

Creation Date 21-Mar-2011

Revision Date 09-Jan-2026

Revision Number 4

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

### 1.1. Product identifier

|                                  |                                                                       |
|----------------------------------|-----------------------------------------------------------------------|
| <b>Product Description:</b>      | <b>Acetic anhydride</b>                                               |
| <b>Cat No. :</b>                 | <b>36292</b>                                                          |
| <b>Synonyms</b>                  | Acetyl oxide, Acetic acid anhydride, Acetic oxide, Ethanoic anhydride |
| <b>Index No</b>                  | 607-008-00-9                                                          |
| <b>CAS No</b>                    | 108-24-7                                                              |
| <b>EC No</b>                     | 203-564-8                                                             |
| <b>Molecular Formula</b>         | C <sub>4</sub> H <sub>6</sub> O <sub>3</sub>                          |
| <b>REACH registration number</b> | -                                                                     |

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

|                             |                          |
|-----------------------------|--------------------------|
| <b>Recommended Use</b>      | Laboratory chemicals     |
| <b>Uses advised against</b> | No Information available |

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

|                |                                                                                                                                                                                                              |
|----------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Company</b> | Avocado Research Chemicals Ltd.<br>(Part of Thermo Fisher Scientific)<br>Shore Road, Heysham<br>Lancashire, LA3 2XY,<br>United Kingdom<br>Office Tel: +44 (0) 1524 850506<br>Office Fax: +44 (0) 1524 850608 |
|----------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

|                       |                                |
|-----------------------|--------------------------------|
| <b>E-mail address</b> | begel.sdsdesk@thermofisher.com |
|-----------------------|--------------------------------|

### 1.4. Emergency telephone number

For information **US** call: 001-800-227-6701 / **Europe** call: +32 14 57 52 11  
Emergency Number **US**:001-201-796-7100 / **Europe**: +32 14 57 52 99  
**CHEMTREC** Tel. No. **US**:001-800-424-9300 / **Europe**:001-703-527-3887

## SECTION 2: HAZARDS IDENTIFICATION

### 2.1. Classification of the substance or mixture

#### GHS Classification - According to GB-CLP Regulations UK SI 2019/720 and UK SI 2020/1567

#### Physical hazards

Flammable liquids

Category 3 (H226)

#### Health hazards

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Acute oral toxicity  
Acute Inhalation Toxicity - Vapors  
Skin Corrosion/Irritation  
Serious Eye Damage/Eye Irritation

Category 4 (H302)  
Category 2 (H330)  
Category 1 B (H314)  
Category 1 (H318)

## **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

Danger

## **Hazard Statements**

H226 - Flammable liquid and vapor  
H302 - Harmful if swallowed  
H314 - Causes severe skin burns and eye damage  
H330 - Fatal if inhaled  
EUH071 - Corrosive to the respiratory tract

## **Precautionary Statements**

P210 - Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking  
P280 - Wear eye protection/ face protection  
P301 + P330 + P331 - IF SWALLOWED: rinse mouth. Do NOT induce vomiting  
P304 + P340 - IF INHALED: Remove victim to fresh air and keep at rest in a position 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 or doctor/physician

## **2.3. Other hazards**

Substance is not considered persistent, bioaccumulative and toxic (PBT) / very persistent and very bioaccumulative (vPvB)  
Lachrymator (substance which increases the flow of tears)  
This product does not contain any known or suspected endocrine disruptors

## **SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS**

### **3.1. Substances**

| Component        | CAS No   | EC No             | Weight % | GHS Classification - According to GB-CLP Regulations UK SI 2019/720 and UK SI 2020/1567 |
|------------------|----------|-------------------|----------|-----------------------------------------------------------------------------------------|
| Acetic anhydride | 108-24-7 | EEC No. 203-564-8 | >99      | Flam. Liq. 3 (H226)<br>Acute Tox. 4 (H302)<br>Acute Tox. 2 (H330)                       |

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|  |  |  |  |                                                       |
|--|--|--|--|-------------------------------------------------------|
|  |  |  |  | Skin Corr. 1B (H314)<br>Eye Dam. 1 (H318)<br>(EUH071) |
|--|--|--|--|-------------------------------------------------------|

| Component        | Specific concentration limits (SCL's)                                                                                                                                  | M-Factor | Component notes |
|------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------|-----------------|
| Acetic anhydride | Eye Dam. 1 (H318) ::<br>5%≤C<25%<br>Eye Irrit. 2 (H319) :: 1%≤C<5%<br>Skin Corr. 1B (H314) :: C≥25%<br>Skin Irrit. 2 (H315) ::<br>5%≤C<25%<br>STOT SE 3 (H335) :: C≥5% | -        | -               |

|                           |   |
|---------------------------|---|
| REACH registration number | - |
|---------------------------|---|

Full text of Hazard Statements: see section 16

## SECTION 4: FIRST AID MEASURES

### 4.1. Description of first aid measures

|                                    |                                                                                                                                                                                                                                                                                                                         |
|------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Eye Contact                        | Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Immediate medical attention is required.                                                                                                                                                                                       |
| Skin Contact                       | Wash off immediately with plenty of water for at least 15 minutes. Immediate medical attention is required.                                                                                                                                                                                                             |
| Ingestion                          | Do NOT induce vomiting. Call a physician or poison control center immediately.                                                                                                                                                                                                                                          |
| Inhalation                         | Remove to fresh air. If breathing is difficult, give oxygen. Do not use mouth-to-mouth method if victim ingested or inhaled the substance; give artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device. Immediate medical attention is required. |
| Self-Protection of the First Aider | 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

Causes burns by all exposure routes. Difficulty in breathing. Product is a corrosive material. Use of gastric lavage or emesis is contraindicated. Possible perforation of stomach or esophagus should be investigated: Ingestion causes severe swelling, severe damage to the delicate tissue and danger of perforation: Symptoms of overexposure may be headache, dizziness, tiredness, nausea and vomiting

### 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

CO<sub>2</sub>, dry chemical, dry sand, alcohol-resistant foam. Water mist may be used to cool closed containers.

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

Water.

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

Flammable. Corrosive material. Water reactive. Vapors may form explosive mixtures with air. Vapors may travel to source of ignition and flash back. Containers may explode when heated. Thermal decomposition can lead to release of irritating gases and vapors.

### Hazardous Combustion Products

Carbon monoxide (CO), Carbon dioxide (CO<sub>2</sub>).

### 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.

## SECTION 6: ACCIDENTAL RELEASE MEASURES

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

Use personal protective equipment as required. Evacuate personnel to safe areas. Remove all sources of ignition. Take precautionary measures against static discharges. Avoid contact with skin, eyes and inhalation of vapors.

### 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

Remove all sources of ignition. Do not expose spill to water. Soak up with inert absorbent material. Keep in suitable, closed containers for disposal. Use spark-proof tools and explosion-proof equipment.

### 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

Use only under a chemical fume hood. Wear personal protective equipment/face protection. Keep away from open flames, hot surfaces and sources of ignition. Use spark-proof tools and explosion-proof equipment. Do not breathe mist/vapors/spray. Do not get in eyes, on skin, or on clothing. Do not ingest. If swallowed then seek immediate medical assistance. Do not allow contact with water.

### 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. Keep away from heat, sparks and flame. Keep away from water or moist air. Flammables area.

Technical Rules for Hazardous Substances (TRGS) 510

Class 3

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Storage Class (LGK) (Germany)

## 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, Fourth edition. Published 2020. **IRE** - 2021 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 anhydride | STEL: 2 ppm 15 min<br>STEL: 10 mg/m <sup>3</sup> 15 min<br>TWA: 0.5 ppm 8 hr<br>TWA: 2.5 mg/m <sup>3</sup> 8 hr |                | TWA: 1 ppm 8 hr.<br>TWA: 2.5 mg/m <sup>3</sup> 8 hr.<br>STEL: 3 ppm 15 min<br>STEL: 10 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

#### Derived No Effect Level (DNEL) / Derived Minimum Effect Level (DMEL)

See table for values

| Component                          | Acute effects local (Inhalation) | Acute effects systemic (Inhalation) | Chronic effects local (Inhalation) | Chronic effects systemic (Inhalation) |
|------------------------------------|----------------------------------|-------------------------------------|------------------------------------|---------------------------------------|
| Acetic anhydride<br>108-24-7 (>99) | DNEL = 12.6mg/m <sup>3</sup>     |                                     | DNEL = 4.2mg/m <sup>3</sup>        | DNEL = 4.2mg/m <sup>3</sup>           |

#### Predicted No Effect Concentration (PNEC)

See values below.

| Component                          | Fresh water      | Fresh water sediment          | Water Intermittent | Microorganisms in sewage treatment | Soil (Agriculture)       |
|------------------------------------|------------------|-------------------------------|--------------------|------------------------------------|--------------------------|
| Acetic anhydride<br>108-24-7 (>99) | PNEC = 3.058mg/L | PNEC = 11.36mg/kg sediment dw | PNEC = 30.58mg/L   | PNEC = 115mg/L                     | PNEC = 0.47mg/kg soil dw |

| Component                          | Marine water      | Marine water sediment         | Marine water intermittent | Food chain | Air |
|------------------------------------|-------------------|-------------------------------|---------------------------|------------|-----|
| Acetic anhydride<br>108-24-7 (>99) | PNEC = 0.3058mg/L | PNEC = 1.136mg/kg sediment dw |                           |            |     |

### 8.2. Exposure controls

#### Engineering Measures

Use only under a chemical fume hood. Ensure that eyewash stations and safety showers are close to the workstation location. Use explosion-proof electrical/ventilating/lighting equipment.

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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

| Glove material | Breakthrough time | Glove thickness | EU standard       | Glove comments                                                                                                                    |
|----------------|-------------------|-----------------|-------------------|-----------------------------------------------------------------------------------------------------------------------------------|
| Nitrile rubber | < 240 minutes     | 0.38 mm         | EN 374<br>Level 5 | Permeation rate 1779 µg/cm <sup>2</sup> /min<br>As tested under EN374-3 Determination of<br>Resistance to Permeation by Chemicals |
| Butyl rubber   | > 480 minutes     | 0.35 mm         |                   |                                                                                                                                   |
| Neoprene       | > 480 minutes     | 0.45 mm         |                   |                                                                                                                                   |
| Viton (R)      | > 480 minutes     | 0.7 mm          |                   |                                                                                                                                   |

### 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:** Organic gases and vapours filter Type A Brown 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

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

|                          |                                             |                       |
|--------------------------|---------------------------------------------|-----------------------|
| Physical State           | Liquid                                      |                       |
| Appearance               | Colorless                                   |                       |
| Odor                     | pungent                                     |                       |
| Odor Threshold           | No data available                           |                       |
| Melting Point/Range      | -73.1 °C / -99.6 °F                         |                       |
| Softening Point          | No data available                           |                       |
| Boiling Point/Range      | 140 °C / 284 °F                             | @ 760 mmHg            |
| Flammability (liquid)    | Flammable                                   | On basis of test data |
| Flammability (solid,gas) | Not applicable                              | Liquid                |
| Explosion Limits         | <b>Lower</b> 2 Vol%<br><b>Upper</b> 12 Vol% |                       |
| Flash Point              | 49 °C / 120.2 °F                            |                       |

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|                                         |                          |                          |
|-----------------------------------------|--------------------------|--------------------------|
|                                         |                          | Method - CC (closed cup) |
| Autoignition Temperature                | 316 °C / 600.8 °F        |                          |
| Decomposition Temperature               | No data available        |                          |
| pH                                      | 3                        |                          |
| Viscosity                               | 0.91 mPa.s at 20 °C      |                          |
| Water Solubility                        | hydrolyses               |                          |
| Solubility in other solvents            | No information available |                          |
| Partition Coefficient (n-octanol/water) |                          |                          |
| Component                               | log Pow                  |                          |
| Acetic anhydride                        | -0.27                    |                          |
| Vapor Pressure                          | 5 mbar @ 20 °C           |                          |
| Density / Specific Gravity              | 1.080                    |                          |
| Bulk Density                            | Not applicable           | Liquid                   |
| Vapor Density                           | 3.5                      | (Air = 1.0)              |
| Particle characteristics                | Not applicable (liquid)  |                          |

## 9.2. Other information

|                      |                                        |
|----------------------|----------------------------------------|
| Molecular Formula    | C4 H6 O3                               |
| Molecular Weight     | 102.09                                 |
| Explosive Properties | explosive air/vapour mixtures possible |
| Evaporation Rate     | 0.46 - (Butyl Acetate = 1.0)           |

## SECTION 10: STABILITY AND REACTIVITY

### 10.1. Reactivity

Yes

### 10.2. Chemical stability

Moisture sensitive.

### 10.3. Possibility of hazardous reactions

|                          |                                          |
|--------------------------|------------------------------------------|
| Hazardous Polymerization | Hazardous polymerization does not occur. |
| Hazardous Reactions      | No information available.                |

### 10.4. Conditions to avoid

Incompatible products. Keep away from open flames, hot surfaces and sources of ignition.  
Exposure to moist air or water.

### 10.5. Incompatible materials

Strong acids. Water. Strong reducing agents. Alcohols. Bases. Oxidizing agent.

### 10.6. Hazardous decomposition products

Carbon monoxide (CO). Carbon dioxide (CO<sub>2</sub>).

## SECTION 11: TOXICOLOGICAL INFORMATION

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

#### Product Information

#### (a) acute toxicity;

|            |                                                                  |
|------------|------------------------------------------------------------------|
| Oral       | Category 4                                                       |
| Dermal     | Based on available data, the classification criteria are not met |
| Inhalation | Category 2                                                       |

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| Component        | LD50 Oral                                 | LD50 Dermal                | LC50 Inhalation                                                        |
|------------------|-------------------------------------------|----------------------------|------------------------------------------------------------------------|
| Acetic anhydride | LD50 = 630 mg/kg (Rat)<br>Equiv. OECD 410 | LD50 = 4000 mg/kg (Rabbit) | LC100: 1.67 mg/L/6h (Rat)<br>Equiv. OECD 412<br>LC50: 400 ppm/6h (Rat) |

- (b) skin corrosion/irritation; Category 1 B  
Based on available literature and data from closely analogous substances using structure/activity relationships
- (c) serious eye damage/irritation; Category 1  
Based on available literature and data from closely analogous substances using structure/activity relationships
- (d) respiratory or skin sensitization;  
Respiratory Based on available data, the classification criteria are not met  
Skin Based on available data, the classification criteria are not met
- (e) germ cell mutagenicity; Based on available data, the classification criteria are not met  
Not mutagenic in AMES Test
- (f) carcinogenicity; Based on available data, the classification criteria are not met  
There are no known carcinogenic chemicals in this product.
- (g) reproductive toxicity; Based on available data, the classification criteria are not met
- (h) STOT-single exposure; Based on available data, the classification criteria are not met
- Study/Evidence (Classification basis) OECD Test No. 412  
Test species / Sex / Route of exposure Rat / Inhalation (4h)  
Effective dose LOAEL = 300 - 2000 ppm  
Results / Target organs Eyes.
- (i) STOT-repeated exposure; Based on available data, the classification criteria are not met
- Test method OECD Test No. 413  
Test species / Duration Rat / 90 days  
Study result NOAEL = 0.2 - 1 ppm  
Route of exposure Inhalation  
Target Organs None known.
- (j) aspiration hazard; Based on available data, the classification criteria are not met
- Symptoms / effects, both acute and delayed Product is a corrosive material. Use of gastric lavage or emesis is contraindicated. Possible perforation of stomach or esophagus should be investigated. Ingestion causes severe swelling, severe damage to the delicate tissue and danger of perforation. Symptoms of overexposure may be headache, dizziness, tiredness, nausea and vomiting.

## 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.

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## SECTION 12: ECOLOGICAL INFORMATION

### 12.1. Toxicity

#### Ecotoxicity effects

Reacts with water so no ecotoxicity data for the substance is available. Do not empty into drains. Large amounts will affect pH and harm aquatic organisms.

### 12.2. Persistence and degradability

#### Persistence

Readily biodegradable

#### Degradability

Persistence is unlikely, based on information available.

#### Degradation in sewage treatment plant

Reacts with water.

Decomposes in contact with water. Neutralization is normally necessary before waste water is discharged into water treatment plants.

### 12.3. Bioaccumulative potential

Bioaccumulation is unlikely

| Component        | log Pow | Bioconcentration factor (BCF) |
|------------------|---------|-------------------------------|
| Acetic anhydride | -0.27   | 3.16                          |

### 12.4. Mobility in soil

Decomposes in contact with water .

### 12.5. Results of PBT and vPvB assessment

Substance is not considered persistent, bioaccumulative and toxic (PBT) / very persistent and very bioaccumulative (vPvB).

### 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

This product does not contain any known or suspected substance

#### Ozone Depletion Potential

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. Do not flush to sewer. Large amounts will affect pH and harm aquatic organisms.

## SECTION 14: TRANSPORT INFORMATION

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## IMDG/IMO

**14.1. UN number or ID number** UN1715  
**14.2. UN proper shipping name** ACETIC ANHYDRIDE  
**14.3. Transport hazard class(es)** 8  
Subsidiary Hazard Class 3  
**14.4. Packing group** II

## ADR

**14.1. UN number or ID number** UN1715  
**14.2. UN proper shipping name** ACETIC ANHYDRIDE  
**14.3. Transport hazard class(es)** 8  
Subsidiary Hazard Class 3  
**14.4. Packing group** II

## IATA

**14.1. UN number or ID number** UN1715  
**14.2. UN proper shipping name** ACETIC ANHYDRIDE  
**14.3. Transport hazard class(es)** 8  
Subsidiary Hazard Class 3  
**14.4. Packing group** II

**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

Europe (EINECS/ELINCS/NLP), China (IECSC), Taiwan (TCSI), Korea (KECL), Japan (ENCS), Japan (ISHL), Canada (DSL/NDSL), Australia (AICS), New Zealand (NZIoC), Philippines (PICCS). US EPA (TSCA) - Toxic Substances Control Act, (40 CFR Part 710)

| Component        | CAS No   | EINECS    | ELINCS | NLP | IECSC | TCSI | KECL     | ENCS | ISHL |
|------------------|----------|-----------|--------|-----|-------|------|----------|------|------|
| Acetic anhydride | 108-24-7 | 203-564-8 | -      | -   | X     | X    | KE-00017 | X    | X    |

| Component        | CAS No   | TSCA | TSCA Inventory notification - Active-Inactive | DSL | NDSL | AICS | NZIoC | PICCS |
|------------------|----------|------|-----------------------------------------------|-----|------|------|-------|-------|
| Acetic anhydride | 108-24-7 | X    | ACTIVE                                        | X   | -    | X    | X     | X     |

Legend: X - Listed '-' - Not Listed

KECL - NIER number or KE number (<http://ncis.nier.go.kr/en/main.do>)

### Authorisation/Restrictions according to EU REACH

| Component        | CAS No   | REACH (1907/2006) - Annex XIV - Substances Subject to Authorization | REACH (1907/2006) - Annex XVII - Restrictions on Certain Dangerous Substances | REACH Regulation (EC 1907/2006) article 59 - Candidate List of Substances of Very High Concern (SVHC) |
|------------------|----------|---------------------------------------------------------------------|-------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------|
| Acetic anhydride | 108-24-7 | -                                                                   | Use restricted. See entry                                                     | -                                                                                                     |

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|  |  |  |                                           |  |
|--|--|--|-------------------------------------------|--|
|  |  |  | 75.<br>(see link for restriction details) |  |
|--|--|--|-------------------------------------------|--|

## REACH links

<https://echa.europa.eu/substances-restricted-under-reach>

## Seveso III Directive (2012/18/EC)

| Component        | CAS No   | Seveso III Directive (2012/18/EC) -<br>Qualifying Quantities for Major Accident<br>Notification | Seveso III Directive (2012/18/EC) -<br>Qualifying Quantities for Safety Report<br>Requirements |
|------------------|----------|-------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------|
| Acetic anhydride | 108-24-7 | Not applicable                                                                                  | Not applicable                                                                                 |

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

| Component        | CAS No   | OECD HPV | Restriction of Hazardous<br>Substances (RoHS) | Basel Convention<br>(Hazardous Waste) |
|------------------|----------|----------|-----------------------------------------------|---------------------------------------|
| Acetic anhydride | 108-24-7 | Listed   | Not applicable                                | Not applicable                        |

## 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

## Contains component(s) that meet a 'definition' of per & poly fluoroalkyl substance (PFAS)?

Not applicable

Take note of Directive 98/24/EC on the protection of the health and safety of workers from the risks related to chemical agents at work .

## National Regulations

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

## WGK Classification

See table for values

| Component        | Germany - Water Classification (AwSV) | Germany - TA-Luft Class                              |
|------------------|---------------------------------------|------------------------------------------------------|
| Acetic anhydride | WGK1                                  | Class I : 20 mg/m <sup>3</sup> (Massenkonzentration) |

| Component                            | Switzerland - Ordinance on the<br>Reduction of Risk from<br>handling of hazardous<br>substances preparation (SR<br>814.81) | Switzerland - Ordinance on<br>Incentive Taxes on Volatile<br>Organic Compounds (OVOC) | Switzerland - Ordinance of the<br>Rotterdam Convention on the<br>Prior Informed Consent<br>Procedure |
|--------------------------------------|----------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------|
| Acetic anhydride<br>108-24-7 ( >99 ) |                                                                                                                            | Group I                                                                               |                                                                                                      |

## 15.2. Chemical safety assessment

A Chemical Safety Assessment/Report (CSA/CSR) has been conducted by the manufacturer/importer

## SECTION 16: OTHER INFORMATION

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

H226 - Flammable liquid and vapor  
H302 - Harmful if swallowed  
H314 - Causes severe skin burns and eye damage  
H318 - Causes serious eye damage  
H330 - Fatal if inhaled  
EUH071 - Corrosive to the respiratory tract

## 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

## Key literature references and sources for data

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

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

**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)

## Training Advice

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

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

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

Fire prevention and fighting, identifying hazards and risks, static electricity, explosive atmospheres posed by vapours and dusts.

## Prepared By

Health, Safety and Environmental Department

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## Revision Date

09-Jan-2026

## Revision Summary

SDS sections updated, 1, 3, 8, 11, 15.

**This safety data sheet complies with Regulation UK SI 2019/758 and UK SI 2020/1577 as amended.**

## Disclaimer

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**End of Safety Data Sheet**