

Acetic anhydride

33214-1L

Version 1.2

Revision Date 09.06.2022

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier

Product name : Acetic anhydride
SDS-number : 000000020871
Type of product : Substance
Remarks : SDS according to Art. 31 of Regulation (EC) 1907/2006.
Chemical name : acetic anhydride
Index-No. : 607-008-00-9
REACH Registration Number : no data available

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

Use of the Substance/Mixture : Laboratory chemicals
Uses advised against : none

1.3. Details of the supplier of the safety data sheet

Company	: Honeywell International Inc. 115 Tabor Road 07950-2546 Morris Plains USA	Honeywell International, Inc. 115 Tabor Road Morris Plains, NJ 07950-2546 USA
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Telephone :
For further information, please contact: : SafetyDataSheet@Honeywell.com

1.4. Emergency telephone number

Emergency telephone number : +1-703-527-3887 (ChemTrec-Transport)
+1-303-389-1414 (Medical)
Country based Poison : see chapter 15.1

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Control Center

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

REGULATION (EC) No 1272/2008

Flammable liquids Category 3
H226 Flammable liquid and vapour.
Acute toxicity Category 4 - Oral
H302 Harmful if swallowed.
Acute toxicity Category 4 - Inhalation
H332 Harmful if inhaled.
Skin corrosion Category 1B
H314 Causes severe skin burns and eye damage.

2.2. Label elements

REGULATION (EC) No 1272/2008

Hazard pictograms



Signal word

: Danger

Hazard statements

: H226
H302 + H332
H314

Flammable liquid and vapour.
Harmful if swallowed or if inhaled.
Causes severe skin burns and eye damage.

Precautionary statements

: P210

P260

P280

P284
P301 + P330 + P331

P302 + P352
P304 + P340

Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
Do not breathe dust/ fume/ gas/ mist/ vapours/ spray.
Wear protective gloves/protective clothing/eye protection/face protection.
Wear respiratory protection.
IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.
IF ON SKIN: Wash with plenty of water.
IF INHALED: Remove person to fresh

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P305 + P351 + P338 air and keep comfortable for breathing.
IF IN EYES: Rinse cautiously with water
for several minutes. Remove contact
lenses, if present and easy to do.
Continue rinsing.

P308 + P313 IF exposed or concerned: Get medical
advice/ attention.

2.3. Other hazards

Vapours may form explosive mixtures with air. Results of PBT and vPvB assessment, see chapter 12.5.

SECTION 3: Composition/information on ingredients

3.1. Substance

Chemical name	CAS-No. Index-No. REACH Registration Number EC-No.	Classification 1272/2008	Concentration	Remarks
acetic anhydride	108-24-7 607-008-00-9 203-564-8	Flam. Liq. 3; H226 Acute Tox. 4; H302; Oral Acute Tox. 4; H332; Inhalation Skin Corr. 1B; H314 STOT SE 3; H335; Respiratory system	100 %	STOT SE 3; H335: >= 5 % Eye Irrit. 2; H319: 1 - < 5 % Eye Dam. 1; H318: 5 - < 25 % Skin Irrit. 2; H315: 5 - < 25 % Skin Corr. 1B; H314: >= 25 % Skin Corr. 1B; H314: >= 25 %

3.2. Mixture

Not applicable

Occupational Exposure Limit(s), if available, are listed in Section 8.

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For the full text of the H-Statements mentioned in this Section, see Section 16.

SECTION 4: First aid measures

4.1 Description of first aid measures

General advice:

First aider needs to protect himself. Move out of dangerous area. Take off all contaminated clothing immediately.

Inhalation:

If breathed in, move person into fresh air. Call a physician immediately.

Skin contact:

After contact with skin, wash immediately with plenty of water. Call a physician immediately.

Eye contact:

Rinse thoroughly with plenty of water, also under the eyelids. Protect unharmed eye. Call a physician immediately.

Ingestion:

Do NOT induce vomiting. When swallowed, allow water to be drunk. Rinse mouth. Call a physician immediately.

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

No data available

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

No data available

See Section 11 for more detailed information on health effects and symptoms.

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SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media:

Carbon dioxide (CO₂)
Dry chemical
Alcohol-resistant foam

Extinguishing media which shall not be used for safety reasons:

High volume water jet

5.2. Special hazards arising from the substance or mixture

Flammable.

Vapours may form explosive mixtures with air.

Vapours are heavier than air and may spread along floors.

Vapors may travel to areas away from work site before igniting/flashing back to vapor source.

In case of fire hazardous decomposition products may be produced such as:

Carbon monoxide
Carbon dioxide (CO₂)

5.3. Advice for firefighters

In the event of fire, wear self-contained breathing apparatus.

Do not use a solid water stream as it may scatter and spread fire. Use a water spray to cool fully closed containers. Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Wear personal protective equipment. Immediately evacuate personnel to safe areas. Keep people away from and upwind of spill/leak. Ensure adequate ventilation. Remove all sources of ignition. Do not swallow. Do not breathe vapours or spray mist. Do not get in eyes, on skin, or on clothing.

6.2. Environmental precautions

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Prevent further leakage or spillage if safe to do so. Prevent product from entering drains. Discharge into the environment must be avoided. Do not flush into surface water or sanitary sewer system. Do not allow run-off from fire fighting to enter drains or water courses.

6.3. Methods and materials for containment and cleaning up

Soak up with inert absorbent material.
Pick for disposal in tightly closed containers

6.4. Reference to other sections

For personal protection see section 8.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Advice on safe handling:

Wear personal protective equipment. Use only in well-ventilated areas. Keep container tightly closed. Do not smoke. Do not swallow. Do not breathe vapours or spray mist. Do not get in eyes, on skin, or on clothing.

Advice on protection against fire and explosion:

Keep away from heat and sources of ignition. Take precautionary measures against static discharges.

Hygiene measures:

When using do not eat, drink or smoke. Wash hands before breaks and immediately after handling the product. Keep working clothes separately. Remove and wash contaminated clothing before re-use. Do not swallow. Do not breathe vapours or spray mist. Do not get in eyes, on skin, or on clothing.

7.2. Conditions for safe storage, including any incompatibilities

Requirements for storage areas and containers:

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

7.3. Specific end use(s)

no additional data available

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SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Occupational exposure limits:

Components	Basis / Value type	Value / Form of exposure	Exceeding Factor	Remarks
acetic anhydride	EH40 WEL STEL	10 mg/m ³ 2 ppm		
acetic anhydride	EH40 WEL TWA	2,5 mg/m ³ 0,5 ppm		
acetic anhydride	BY MAC MAC STEL	3 mg/m ³ Vapour		
acetic anhydride	EH40 WEL STEL	10 mg/m ³ 2 ppm	15 minutes	

STEL - Short term exposure limit

TWA - Time weighted average

MAC STEL - Short-term Exposure Limit STEL (MAC):

DNEL/ PNEC-Values

No DNEL-data available.

No PNEC data available.

8.2. Exposure controls

Occupational exposure controls

The Personal Protective Equipment must be in accordance with EN standards:respirator EN 136, 140, 149; safety glasses EN 166; protective suit: EN 340, 463, 468, 943-1, 943-2; gloves EN 374, 511; safety shoes EN-ISO 20345.

Engineering measures

Use with local exhaust ventilation.

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Personal protective equipment

Respiratory protection:

In the case of vapour formation use a respirator with an approved filter.

Hand protection:

Glove material: Natural Latex

Break through time: > 480 min

Glove thickness: 1 mm

Combi Latex 403

Gloves must be inspected prior to use.

Replace when worn.

Remarks: Supplementary note: The specifications are based on information and tests from similar substances by analogy.

Due to varying conditions (e.g.temperature or other strains) it must be considered that the usage of a chemical protective glove in practice may be much shorter than the permeation time determined in accordance with EN 374.

Since actual conditions of practical use often deviate from standardised conditions according EN 374 the glove manufacturer recommends to use the chemical protective glove in practice not longer than 50% of the recommended permeation time.

Manufacturer's directions for use should be observed because of great diversity of types .

Suitable gloves tested according EN 374 are supplied e.g. from KCL GmbH, D-36124 Eichenzell, Vertrieb@kcl.de

Skin and body protection:

Wear as appropriate:

Solvent-resistant apron

Flame retardant antistatic protective clothing.

If splashes are likely to occur, wear:

Protective suit

Environmental exposure controls

Handle in accordance with local environmental regulations and good industrial practices.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state : liquid

Colour : colourless

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Odour	:	strong vinegar-like
molecular weight	:	102,1 g/mol
Freezing point	:	-73,1 °C
Boiling point/boiling range	:	140 °C
Upper explosion limit	:	10,3 %(V)
Lower explosion limit	:	2,7 %(V)
Flash point	:	49,5 °C Method: closed cup
Auto-ignition temperature	:	316 °C
Decomposition temperature	:	Stable under recommended storage conditions.
pH	:	not determined
Viscosity, kinematic	:	No data available
Viscosity, kinematic	:	No data available
Water solubility	:	completely soluble
Partition coefficient: n-octanol/water	:	Pow: 0,27
Vapour pressure	:	5,3 hPa at 20 °C
Density	:	1,083 g/cm ³ at 20 °C
Relative vapour density	:	3,52 (Air = 1.0)

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9.2 Other Information

- Oxidizing properties : The substance or mixture is not classified as oxidizing.
- Evaporation rate : No data available
- Evaporation rate : No data available
- Viscosity, dynamic : No data available
- Viscosity, dynamic : No data available

SECTION 10: Stability and reactivity

10.1. Reactivity

Stable under normal conditions.

10.2. Chemical stability

Stable under recommended storage conditions.

10.3. Possibility of hazardous reactions

Hazardous polymerisation does not occur.

10.4. Conditions to avoid

Heat, flames and sparks.
Keep away from direct sunlight.
Protect against water.
Protect from moisture.

10.5. Incompatible materials

Water
Bases
Alcohols
Glycol

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Hydrogen peroxide, aqueous solution
Perchloric acid
Nitric acid
Strong oxidizing agents
Amines
Chromium trioxide
Boric Acid
Corrosive in contact with metals

10.6. Hazardous decomposition products

In case of fire hazardous decomposition products may be produced such as:

Carbon monoxide
Carbon dioxide (CO₂)

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute oral toxicity:

Classification based on Annex VI of regulation 1272/2008/EC.

Acute dermal toxicity:

LD50

Species: Rabbit

Value: 4.000 mg/kg

Acute inhalation toxicity:

Classification based on Annex VI of regulation 1272/2008/EC.

Skin irritation:

Classification based on Annex VI of regulation 1272/2008/EC.

Eye irritation:

Classification based on Annex VI of regulation 1272/2008/EC.

Respiratory or skin sensitisation:

No data available

Repeated dose toxicity:

Species: Rat

Application Route: Inhalation

Dose: Intermittent – 40 ppm or 167.2 mg/m³

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Exposure time: 2 Weeks
Note: Respiratory disorders
: Lachrymation
: Shortness of breath
: Fatality

Species: Rat
Application Route: Inhalation
Exposure time: 13 Weeks
NOEL: 1
Note: Local effects
: Respiratory irritation

Species: Rat
Application Route: Inhalation
Exposure time: 13 Weeks
Note: Systemic toxicity
: No systemic toxicity was observed at 20 ppm (the highest level tested).

Carcinogenicity:
Note: No data available

Germ cell mutagenicity:
Test Method: Ames test
Result: negative

Species: Rat
Cell type: Micronucleus
Application Route: Inhalation
Result: negative

Reproductive toxicity:
Remarks: Not classified due to data which are conclusive although insufficient for classification.

Aspiration hazard:
No data available

11.2. Information on other hazards

Endocrine disrupting properties
No data available

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Other information:

No data available

SECTION 12: Ecological information

12.1. Toxicity

Toxicity to fish:

Not classified due to data which are conclusive although insufficient for classification.

Toxicity to aquatic plants:

Not classified due to data which are conclusive although insufficient for classification.

Toxicity to aquatic invertebrates:

Not classified due to data which are conclusive although insufficient for classification.

12.2. Persistence and degradability

Biodegradability:

aerobic

Biodegradation: 95 %

Exposure time: 5 d

Result: Inherently biodegradable.

Method: OECD 302 B

12.3. Bioaccumulative potential

No data available

12.4. Mobility in soil

No data available

12.5. Results of PBT and vPvB assessment

No data available

12.6. Endocrine disrupting properties

No data available

12.7. Other adverse effects

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No data available

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Product:

Dispose according to legal requirements.

Packaging:

Legal requirements are to be considered in regard of reuse or disposal of used packaging materials

Further information:

Provisions relating to waste:

EC Directive 2006/12/EC; 2008/98/EEC

Regulation No. 1013/2006

For personal protection see section 8.

SECTION 14: Transport information

14.1 UN number

ADR/RID:1715

IMDG:1715

IATA:1715

14.2 UN proper shipping name

ADR/RID:ACETIC ANHYDRIDE

IMDG:ACETIC ANHYDRIDE

IATA:Acetic anhydride

14.3 Transport hazard class(es)

ADR/RID: 8 (3)

IMDG: 8 (3)

IATA: 8 (3)

14.4 Packaging group

ADR/RID: II

IMDG: II

IATA: II

14.5 Environmental hazards

ADR/RID:no

Marine pollutant: no

14.6 Special precautions for user

IMDG Code segregation group (SGG1) – ACIDS,

14.7 Maritime transport in bulk according to IMO instruments

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No data available

SECTION 15: Regulatory information

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

Basis	Value	Remarks
Substances of very high concern (SVHC)		This product does not contain substances of very high concern according to Regulation (EC) No Article 57 above the respective regulatory 1907/2006 (REACH), concentration limit of $\geq 0.1\%$ (w/w).
Directive 2012/18/EC SEVESO III Listed in Regulation : P5c: FLAMMABLE LIQUIDS	Quantity: 5.000 kg Quantity: 50.000 kg	

Poison Control Center

Country	Phone Number
Austria	+4314064343
Belgium	070 245245
Bulgaria	(+)35929154233
Croatia	(+3851)23-48-342
Cyprus	+357 2240 5611
Czech Republic	+420224919293; +420224915402
Denmark	82121212
Estonia	16662; (+372)6269390
Finland	9471977
France	+33(0)145425959
Greece	+30 210 779 3777
Hungary	(+36-80)201-199
Iceland	5432222

Country	Phone Number
Liechtenstein	+41 442515151
Lithuania	+370532362052
Luxembourg	070245245; (+352)80002-5500
Malta	+356 2395 2000
Netherlands	030-2748888
Norway	22591300
Poland	+48 42 25 38 400
Portugal	800250250
Romania	+40 21 318 3606
Slovakia (NTIC)	+421 2 54 774 166
Slovenia	+386 1 400 6051
Spain	+34915620420
Sweden	112 (begär

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Ireland	+353(1)8092166
Italy	0382 24444
Germany	Berlin : 030/19240
	Bonn : 0228/19240
	Erfurt : 0361/730730
	Freiburg : 0761/19240
	Göttingen : 0551/19240
	Homburg : 06841/19240
	Mainz : 06131/19240
Munich : 089/19240	
Latvia	+37167042473

	Giftinformation);+46104566786
Switzerland	145
United Kingdom	(+44) 844 892 0111

Other inventory information

US. Toxic Substances Control Act
On TSCA Inventory

Australia. Industrial Chemicals Act (AIC), as amended
On the inventory, or in compliance with the inventory

Canada. Canadian Environmental Protection Act (CEPA). Domestic Substances List (DSL)
All components of this product are on the Canadian DSL

Japan. Kashin-Hou Law List
On the inventory, or in compliance with the inventory

Korea. Existing Chemicals Inventory (KECI)
On the inventory, or in compliance with the inventory

Philippines. Inventory of Chemicals and Chemical Substances (PICCS)
On the inventory, or in compliance with the inventory

China. Inventory of Existing Chemical Substances (IECSC)
On the inventory, or in compliance with the inventory

New Zealand. Inventory of Chemicals (NZIoC), as published by ERMA New Zealand

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On the inventory, or in compliance with the inventory

Taiwan Chemical Substance Inventory (TCSI)

On the inventory, or in compliance with the inventory

15.2 Chemical safety assessment

A Chemical Safety Assessment has not been carried out.

SECTION 16: Other information

Text of H-statements referred to under heading 3

acetic anhydride : H226 Flammable liquid and vapour.
H302 Harmful if swallowed.
H332 Harmful if inhaled.
H314 Causes severe skin burns and eye damage.
H335 May cause respiratory irritation.

Further information

All directives and regulations refer to amended versions.

Vertical lines in the left hand margin indicate a relevant amendment from the previous version.

Abbreviations:

EC European Community

CAS Chemical Abstracts Service

DNEL Derived no effect level

PNEC Predicted no effect level

vPvB Very persistent and very bioaccumulative substance

PBT Persistent, bioaccumulative und toxic substance

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

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materials or in any process, unless specified in the text. Final determination of suitability of any material is the sole responsibility of the user.

This information should not constitute a guarantee for any specific product properties.
