

## SAFETY DATA SHEET

Version 6.0  
 Revision Date 01/31/2017  
 Print Date 11/15/2018

### 1. PRODUCT AND COMPANY IDENTIFICATION

#### 1.1 Product identifiers

Product name : Valeric anhydride  
 Product Number : 245933  
 Brand : Aldrich  
 CAS-No. : 2082-59-9

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

Identified uses : Laboratory chemicals, Synthesis of substances

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

Company : Sigma-Aldrich Inc.  
 3050 Spruce Street  
 ST. LOUIS MO 63103  
 UNITED STATES  
 Telephone : +1 314 771-5765  
 Fax : +1 800 325-5052

#### 1.4 Emergency telephone number

Emergency Phone # : (314) 776-6555

### 2. HAZARDS IDENTIFICATION

#### 2.1 Classification of the substance or mixture

##### GHS Classification in accordance with 29 CFR 1910 (OSHA HCS)

Skin corrosion (Category 1B), H314  
 Serious eye damage (Category 1), H318

For the full text of the H-Statements mentioned in this Section, see Section 16.

#### 2.2 GHS Label elements, including precautionary statements

Pictogram



Signal word

Danger

Hazard statement(s)

H314

Causes severe skin burns and eye damage.

H318

Causes serious eye damage.

Precautionary statement(s)

P264

Wash skin thoroughly after handling.

P280

Wear protective gloves/ protective clothing/ eye protection/ face protection.

P301 + P330 + P331

IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.

P303 + P361 + P353

IF ON SKIN (or hair): Remove/ Take off immediately all contaminated

P304 + P340 + P310 clothing. Rinse skin with water/ shower.  
 IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Immediately call a POISON CENTER or doctor/ physician.

P305 + P351 + P338 + P310 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER/doctor.

P363 Wash contaminated clothing before reuse.

P405 Store locked up.

P501 Dispose of contents/ container to an approved waste disposal plant.

**2.3 Hazards not otherwise classified (HNOC) or not covered by GHS**

Stench.

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**3. COMPOSITION/INFORMATION ON INGREDIENTS**

**3.1 Substances**

Synonyms : Pentanoic anhydride

Formula : C<SB>10</SB>H<SB>18</SB>O<SB>3</SB>

Molecular weight : 186.25 g/mol

CAS-No. : 2082-59-9

EC-No. : 218-212-9

**Hazardous components**

Component	Classification	Concentration
<b>Valeric anhydride</b>		
	Skin Corr. 1B; Eye Dam. 1; H314	<= 100 %

For the full text of the H-Statements mentioned in this Section, see Section 16.

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**4. FIRST AID MEASURES**

**4.1 Description of first aid measures**

**General advice**

Consult a physician. Show this safety data sheet to the doctor in attendance. Move out of dangerous area.

**If inhaled**

If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician.

**In case of skin contact**

Take off contaminated clothing and shoes immediately. Wash off with soap and plenty of water. Consult a physician.

**In case of eye contact**

Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician. Continue rinsing eyes during transport to hospital.

**If swallowed**

Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

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

The most important known symptoms and effects are described in the labelling (see section 2.2) and/or in section 11

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

No data available

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## 5. FIREFIGHTING MEASURES

### 5.1 Extinguishing media

#### Suitable extinguishing media

Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

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

Carbon oxides

### 5.3 Advice for firefighters

Wear self-contained breathing apparatus for firefighting if necessary.

### 5.4 Further information

No data available

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## 6. ACCIDENTAL RELEASE MEASURES

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

Use personal protective equipment. Avoid breathing vapours, mist or gas. Ensure adequate ventilation. Evacuate personnel to safe areas.

For personal protection see section 8.

### 6.2 Environmental precautions

Do not let product enter drains.

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

Soak up with inert absorbent material and dispose of as hazardous waste. Keep in suitable, closed containers for disposal.

### 6.4 Reference to other sections

For disposal see section 13.

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## 7. HANDLING AND STORAGE

### 7.1 Precautions for safe handling

Avoid inhalation of vapour or mist.

For precautions see section 2.2.

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

Keep container tightly closed in a dry and well-ventilated place. Containers which are opened must be carefully resealed and kept upright to prevent leakage.

Moisture sensitive.

### 7.3 Specific end use(s)

Apart from the uses mentioned in section 1.2 no other specific uses are stipulated

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## 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

### 8.1 Control parameters

#### Components with workplace control parameters

Contains no substances with occupational exposure limit values.

### 8.2 Exposure controls

#### Appropriate engineering controls

Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.

#### Personal protective equipment

##### Eye/face protection

Tightly fitting safety goggles. Faceshield (8-inch minimum). Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).

##### Skin protection

Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.

Full contact

Material: butyl-rubber  
Minimum layer thickness: 0.3 mm  
Break through time: 480 min  
Material tested: Butoject® (KCL 897 / Aldrich Z677647, Size M)

Splash contact  
Material: butyl-rubber  
Minimum layer thickness: 0.3 mm  
Break through time: 480 min  
Material tested: Butoject® (KCL 897 / Aldrich Z677647, Size M)

data source: KCL GmbH, D-36124 Eichenzell, phone +49 (0)6659 87300, e-mail sales@kcl.de, test method: EN374

If used in solution, or mixed with other substances, and under conditions which differ from EN 374, contact the supplier of the CE approved gloves. This recommendation is advisory only and must be evaluated by an industria situation of anticipated use by our customers. It should not be construed as offering an approval for any specific use scenario.

### Body Protection

Complete suit protecting against chemicals, The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

### Respiratory protection

Where risk assessment shows air-purifying respirators are appropriate use (US) or type ABEK (EN 14387) respirator cartridges as a backup to enginee protection, use a full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

### Control of environmental exposure

Do not let product enter drains.

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## 9. PHYSICAL AND CHEMICAL PROPERTIES

### 9.1 Information on basic physical and chemical properties

- |   |   |
|---|---|
| a) Appearance                                   | Form: clear, liquid<br>Colour: colourless   |
| b) Odour  | Stench.                                     |
| c) Odour Threshold                              | No data available                           |
| d) pH   | No data available                           |
| e) Melting point/freezing point                 | Melting point/range: -56 °C (-69 °F) - lit. |
| f) Initial boiling point and boiling range      | 228 - 230 °C (442 - 446 °F) - lit.          |
| g) Flash point                                  | 99 °C (210 °F) - closed cup                 |
| h) Evaporation rate                             | No data available                           |
| i) Flammability (solid, gas)                    | No data available                           |
| j) Upper/lower flammability or explosive limits | No data available                           |
| k) Vapour pressure                              | No data available                           |
| l) Vapour density                               | No data available                           |
| m) Relative density                             | 0.944 g/cm <sup>3</sup> at 20 °C (68 °F)    |
| n) Water solubility                             | No data available                           |
| o) Partition coefficient: n-octanol/water       | No data available                           |
| p) Auto-ignition                                | No data available                           |

temperature

- q) Decomposition temperature No data available
- r) Viscosity No data available
- s) Explosive properties No data available
- t) Oxidizing properties No data available

## 9.2 Other safety information

No data available

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## 10. STABILITY AND REACTIVITY

### 10.1 Reactivity

No data available

### 10.2 Chemical stability

Stable under recommended storage conditions.

### 10.3 Possibility of hazardous reactions

No data available

### 10.4 Conditions to avoid

No data available

### 10.5 Incompatible materials

Strong oxidizing agents, Strong acids, Strong bases

### 10.6 Hazardous decomposition products

Hazardous decomposition products formed under fire conditions. - Carbon oxides

Other decomposition products - No data available

In the event of fire: see section 5

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## 11. TOXICOLOGICAL INFORMATION

### 11.1 Information on toxicological effects

#### Acute toxicity

No data available(Valeric anhydride)

Inhalation: No data available(Valeric anhydride)

Dermal: No data available(Valeric anhydride)

No data available(Valeric anhydride)

#### Skin corrosion/irritation

No data available(Valeric anhydride)

#### Serious eye damage/eye irritation

No data available(Valeric anhydride)

#### Respiratory or skin sensitisation

No data available(Valeric anhydride)

#### Germ cell mutagenicity

No data available(Valeric anhydride)

#### Carcinogenicity

IARC: No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

ACGIH: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by ACGIH.

NTP: No component of this product present at levels greater than or equal to 0.1% is identified as a

known or anticipated carcinogen by NTP.

OSHA: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.

**Reproductive toxicity**

No data available(Valeric anhydride)

No data available(Valeric anhydride)

**Specific target organ toxicity - single exposure**

No data available(Valeric anhydride)

**Specific target organ toxicity - repeated exposure**

No data available

**Aspiration hazard**

No data available(Valeric anhydride)

**Additional Information**

RTECS: Not available

Material is extremely destructive to tissue of the mucous membranes and upper respiratory tract, eyes, and skin., Cough, Shortness of breath, Headache, Nausea(Valeric anhydride)

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**12. ECOLOGICAL INFORMATION**

**12.1 Toxicity**

No data available

**12.2 Persistence and degradability**

No data available

**12.3 Bioaccumulative potential**

No data available

**12.4 Mobility in soil**

No data available(Valeric anhydride)

**12.5 Results of PBT and vPvB assessment**

PBT/vPvB assessment not available as chemical safety assessment not required/not conducted

**12.6 Other adverse effects**

No data available

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**13. DISPOSAL CONSIDERATIONS**

**13.1 Waste treatment methods**

**Product**

Offer surplus and non-recyclable solutions to a licensed disposal company. Contact a licensed professional waste disposal service to dispose of this material. Dissolve or mix the material with a combustible solvent and burn in a chem scrubber.

**Contaminated packaging**

Dispose of as unused product.

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**14. TRANSPORT INFORMATION**

**DOT (US)**

UN number: 3265

Class: 8

Packing group: III

Proper shipping name: Corrosive liquid, acidic, organic, n.o.s. (Valeric anhydride)

Poison Inhalation Hazard: No

**IMDG**

UN number: 3265      Class: 8      Packing group: III      EMS-No: F-A, S-B  
Proper shipping name: CORROSIVE LIQUID, ACIDIC, ORGANIC, N.O.S. (Valeric anhydride)

**IATA**

UN number: 3265      Class: 8      Packing group: III  
Proper shipping name: Corrosive liquid, acidic, organic, n.o.s. (Valeric anhydride)

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**15. REGULATORY INFORMATION**

**SARA 302 Components**

No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.

**SARA 313 Components**

This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

**SARA 311/312 Hazards**

Acute Health Hazard

**Massachusetts Right To Know Components**

No components are subject to the Massachusetts Right to Know Act.

**Pennsylvania Right To Know Components**

	CAS-No.	Revision Date
Valeric anhydride	2082-59-9	

**New Jersey Right To Know Components**

	CAS-No.	Revision Date
Valeric anhydride	2082-59-9	

**California Prop. 65 Components**

This product does not contain any chemicals known to State of California to cause cancer, birth defects, or any other reproductive harm.

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**16. OTHER INFORMATION**

**Full text of H-Statements referred to under sections 2 and 3.**

H314                      Causes severe skin burns and eye damage.  
H318                      Causes serious eye damage.

**HMIS Rating**

Health hazard:                      3  
Chronic Health Hazard:  
Flammability:                      1  
Physical Hazard                      0

**NFPA Rating**

Health hazard:                      3  
Fire Hazard:                      1  
Reactivity Hazard:                      0

**Further information**

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**Preparation Information**

Sigma-Aldrich Corporation  
Product Safety – Americas Region  
1-800-521-8956  
Version: 6.0

Revision Date: 01/31/2017

Print Date: 11/15/2018