

### 1. PRODUCT AND COMPANY IDENTIFICATION

Product name : Nonanoic acid

Product Number : W278408  
Brand : Aldrich

Supplier : Sigma-Aldrich  
3050 Spruce Street  
SAINT LOUIS MO 63103  
USA

Telephone : +1 800-325-5832  
Fax : +1 800-325-5052  
Emergency Phone # (For both supplier and manufacturer) : (314) 776-6555

Preparation Information : Sigma-Aldrich Corporation  
Product Safety - Americas Region  
1-800-521-8956

### 2. HAZARDS IDENTIFICATION

#### Emergency Overview

##### OSHA Hazards

Corrosive

##### GHS Classification

Acute toxicity, Dermal (Category 5)  
Skin corrosion (Category 1B)  
Serious eye damage (Category 1)  
Acute aquatic toxicity (Category 3)

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

Pictogram



Signal word

Danger

Hazard statement(s)

H313 May be harmful in contact with skin.  
H314 Causes severe skin burns and eye damage.  
H402 Harmful to aquatic life.

Precautionary statement(s)

P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.  
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 or doctor/ physician.

##### HMIS Classification

Health hazard: 3  
Flammability: 1  
Physical hazards: 0

##### NFPA Rating

Health hazard: 3  
Fire: 1

**Reactivity Hazard:** 0

**Potential Health Effects**

**Inhalation** May be harmful if inhaled. Material is extremely destructive to the tissue of the mucous membranes and upper respiratory tract.  
**Skin** May be harmful if absorbed through skin. Causes skin burns.  
**Eyes** Causes eye burns.  
**Ingestion** May be harmful if swallowed.

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**3. COMPOSITION/INFORMATION ON INGREDIENTS**

Synonyms : Pelargonic acid  
Acid C9

Formula : C<sub>9</sub>H<sub>18</sub>O<sub>2</sub>  
Molecular Weight : 158.24 g/mol

| Component              | Concentration |
|------------------------|---------------|
| <b>Nonanoic acid</b>   |               |
| CAS-No. 112-05-0       | -             |
| EC-No. 203-931-2       | -             |
| Index-No. 607-197-00-8 | -             |

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**4. 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.

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**5. FIREFIGHTING MEASURES**

**Conditions of flammability**

Not flammable or combustible.

**Suitable extinguishing media**

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

**Special protective equipment for firefighters**

Wear self contained breathing apparatus for fire fighting if necessary.

**Hazardous combustion products**

Hazardous decomposition products formed under fire conditions. - Carbon oxides

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**6. ACCIDENTAL RELEASE MEASURES**

**Personal precautions**

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

**Environmental precautions**

Prevent further leakage or spillage if safe to do so. Do not let product enter drains. Discharge into the environment must be avoided.

## 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.

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## 7. HANDLING AND STORAGE

### Precautions for safe handling

Avoid inhalation of vapour or mist.

### Conditions for safe storage

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.

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## 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Contains no substances with occupational exposure limit values.

### Personal protective equipment

#### Respiratory protection

Where risk assessment shows air-purifying respirators are appropriate use a full-face respirator with multi-purpose combination (US) or type ABEK (EN 14387) respirator cartridges as a backup to engineering controls. If the respirator is the sole means of 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).

#### Hand 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: Nitrile rubber

Minimum layer thickness: 0.4 mm

Break through time: 480 min

Material tested: Camatril® (KCL 730 / Aldrich Z677442, Size M)

##### Splash contact

Material: Nitrile rubber

Minimum layer thickness: 0.11 mm

Break through time: 60 min

Material tested: Dermatril® (KCL 740 / Aldrich Z677272, 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 industrial hygienist and safety officer familiar with the specific situation of anticipated use by our customers. It should not be construed as offering an approval for any specific use scenario.

#### Eye 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 and 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.

#### Hygiene measures

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

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## 9. PHYSICAL AND CHEMICAL PROPERTIES

### Appearance

|        |                   |
|--------|-------------------|
| Form   | liquid            |
| Colour | no data available |

## Safety data

|  |  |
|--|--|
| pH                                     | no data available                        |
| Melting point/freezing point           | Melting point/range: 9 °C (48 °F) - lit. |
| Boiling point                          | 268 - 269 °C (514 - 516 °F) - lit.       |
| Flash point                            | 140 °C (284 °F) - closed cup             |
| Ignition temperature                   | 405 °C (761 °F)                          |
| Auto-ignition temperature              | no data available                        |
| Lower explosion limit                  | 0.8 %(V)                                 |
| Upper explosion limit                  | 9 %(V)                                   |
| Vapour pressure                        | < 0.1 hPa (< 0.1 mmHg) at 20 °C (68 °F)  |
| Density                                | 0.906 g/cm <sup>3</sup> at 25 °C (77 °F) |
| Water solubility                       | ca.0.3 g/l                               |
| Partition coefficient: n-octanol/water | log Pow: 3.42                            |
| Relative vapour density                | 5.46<br>- (Air = 1.0)                    |
| Odour                                  | no data available                        |
| Odour Threshold                        | no data available                        |
| Evaporation rate                       | no data available                        |

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## 10. STABILITY AND REACTIVITY

### Chemical stability

Stable under recommended storage conditions.

### Possibility of hazardous reactions

no data available

### Conditions to avoid

no data available

### Materials to avoid

Strong oxidizing agents

### Hazardous decomposition products

Hazardous decomposition products formed under fire conditions. - Carbon oxides

Other decomposition products - no data available

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## 11. TOXICOLOGICAL INFORMATION

### Acute toxicity

#### Oral LD50

LD50 Oral - rat - > 5,000 mg/kg

#### Inhalation LC50

no data available

#### Dermal LD50

LD50 Dermal - rat - > 2,000 mg/kg

#### Other information on acute toxicity

no data available

### Skin corrosion/irritation

Skin - guinea pig - Severe skin irritation

**Serious eye damage/eye irritation**

Eyes - rabbit - Severe eye irritation

**Respiratory or skin sensitisation**

no data available

**Germ cell mutagenicity**

no data available

**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

**Teratogenicity**

no data available

**Specific target organ toxicity - single exposure (Globally Harmonized System)**

no data available

**Specific target organ toxicity - repeated exposure (Globally Harmonized System)**

no data available

**Aspiration hazard**

no data available

**Potential health effects**

|                   |   |
|-------------------|---|
| <b>Inhalation</b> | May be harmful if inhaled. Material is extremely destructive to the tissue of the mucous membranes and upper respiratory tract. |
| <b>Ingestion</b>  | May be harmful if swallowed.  |
| <b>Skin</b>       | May be harmful if absorbed through skin. Causes skin burns.   |
| <b>Eyes</b>       | Causes eye burns.   |

**Signs and Symptoms of Exposure**

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

**Synergistic effects**

no data available

**Additional Information**

RTECS: RA6650000

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**12. ECOLOGICAL INFORMATION****Toxicity**

|   |  |
|---|--|
| Toxicity to daphnia and other aquatic invertebrates | EC50 - Daphnia magna (Water flea) - 64 - 119 mg/l - 48 h |
|---|--|

**Persistence and degradability**

no data available

**Bioaccumulative potential**

no data available

**Mobility in soil**

no data available

**PBT and vPvB assessment**

no data available

**Other adverse effects**

An environmental hazard cannot be excluded in the event of unprofessional handling or disposal.

Harmful to aquatic life.

no data available

**13. DISPOSAL CONSIDERATIONS****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 chemical incinerator equipped with an afterburner and scrubber.

**Contaminated packaging**

Dispose of as unused product.

**14. TRANSPORT INFORMATION****DOT (US)**

UN number: 3265 Class: 8 Packing group: III  
 Proper shipping name: Corrosive liquid, acidic, organic, n.o.s. (Nonanoic acid)  
 Marine pollutant: No  
 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. (Nonanoic acid)  
 Marine pollutant: No

**IATA**

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

**15. REGULATORY INFORMATION****OSHA Hazards**

Corrosive

**SARA 302 Components**

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

**SARA 313 Components**

SARA 313: 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**

Nonanoic acid

CAS-No.  
112-05-0

Revision Date

**New Jersey Right To Know Components**

Nonanoic acid

CAS-No.  
112-05-0

Revision Date

**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****Further information**

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