniting.

**Danger of explosion:** Product does not present an explosion hazard.

#### **Explosion limits:**

<b>Lower:</b>	Not determined.
<b>Upper:</b>	Not determined.

**Vapor pressure:** Not determined.

**Density at 20°C (68 °F):** 1.012 g/cm<sup>3</sup> (8.445 lbs/gal)

**Relative density** Not determined.

**Vapour density** Not determined.

**Evaporation rate** Not determined.

#### **Solubility in / Miscibility with**

**Water:** Not miscible or difficult to mix.

**Segregation coefficient (n-octanol/water):** Not determined.

#### **Viscosity:**

<b>Dynamic:</b>	Not determined.
<b>Kinematic:</b>	Not determined.

#### **Solvent content:**

<b>Organic solvents:</b>	0.0 %
<b>Water:</b>	60.0 %

**Solids content:** 40.0 %

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Other information

No further relevant information available.

## 10 Stability and reactivity

**Reactivity****Chemical stability****Thermal decomposition / conditions to be avoided:** No decomposition if used according to specifications.**Possibility of hazardous reactions** No dangerous reactions known.**Conditions to avoid** No further relevant information available.**Incompatible materials:** No further relevant information available.**Hazardous decomposition products:** No dangerous decomposition products known.

## 11 Toxicological information

**Information on toxicological effects****Acute toxicity:****LD/LC50 values that are relevant for classification:****79-06-1 acrylamide**

Oral	LD50	124 mg/kg (Rat)
Dermal	LD50	400 mg/kg (Rat) 252 mg/kg (Rabbit)
Irritation of skin	acute	500 mg/ 24H (Rabbit) mild irritation

**Primary irritant effect:****on the skin:** Irritant to skin and mucous membranes.**on the eye:** Irritating effect.**Sensitization:** Sensitization possible through skin contact.**Additional toxicological information:**

The product shows the following dangers according to internally approved calculation methods for preparations:

Toxic

Harmful

Irritant

Carcinogenic.

The product can cause inheritable damage.

## 12 Ecological information

**Toxicity****Aquatic toxicity:** Not harmful to the aquatic environment**Persistence and degradability** Not available**Behavior in environmental systems:****Bioaccumulative potential** Not known**Mobility in soil** No further relevant information available.**Ecotoxicological effects:****Remark:** Not available**Additional ecological information:****General notes:**

Water hazard class 3 (Self-assessment): extremely hazardous for water

Do not allow product to reach ground water, water course or sewage system, even in small quantities.

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*Danger to drinking water if even extremely small quantities leak into the ground.*

**Results of PBT and vPvB assessment**

**PBT:** Not applicable.

**vPvB:** Not applicable.

**Other adverse effects** No further relevant information available.

## 13 Disposal considerations

**Waste treatment methods**

**Recommendation:**

*Disposal should be in accordance with applicable regional, national and local laws and regulations.*

*Refer to Section 7: Handling and Storage and Section 8: Exposure Control/Personal Protection for additional handling information and protection of employees.*

**Uncleaned packagings:**

**Recommendation:** Disposal must be made according to official regulations.

## \* 14 Transport information

Contact Promega Safety Department for additional transportation information

**DOT regulations:**



**Hazard class:** 6.1  
**Identification number:** UN3426  
**Packing group:** III  
**Proper shipping name (technical name):** ACRYLAMIDE SOLUTION  
**Label:** 6.1

**Land transport ADR/RID (cross-border):**



**ADR/RID class:** 6.1 (T1) Toxic substances  
**Danger code (Kemler):** 60  
**UN-Number:** 3426  
**Packaging group:** III  
**Label:** 6.1  
**UN proper shipping name:** 3426 ACRYLAMIDE SOLUTION

**Maritime transport IMDG:**



**IMDG Class:** 6.1  
**UN Number:** 3426

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<b>Label</b>	6.1
<b>Packaging group:</b>	III
<b>EMS Number:</b>	F-A,S-A
<b>Marine pollutant:</b>	No
<b>Propper shipping name:</b>	ACRYLAMIDE SOLUTION

Air transport ICAO-TI and IATA-DGR:



<b>ICAO/IATA Class:</b>	6.1
<b>UN/ID Number:</b>	3426
<b>Label</b>	6.1
<b>Packaging group:</b>	III
<b>Propper shipping name:</b>	ACRYLAMIDE SOLUTION

**Special precautions for user** Warning: Toxic substances  
 Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code Not applicable.

## 15 Regulatory information

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

Section 355 (extremely hazardous substances):

79-06-1 | acrylamide

Section 313 (Specific toxic chemical listings):

79-06-1 | acrylamide

TSCA (Toxic Substances Control Act):

All ingredients are listed.

Proposition 65

Chemicals known to cause cancer:

79-06-1 | acrylamide

Chemicals known to cause reproductive toxicity for females:

None of the ingredients are listed.

Chemicals known to cause reproductive toxicity for males:

None of the ingredients are listed.

Chemicals known to cause developmental toxicity:

None of the ingredients are listed.

Carcinogenicity categories

EPA (Environmental Protection Agency)

79-06-1 | acrylamide

B2

IARC (International Agency for Research on Cancer)

79-06-1 | acrylamide

2A

NTP (National Toxicology Program)

79-06-1 | acrylamide

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**TLV (Threshold Limit Value established by ACGIH)**

79-06-1	acrylamide	A3
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**MAK (German Maximum Workplace Concentration)**

79-06-1	acrylamide	2
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**NIOSH-Ca (National Institute for Occupational Safety and Health)**

79-06-1	acrylamide	
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**OSHA-Ca (Occupational Safety & Health Administration)**

None of the ingredients are listed.

**Product related hazard informations:**

The product has been classified and marked in accordance with directives on hazardous materials.

**Hazard symbols:**

T Toxic

**Hazard-determining components of labelling:**

acrylamide

**Risk phrases:**

May cause cancer.

May cause heritable genetic damage.

Also harmful by inhalation and in contact with skin.

Also toxic if swallowed.

Irritating to eyes and skin.

May cause sensitization by skin contact.

Also toxic: danger of serious damage to health by prolonged exposure through inhalation, in contact with skin and if swallowed.

Possible risk of impaired fertility.

**Safety phrases:**

Avoid exposure - obtain special instructions before use.

Keep container in a well-ventilated place.

When using do not eat or drink.

Wear suitable protective clothing, gloves and eye/face protection.

In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).

This material and its container must be disposed of as hazardous waste.

**National regulations:**

Class	Share in %
Wasser	60.0
II	40.0

**Water hazard class:** Water hazard class 3 (Self-assessment): extremely hazardous for water.

**Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

## 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.

**Department issuing MSDS:**

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*Promega Corporation  
Environmental Health and Safety Department  
2800 Woods Hollow Road  
Madison, WI  
Ph: (608)274-4330*

**\* Data compared to the previous version altered.**

USA