

## SAFETY DATA SHEET

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# Safety Data Sheet

According to regulation (EC) No. 1907/2006 (REACH)

# deffner & Johann

**2328200 Acetic Acid 60 %**

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Revised edition: 07.07.2015

Version: 105

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## 1. Identification of the Substance/Mixture and of the Company/Undertaking

### 1.1. Product Identifier

*Product Name:* Acetic Acid 60 %

*Article No.:* 2328200

*UFI:* --

### 1.2. Relevant identified Uses of the Substance or Mixture and Uses advised against

*Identified uses:*

Chemical for different applications  
Solvent  
Intermediate product for organic syntheses

*Uses advised against:*

### 1.3. Details of the Supplier of the Safety Data Sheet (Producer/Importer)

*Company:* Deffner & Johann GmbH

*Address:* Mühlackerstraße 13, D-97520 Röthlein, Germany

*Tel./Fax.:* Tel. +49 9723 9350-0, Fax +49 9723 9350-25

*Internet:* www.deffner-johann.de

*E-Mail:* E-Mail info@deffner-johann.de

*Importer:*

### 1.4. Emergency No.

Tel. +49 9723 9350-0 (Mo. - Fr.: 8:00 - 15:00 Uhr)

*Emergency No.:*

### 1.4.2 Poison Center:

## 2. Hazards Identification

### 2.1. Classification of the Substance or Mixture

*Classification according to Regulation (EC) No. 1272/2008 (CLP/GHS)*

H314 Skin corrosion, hazard category 1B  
Cat.: 1A  
Causes severe skin burns and eye damage.  
H318 Causes serious eye damage.  
Cat.: 1

*Possible Environmental Effects:*

### 2.2. Label Elements

*Classification according to Regulation (EC) No. 1272/2008 (CLP/GHS)*

*Hazard designation:*



GHS05-2

*Signal word:*

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## Danger

### Hazard designation:

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

### Safety designation:

P280 Wear protective gloves/ clothing/ eye/ face protection.  
P303+P361+P353 If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.  
P305+P351+P338 If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses and continue rinsing.  
P310 Immediately call a poison center or physician.  
P405 Store locked up.  
P501 Dispose of contents/ container according to regional, national and international regulations.

### Hazardous components for labelling:

Acetic acid

## 2.3. Other Hazards

Not applicable.

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## 3. Composition/Information on Ingredients

### 3.1. Substance

### 3.2. Mixture

#### Chemical Characterization:

#### Information on Components / Hazardous Ingredients:

Acetic acid (C; R10-35; H226-314); REACH-Nr. 01-2119475328-30-XXXX	60 %	CAS-Nr: 64-19-7 EINECS-Nr: 200-580-7 EC-Nr: 607-002-00-6
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#### Additional information:

## 4. First Aid Measures

### 4.1. Description of the First Aid Measures

#### General information:

Remove contaminated clothes immediately.  
Take person away from hazardous area.

#### After inhalation:

Supply fresh air. If required give artificial respiration. In case of complaints or unconsciousness consult a physician. In case of unconsciousness place patient stable in side position for transportation.

#### After skin contact:

Remove contaminated clothing immediately. Wash off immediately with plenty of water and soap.  
Get medical attention.

#### After eye contact:

Rinse open eyes with plenty of water for at least 15 minutes.

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*Consult physician.*

*After ingestion:*

*Rinse mouth with water and drink plenty of water.*

*Immediately get medical help.*

*Do not induce vomiting.*

*Risk of perforation!*

#### 4.2. Most important Symptoms and Effects, both Acute and Delayed

*Symptoms:*

*Burning and pain in eyes, skin and mucous membranes.*

*Swallowing: strong irritant effect in mouth and throat. Danger of perforation of esophagus.*

*Effects:*

*No further information available.*

#### 4.3. Indication of any Immediate Medical Attention and special Treatment needed

*Treatment:*

*In case of skin corrosion, consider systemic effects. After oral intake, apply aluminium oxide preparations.*

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## 5. Fire-Fighting Measures

### 5.1. Extinguishing Media

*Suitable extinguishing media:*

*CO<sub>2</sub>, extinguishing powder, water jet.*

*Fight larger fire with water jet or alcohol resistant foam.*

*Unsuitable extinguishing media:*

*Water with full jet.*

### 5.2. Special Hazards arising from the Substance or Mixture

*Special hazards:*

*In case of fire: formation of carbon monoxide and dioxide.*

*Fumes can form an explosive mixture with air.*

*The vapor is heavier than air, spreads along the ground and distant ignition is possible.*

### 5.3. Advice for Firefighters

*Protective equipment:*

*Wear self-contained respiratory protective device.*

*Further information:*

*Cool exposed containers with water spray.*

*Contaminated extinguishing water and debris should be disposed of according to local regulations.*

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## 6. Accidental Release Measures

### 6.1. Personal Precautions, Protective Equipment and Emergency Procedures

*Personal precautions:*

*Wear protective clothing.*

*Ensure adequate ventilation.*

*Avoid contact with skin, eyes and clothing. Do not ingest or inhale.*

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## 6.2. Environmental Precautions

*Environmental precautions:*

*Prevent contamination of soils, drains and surface water.  
Dilute with plenty of water.  
Reduce escaping gases/fumes/mist with water.  
Contact local authorities if product pollutes soil or vegetation.*

## 6.3. Methods and Material for Containment and Cleaning Up

*Methods and material:*

*Provide adequate ventilation.  
Contain with absorbent material (sand, diatomaceous earth, universal absorbent, Oil Dri) and dispose accordingly.  
Use neutralizing agents.  
Transfer liquids and solid diking material to separate suitable containers for recovery or disposal.*

## 6.4. Reference to other Sections

*For information for safe handling see Section 7.  
Protective clothing, see Section 8.  
See Section 13 for information on disposal.*

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## 7. Handling and Storage

### 7.1. Precautions for Safe Handling

*Instructions on safe handling:*

*Provide adequate ventilation.  
Open and handle container with care.  
Do not swallow or inhale.  
When diluting: always pour the product into the water. Never pour in water into the product.*

*Hygienic measures:*

*Do not inhale gas/fumes/vapours/aerosols.  
Avoid contact with eyes and skin.*

### 7.2. Conditions for Safe Storage, including any Incompatibilities

*Storage conditions:*

*Store in tightly sealed containers in a cool and well ventilated location.  
Protect against heat and direct sunlight.  
Heat causes pressure increase and risk of bursting.*

*Requirements for storage areas and containers:*

*Store in containers which are permitted for this product.  
Suitable container material: Polyethylene or stainless steel.*

*Information on fire and explosion protection:*

*Do not store together with: oxidants.  
Hot product develops flammable fumes.  
Do not store together with alkalis.  
Vapors may form an explosive mixture with air.  
Keep away from sources of ignition - do not smoke*

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*Storage class:*

8 A; combustible corrosive substances (TRGS 510)

*Further Information:*

**7.3. Specific End Use(s)**

*Further information:*

No information available.

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**8. Exposure Controls/Personal Protection**

**8.1. Parameters to be Controlled**

*Parameters to be controlled (DE):*

Acetic acid (CAS 64-19-7), AGW: 25 mg/m<sup>3</sup>, 10 ml/m<sup>3</sup> (long-term value); 2(I); (DFG, Y)

*Parameters to be controlled:*

IOELV (EC): 25 mg/m<sup>3</sup>, 10 ml/m<sup>3</sup> (long-term value)

*Derived No-Effect Level (DNEL):*

Acetic acid, CAS 64-19-7:

25 mg/m<sup>3</sup> (worker, inhalation, short-term/long-term exposure - local effects)

25 mg/m<sup>3</sup> (consumer, inhalation, short-term/long-term exposure - local effects)

*Predicted No-Effect Concentration (PNEC):*

Acetic acid, CAS 64-19-17:

Fresh water: 3.058 mg/l

Sea water: 0.3058 mg/l

Fresh water sediment: 11.36 mg/kg dw

Sea water sediment: 1.136 mg/kg dw

Soil: 0.478 mg/kg dw

Intermittent release: 30.58 mg/l

Sewage treatment system (STP): 85 mg/l

*Additional Information:*

**8.2. Exposure Controls**

*Technical protective measures:*

No further measures, see Section 7.

*Personal Protection*

*General protective measures:*

Remove contaminated clothing immediately.

Do not inhale gas/fumes/vapor/aerosol.

Avoid contact with eyes and skin.

Keep away from foodstuffs and drinks. Do not eat, drink or smoke during work. Wash hands before breaks and at the end of work.

*Respiratory protection:*

None required under normal operating conditions.

Recommended: Particle filter E-P2 (EN 141)

*Hand protection:*

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*Acid resistant protective gloves.*

*Protective glove material:*

*Please note the manufacturers' detailed statements, especially about the minimum thickness and the minimum breakthrough time.  
Butyl rubber (480 min, 0.7 mm)*

*Eye protection:*

*Tightly fitting safety goggles (EN 166).  
Facial protection*

*Body protection:*

*Protective clothing, acid-resistant.  
Chemical resistant safety shoes.*

*Environmental precautions:*

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## 9. Physical and Chemical Properties

### 9.1. Information on Basic Physical and Chemical Properties

<i>Form:</i>	<i>liquid</i>
<i>Color:</i>	<i>colorless</i>
<i>Odor:</i>	<i>pungent</i>
<i>Odor threshold:</i>	<i>no information available</i>
<i>pH-Value:</i>	<i>1</i>
<i>Melting temperature:</i>	<i>-24 to -30°C</i>
<i>Boiling temperature:</i>	<i>101 - 112°C</i>
<i>Flash point:</i>	<i>not available</i>
<i>Evaporation rate:</i>	<i>No information available.</i>
<i>Flammability (solid, gas):</i>	<i>not available</i>
<i>Upper explosion limit:</i>	<i>17 Vol.-%</i>
<i>Lower explosion limit:</i>	<i>4 Vol.-%</i>
<i>Vapor pressure:</i>	<i>15 hPa (20°C)</i>
<i>Vapor density:</i>	<i>No information available.</i>
<i>Density:</i>	<i>1.064 g/cm<sup>3</sup> (20°C)</i>
<i>Solubility in water:</i>	<i>completely miscible</i>
<i>Coefficient of variation (n-Octanol/Water):</i>	<i>no information available</i>
<i>Auto-ignition temperature:</i>	

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*Product is not auto-ignitable.*

*Decomposition temperature:*

*not determined*

*Viscosity, dynamic:*

*2.11 mPa.s*

*Explosive properties:*

*Product is not explosive; however, an explosive vapor/air mixture can be formed.*

*Oxidizing properties:*

*no information available*

*Bulk density:*

*not determined*

## 9.2. Further Information

*Solubility in solvents:*

*Viscosity, kinematic:*

*Burning class:*

*Solvent content:*

*Solid content:*

*Particle size:*

*Other information:*

*No further information.*

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## 10. Stability and Reactivity

### 10.1. Reactivity

*Stable if used according to specifications.*

### 10.2. Chemical Stability

*Stable if used according to specifications.*

### 10.3. Possibility of Hazardous Reactions

*Corrosive to metals.*

*Reactions with metals: development of hydrogen.*

*Exothermic reaction (strong) with alkalis.*

*Development of ignitable mixtures with air when heated above the flash point and/or when atomized or nebulized.*

### 10.4. Conditions to Avoid

*Conditions to avoid:*

*No further information available.*

*Thermal decomposition:*

*No data available.*

### 10.5. Incompatible Materials

*Strong oxidizing agents, alkalis, metals*

### 10.6. Hazardous Decomposition Products

*Carbon monoxide, carbon dioxide and hydrocarbons.*

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## 10.7. Further Information

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## 11. Toxicological Information

### 11.1. Information on Toxicological Effects

#### Acute Toxicity

LD50, oral: 3310 mg/kg (rat)

LD50, dermal: not determined

LC50, inhalation: > 16 mg/l (rat)

#### Primary effects

Irritant effect on skin: Causes chemical burns to skin and mucous membrane.

Irritant effect on eyes: Causes severe chemical burns.

Inhalation: No information available.

Ingestion: No information available

Sensitization: No sensitizing effects known.

Mutagenicity: No relevant data found.

Reproductive toxicity: No information available.

Carcinogenicity: No relevant data found.

Teratogenicity: No information available.

Specific target organ toxicity (STOT): No relevant data found.

#### Additional toxicological information:

Inhalation can cause chemical burns and a resorptive toxic effect. The inhalation of high concentrations of acetic acid vapors can cause laryngitis, tracheitis and bronchitis, and in extreme cases an obstructing pulmonary edema.

After skin contact, a brown corrosion scab is mostly formed.

Due to its good lipid solubility it is rapidly penetrated by the skin with depth effect.

The data is based on the undiluted 100 % preparation.

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## 12. Ecological Information

### 12.1. Aquatic Toxicity

#### Fish toxicity:

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*LC50: 408 - 410 mg/l (48h, Leuciscus idus)*

*LC50: > 300 mg/l (96h, Oncorhynchus mykiss; OECD 203)*

*LC50: 79 mg/l (96h, Pimephales promelas)*

*Daphnia toxicity:*

*EC50: 47 - 95 mg/l (24h, Daphnia magna)*

*EC50: > 300 mg/l (48h, Daphnia magna; OECD 202)*

*Bacteria toxicity:*

*no information available*

*Algae toxicity:*

*EC50: > 300 mg/l (72h, Skeletonema costatum; ISO/DIS 10253)*

#### 12.2. Persistency and Degradability

*Readily biodegradable.*

#### 12.3. Bioaccumulation

*No bioaccumulation.*

#### 12.4. Mobility

*No information available.*

#### 12.5. Results of PBT- und vPvP Assessment

*Not applicable.*

#### 12.6. Other Adverse Effects

*Water hazard class:*

*1, slightly hazardous*

*Behaviour in sewage systems:*

*Further ecological effects:*

*Rinse off of bigger amounts into drains or aquatic environment may lead to increased pH-values. A high pH-value harms aquatic organisms.*

*The pH-value is reduced significantly when the used product is diluted, so that the waste water which might enter the sewage system is only slightly hazardous to water.*

*Do not let product enter waterways or sewage system.*

*The data is based on the undiluted 100 % preparation.*

*AOX Value:*

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### 13. Disposal Considerations

#### 13.1. Waste Treatment Methods

*Product:*

*Dispose of according to official national and local regulations.*

*Must not be disposed together with household garbage.*

*Do not let product enter water systems.*

*European Waste Code (EWC):*

*Uncleaned packaging:*

*Dispose of according to official local regulations.*

*Suggested cleaning agent: water.*

*Waste Code No.:*

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## 14. Transport Information

### 14.1. UN Number

ADR, IMDG, IATA 2790

### 14.2. UN Proper Shipping Name

ADR/RID: ESSIGSÄURE, LÖSUNG

IMDG/IATA: ACETIC ACID SOLUTION

### 14.3. Transport Hazard Classes

ADR Class: 8

Hazard no.: 8

Classification code: C3

Tunnel restriction code: E

IMDG Class (sea): 8

Hazard no.: 8

EmS No.: F-A, S-B

IATA Class: 8

Hazard no.: 8

### 14.4. Packaging Group

ADR/RID: II

IMDG: II

IATA: II

### 14.5. Environmental Hazards

*Not classified as environmentally hazardous.*

### 14.6. Special Precautions for User

*Warning: corrosive substances*

### 14.7. Transportation in Bulk according to Annex II of MARPOL 73/78 and IBC-Code

*not applicable*

### 14.8. Further Information

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## 15. Regulatory Information

### 15.1. Safety, Health and Environmental Regulations/Legislation specific for the Substance or Mixture

*Water hazard class:*

*1, slightly hazardous for water (German Regulation, self-assessment)*

*Local regulations on chemical accidents:*

*Not listed.*

*Employment restrictions:*

*The employment restrictions for young workers in accordance with the Youth Employment Protection Law are to be observed.*

*Restriction and prohibition of application:*

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*Technical instructions on air quality:*

*5.2.5.: Organic substances*

*Classification II: 80 %*

**15.2. Chemical Safety Assessment**

*A Chemical Safety Assessment has been carried out for this product.*

**15.3. Further Information**

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**16. Other Information**

*This product should be stored, handled and used in accordance with good hygiene practices and in conformity with any legal regulations. This information contained herein is based on the present state of knowledge and is intended to describe our product from the point of view of safety requirements. It should be therefore not be construed as guaranteeing specific properties.*