

Creation Date 03-Jun-2010

Revision Date 31-Dec-2020

Revision Number 6

## SECTION 1: IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

### 1.1. Product identifier

Product Description: **Acetic acid 2M**  
Cat No. : **J/0549/PB17**

Unique Formula Identifier (UFI) **N28A-7229-UX0N-1R94**

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

Recommended Use Laboratory chemicals.  
Uses advised against No Information available

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

Company **UK entity/business name**  
Fisher Scientific UK  
Bishop Meadow Road, Loughborough,  
Leicestershire LE11 5RG, United Kingdom

**EU entity/business name**  
Acros Organics BVBA  
Janssen Pharmaceuticaaan 3a  
2440 Geel, Belgium

E-mail address [bege1.sdsdesk@thermofisher.com](mailto:bege1.sdsdesk@thermofisher.com)

### 1.4. Emergency telephone number

Tel: 01509 231166  
Chemtrec US: (800) 424-9300  
Chemtrec EU: 001 (202) 483-7616

Poison Centre - Emergency information services **Ireland** : National Poisons Information Centre (NPIC) - **01 809 2166** (8am-10pm, 7 days a week)  
**Malta** : +356 2395 2000  
**Cyprus** : +357 2240 5611

## SECTION 2: HAZARDS IDENTIFICATION

### 2.1. Classification of the substance or mixture

CLP Classification - Regulation (EC) No 1272/2008

#### Physical hazards

Substances/mixtures corrosive to metal

Category 1 (H290)

# SAFETY DATA SHEET

Acetic acid 2M

Revision Date 31-Dec-2020

## Health hazards

Skin Corrosion/Irritation  
Serious Eye Damage/Eye Irritation

Category 2 (H315)  
Category 2 (H319)

## Environmental hazards

Based on available data, the classification criteria are not met

Full text of Hazard Statements: see section 16

## 2.2. Label elements



Signal Word

Warning

## Hazard Statements

H290 - May be corrosive to metals  
H315 - Causes skin irritation  
H319 - Causes serious eye irritation

## Precautionary Statements

P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing  
P234 - Keep only in original packaging  
P280 - Wear protective gloves/protective clothing/eye protection/face protection

## 2.3. Other hazards

## SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

### 3.2. Mixtures

| Component   | CAS-No    | EC-No.    | Weight % | CLP Classification - Regulation (EC) No 1272/2008                |
|-------------|-----------|-----------|----------|--|
| Acetic acid | 64-19-7   | 200-580-7 | 10-25    | Flam. Liq. 3 (H226)<br>Skin Corr. 1A (H314)<br>Eye Dam. 1 (H318) |
| Water       | 7732-18-5 | 231-791-2 | 75-90    | -  |

| Component   | Specific concentration limits (SCL's)   | M-Factor | Component notes |
|-------------|---|----------|-----------------|
| Acetic acid | Eye Irrit. 2 :: 10%≤C<25%<br>Skin Corr. 1A :: C≥90%<br>Skin Corr. 1B :: 25%≤C<90%<br>Skin Irrit. 2 :: 10%≤C<25% | -        | -               |

# SAFETY DATA SHEET

Acetic acid 2M

Revision Date 31-Dec-2020

| Components  | Reach Registration Number |  |
|-------------|---------------------------|--|
| Acetic acid | 01-2119475328-30          |  |

Full text of Hazard Statements: see section 16

## SECTION 4: FIRST AID MEASURES

### 4.1. Description of first aid measures

|   |  |
|---|--|
| <b>Eye Contact</b>                        | Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Get medical attention.                                  |
| <b>Skin Contact</b>                       | Wash off immediately with plenty of water for at least 15 minutes. Get medical attention.  |
| <b>Ingestion</b>                          | Do NOT induce vomiting. Get medical attention.   |
| <b>Inhalation</b>                         | Remove to fresh air. If breathing is difficult, give oxygen. Get medical attention.  |
| <b>Self-Protection of the First Aider</b> | Ensure that medical personnel are aware of the material(s) involved, take precautions to protect themselves and prevent spread of contamination. |

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

No information available.

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

**Notes to Physician** Treat symptomatically.

## SECTION 5: FIREFIGHTING MEASURES

### 5.1. Extinguishing media

#### **Suitable Extinguishing Media**

Water spray, carbon dioxide (CO<sub>2</sub>), dry chemical, alcohol-resistant foam.

#### **Extinguishing media which must not be used for safety reasons**

No information available.

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

Thermal decomposition can lead to release of irritating gases and vapors.

#### **Hazardous Combustion Products**

Carbon monoxide (CO), Carbon dioxide (CO<sub>2</sub>), Thermal decomposition can lead to release of irritating gases and vapors.

### 5.3. Advice for firefighters

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear. Thermal decomposition can lead to release of irritating gases and vapors.

## SECTION 6: ACCIDENTAL RELEASE MEASURES

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

Ensure adequate ventilation. Use personal protective equipment as required.

# SAFETY DATA SHEET

Acetic acid 2M

Revision Date 31-Dec-2020

## 6.2. Environmental precautions

Should not be released into the environment. See Section 12 for additional Ecological Information.

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

Soak up with inert absorbent material. Keep in suitable, closed containers for disposal.

## 6.4. Reference to other sections

Refer to protective measures listed in Sections 8 and 13.

## SECTION 7: HANDLING AND STORAGE

### 7.1. Precautions for safe handling

Wear personal protective equipment/face protection. Ensure adequate ventilation. Do not get in eyes, on skin, or on clothing. Avoid ingestion and inhalation.

### **Hygiene Measures**

Handle in accordance with good industrial hygiene and safety practice. Keep away from food, drink and animal feeding stuffs. Do not eat, drink or smoke when using this product. Remove and wash contaminated clothing and gloves, including the inside, before re-use. Wash hands before breaks and after work.

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

Keep containers tightly closed in a dry, cool and well-ventilated place.

**Technical Rules for Hazardous Substances (TRGS) 510 Storage Class (LGK)**  
**(Germany)**

Class 10

### 7.3. Specific end use(s)

Use in laboratories

## SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

### 8.1. Control parameters

#### **Exposure limits**

List source(s): **UK** - EH40/2005 Work Exposure Limits, Third edition. Published 2018. **IRE** - 2018 Code of Practice for the Chemical Agents Regulations, Schedule 1. Published by the Health and Safety Authority

| Component   | The United Kingdom   | European Union   | Ireland  |
|-------------|--|--|--|
| Acetic acid | STEL: 37 mg/m <sup>3</sup><br>STEL: 15 ppm<br>TWA: 10 ppm<br>TWA: 25 mg/m <sup>3</sup> | TWA: 25 mg/m <sup>3</sup> (15min)<br>TWA: 10 ppm (15min)<br>STEL: 50 mg/m <sup>3</sup> (8h)<br>STEL: 20 ppm (8h) | TWA: 10 ppm 8 hr.<br>TWA: 25 mg/m <sup>3</sup> 8 hr.<br>STEL: 20 ppm 15 min<br>STEL: 50 mg/m <sup>3</sup> 15 min |

#### **Biological limit values**

This product, as supplied, does not contain any hazardous materials with biological limits established by the region specific regulatory bodies

#### **Monitoring methods**

BS EN 14042:2003 Title Identifier: Workplace atmospheres. Guide for the application and use of procedures for the assessment of exposure to chemical and biological agents.

# SAFETY DATA SHEET

Acetic acid 2M

Revision Date 31-Dec-2020

**Derived No Effect Level (DNEL)** No information available

| <u>Route of exposure</u>     | <b>Acute effects (local)</b> | <b>Acute effects (systemic)</b> | <b>Chronic effects (local)</b> | <b>Chronic effects (systemic)</b> |
|------------------------------|------------------------------|---------------------------------|--------------------------------|-----------------------------------|
| Oral<br>Dermal<br>Inhalation |                              |                                 |                                |                                   |

**Predicted No Effect Concentration (PNEC)** No information available.

## 8.2. Exposure controls

### **Engineering Measures**

Ensure that eyewash stations and safety showers are close to the workstation location. Ensure adequate ventilation, especially in confined areas.

Wherever possible, engineering control measures such as the isolation or enclosure of the process, the introduction of process or equipment changes to minimise release or contact, and the use of properly designed ventilation systems, should be adopted to control hazardous materials at source

### **Personal protective equipment**

**Eye Protection** Goggles (European standard - EN 166)

**Hand Protection** Protective gloves

| <b>Glove material</b> | <b>Breakthrough time</b>          | <b>Glove thickness</b> | <b>EU standard</b> | <b>Glove comments</b> |
|-----------------------|-----------------------------------|------------------------|--------------------|-----------------------|
| Butyl rubber          | See manufacturers recommendations | -                      | EN 374             | (minimum requirement) |

**Skin and body protection** Wear appropriate protective gloves and clothing to prevent skin exposure

Inspect gloves before use.

Please observe the instructions regarding permeability and breakthrough time which are provided by the supplier of the gloves. (Refer to manufacturer/supplier for information)

Ensure gloves are suitable for the task: Chemical compatibility, Dexterity, Operational conditions, User susceptibility, e.g. sensitisation effects, also take into consideration the specific local conditions under which the product is used, such as the danger of cuts, abrasion.

Remove gloves with care avoiding skin contamination.

**Respiratory Protection** When workers are facing concentrations above the exposure limit they must use appropriate certified respirators. To protect the wearer, respiratory protective equipment must be the correct fit and be used and maintained properly

**Large scale/emergency use** Use a NIOSH/MSHA or European Standard EN 136 approved respirator if exposure limits are exceeded or if irritation or other symptoms are experienced  
**Recommended Filter type:** Particulates filter conforming to EN 143 Acid gases filter Type E Yellow conforming to EN14387

**Small scale/Laboratory use** Use a NIOSH/MSHA or European Standard EN 149:2001 approved respirator if exposure limits are exceeded or if irritation or other symptoms are experienced.  
**Recommended half mask:-** Valve filtering: EN405; or; Half mask: EN140; plus filter, EN 141  
When RPE is used a face piece Fit Test should be conducted

**Environmental exposure controls** No information available.

## **SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES**

# SAFETY DATA SHEET

Acetic acid 2M

Revision Date 31-Dec-2020

## 9.1. Information on basic physical and chemical properties

|  |                          |                           |
|--|--------------------------|---------------------------|
| <b>Physical State</b>                          | Liquid                   |                           |
| <b>Appearance</b>                              | Clear, Colorless         |                           |
| <b>Odor</b>                                    | vinegar-like             |                           |
| <b>Odor Threshold</b>                          | No data available        |                           |
| <b>Melting Point/Range</b>                     | No data available        |                           |
| <b>Softening Point</b>                         | No data available        |                           |
| <b>Boiling Point/Range</b>                     | 100 °C / 212 °F          | Estimated                 |
| <b>Flammability (liquid)</b>                   | No data available        |                           |
| <b>Flammability (solid,gas)</b>                | Not applicable           | Liquid                    |
| <b>Explosion Limits</b>                        | No data available        |                           |
| <b>Flash Point</b>                             | > 100 °C / > 212 °F      | <b>Method -</b> Estimated |
| <b>Autoignition Temperature</b>                | No data available        |                           |
| <b>Decomposition Temperature</b>               | No data available        |                           |
| <b>pH</b>                                      | 2.4-3.4                  |                           |
| <b>Viscosity</b>                               | No data available        |                           |
| <b>Water Solubility</b>                        | Soluble                  |                           |
| <b>Solubility in other solvents</b>            | No information available |                           |
| <b>Partition Coefficient (n-octanol/water)</b> |                          |                           |
| <b>Component</b>                               | <b>log Pow</b>           |                           |
| Acetic acid                                    | -0.2                     |                           |
| <b>Vapor Pressure</b>                          | No data available        |                           |
| <b>Density / Specific Gravity</b>              | 1.0                      |                           |
| <b>Bulk Density</b>                            | Not applicable           | Liquid                    |
| <b>Vapor Density</b>                           | No data available        | (Air = 1.0)               |
| <b>Particle characteristics</b>                | Not applicable (liquid)  |                           |

## 9.2. Other information

## SECTION 10: STABILITY AND REACTIVITY

### 10.1. Reactivity

None known, based on information available

### 10.2. Chemical stability

Stable under normal conditions.

### 10.3. Possibility of hazardous reactions

**Hazardous Polymerization**  
**Hazardous Reactions**

Hazardous polymerization does not occur.  
Corrosive to metals.

### 10.4. Conditions to avoid

Incompatible products. Excess heat.

### 10.5. Incompatible materials

Strong oxidizing agents. Bases. Acid anhydrides. Acid chlorides.

### 10.6. Hazardous decomposition products

Carbon monoxide (CO). Carbon dioxide (CO<sub>2</sub>). Thermal decomposition can lead to release of irritating gases and vapors.

## SECTION 11: TOXICOLOGICAL INFORMATION

# SAFETY DATA SHEET

Acetic acid 2M

Revision Date 31-Dec-2020

## 11.1. Information on hazard classes as defined in Regulation (EC) No 1272/2008

### Product Information

#### (a) acute toxicity;

Oral

Based on available data, the classification criteria are not met

Dermal

Based on available data, the classification criteria are not met

Inhalation

Based on available data, the classification criteria are not met

### Toxicology data for the components

| Component   | LD50 Oral          | LD50 Dermal | LC50 Inhalation       |
|-------------|--------------------|-------------|-----------------------|
| Acetic acid | 3310 mg/kg ( Rat ) | -           | > 40 mg/L ( Rat ) 4 h |
| Water       | -                  | -           | -                     |

(b) skin corrosion/irritation; Category 2

(c) serious eye damage/irritation; Category 2

#### (d) respiratory or skin sensitization;

Respiratory

No data available

Skin

No data available

(e) germ cell mutagenicity; No data available

(f) carcinogenicity; No data available

There are no known carcinogenic chemicals in this product

(g) reproductive toxicity; No data available

(h) STOT-single exposure; No data available

(i) STOT-repeated exposure; No data available

Target Organs

No information available.

(j) aspiration hazard; No data available

Symptoms / effects, both acute and delayed No information available.

## 11.2. Information on other hazards

### Endocrine Disrupting Properties

Assess endocrine disrupting properties for human health. This product does not contain any known or suspected endocrine disruptors.

## SECTION 12: ECOLOGICAL INFORMATION

### 12.1. Toxicity

# SAFETY DATA SHEET

Acetic acid 2M

Revision Date 31-Dec-2020

## Ecotoxicity effects

| Component   | Freshwater Fish  | Water Flea         | Freshwater Algae |
|-------------|--|--------------------|------------------|
| Acetic acid | Pimephales promelas: LC50 = 88 mg/L/96h<br>Lepomis macrochirus: LC50 = 75 mg/L/96h | EC50 = 95 mg/L/24h | -                |

| Component   | Microtox  | M-Factor |
|-------------|---|----------|
| Acetic acid | Photobacterium phosphoreum: EC50 = 8.8 mg/L/15 min<br>Photobacterium phosphoreum: EC50 = 8.8 mg/L/25 min<br>Photobacterium phosphoreum: EC50 = 8.8 mg/L/5 min |          |

### 12.2. Persistence and degradability

#### Persistence

Soluble in water, Persistence is unlikely, based on information available.

### 12.3. Bioaccumulative potential

Bioaccumulation is unlikely

| Component   | log Pow | Bioconcentration factor (BCF) |
|-------------|---------|-------------------------------|
| Acetic acid | -0.2    | No data available             |

### 12.4. Mobility in soil

The product is water soluble, and may spread in water systems . Will likely be mobile in the environment due to its water solubility. Highly mobile in soils

### 12.5. Results of PBT and vPvB assessment

No data available for assessment.

### 12.6. Endocrine disrupting properties

#### Endocrine Disruptor Information

This product does not contain any known or suspected endocrine disruptors

### 12.7. Other adverse effects

#### Persistent Organic Pollutant Ozone Depletion Potential

This product does not contain any known or suspected substance  
This product does not contain any known or suspected substance

## SECTION 13: DISPOSAL CONSIDERATIONS

### 13.1. Waste treatment methods

#### Waste from Residues/Unused Products

Waste is classified as hazardous. Dispose of in accordance with the European Directives on waste and hazardous waste. Dispose of in accordance with local regulations.

#### Contaminated Packaging

Dispose of this container to hazardous or special waste collection point.

#### European Waste Catalogue (EWC)

According to the European Waste Catalog, Waste Codes are not product specific, but application specific.

#### Other Information

Waste codes should be assigned by the user based on the application for which the product was used. Do not empty into drains.

## SECTION 14: TRANSPORT INFORMATION



# SAFETY DATA SHEET

Acetic acid 2M

Revision Date 31-Dec-2020

## IMDG/IMO

**14.1. UN number** UN2790  
**14.2. UN proper shipping name** Acetic acid solution  
**14.3. Transport hazard class(es)** 8  
**14.4. Packing group** III

## ADR

**14.1. UN number** UN2790  
**14.2. UN proper shipping name** Acetic acid solution  
**14.3. Transport hazard class(es)** 8  
**14.4. Packing group** III

## IATA

**14.1. UN number** UN2790  
**14.2. UN proper shipping name** Acetic acid solution  
**14.3. Transport hazard class(es)** 8  
**14.4. Packing group** III

**14.5. Environmental hazards** No hazards identified  
**14.6. Special precautions for user** No special precautions required  
**14.7. Maritime transport in bulk according to IMO instruments** Not applicable, packaged goods

## SECTION 15: REGULATORY INFORMATION

### 15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture

#### International Inventories

X = listed, Europe (EINECS/ELINCS/NLP), U.S.A. (TSCA), Canada (DSL/NDSL), Philippines (PICCS), China (IECSC), Japan (ENCS), Australia (AICS), Korea (ECL).

| Component   | EINECS    | ELINCS | NLP | TSCA | DSL | NDSL | PICCS | ENCS | IECSC | AICS | KECL         |
|-------------|-----------|--------|-----|------|-----|------|-------|------|-------|------|--------------|
| Acetic acid | 200-580-7 | -      |     | X    | X   | -    | X     | X    | X     | X    | X            |
| Water       | 231-791-2 | -      |     | X    | X   | -    | X     | X    | X     | X    | KE-3540<br>0 |

#### Regulation (EC) No 649/2012 of the European Parliament and of the Council of 4 July 2012 concerning the export and import of dangerous chemicals

Not applicable

#### National Regulations

**WGK Classification** Water endangering class = 1 (self classification)

| Component   | Germany - Water Classification (VwVwS) | Germany - TA-Luft Class                                |
|-------------|--|--|
| Acetic acid | WGK1                                   | Class II : 0.10 g/m <sup>3</sup> (Massenkonzentration) |

**UK** - Take note of Control of Substances Hazardous to Health Regulations (COSHH) 2002 and 2005 Amendment

### 15.2. Chemical safety assessment

FSUJ0549

# SAFETY DATA SHEET

Acetic acid 2M

Revision Date 31-Dec-2020

Chemical Safety Assessment/Reports (CSA/CSR) are not required for mixtures

## SECTION 16: OTHER INFORMATION

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

H226 - Flammable liquid and vapor

H314 - Causes severe skin burns and eye damage

H318 - Causes serious eye damage

### Legend

**CAS** - Chemical Abstracts Service

**EINECS/ELINCS** - European Inventory of Existing Commercial Chemical Substances/EU List of Notified Chemical Substances

**PICCS** - Philippines Inventory of Chemicals and Chemical Substances

**IECSC** - Chinese Inventory of Existing Chemical Substances

**KECL** - Korean Existing and Evaluated Chemical Substances

**TSCA** - United States Toxic Substances Control Act Section 8(b) Inventory

**DSL/NDSL** - Canadian Domestic Substances List/Non-Domestic Substances List

**ENCS** - Japanese Existing and New Chemical Substances

**AICS** - Australian Inventory of Chemical Substances

**NZIoC** - New Zealand Inventory of Chemicals

**WEL** - Workplace Exposure Limit

**ACGIH** - American Conference of Governmental Industrial Hygienists

**DNEL** - Derived No Effect Level

**RPE** - Respiratory Protective Equipment

**LC50** - Lethal Concentration 50%

**NOEC** - No Observed Effect Concentration

**PBT** - Persistent, Bioaccumulative, Toxic

**TWA** - Time Weighted Average

**IARC** - International Agency for Research on Cancer Predicted No Effect Concentration (PNEC)

**LD50** - Lethal Dose 50%

**EC50** - Effective Concentration 50%

**POW** - Partition coefficient Octanol:Water

**vPvB** - very Persistent, very Bioaccumulative

**ADR** - European Agreement Concerning the International Carriage of Dangerous Goods by Road

**IMO/IMDG** - International Maritime Organization/International Maritime Dangerous Goods Code

**OECD** - Organisation for Economic Co-operation and Development

**BCF** - Bioconcentration factor

**ICAO/IATA** - International Civil Aviation Organization/International Air Transport Association

**MARPOL** - International Convention for the Prevention of Pollution from Ships

**ATE** - Acute Toxicity Estimate

**VOC** (volatile organic compound)

### Key literature references and sources for data

<https://echa.europa.eu/information-on-chemicals>

Suppliers safety data sheet, Chemadvisor - LOLI, Merck index, RTECS

### Classification and procedure used to derive the classification for mixtures according to Regulation (EC) 1272/2008 [CLP]:

**Physical hazards** On basis of test data

**Health Hazards** Calculation method

**Environmental hazards** Calculation method

### Training Advice

Chemical hazard awareness training, incorporating labelling, Safety Data Sheets (SDS), Personal Protective Equipment (PPE) and hygiene.

Use of personal protective equipment, covering appropriate selection, compatibility, breakthrough thresholds, care, maintenance, fit and standards.

First aid for chemical exposure, including the use of eye wash and safety showers.

Chemical incident response training.

**Creation Date** 03-Jun-2010

**Revision Date** 31-Dec-2020

**Revision Summary** Update to CLP Format.

**This safety data sheet complies with the requirements of Regulation (EC) No. 1907/2006  
COMMISSION REGULATION (EU) 2020/878 amending Annex II to Regulation (EC) No  
1907/2006**

### Disclaimer

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the

# SAFETY DATA SHEET

Acetic acid 2M

Revision Date 31-Dec-2020

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date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text

**End of Safety Data Sheet**