

Revision: 3.0  
(Replaces revision 2.3 of 16 April 2021)Revision date:  
Date printed:06 May 2021  
12 August 2023**Section 1. Identification****1.1 Product Identifier** 0012

Product Name ACETIC ANHYDRIDE  
CAS Number 108-24-7  
REACH Registration No 01-2119486470-36-XXXX  
Molecular Formula  $(CH_3CO)_2O = 102.09$

**1.2 Relevant identified uses of the substance or mixture & uses advised against**

Uses of Material Chemical for industrial and laboratory use. Not suitable for domestic use.

**1.3 Supplier** Vickers Laboratories Ltd

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**1.4 Emergency Telephone** (08:00-16:30) +44(0) 113 2362811  
(24hr) 112  
(Have this document to hand)**Section 2. Hazards Identification****2.1 Classification of the substance or mixture****Classification according to regulation 1272/2008/EC**

Flammable liquid, category 3  
Skin corrosion/irritation, category 1B  
Acute toxicity, category 4 (oral)  
Acute toxicity, category 4 (inhalation)

H226: Flammable liquid and vapour.  
H314: Causes severe skin burns and eye damage.  
H302: Harmful if swallowed.  
H332: Harmful if inhaled.

**2.2 Label elements****Labelling according to regulation 1272/2008/EC**

Signal word Danger

Hazard Pictograms



Hazard Statements	Flammable liquid and vapour. Causes severe skin burns and eye damage. Harmful if inhaled. Harmful if swallowed.
Precautionary Statements	Keep away from heat / sparks/open flames/hot surfaces - No smoking. Wear protective gloves / protective clothing / eye protection / face protection. Do not breathe dust / fume / gas / mist / vapours / spray. Do not eat, drink or smoke when using this product. IF SWALLOWED: Rinse mouth. Do NOT induce vomiting. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do and continue rinsing.

## Section 3. Composition

### 3.1 Substances

Component	CAS No.	EEC No.	REACH No.	Conc w/w	CLP Classification (1272/2008/CE)
Acetic anhydride	108-24-7	203-564-8	01-2119486470-36-XXXX	>98%	Flam. Liq. 3, Skin Corr. 1B, Acute Tox. 4 (O), Acute Tox. 4 (I)

## Section 4. First Aid

### 4.1 Description of first aid measures

Eyes	Irrigate thoroughly with plenty of water for at least 10 minutes, holding the eye open. OBTAIN MEDICAL ATTENTION URGENTLY.
Skin	Wash off skin thoroughly with water. Remove contaminated clothing immediately and wash before re-use. If discomfort persists OBTAIN MEDICAL ATTENTION.
Inhalation	Remove from exposure. Keep warm and at rest. If there is difficulty in breathing give oxygen if available. If breathing stops or shows signs of failing, apply artificial resuscitation. If unconscious place in the recovery position. OBTAIN MEDICAL ATTENTION URGENTLY.
Ingestion	If conscious give plenty of water to drink. Do not induce vomiting. If there is difficulty in breathing give oxygen if available. If breathing stops or shows signs of failing, apply artificial resuscitation. If unconscious place in the recovery position. OBTAIN MEDICAL ATTENTION URGENTLY.
Personal protection for first aiders	Wear protective gloves / eye protection.

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

No further relevant information available.

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

No further relevant information available.

## Section 5. Fire Fighting

### 5.1 Extinguishing media

Extinguishing Media	Water spray, alcohol resistant foam, dry powder or carbon dioxide. Use water spray to keep fire exposed containers cool.
Unsuitable Media	Do not use water jet.

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

Hazards	Vapour-air mixtures are explosive.
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### 5.3 Advice for firefighters

Advice for firefighters	Evacuate area immediately. Keep up wind. Avoid exposure to toxic vapours and fumes. Fire-fighters should wear protective clothing and breathing apparatus.
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## Section 6. Accidental Release Measures

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

Personal Protection	Ensure no sources of ignition. Avoid breathing vapour. Use approved personal protective equipment. Evacuate area immediately. Do not allow general use of area until it is safe to do so.
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### 6.2 Environmental precautions

Environmental Keep material out of sewers, storm drains, surface waters and soil. Notify the Environmental Agency and local Environmental Health Officer if major spillage occurs.

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

Major Spillage Contain and absorb on inert material. Transfer absorbent to salvage container for removal. Wash area down with copious amounts of water.

Minor Spillage Contain and absorb on inert material. Neutralise spill with soda ash, lime, calcium carbonate or sodium bicarbonate. Wash to drain with copious amounts of water.

### 6.4 Reference to other sections

See section 8.2 for information on protective equipment and section 13 for information on disposal.

## Section 7. Storage & Handling

### 7.1 Precautions for safe handling

Avoid contact with skin and eyes. Do not breath vapours. Do not allow to contaminate clothing.

Ensure Local Exhaust Ventilation maintains vapour concentrations below the recommended limits.

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

Well ventilated, cool, dry storage . Protect from direct sun and store away from sources of ignition. Keep containers closed when not in use.

### 7.3 Specific end use(s)

See section 1.2.

## Section 8. Workplace Exposure & Personal Protection

### 8.1 Control parameters

Component	CAS No	Concentration	Workplace Exposure Limits			
			Long Term (8hr TWA)		Short Term 15min period	
Acetic anhydride	108-24-7	>98%	0.5 ppm	2.0 mg/m-3	2.5 ppm	10.0 mg/m-3

Exposure data source(s) IOELV: Indicative Occupational Exposure Limit Value.

### 8.2 Exposure controls

Respiratory Protection Use L.E.V. or natural ventilation to maintain vapour concentrations below exposure limits. If not, use a well maintained chemical cartridge organic vapour respirator, or use self contained breathing apparatus.

Hand Protection Use PVC gauntlets.

Eye Protection Use chemical full face shield.

Skin Protection Wear PVC oversuit.

Special Hazards No special precautions required.

## Section 9. Physical & Chemical Properties

### 9.1 Information on basic physical and chemical properties

Appearance Clear colourless liquid.

Odour Sharp vinegary odour and burning taste.

pH Not applicable

Boiling Point 139.6°C

Melting Point -73.1°C

Flash Point 54°C (Closed cup)

Upper Flammable Limit 10.1%

Lower Flammable Limit 2.7%

Auto Ignition 330°C

Explosive Properties Moderate/severe in confined spaces.

Oxidising Properties No.

Vapour Pressure 3.9753mmHg @ 20°C

Relative Density	1.0810
Water Solubility	Completely soluble in water but reacts vigorously with much evolution of heat and fumes.

## 9.2 Other information

No data available.

## Section 10. Stability & Reactivity

10.1 Reactivity	No data available.
10.2 Chemical Stability	Stable under normal conditions
10.3 Possibility of hazardous reactions	No data available.
10.4 Conditions to Avoid	Hot surfaces, naked flames or other sources of ignition.
10.5 Incompatible Materials	Water. Alkalis.
10.6 Hazardous Decomposition Products	None unusual. Burning will produce smoke, carbon monoxide and/or carbon dioxide.

## Section 11. Toxicological Information

### 11.1 Information on toxicological effects

Eyes	The vapour is irritating to the eyes. The liquid and solutions will cause severe burns. Damage can range from severe irritation and corneal scarring to permanent blindness.
Skin	The liquid and solutions will cause severe burns. Repeated exposure may cause dermatitis.
LD50 Skin	4000mg/kg Rabbit
Ingestion	Causes severe corrosion of the mouth, throat and gastro-intestinal tract.
LD50 Oral	1780mg/kg Rat
Inhalation	Exposure to vapour concentrations above the occupational exposure limits will produce severe irritation of the eyes, nose, throat and respiratory tract. High concentrations of vapour may seriously damage the membranes lining the nose, throat and upper respiratory tract.
LD50 Inhalation	Not available
TCLo	Not available
Carcinogenicity	Not considered to be a carcinogen.
Mutagenicity	Not considered to be a mutagen.
Reproductive Effects	None identified.
Other Information	The irritant effect provides warning that control of exposure is needed.

## Section 12. Ecological

12.1 Toxicity	Readily biodegradable in both fresh and salt water. Bio-oxidation as a % of Theoretical O2 Demand
LC50 Algal	Not available
LC50 Crustacea	Not available
LC50 Fish	Not available
12.2 Persistence and degradability	No data available.
12.3 Bioaccumulative potential	No data available.
12.4 Mobility in soil	No data available.
12.5 Results of PBT & vPvB assessment	Assessment not required.
12.6 Other adverse effects	None known at present.

## Section 13. Disposal Considerations

### 13.1 Waste treatment methods

Disposal Methods	Dispose of in a licensed incinerator for organic solvents. Do not dispose of as domestic waste. Never dispose of into water courses or sewerage systems due to high risk of explosion.
Contaminated Packaging	Use a licensed waste disposer. Do not attempt to burn any residual liquids due to risk of explosion.

## Section 14. Transport Information

14.1 UN Number	1715
14.2 Proper Shipping Name	Acetic anhydride
14.3 Transport classes	
UN classification	8
Subsidiary hazard(s)	3
Transport category	2
ADR Hazard ID	83
Tunnel Restriction Code	D/E
14.4 Packing Group	II
14.5 Environment hazards	See section 12.
14.6 Special precautions for user	No special precautions required.
14.7 Transport in bulk	Not transported in bulk.



## Section 15. Regulatory Information

### 15.1 Safety, health and environment regulations specific for substance/mixture.

#### Classification, Labeling & Packaging of Substances & Mixtures Regulations (1272/2008/CE)

Classification Flammable liquid, category 3; Skin corrosion/irritation, category 1B; Acute toxicity, category 4 (oral); Acute toxicity, category 4 (inhalation)

Signal word Danger

Hazard Pictograms



Hazard Statements H226, H314, H332, H302  
Flammable liquid and vapour. Causes severe skin burns and eye damage. Harmful if inhaled. Harmful if swallowed.

Hazard Statements (Packs of 100ml/g or less) H226, H332, H314, H302  
Flammable liquid and vapour. Harmful if inhaled. Causes severe skin burns and eye damage. Harmful if swallowed.

Precautionary Statements P210, P280, P260, P270, P301+P330+P331, P305+P351+P338  
Keep away from heat / sparks/open flames/hot surfaces - No smoking. Wear protective gloves / protective clothing / eye protection / face protection. Do not breathe dust / fume / gas / mist / vapours / spray. Do not eat, drink or smoke when using this product. IF SWALLOWED: Rinse mouth. Do NOT induce vomiting. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do and continue rinsing.

Precautionary Statements (Packs of 100ml/g or less) P280, P210  
Wear protective gloves / protective clothing / eye protection / face protection. Keep away from heat / sparks/open flames/hot surfaces - No smoking.

### 15.2 Chemical safety assessment

Assessment not required.

## Section 16. Other Information

The information contained in this document only covers the hazards presented by this material, it DOES NOT constitute a workplace risk assessment. See sections 11 for toxicological information and section 12 for ecological information.

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