

07/04/2016

### Kit Components

| Product code | Description                             |
|--------------|---|
| <b>V3111</b> | <b>Acrylamide Molecular Grade, 100g</b> |
| Components:  |   |
| V311         | Acrylamide                              |



**Safety Data Sheet**  
*acc. to OSHA HCS*

Printing date 07/04/2016

Reviewed on 07/03/2016

**1 Identification**

**Product identifier**

**Trade name:** Acrylamide

**Article number:** V311

**CAS Number:**

79-06-1

**EC number:**

201-173-7

**Index number:**

616-003-00-0

**Application of the substance / the mixture** 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:** SDS author: [Regulatory.Affairs@promega.com](mailto:Regulatory.Affairs@promega.com)

**Emergency telephone number:**

For Chemical Emergency Spill, Leak, Fire, Exposure, or Accident Call CHEMTREC Day or Night Within USA and Canada: 1-800-424-9300

Outside USA and Canada: +1 703-527-3887 (collect calls accepted)

**2 Hazard(s) identification**

**Classification of the substance or mixture**



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 H361 Suspected of damaging fertility or the unborn child.

STOT RE 1 H372 Causes damage to organs through prolonged or repeated exposure.



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*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. 2A H319 Causes serious eye irritation.*

*Skin Sens. 1 H317 May cause an allergic skin reaction.*

**Label elements**

**GHS label elements**

*The substance is classified and labeled according to the Globally Harmonized System (GHS).*

**Hazard pictograms** GHS06, GHS07, GHS08

**Signal word** Danger

**Hazard-determining components of labeling:**

acrylamide

**Hazard statements**

*Toxic if swallowed.*

*Harmful in contact with skin or if inhaled.*

*Causes skin irritation.*

*Causes serious eye irritation.*

*May cause an allergic skin reaction.*

*May cause genetic defects.*

*May cause cancer.*

*Suspected of damaging fertility or the unborn child.*

*Causes damage to organs through prolonged or repeated exposure.*

**Precautionary statements**

*Obtain special instructions before use.*

*Do not handle until all safety precautions have been read and understood.*

*Wash thoroughly after handling.*

*Do not eat, drink or smoke when using this product.*

*Contaminated work clothing must not be allowed out of the workplace.*

*Do not breathe dust/fume/gas/mist/vapors/spray.*

*Wear protective gloves / protective clothing.*

*Wear eye protection / face protection.*

*Use only outdoors or in a well-ventilated area.*

*IF SWALLOWED: Immediately call a POISON CENTER/ doctor.*

*IF ON SKIN: Wash with plenty of water.*

*If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do.*

*Continue rinsing.*

*Call a POISON CENTER/doctor if you feel unwell.*

*IF INHALED: Remove person to fresh air and keep comfortable for breathing.*

*Wash contaminated clothing before reuse.*

*IF exposed or concerned: Get medical advice/attention.*

*If skin irritation or rash occurs: Get medical advice/attention.*

*If eye irritation persists: Get medical advice/attention.*

*Get medical advice/attention if you feel unwell.*

*Rinse mouth.*

*Take off contaminated clothing and wash it before reuse.*

*Store locked up.*

*Dispose of contents/container in accordance with local/regional/national/international regulations.*

**Classification system:**

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

Health = 2

Fire = 2

Reactivity = 2

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**Trade name: Acrylamide**

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

Health = 2

Fire = 2

Reactivity = 2

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

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.**vPvB:** Not applicable.

### \* 3 Composition/information on ingredients

**Chemical characterization: Substances****CAS No. Description**

79-06-1 acrylamide

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

### \* 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.

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**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 Fire-fighting 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**

Remove persons from danger area.

Avoid formation of dust.

Wear protective clothing.

**Environmental precautions:** Do not allow to enter sewers/ surface or ground water.**Methods and material for containment and cleaning up:**

Dispose contaminated material as waste according to Section 13.

Pick up mechanically.

Ensure adequate ventilation.

**Reference to other sections**

See Section 7 for information on safe handling.

See Section 13 for disposal information.

## \* 7 Handling and storage

**Handling:****Precautions for safe handling**

Thorough dedusting.

Keep receptacles tightly sealed.

Ensure good ventilation/exhaustion at the workplace.

Open and handle receptacle with care.

**Information about protection against explosions and fires:** Keep respiratory protective device available.**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.

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## 8 Exposure controls/personal protection

### Control parameters

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

#### 79-06-1 acrylamide

|     |   |
|-----|---|
| PEL | Long-term value: 0.3 mg/m <sup>3</sup><br>Skin                                  |
| REL | Long-term value: 0.03 mg/m <sup>3</sup><br>Skin; See Pocket Guide App. A        |
| TLV | Long-term value: 0.03* mg/m <sup>3</sup><br>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:

Ensure that washing facilities are available at the work place.

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.

#### 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.

Select the glove material considering penetration time, rate of diffusion and degradation time.

It is recommended that the selected protective gloves be tested and approved under NIOSH or EU Directive 89/686/EEC and the standard EN 374 derived from it.

#### 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.

#### Eye protection:

Safety glasses

Use equipment for eye protection tested and approved under government NIOSH standards.

## 9 Physical and chemical properties

### Information on basic physical and chemical properties

#### General Information

#### Appearance:

**Form:** Crystalline

**Color:** Colorless

**Odor:** Odorless

**Odor threshold:** Not determined.

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|   |   |
|---|---|
| <b>pH-value:</b>                                | Not applicable.                               |
| <b>Change in condition</b>                      |   |
| <b>Melting point/Melting range:</b>             | 84-85 °C (183-185 °F)                         |
| <b>Boiling point/Boiling range:</b>             | 125/30 hPa °C (257/86 hPa °F)                 |
| <b>Flash point:</b>                             | Not applicable.                               |
| <b>Flammability (solid, gaseous):</b>           | Product is not flammable.                     |
| <b>Ignition temperature:</b>                    |   |
| <b>Decomposition temperature:</b>               | Not determined.                               |
| <b>Auto igniting:</b>                           | Not determined.                               |
| <b>Danger of explosion:</b>                     | Product does not present an explosion hazard. |
| <b>Explosion limits:</b>                        |   |
| <b>Lower:</b>                                   | Not determined.                               |
| <b>Upper:</b>                                   | Not determined.                               |
| <b>Vapor pressure at 20 °C (68 °F):</b>         | 0.009 hPa                                     |
| <b>Density at 20 °C (68 °F):</b>                | 1.13 g/cm <sup>3</sup> (9.43 lbs/gal)         |
| <b>Relative density</b>                         | Not determined.                               |
| <b>Vapor density</b>                            | Not applicable.                               |
| <b>Evaporation rate</b>                         | Not applicable.                               |
| <b>Solubility in / Miscibility with</b>         |   |
| <b>Water:</b>                                   | Soluble.                                      |
| <b>Partition coefficient (n-octanol/water):</b> | Not determined.                               |
| <b>Viscosity:</b>                               |   |
| <b>Dynamic:</b>                                 | Not applicable.                               |
| <b>Kinematic:</b>                               | Not applicable.                               |
| <b>Organic solvents:</b>                        | 0.0 %   |
| <b>Solids content:</b>                          | 100.0 %                                       |
| <b>Other information</b>                        | No further relevant information available.    |

## 10 Stability and reactivity

**Reactivity** No further relevant information available.

**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:**

Oxidizing agents

Strong acids

**Hazardous decomposition products:** No dangerous decomposition products known.

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## 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)<br>252 mg/kg (Rabbit)   |
| Irritation of skin | acute | 500 mg/ 24H (Rabbit)<br>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:

#### Carcinogenic categories

#### IARC (International Agency for Research on Cancer)

|         |            |    |
|---------|------------|----|
| 79-06-1 | acrylamide | 2A |
|---------|------------|----|

#### NTP (National Toxicology Program)

|         |            |   |
|---------|------------|---|
| 79-06-1 | acrylamide | R |
|---------|------------|---|

#### OSHA-Ca (Occupational Safety & Health Administration)

Substance is not listed.

## 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 (Assessment by list): extremely hazardous for water

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

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.

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## 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.

**Recommended cleansing agent:** Water, if necessary with cleansing agents.

## 14 Transport information

### UN-Number

**DOT, ADR, IMDG, IATA** UN2074

### UN proper shipping name

**DOT** Acrylamide, solid  
**ADR** 2074 Acrylamide, solid  
**IMDG, IATA** ACRYLAMIDE, SOLID

### Transport hazard class(es)

#### DOT



**Class** 6.1 Toxic substances  
**Label** 6.1

#### ADR



**Class** 6.1 (T2) Toxic substances  
**Label** 6.1

#### IMDG, IATA



**Class** 6.1 Toxic substances  
**Label** 6.1

### Packing group

**DOT, ADR, IMDG, IATA** III

### Environmental hazards:

**Marine pollutant:** No

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|                                     |   |
|-------------------------------------|---|
| <b>Special precautions for user</b> | Warning: Toxic substances                 |
| <b>Danger code (Kemler):</b>        | 60  |
| <b>EMS Number:</b>                  | F-A,S-A                                   |
| <b>Stowage Category</b>             | A   |
| <b>Stowage Code</b>                 | SW1 Protected from sources of heat.       |
| <b>Handling Code</b>                | H2 Keep as cool as reasonably practicable |

**Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code** Not applicable.

**Transport/Additional information:****ADR**

|                                 |  |
|---------------------------------|--|
| <b>Exempted quantities (EQ)</b> | Code: E1   |
|                                 | Maximum net quantity per inner packaging: 30 g   |
|                                 | Maximum net quantity per outer packaging: 1000 g |

**IMDG**

|                                 |  |
|---------------------------------|--|
| <b>Limited quantities (LQ)</b>  | 5 kg   |
| <b>Exempted quantities (EQ)</b> | Code: E1   |
|                                 | Maximum net quantity per inner packaging: 30 g   |
|                                 | Maximum net quantity per outer packaging: 1000 g |

**UN "Model Regulation":** UN 2074 ACRYLAMIDE, SOLID, 6.1, III

## 15 Regulatory information

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

**Section 355 (extremely hazardous substances):**

Substance is listed.

**Section 313 (Specific toxic chemical listings):**

Substance is listed.

**TSCA (Toxic Substances Control Act):**

Substance is listed.

**Proposition 65****Chemicals known to cause cancer:**

Substance is listed.

**Chemicals known to cause reproductive toxicity for females:**

Substance is not listed.

**Chemicals known to cause reproductive toxicity for males:**

Substance is listed.

**Chemicals known to cause developmental toxicity:**

Substance is listed.

**Carcinogenicity categories****EPA (Environmental Protection Agency)**

79-06-1 acrylamide

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**Trade name:** Acrylamide

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

79-06-1 acrylamide

A3

**NIOSH-Ca (National Institute for Occupational Safety and Health)**

Substance is listed.

**GHS label elements**

The substance is classified and labeled according to the Globally Harmonized System (GHS).

**Signal word** Danger

**Hazard-determining components of labeling:**

acrylamide

**Hazard statements**

Toxic if swallowed.

Harmful in contact with skin or if inhaled.

Causes skin irritation.

Causes serious eye irritation.

May cause an allergic skin reaction.

May cause genetic defects.

May cause cancer.

Suspected of damaging fertility or the unborn child.

Causes damage to organs through prolonged or repeated exposure.

**Precautionary statements**

Obtain special instructions before use.

Do not handle until all safety precautions have been read and understood.

Wash thoroughly after handling.

Do not eat, drink or smoke when using this product.

Contaminated work clothing must not be allowed out of the workplace.

Do not breathe dust/fume/gas/mist/vapors/spray.

Wear protective gloves / protective clothing.

Wear eye protection / face protection.

Use only outdoors or in a well-ventilated area.

**IF SWALLOWED:** Immediately call a POISON CENTER/ doctor.**IF ON SKIN:** Wash with plenty of water.

If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do.

Continue rinsing.

Call a POISON CENTER/doctor if you feel unwell.

**IF INHALED:** Remove person to fresh air and keep comfortable for breathing.

Wash contaminated clothing before reuse.

**IF exposed or concerned:** Get medical advice/attention.

If skin irritation or rash occurs: Get medical advice/attention.

If eye irritation persists: Get medical advice/attention.

Get medical advice/attention if you feel unwell.

Rinse mouth.

Take off contaminated clothing and wash it before reuse.

Store locked up.

Dispose of contents/container in accordance with local/regional/national/international regulations.

**National regulations:**
**Information about limitation of use:**

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

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

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**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 SDS:**

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

**Date of preparation / last revision** 07/04/2016 / -

**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

DOT: US Department of Transportation

IATA: International Air Transport Association

ACGIH: American Conference of Governmental Industrial Hygienists

EINECS: European Inventory of Existing Commercial Chemical Substances

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

NFPA: National Fire Protection Association (USA)

HMIS: Hazardous Materials Identification System (USA)

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

PBT: Persistent, Bioaccumulative and Toxic

vPvB: very Persistent and very Bioaccumulative

NIOSH: National Institute for Occupational Safety

OSHA: Occupational Safety & Health

TLV: Threshold Limit Value

PEL: Permissible Exposure Limit

REL: Recommended Exposure Limit

Acute Tox. 3: Acute toxicity – Category 3

Acute Tox. 4: Acute toxicity – Category 4

Skin Irrit. 2: Skin corrosion/irritation – Category 2

Eye Irrit. 2A: Serious eye damage/eye irritation – Category 2A

Skin Sens. 1: Skin sensitisation – Category 1

Muta. 1B: Germ cell mutagenicity – Category 1B

Carc. 1B: Carcinogenicity – Category 1B

Repr. 2: Reproductive toxicity – Category 2

STOT RE 1: Specific target organ toxicity (repeated exposure) – Category 1

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