



Safety Data Sheet

acc. to OSHA HCS

Printing date 10/24/2017

Reviewed on 10/24/2017

1 Identification

· **Product identifier**

· **Product name: 37 - Acrylamide**

· **Part number:** PT-AQ-37

· **CAS Number:**

79-06-1

· **EC number:**

201-173-7

· **Index number:**

616-003-00-0

· **Application of the substance / the mixture** Reference material for laboratory use only

· **Details of the supplier of the safety data sheet**

· **Manufacturer/Supplier:**

VHG Labs, Inc

LGC Standards

276 Abby Road

Manchester, NH 03103

UNITED STATES OF AMERICA

Tel : +1 (603) 622-7660

Fax : +1 (603) 622-5180

eMail : custsvc@vhglabs.com

Web : www.vhglabs.com

· **Information department:**

Product safety department

eMail : sds-request@lgcgroup.com

· **Emergency telephone number:**

INFOTRAC 24-hour Emergency telephone number:

800-535-5053 (US & Canada);

352-323-3500 (International)

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 statements**

H301 Toxic if swallowed.
H312+H332 Harmful in contact with skin or 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.
H361 Suspected of damaging fertility or the unborn child.
H372 Causes damage to organs through prolonged or repeated exposure.

Precautionary statements

P260 Do not breathe dust/fume/gas/mist/vapors/spray.
P280 Wear protective gloves/protective clothing/eye protection/face protection.
P301+P310 IF SWALLOWED: Immediately call a POISON CENTER/ doctor.
P305+P351+P338 If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P405 Store locked up.
P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

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

Health = 2
Fire = 0
Reactivity = 0

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· HMIS-ratings (scale 0 - 4)

HEALTH	2	Health = 2
FIRE	0	Fire = 0
REACTIVITY	0	Reactivity = 0

- **Other hazards**
- **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
- **RTECS:** AS 3325000

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.
- **After inhalation:**
Supply fresh air and to be sure call for a doctor.
In case of unconsciousness place patient stably in side position for transportation.
- **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:**
Rinse mouth. Do not induce vomiting.
Call a doctor immediately.
- **Information for doctor:**
- **Most important symptoms and effects, both acute and delayed** No further relevant information available.
- **Indication of any immediate medical attention and special treatment needed**
No further relevant information available.

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5 Fire-fighting measures

- **Extinguishing media**
- **Suitable extinguishing agents:**
CO₂, extinguishing powder or water spray. Fight larger fires with water spray or alcohol resistant foam.
- **Special hazards arising from the substance or mixture**
Formation of toxic gases is possible during heating or in case of fire.
- **Advice for firefighters**
- **Protective equipment:**
*Mouth respiratory protective device.
Wear self-contained respiratory protective device.*

6 Accidental release measures

- **Personal precautions, protective equipment and emergency procedures** *Avoid formation of dust.*
- **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 item 13.
Ensure adequate ventilation.*
- **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 disposal information.*

7 Handling and storage

- **Handling:**
- **Precautions for safe handling**
*Ensure good ventilation/exhaustion at the workplace.
Thorough dedusting.
Store in cool, dry place in tightly closed receptacles.
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:**
*Please refer to the manufacturers certificate for specific storage and transport temperature conditions.
Store only in the original receptacle.
Keep container in a well-ventilated place. Keep away from sources of ignition and heat.*
- **Information about storage in one common storage facility:** *Store away from foodstuffs.*
- **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

· **Additional information about design of technical systems:** No further data; see item 7.

· **Control parameters**

· **Components with limit values that require monitoring at the workplace:**

79-06-1 Acrylamide

PEL	Long-term value: 0.3 mg/m ³ Skin
REL	Long-term value: 0.03 mg/m ³ Skin; See Pocket Guide App. A
TLV	Long-term value: 0.03 mg/m ³ 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.

· **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:**

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

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



Protective gloves

Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.

· **Material of gloves** Nitrile rubber, NBR

· **Penetration time of glove material**

The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

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· **Eye protection:**

Tightly sealed goggles

9 Physical and chemical properties· **Information on basic physical and chemical properties**· **General Information**· **Appearance:**

· Form:	Solid
· Color:	Colorless
· Odor:	Odorless
· Odor threshold:	Not determined.

· **pH-value:** Not applicable.· **Change in condition**

· Melting point/Melting range:	84-85 °C (183-185 °F)
· Boiling point/Boiling range:	125/30 hPa °C (257/86 hPa °F)

· **Flash point:** Not applicable.· **Flammability (solid, gaseous):** Not determined.· **Ignition temperature:** 424 °C (795 °F)· **Decomposition temperature:** Not determined.· **Auto igniting:** Not determined.· **Danger of explosion:** Product is not explosive. However, formation of explosive air/vapor mixtures are possible.· **Explosion limits:**

· Lower:	30 g/m ³
· Upper:	Not determined.

· **Vapor pressure at 20 °C (68 °F):** 0.009 hPa· **Density at 20 °C (68 °F):** 1.03 g/cm³ (8.595 lbs/gal)· **Relative density** Not determined.· **Vapor density** Not applicable.· **Evaporation rate** Not applicable.· **Solubility in / Miscibility with**· **Water at 30 °C (86 °F):** 2150 g/l· **Partition coefficient (n-octanol/water):** - 0.78 logP

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- **Viscosity:**
 - Dynamic:** Not applicable.
 - Kinematic:** Not applicable.
- **Other information** No further relevant information available.

10 Stability and reactivity

- **Reactivity** Stable under normal conditions.
- **Chemical stability** Stable under normal conditions.
- **Thermal decomposition / conditions to be avoided:**
Formation of toxic gases is possible during heating or in case of fire.
- **Possibility of hazardous reactions** No dangerous reactions known.
- **Conditions to avoid**
 - Heat.
 - Light.
- **Incompatible materials:** Strong oxidizing agents.
- **Hazardous decomposition products:** Formation of toxic gases is possible during heating or in case of fire.

11 Toxicological information

- **Information on toxicological effects**

- **Acute toxicity:**

- **LD/LC50 values that are relevant for classification:**

Oral	LD50	124 mg/kg (rat)
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Dermal	LD50	400 mg/kg (rat)
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- **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)** 2A
 - **NTP (National Toxicology Program)** R
 - **OSHA-Ca (Occupational Safety & Health Administration)** Substance is not listed.

12 Ecological information

- **Toxicity**

- **Aquatic toxicity:**

EC50/48 h	98 mg/l (crustacean)
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LC50/48	160 mg/l (crustacean)
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LC50/96 h 122 mg/l (fish)

- **Persistence and degradability** No further relevant information available.
- **Behavior in environmental systems:**
- **Bioaccumulative potential** No further relevant information available.
- **Mobility in soil** No further relevant information 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.

13 Disposal considerations

- **Waste treatment methods**
- **Recommendation:**
Must not be disposed of together with household garbage. Do not allow product to reach sewage system.
- **Uncleaned packagings:**
- **Recommendation:** Dispose in accordance with national regulations.

14 Transport information

- **UN-Number**
- **DOT, ADR, IMDG, IATA** UN2074
- **DOT** Acrylamide, solid
- **ADR** 2074 Acrylamide, solid
- **IMDG, IATA** ACRYLAMIDE, SOLID

- **Transport hazard class(es)**

- **DOT**



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

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· ADR, IMDG, IATA

· Class	6.1 Toxic substances
· Label	6.1
· Packing group	
· DOT, ADR, IMDG, IATA	III
· Environmental hazards:	
· Marine pollutant:	No
· Special precautions for user	Warning: Toxic substances
· Danger code (Kemler):	60
· EMS Number:	F-A,S-A
· Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code	Not applicable.
· Transport/Additional information:	
· DOT	
· Remarks:	Lösung: EmS 6.1-02
· UN "Model Regulation":	UN2074, 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.
- **Carcinogenic categories**
- **EPA (Environmental Protection Agency) B2**
- **TLV (Threshold Limit Value established by ACGIH) 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).

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Hazard pictograms

GHS06 GHS07 GHS08

Signal word *Danger***Hazard statements**

- H301 Toxic if swallowed.
H312+H332 Harmful in contact with skin or 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.
H361 Suspected of damaging fertility or the unborn child.
H372 Causes damage to organs through prolonged or repeated exposure.

Precautionary statements

- P260 Do not breathe dust/fume/gas/mist/vapors/spray.
P280 Wear protective gloves/protective clothing/eye protection/face protection.
P301+P310 IF SWALLOWED: Immediately call a POISON CENTER/ doctor.
P305+P351+P338 If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P405 Store locked up.
P501 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.

Chemical safety assessment: A Chemical Safety Assessment has not been carried out.**16 Other information**

The information in this Safety Data Sheet meets the requirements of the United States OCCUPATIONAL SAFETY AND HEALTH ACT and regulations promulgated thereunder (29 CFR 1910.1200 et. seq.) This document is intended only as a guide to the appropriate precautionary handling of the material by a person trained in, or supervised by a person trained in, chemical handling. The user is responsible for determining the application. Depending on usage, protective clothing including eye and face guards and respirators must be used to avoid contact with material or breathing chemical vapors/fumes. Exposure to this product may have serious adverse health effects. This chemical may interact with other substances. Since the potential uses are so varied, we cannot warn of all of the potential dangers of use or interaction with other chemicals or materials. We warrant that the chemical meets the specifications set forth on the label. We (LGC/VHG/ARMI) disclaim any other warranties, expressed or implied with regard to the product supplied hereunder, its merchantability or its fitness for a particular purpose. The user should recognize that this product can cause severe injury and even death, especially if improperly handled or the known dangers of use are not heeded.

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Read all precautionary information.

· **Date of preparation / last revision** 10/24/2017 / -

· **Abbreviations and acronyms:**

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

· **Sources**

Tables 3.1 and 3.2 from Annex 6 of EC 1272/2008, EC 1907/2006, EH40/2005 as amended 2011, Registry of Toxic Effects of Chemical Substances (RTECS), The Dictionary of Substances and their Effects, 1st Edition, IUCLID.