

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

#### 1.1. Product identifier

Product form : Mixture  
Product name : Acrolein Mix  
Product code : AL0-130159  
Product group : Trade product

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

##### 1.2.1. Relevant identified uses

Main use category : Laboratory Use  
Industrial/Professional use spec : Industrial  
For professional use only  
Use of the substance/mixture : Certified reference material for laboratory use only

##### 1.2.2. Uses advised against

No additional information available

#### 1.3. Details of the supplier of the safety data sheet

Phenova  
6390 Joyce Dr. Suite 100  
80403 Golden, CO - United States  
T 1-866-942-2978 - F 1-866-283-0269  
[info@phenova.com](mailto:info@phenova.com) - [www.phenova.com](http://www.phenova.com)

#### 1.4. Emergency telephone number

Emergency number : ChemTel Assistance (US/Canada) 1-800-255-3924  
ChemTel Assistance (International) +1 813-248-0585

### SECTION 2: Hazards identification

#### 2.1. Classification of the substance or mixture

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

Flam. Liq. 2 H225  
Acute Tox. 4 (Oral) H302  
Skin Corr. 1B H314  
Aquatic Acute 1 H400  
Aquatic Chronic 3 H412

##### Classification according to Directive 67/548/EEC [DSD] or 1999/45/EC [DPD]

F; R11  
T; R23/25  
C; R34  
N; R50

Full text of R-phrases: see section 16

##### Adverse physicochemical, human health and environmental effects

No additional information available

#### 2.2. Label elements

##### Labeling according to Regulation (EC) No. 1272/2008 [CLP]

Hazard pictograms (CLP) :



GHS02

GHS05

GHS07

GHS09

Signal word (CLP)

: Danger

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according to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2015/830

|                                |   |
|--------------------------------|---|
| Hazardous ingredients          | : Acrolein  |
| Hazard statements (CLP)        | : H225 - Highly flammable liquid and vapor<br>H302 - Harmful if swallowed<br>H314 - Causes severe skin burns and eye damage<br>H410 - Very toxic to aquatic life with long lasting effects  |
| Precautionary statements (CLP) | : P210 - Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking<br>P233 - Keep container tightly closed<br>P260 - Do not breathe dust/fume/gas/mist/vapors/spray<br>P270 - Do not eat, drink or smoke when using this product<br>P273 - Avoid release to the environment<br>P280 - Wear protective gloves/protective clothing/eye protection/face protection<br>P301+P330+P331 - IF SWALLOWED: Rinse mouth. Do NOT induce vomiting<br>P303+P361+P353 - IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water<br>P304+P340 - IF INHALED: Remove person to fresh air and keep comfortable for breathing<br>P305+P351+P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing<br>P308+P313 - IF exposed or concerned: Get medical advice/attention<br>P370+P378 - In case of fire: Use media other than water to extinguish<br>P391 - Collect spillage<br>P403+P235 - Store in a well-ventilated place. Keep cool<br>P501 - Dispose of contents/container to hazardous or special waste collection point, in accordance with local, regional, national and/or international regulation |

No labeling applicable

### 2.3. Other hazards

No additional information available

## SECTION 3: Composition/Information on ingredients

### 3.1. Substances

Not applicable

### 3.2. Mixtures

| Name     | Product identifier  | %                              | Classification according to Regulation (EC) No. 1272/2008 [CLP]   |
|----------|---|--------------------------------|---|
| Acrolein | (CAS No) 107-02-8<br>(EC-No.) 203-453-4<br>(EC index no) 605-008-00-3 | 1.25                           | Flam. Liq. 2, H225<br>Acute Tox. 2 (Oral), H300<br>Acute Tox. 3 (Dermal), H311<br>Acute Tox. 1 (Inhalation), H330<br>Skin Corr. 1B, H314<br>Aquatic Acute 1, H400 (M=10)<br>Aquatic Chronic 1, H410 |
| Name     | Product identifier  | Specific concentration limits  |   |
| Acrolein | (CAS No) 107-02-8<br>(EC-No.) 203-453-4<br>(EC index no) 605-008-00-3 | (C >= 0.1) Skin Corr. 1B, H314 |   |

## SECTION 4: First aid measures

### 4.1. Description of first aid measures

|                                       |   |
|---------------------------------------|---|
| First-aid measures general            | : Never give anything by mouth to an unconscious person. Call a POISON CENTER or doctor/physician. IF exposed or concerned: Get medical advice/attention.   |
| First-aid measures after inhalation   | : Remove victim to fresh air and keep at rest in a position comfortable for breathing.  |
| First-aid measures after skin contact | : Rinse skin with water/shower. Remove/Take off immediately all contaminated clothing. Immediately call a poison center or doctor/physician. Wash with plenty of soap and water. Wash contaminated clothing before reuse. |
| First-aid measures after eye contact  | : Remove contact lenses, if present and easy to do. Continue rinsing. Rinse cautiously with water for several minutes. Obtain medical attention if pain, blinking or redness persists.                                    |
| First-aid measures after ingestion    | : Rinse mouth. Do NOT induce vomiting. Obtain emergency medical attention. Immediately call a poison center or doctor/physician.  |

### 4.2. Most important symptoms and effects, both acute and delayed

|                                     |   |
|-------------------------------------|---|
| Symptoms/effects after skin contact | : Repeated exposure to this material can result in absorption through skin causing significant health hazard. Toxic in contact with skin. |
| Symptoms/effects after ingestion    | : Toxic if swallowed. Swallowing a small quantity of this material will result in serious health hazard.                                  |

### 4.3. Indication of any immediate medical attention and special treatment needed

No additional information available

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### SECTION 5: Firefighting measures

#### 5.1. Extinguishing media

- Suitable extinguishing media : Foam. Dry powder. Carbon dioxide. Water spray. Sand.
- Unsuitable extinguishing media : Do not use a heavy water stream.

#### 5.2. Special hazards arising from the substance or mixture

- Fire hazard : Highly flammable liquid and vapor.
- Explosion hazard : May form flammable/explosive vapor-air mixture.

#### 5.3. Advice for firefighters

- Firefighting instructions : Use water spray or fog for cooling exposed containers. Exercise caution when fighting any chemical fire. Prevent fire-fighting water from entering environment.
- Protection during firefighting : Do not enter fire area without proper protective equipment, including respiratory protection.

### SECTION 6: Accidental release measures

#### 6.1. Personal precautions, protective equipment and emergency procedures

##### 6.1.1. For non-emergency personnel

- Emergency procedures : Evacuate unnecessary personnel.

##### 6.1.2. For emergency responders

- Protective equipment : Equip cleanup crew with proper protection. Avoid breathing dust/fume/gas/mist/vapors/spray.
- Emergency procedures : Ventilate area.

#### 6.2. Environmental precautions

Prevent entry to sewers and public waters. Notify authorities if liquid enters sewers or public waters.

#### 6.3. Methods and material for containment and cleaning up

- Methods for cleaning up : Soak up spills with inert solids, such as clay or diatomaceous earth as soon as possible. Collect spillage. Store away from other materials.

#### 6.4. Reference to other sections

See Heading 8. Exposure controls and personal protection.

### SECTION 7: Handling and storage

#### 7.1. Precautions for safe handling

- Additional hazards when processed : Handle empty containers with care because residual vapors are flammable.
- Precautions for safe handling : Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work. Provide good ventilation in process area to prevent formation of vapor. No open flames. No smoking. Use only non-sparking tools.
- Hygiene measures : Do not eat, drink or smoke when using this product. Gently wash with plenty of soap and water. Remove/Take off immediately all contaminated clothing. Wash contaminated clothing before reuse.

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

- Technical measures : Proper grounding procedures to avoid static electricity should be followed. Ground/bond container and receiving equipment.
- Storage conditions : Keep in fireproof place. Keep container tightly closed. Keep container tightly closed and in a well-ventilated place. Keep away from any flames or sparking source.
- Incompatible products : Strong bases. Strong acids.
- Incompatible materials : Sources of ignition. Direct sunlight. Heat sources.

#### 7.3. Specific end use(s)

No additional information available

### SECTION 8: Exposure controls/personal protection

#### 8.1. Control parameters

No additional information available

#### 8.2. Exposure controls

- Appropriate engineering controls : Either local exhaust or general room ventilation is usually required.
- Personal protective equipment : Avoid all unnecessary exposure. Gloves. Protective clothing. Protective goggles. Safety glasses.



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|                          |  |
|--------------------------|--|
| Hand protection          | : Wear chemically resistant protective gloves. Wear suitable gloves resistant to chemical penetration.   |
| Eye protection           | : Chemical goggles or safety glasses. Safety glasses.  |
| Skin and body protection | : Wear chemically protective gloves, lab coat or apron to prevent prolonged or repeated skin contact.    |
| Respiratory protection   | : Where exposure through inhalation may occur from use, respiratory protection equipment is recommended. |
| Other information        | : Do not eat, drink or smoke during use.   |

### SECTION 9: Physical and chemical properties

#### 9.1. Information on basic physical and chemical properties

|                           |                                     |
|---------------------------|-------------------------------------|
| Physical state            | : Liquid                            |
| Color                     | : Colorless.                        |
| Odor                      | : characteristic.                   |
| pH                        | : No data available                 |
| Melting point             | : No data available                 |
| Freezing point            | : No data available                 |
| Boiling point             | : No data available                 |
| Flash point               | : No data available                 |
| Auto-ignition temperature | : No data available                 |
| Decomposition temperature | : No data available                 |
| Flammability (solid, gas) | : Highly flammable liquid and vapor |
| Relative density          | : No data available                 |
| Solubility                | : No data available                 |
| Explosive properties      | : No data available                 |
| Oxidizing properties      | : No data available                 |
| Explosion limits          | : No data available                 |

#### 9.2. Other information

No additional information available

### SECTION 10: Stability and reactivity

#### 10.1. Reactivity

No additional information available

#### 10.2. Chemical stability

Not established. Highly flammable liquid and vapor. May form flammable/explosive vapor-air mixture.

#### 10.3. Possibility of hazardous reactions

Not established.

#### 10.4. Conditions to avoid

Direct sunlight. Extremely high or low temperatures. Open flame.

#### 10.5. Incompatible materials

Strong acids. Strong bases.

#### 10.6. Hazardous decomposition products

fume. Carbon monoxide. Carbon dioxide. May release flammable gases.

### SECTION 11: Toxicological information

#### 11.1. Information on toxicological effects

Acute toxicity : Oral: Harmful if swallowed.

| Acrolein Mix               |   |
|----------------------------|---|
| ATE CLP (oral)             | 400 mg/kg body weight                   |
| Acrolein (107-02-8)        |   |
| LC50 inhalation rat (mg/l) | 0.018 mg/l/4h (Rat; Experimental value) |
| ATE CLP (oral)             | 5 mg/kg body weight                     |
| ATE CLP (dermal)           | 300 mg/kg body weight                   |
| ATE CLP (gases)            | 10 ppmV/4h                              |
| ATE CLP (vapors)           | 0.018 mg/l/4h                           |
| ATE CLP (dust, mist)       | 0.018 mg/l/4h                           |

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|   |  |
|---|--|
| Skin corrosion/irritation                           | : Causes severe skin burns and eye damage.<br>Based on available data, the classification criteria are not met |
| Serious eye damage/irritation                       | : Eye damage, category 1, implicit<br>Based on available data, the classification criteria are not met         |
| Respiratory or skin sensitization                   | : Not classified<br>Based on available data, the classification criteria are not met                           |
| Germ cell mutagenicity                              | : Not classified<br>Based on available data, the classification criteria are not met                           |
| Carcinogenicity                                     | : Not classified<br>Based on available data, the classification criteria are not met<br>May cause cancer       |
| Reproductive toxicity                               | : Not classified<br>Based on available data, the classification criteria are not met                           |
| Specific target organ toxicity – single exposure    | : Not classified   |
| Specific target organ toxicity – repeated exposure  | : Not classified<br>Based on available data, the classification criteria are not met                           |
| Aspiration hazard                                   | : Not classified<br>Based on available data, the classification criteria are not met                           |
| Potential Adverse human health effects and symptoms | : Toxic if swallowed. Toxic in contact with skin.  |

### SECTION 12: Ecological information

#### 12.1. Toxicity

| Acrolein (107-02-8)            |  |
|--------------------------------|--|
| LC50 other aquatic organisms 1 | 0.007 mg/l (96 h; Xenopus laevis; Lethal; LC50; Other; Flow-through system; Fresh water) |
| LC50 fish 2                    | 0.016 - 0.08 mg/l (LC50; 96 h)   |

#### 12.2. Persistence and degradability

| Acrolein Mix                  |                  |
|-------------------------------|------------------|
| Persistence and degradability | Not established. |

  

| Acrolein (107-02-8)           |   |
|-------------------------------|---|
| Persistence and degradability | Readily biodegradable in water. Biodegradable in the soil. Highly mobile in soil. |
| Chemical oxygen demand (COD)  | 1.72 g O <sub>2</sub> /g substance  |
| ThOD                          | 2 g O <sub>2</sub> /g substance   |
| BOD (% of ThOD)               | 0.3   |

#### 12.3. Bioaccumulative potential

| Acrolein Mix              |                  |
|---------------------------|------------------|
| Bioaccumulative potential | Not established. |

  

| Acrolein (107-02-8)       |  |
|---------------------------|--|
| BCF fish 1                | 344 (BCF; Other; 28 days; Lepomis macrochirus; Flow-through system; Fresh water; Experimental value) |
| Log Pow                   | -0.01 (Experimental value)   |
| Bioaccumulative potential | Low potential for bioaccumulation (BCF < 500).   |

#### 12.4. Mobility in soil

| Acrolein (107-02-8) |   |
|---------------------|---|
| Surface tension     | 0.027 N/m (20 °C)   |
| Log Koc             | Koc,PCKOCWIN v1.66; 2.763; Calculated value; log Koc; PCKOCWIN v1.66; 0.441; Calculated value |
| Ecology - soil      | Toxic to flora.   |

#### 12.5. Results of PBT and vPvB assessment

No additional information available

#### 12.6. Other adverse effects

Additional information : Avoid release to the environment

### SECTION 13: Disposal considerations

#### 13.1. Waste treatment methods

Product/Packaging disposal recommendations : Dispose in a safe manner in accordance with local/national regulations.

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Additional information : Handle empty containers with care because residual vapors are flammable.  
Ecology - waste materials : Avoid release to the environment. Hazardous waste due to toxicity.

### SECTION 14: Transport information

In accordance with ADR / RID / IMDG / IATA / ADN

#### 14.1. UN number

UN-No. (ADR) : 2924  
UN-No. (IATA) : 2924  
UN-No. (IMDG) : 2924  
UN-No. (ADN) : 2924

#### 14.2. UN proper shipping name

Proper Shipping Name (ADR) : FLAMMABLE LIQUID, CORROSIVE, N.O.S.  
Proper Shipping Name (IATA) : Flammable liquid, corrosive, n.o.s.  
Proper Shipping Name (IMDG) : FLAMMABLE LIQUID, CORROSIVE, N.O.S.  
Proper Shipping Name (ADN) : FLAMMABLE LIQUID, CORROSIVE, N.O.S.  
Transport document description (ADR) : UN 2924 FLAMMABLE LIQUID, CORROSIVE, N.O.S., 3 (8), II, (D/E), ENVIRONMENTALLY HAZARDOUS

#### 14.3. Packing group

Class (ADR) : 3  
Classification code (ADR) : FC  
Class (IATA) : 3  
Class (IMDG) : 3  
Class (ADN) : 3  
Classification code (ADN) : FC  
Subsidiary risks (ADR) : 8  
Subsidiary risks (IMDG) : 8  
Hazard labels (ADR) : 3, 8



Hazard labels (IATA) : 3, 8



Hazard labels (IMDG) : 3, 8



Hazard labels (ADN) : 3, 8



#### 14.4. Packing group

Packing group (ADR) : II  
Packing group (IATA) : II  
Packing group (IMDG) : II  
Packing group (ADN) : II

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### 14.5. Environmental hazards

Dangerous for the environment



Other information

: No supplementary information available.

### 14.6. Special precautions for user

#### 14.6.1. Overland transport

Hazard identification number (Kemler No.) : 338

Classification code (ADR) : FC

Orange plates



Special provision (ADR) : 274

Transport category (ADR) : 2

Tunnel restriction code (ADR) : D/E

Limited quantities (ADR) : 1I

Excepted quantities (ADR) : E2

#### 14.6.2. Transport by sea

Special provision (IMDG) : 274

Limited quantities (IMDG) : 1 L

Excepted quantities (IMDG) : E2

Packing instructions (IMDG) : P001

IBC packing instructions (IMDG) : IBC02

Tank instructions (IMDG) : T11

Tank special provisions (IMDG) : TP2, TP27

EmS-No. (Fire) : F-E

EmS-No. (Spillage) : S-C

Stowage category (IMDG) : B

Properties and observations (IMDG) : Causes burns to skin, eyes and mucous membranes.

#### 14.6.3. Air transport

CAO packing instructions (IATA) : 363

CAO max net quantity (IATA) : 5L

PCA packing instructions (IATA) : 352

PCA Limited quantities (IATA) : Y340

PCA limited quantity max net quantity (IATA) : 0.5L

PCA max net quantity (IATA) : 1L

PCA Excepted quantities (IATA) : E2

Special provision (IATA) : A3

ERG code (IATA) : 3CH

#### 14.6.4. Inland waterway transport

Special provision (ADN) : 274

Limited quantities (ADN) : 1 L

Excepted quantities (ADN) : E2

Carriage permitted (ADN) : T

Equipment required (ADN) : PP, EP, EX, A

Ventilation (ADN) : VE01

Number of blue cones/lights (ADN) : 1

Carriage prohibited (ADN) : No

### 14.7. Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Not applicable

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### SECTION 15: Regulatory information

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

##### 15.1.1. EU-Regulations

Contains no REACH substances with Annex XVII restrictions

Contains no REACH candidate substance

Contains no REACH Annex XIV substances.

##### 15.1.2. National regulations

No additional information available

#### 15.2. Chemical safety assessment

No chemical safety assessment has been carried out

### SECTION 16: Other information

Data sources : REGULATION (EC) No 1272/2008 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 16 December 2008 on classification, labeling and packaging of substances and mixtures, amending and repealing Directives 67/548/EEC and 1999/45/EC, and amending Regulation (EC) No 1907/2006.

Other information : None.

PHV SDS EU

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