

## 2 Acrylamido-2-methylpropane sulfonic acid (AMPS) 95% powder

Version number: 1.0

### SECTION 1: Identification

#### 1.1 Product identifier

Identification of the substance	2-acrylamido-2-methylpropanesulphonic acid
Trade name	<u>2 Acrylamido-2-methylpropane sulfonic acid (AMPS) 95% powder</u>
CAS number	15214-89-8

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

Relevant identified uses	Chemicals for various applications
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#### 1.3 Details of the supplier of the safety data sheet

Valudor Products, LLC 179 Calle Magdalena Suite 100 Encinitas, California CA 92024 United States	Telephone: +1 (760) 635 8500 e-mail: info@valudor.com Website: www.valudor.com
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#### 1.4 Emergency telephone number

Emergency information	800-535-5053 (Infotrac)
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As above or nearest toxicological information centre.

### SECTION 2: Hazard(s) identification

#### 2.1 Classification of the substance or mixture

Classification acc. to OSHA "Hazard Communication Standard" (29 CFR 1910.1200)

Classification				
Section	Hazard class	Category	Hazard class and category	Hazard statement
A.10	acute toxicity (oral)	4	Acute Tox. 4	H302
A.11	acute toxicity (inhal.)	4	Acute Tox. 4	H332
A.3	serious eye damage/eye irritation	1	Eye Dam. 1	H318
A.8R	specific target organ toxicity - single exposure (respiratory tract irritation)	3	STOT SE 3	H335

For full text of abbreviations: see SECTION 16

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## 2.2 Label elements

Labelling acc. to OSHA "Hazard Communication Standard" (29 CFR 1910.1200)

Signal word danger

Pictograms

GHS05, GHS07



Hazard statements

H302+H332 Harmful if swallowed or if inhaled.

H318 Causes serious eye damage.

H335 May cause respiratory irritation.

Precautionary statements

P261 Avoid breathing dust/fume/gas/mist/vapors/spray.

P270 Do not eat, drink or smoke when using this product.

P271 Use only outdoors or in a well-ventilated area.

P280 Wear eye protection/face protection.

P304+P340 If inhaled: Remove person to fresh air and keep comfortable for breathing.

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/doctor.

P330 Rinse mouth.

P403+P233 Store in a well-ventilated place. Keep container tightly closed.

P405 Store locked up.

P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

## 2.3 Other hazards

Results of PBT and vPvB assessment

According to the results of its assessment, this substance is not a PBT or a vPvB.

## SECTION 3: Composition/information on ingredients

### 3.1 Substances

Name of substance	2-acrylamido-2-methylpropanesulphonic acid
Identifiers	
CAS No	15214-89-8
Molecular formula	C <sub>7</sub> H <sub>13</sub> NO <sub>4</sub> S
Molar mass	207.2 g/mol
Purity	≥95,0%

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## SECTION 4: First-aid measures

### 4.1 Description of first-aid measures

#### General notes

Self-protection of the first aider.

Remove affected person from the danger area and lay down.

Do not leave affected person unattended.

Take off immediately all contaminated clothing.

In all cases of doubt, or when symptoms persist, seek medical advice.

#### Following inhalation

Provide fresh air.

If breathing is irregular or stopped, immediately seek medical assistance and start first aid actions.

In case of respiratory tract irritation, consult a physician.

#### Following skin contact

After contact with skin, take off immediately all contaminated clothing, and wash immediately with plenty of water and soap.

If skin irritation occurs: Get medical advice/attention.

Wash contaminated clothing before reuse.

#### Following eye contact

Rinse cautiously with water for several minutes.

In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.

Remove contact lenses, if present and easy to do. Continue rinsing.

#### Following ingestion

Rinse mouth. Do not induce vomiting.

Immediately call a doctor.

#### Notes for the doctor

None.

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

Cough, pain, choking, and breathing difficulties.

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

None.

## SECTION 5: Fire-fighting measures

### 5.1 Extinguishing media

#### Suitable extinguishing media

water, foam, alcohol resistant foam, fire extinguishing powder

#### Unsuitable extinguishing media

water jet

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

Combustible.

Hazardous decomposition products: Section 10.

Deposited combustible dust has considerable explosion potential.

#### Hazardous combustion products

nitrogen oxides (NO<sub>x</sub>), carbon monoxide (CO), carbon dioxide (CO<sub>2</sub>), sulfur oxides (SO<sub>x</sub>)

### 5.3 Advice for firefighters

Keep containers cool with water spray.

In case of fire and/or explosion do not breathe fumes.

Coordinate firefighting measures to the fire surroundings.

Do not allow firefighting water to enter drains or water courses.

Collect contaminated firefighting water separately.

Fight fire with normal precautions from a reasonable distance.

#### Special protective equipment for firefighters

Wear self-contained breathing apparatus

## SECTION 6: Accidental release measures

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

#### For non-emergency personnel

Remove persons to safety.

Ventilate affected area.

Do not breathe dust.

Control of dust.

Wearing of suitable protective equipment (including personal protective equipment referred to under Section 8 of the safety data sheet) to prevent any contamination of skin, eyes and personal clothing.

#### For emergency responders

Wear breathing apparatus if exposed to vapors/dust/aerosols/gases.

### 6.2 Environmental precautions

Keep away from drains, surface and ground water.

Retain contaminated washing water and dispose of it.

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

#### Advice on how to contain a spill

Take up mechanically.

#### Advice on how to clean up a spill

Take up mechanically.

Collect spillage.

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### Other information relating to spills and releases

Place in appropriate containers for disposal.  
Ventilate affected area.

### 6.4 Reference to other sections

Hazardous combustion products: see section 5.  
Personal protective equipment: see section 8.  
Incompatible materials: see section 10.  
Disposal considerations: see section 13.

## SECTION 7: Handling and storage

### 7.1 Precautions for safe handling

Avoid contact with skin and eyes.  
Do not breathe dust.

#### Measures to prevent fire as well as aerosol and dust generation

Use local and general ventilation.  
Keep away from sources of ignition - No smoking.  
Removal of dust deposits.

#### Specific notes/details

Dust deposits may accumulate on all deposition surfaces in a technical room.

#### Measures to protect the environment

Avoid release to the environment.

#### Advice on general occupational hygiene

Do not eat, drink and smoke in work areas.  
Wash hands after use.  
Preventive skin protection (barrier creams/ointments) is recommended.  
Remove contaminated clothing and protective equipment before entering eating areas.

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

#### Explosive atmospheres

Removal of dust deposits.

#### Flammability hazards

Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.

#### Incompatible substances or mixtures

Incompatible materials: see section 10.  
Store away from oxidizing agents.  
Store away from caustic solutions.  
Store away from foodstuffs.

#### Protect against external exposure, such as

heat, humidity

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### Consideration of other advice

Keep away from food, drink and animal feedingstuffs.

### Ventilation requirements

Keep any substance that emits harmful vapors or gases in a place that allows these to be permanently extracted.

Provision of sufficient ventilation.

### Specific designs for storage rooms or vessels

Keep container tightly closed and in a well-ventilated place.

Keep cool.

Store in a dry place.

### Packaging compatibilities

Keep only in original container.

### 7.3 Specific end use(s)

No information available.

## SECTION 8: Exposure controls/personal protection

### 8.1 Control parameters

The following constituents are the only constituents of the product which have a PEL, a TLV or other recommended exposure limit. At this time, the other constituents have no known exposure limits.

Occupational exposure limit values (Workplace Exposure Limits)									
Country	Name of agent	CAS No	Identifier	TWA [ppm]	TWA [mg/m <sup>3</sup> ]	STEL [ppm]	STEL [mg/m <sup>3</sup> ]	Notation	Source
US	Particulates not otherwise regulated	-	PEL (CA)	-	10	-	-	dust	Cal/OSHA PEL
US	Particulates not otherwise regulated	-	PEL (CA)	-	5	-	-	r	Cal/OSHA PEL
US	particulates not otherwise classified	-	REL	-	-	-	-	appx-D	NIOSH REL
US	particulates not otherwise classified (PNOC)	-	PEL	1,766	15	-	-	partml, i, dust	29 CFR 1910.1000
US	particulates not otherwise classified (PNOC)	-	PEL	529.5	5	-	-	partml, r, dust	29 CFR 1910.1000

#### Notation

appx-D see Appendix D - Substances with No Established RELs

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## Notation

dust	as dust
i	inhalable fraction
partml	particles/ml
r	respirable fraction
STEL	short-term exposure limit: a limit value above which exposure should not occur and which is related to a 15-minute period (unless otherwise specified)
TWA	time-weighted average (long-term exposure limit): measured or calculated in relation to a reference period of 8 hours time-weighted average (unless otherwise specified)

## 8.2 Exposure controls

### Appropriate engineering controls

Use local and general ventilation.

### Individual protection measures (personal protective equipment)

#### Eye/face protection

Wear eye/face protection.

#### Hand protection

Protective gloves		
Material	Material thickness	Breakthrough times of the glove material
no information available	no information available	no information available

Wear suitable gloves.

Chemical protection gloves are suitable, which are tested according to EN 374.

Check leak-tightness/impermeability prior to use.

For special purposes, it is recommended to check the resistance to chemicals of the protective gloves mentioned above together with the supplier of these gloves.

#### Body protection

Protective clothing for use against solid particulates.

#### Respiratory protection

In case of inadequate ventilation wear respiratory protection.

Particle filter device (DIN EN 143).

#### Environmental exposure controls

Use appropriate container to avoid environmental contamination.

Keep away from drains, surface and ground water.

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### SECTION 9: Physical and chemical properties

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

##### Appearance

<b>Physical state</b>	solid (powder)
<b>Color</b>	white
<b>Odor</b>	characteristic
<b>Odor threshold</b>	not determined
<b>Other safety parameters</b>	
<b>pH (value)</b>	≤2.5
<b>Melting point/freezing point</b>	not determined
<b>Boiling point or initial boiling point and boiling range</b>	not determined
<b>Flash point</b>	not applicable
<b>Evaporation rate</b>	not determined
<b>Flammability (solid, gas)</b>	this material is combustible, but will not ignite readily
<b>Explosive limits</b>	
	not determined
Explosion limits of dust clouds	not determined
<b>Vapor pressure</b>	0 Pa at 25 °C (ECHA, EU method A.4)
Density	1.36 g/cm <sup>3</sup> at 20 °C (EU method A.3, ECHA)
Relative vapour density	not applicable
<b>Solubility(ies)</b>	
Water solubility	>500 g/l at 20 °C (ECHA, EU method A.6)
<b>Partition coefficient</b>	
n-octanol/water (log KOW)	-3.7 (20 °C) (ECHA, EU method A.8)
Auto-ignition temperature	>400 °C at 101.3 kPa (ECHA, EU method A.16)



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<b>Decomposition temperature</b>	183 °C
<b>Viscosity</b>	not relevant (solid)
<b>Explosive properties</b>	none (ECHA, EU method A.14)
<b>Oxidizing properties</b>	none (ECHA, EU method A.17)
<b>Information for relevant hazard classes according to GHS</b>	hazard classes acc. to GHS (physical hazards): not relevant

### 9.2 Other information

Surface tension	70.5 mN/m (20 °C, 1 g/l) (EU method A.5, ECHA)
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## SECTION 10: Stability and reactivity

### 10.1 Reactivity

This material is not reactive under normal ambient conditions.

### 10.2 Chemical stability

The material is stable under normal ambient and anticipated storage and handling conditions of temperature and pressure.

See below "Conditions to avoid".

### 10.3 Possibility of hazardous reactions

No known hazardous reactions.

### 10.4 Conditions to avoid

Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.

Protect from moisture.

Control of dust.

The product in the delivered form is not dust explosion capable; the enrichment of fine dust however leads to the danger of dust explosion.

### 10.5 Incompatible materials

bases, oxidizers

### 10.6 Hazardous decomposition products

Reasonably anticipated hazardous decomposition products produced as a result of use, storage, spill and heating are not known.

Hazardous combustion products: see section 5.

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## SECTION 11: Toxicological information

### 11.1 Information on toxicological effects

If not otherwise specified the classification is based on:

Animal studies; Evidence from any other toxicity tests; Expert judgment (weight of evidence determination).

#### Classification acc. to OSHA "Hazard Communication Standard" (29 CFR 1910.1200)

##### Acute toxicity

Harmful if swallowed.

Harmful if inhaled.

##### Dermal.

Classification could not be established because:

Data are lacking, inconclusive, or conclusive but not sufficient for classification.

Exposure route	Endpoint	Value	Species	Method	Source
oral	LD50	1,830 mg/kg	rat	OECD Guideline 401	ECHA
dermal	LD0	4,000 mg/kg	rabbit	OECD Guideline 402	ECHA

##### Skin corrosion/irritation

Shall not be classified as corrosive/irritant to skin.

(ECHA, EPA OPPTS 870.2500)

##### Serious eye damage/eye irritation

Causes serious eye damage.

(ECHA, EPA OPPTS 870.2400)

##### Respiratory or skin sensitization

###### Skin sensitization

Shall not be classified as a skin sensitizer.

(ECHA, EPA OPPTS 870.2600)

##### Respiratory sensitization

Classification could not be established because:

Data are lacking, inconclusive, or conclusive but not sufficient for classification.

##### Germ cell mutagenicity

Classification could not be established because:

Data are lacking, inconclusive, or conclusive but not sufficient for classification.

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## Carcinogenicity

### IARC Monographs

not listed

### National Toxicology Program (United States)

not listed

### OSHA Carcinogens

Not listed.

## Reproductive toxicity

Classification could not be established because:

Data are lacking, inconclusive, or conclusive but not sufficient for classification.

## Specific target organ toxicity - single exposure

May cause respiratory irritation.

(ECHA)

## Specific target organ toxicity - repeated exposure

Classification could not be established because:

Data are lacking, inconclusive, or conclusive but not sufficient for classification.

## Aspiration hazard

Shall not be classified as presenting an aspiration hazard.

## 11.2 Other information

There is no additional information.

## SECTION 12: Ecological information

### 12.1 Toxicity

#### Aquatic toxicity (acute)

Based on available data, the classification criteria are not met.

Endpoint	Exposure time	Value	Species	Method	Source
LC50	96 h	170 mg/l	bluegill ( <i>Lepomis macrochirus</i> )	EPA 66013-75-009	ECHA
EC50	48 h	340 mg/l	daphnia magna	EPA 66013-75-009	ECHA

#### Aquatic toxicity (chronic)

Based on available data, the classification criteria are not met.

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Endpoint	Exposure time	Value	Species	Method	Source
NOEC	72 h	2,000 mg/l	algae (raphidocelis subcapitata)	OECD Guideline 201	ECHA
NOEC	3 h	1,000 mg/l	activated sludge of a predominantly do- mestic sewage	OECD Guideline 209	ECHA

### 12.2 Persistence and degradability

Process of degradability				
Process	Degradation rate	Time	Method	Source
DOC removal	<10 %	44 d	-	ECHA

#### Persistence

No data available.

### 12.3 Bioaccumulative potential

n-octanol/water (log KOW) -3.7 (20 °C)  
(ECHA)

### 12.4 Mobility in soil

No data available.

### 12.5 Results of PBT and vPvB assessment

According to the results of its assessment, this substance is not a PBT or a vPvB.

### 12.6 Other adverse effects

Data are not available.

#### Remarks

None.

## SECTION 13: Disposal considerations

### 13.1 Waste treatment methods

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

#### Sewage disposal-relevant information

Do not empty into drains.

#### Waste treatment of containers/packages

Completely emptied packages can be recycled.  
Handle contaminated packages in the same way as the substance itself.

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### Remarks

Please consider the relevant national or regional provisions.

### SECTION 14: Transport information

14.1	UN number	not assigned
14.2	UN proper shipping name	-
14.3	Transport hazard class(es)	-
14.4	Packing group	-
14.5	Environmental hazards	-
14.6	Special precautions for user	-
14.7	Transport in bulk according to IMO instruments	-

### 14.8 Information for each of the UN Model Regulations

#### Transport of dangerous goods by road or rail (49 CFR US DOT) Additional information

Not subject to transport regulations.

### SECTION 15: Regulatory information

#### 15.1 Safety, health and environmental regulations specific for the product in question

##### National regulations (United States)

**Toxic Substance Control Act (TSCA)** Substance is listed (ACTIVE)

##### Superfund Amendment and Reauthorization Act (SARA TITLE III )

**The List of Extremely Hazardous Substances and Their Threshold Planning Quantities (EPCRA Section 302, 304)**

Not listed

##### Specific Toxic Chemical Listings (EPCRA Section 313)

Not listed

##### Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA)

**List of Hazardous Substances and Reportable Quantities (CERCLA section 102a) (40 CFR 302.4)**

Not listed

##### Clean Air Act

Not listed

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## Right to Know Hazardous Substance List

### Toxic or Hazardous Substance List (MA-TURA)

Not listed

### Hazardous Substances List (MN-ERTK)

Not listed

### Hazardous Substance List (NJ-RTK)

Not listed

### Hazardous Substance List (Chapter 323) (PA-RTK)

Not listed

### Hazardous Substance List (RI-RTK)

Not listed

### California Environmental Protection Agency (Cal/EPA): Proposition 65 - Safe Drinking Water and Toxic Enforcement Act of 1987

Not listed

### Drug precursors, Chemicals designated within the Controlled Substances Act, 21 U.S.C. § 802, paragraphs 34 (list I) and 35 (list II)

Not listed

## SECTION 16: Other information, including date of preparation or last revision

Date of preparation: 2023-08-10

### Abbreviations and acronyms

Abbr.	Descriptions of used abbreviations
29 CFR 1910.1000	29 CFR 1910.1000, Tables Z-1, Z-2, Z-3 - Occupational Safety and Health Standards: Toxic and Hazardous Substances (permissible exposure limits)
49 CFR US DOT	49 CFR U.S. Department of Transportation
Cal/OSHA PEL	California Division of Occupational Safety and Health (Cal/OSHA): Permissible Exposure Limits (PELs)
CAS	Chemical Abstracts Service (service that maintains the most comprehensive list of chemical substances)
DGR	Dangerous Goods Regulations (see IATA/DGR)
EC50	Effective Concentration 50 %. The EC50 corresponds to the concentration of a tested substance causing 50 % changes in response (e.g. on growth) during a specified time interval
GHS	"Globally Harmonized System of Classification and Labelling of Chemicals" developed by the United Nations
IARC	International Agency for Research on Cancer
IARC Monographs	IARC Monographs on the Evaluation of Carcinogenic Risks to Humans

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Abbr.	Descriptions of used abbreviations
IATA	International Air Transport Association
IATA/DGR	Dangerous Goods Regulations (DGR) for the air transport (IATA)
IMDG	International Maritime Dangerous Goods Code
LC50	Lethal Concentration 50%: the LC50 corresponds to the concentration of a tested substance causing 50 % lethality during a specified time interval
LD50	Lethal Dose 50 %: the LD50 corresponds to the dose of a tested substance causing 50 % lethality during a specified time interval
NIOSH REL	National Institute for Occupational Safety and Health (NIOSH): Recommended Exposure Limits (RELs)
NOEC	No Observed Effect Concentration
OSHA	Occupational Safety and Health Administration (United States)
PBT	Persistent, Bioaccumulative and Toxic
PEL	Permissible exposure limit
ppm	Parts per million
STEL	Short-term exposure limit
TWA	Time-weighted average
vPvB	Very Persistent and very Bioaccumulative

### Key literature references and sources for data

OSHA Hazard Communication Standard (HCS), 29 CFR 1910.1200.

Transport of dangerous goods by road or rail (49 CFR US DOT).

International Maritime Dangerous Goods Code (IMDG).

Dangerous Goods Regulations (DGR) for the air transport (IATA).

### List of relevant phrases (code and full text as stated in section 2 and 3)

Code	Text
H302	Harmful if swallowed.
H318	Causes serious eye damage.
H332	Harmful if inhaled.
H335	May cause respiratory irritation.

### Responsible for the safety data sheet

Chemical Regulatory Compliance Com- pany Jasper, GA USA	Telephone: +1 (630) 410-1660 e-Mail: GHS@crc-us.com Website: www.crc-us.com
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### **Disclaimer**

This information is based upon the present state of our knowledge.  
This SDS has been compiled and is solely intended for this product.