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

1.1 Product identifier

Trade name: Acetic Anhydride

CAS Number:

108-24-7

EC number:

203-564-8

Index number:

607-008-00-9

Registration number 01-2119486470-36-XXXX

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

Manufacture of substance

Chemical Intermediate

Sector of Use

SU22 Professional uses: Public domain (administration, education, entertainment, services, craftsmen)

Process category PROC15 Use as laboratory reagent

Environmental release category

ERC8a Widespread use of non-reactive processing aid (no inclusion into or onto article, indoor)

Application of the substance / the mixture

In conversion of cellulose to cellulose acetate

Asprin production

A wood preservative

In production of modified starches

It is used as a laboratory reagent and also used as intermediates.

1.3 Details of the supplier of the safety data sheet


Supplier:

Supplier: Bloomchemag BV

Address: Sint - Antoniusstraat 16 b1, B-2400 Mol, Belgium.

Tel no. : +91 72919 74484 / 72919 74050

Email: info@bloomchemag.com

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SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Classification according to Regulation (EC) No 1272/2008

GHS02 flame

Flam. Liq. 3 H226 Flammable liquid and vapour.

GHS06 skull and crossbones

Acute Tox. 1 H330 Fatal if inhaled.

GHS05 corrosion

Skin Corr. 1B H314 Causes severe skin burns and eye damage.

GHS07

Acute Tox. 4 H302 Harmful if swallowed.

Classification according to Directive 67/548/EEC or Directive 1999/45/EC

Not applicable.

T+; Very toxic

R26: Very toxic by inhalation.

C; Corrosive

R35: Causes severe burns.

Xn; Harmful

R22: Harmful if swallowed.

R10: Flammable.

Information concerning particular hazards for human and environment: Not applicable.

2.2 Label elements

Labelling according to Regulation (EC) No 1272/2008

The substance is classified and labelled according to the CLP regulation.

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Hazard pictograms

GHS02 GHS05 GHS06

Signal word Danger**Hazard statements**

H226 Flammable liquid and vapour.

H302 Harmful if swallowed.

H330 Fatal if inhaled.

H314 Causes severe skin burns and eye damage.

Precautionary statements

P303+P361+P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.

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

P310 Immediately call a POISON CENTER/doctor.

P320 Specific treatment is urgent (see on this label).

P405 Store locked up.

P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

2.3 Other hazards**Results of PBT and vPvB assessment****PBT:** Not applicable.**vPvB:** Not applicable.**SECTION 3: Composition/information on ingredients****3.1 Chemical characterisation: Substances****CAS No. Description**

108-24-7 Acetic Anhydride

Identification number(s)**EC number:** 203-564-8**Index number:** 607-008-00-9**Additional information:**Molecular Formula: C₄H₆O₃

Molecular Weight: 102.09

Synonyms: Aceticacidanhydride, Acetyl acetate, Acetyl anhydride, Acetyl ether, Acetylanhydride, Acetylether

SVHC The substance is not in the list of SVHC substances

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SECTION 4: First aid measures**4.1 Description of first aid measures****General information:**

Immediately remove any clothing soiled by the product.

Symptoms of poisoning may even occur after several hours; therefore medical observation for at least 48 hours after the accident.

After inhalation: Supply fresh air; consult doctor in case of complaints.

After skin contact: Immediately rinse with water.

After eye contact: Rinse opened eye for several minutes under running water.

After swallowing: Call for a doctor immediately.

4.2 Most important symptoms and effects, both acute and 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: Firefighting measures**5.1 Extinguishing media****Suitable extinguishing agents:**

CO₂, powder or water spray. Fight larger fires with water spray or alcohol resistant foam.

For safety reasons unsuitable extinguishing agents: Water with full jet

5.2 Special hazards arising from the substance or mixture

During heating or in case of fire poisonous gases are produced.

5.3 Advice for firefighters**Protective equipment:**

Mouth respiratory protective device.

Wear fully protective suit.

SECTION 6: Accidental release measures**6.1 Personal precautions, protective equipment and emergency procedures**

Wear protective equipment. Keep unprotected persons away.

Mount respiratory protective device.

6.2 Environmental precautions: Do not allow to enter sewers/ surface or ground water.

6.3 Methods and material for containment and cleaning up:

Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).

Use neutralising agent.

Dispose contaminated material as waste according to item 13.

Ensure adequate ventilation.

6.4 Reference to other sections

See Section 7 for information on safe handling.

See Section 8 for information on personal protection equipment.

See Section 13 for disposal information.

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SECTION 7: Handling and storage**7.1 Precautions for safe handling**

Ensure good ventilation/exhaustion at the workplace.

Prevent formation of aerosols.

Restrict the quantity stored at the work place.

Information about fire - and explosion protection:

Keep ignition sources away - Do not smoke.

Protect against electrostatic charges.

Keep respiratory protective device available.

7.2 Conditions for safe storage, including any incompatibilities**Storage:****Requirements to be met by storerooms and receptacles:**

Use only receptacles specifically permitted for this substance/product.

Information about storage in one common storage facility:

Store away from water.

Store away from oxidising agents.

Do not store together with acids.

Further information about storage conditions:

Store at ambient temperature condition.

Keep container tightly sealed

7.3 Specific end use(s) See section 1.2 for specific end uses.

SECTION 8: Exposure controls/personal protection

Additional information about design of technical facilities: No further data; see item 7.

8.1 Control parameters**Ingredients with limit values that require monitoring at the workplace:****108-24-7 Acetic Anhydride**

WEL Short-term value: 10 mg/m³, 2 ppm

Long-term value: 2.5 mg/m³, 0.5 ppm

Additional information: The lists valid during the making were used as basis.

8.2 Exposure controls**Personal protective equipment:****General protective and hygienic measures:**

Keep away from foodstuffs, beverages and feed.

Immediately remove all soiled and contaminated clothing

Wash hands before breaks and at the end of work.

Respiratory protection:

In case of brief exposure or low pollution use respiratory filter device. In case of intensive or longer exposure use self-contained respiratory protective device.

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Protection of hands:

Protective gloves

Material of gloves Butyl rubber, BR**Penetration time of glove material**

The typical or minimum breakthrough times of the glove material : 480 min

Value for the permeation: Level 0.3 mm

Eye protection:

Tightly sealed goggles

Face protection

Body protection: Use protective suit.**SECTION 9: Physical and chemical properties****9.1 Information on basic physical and chemical properties****General Information****Appearance:**

Form:	Fluid
Colour:	Colourless
Odour:	Pungent
Odour threshold:	Not determined.


pH-value: Not determined.**Change in condition**

Melting point/freezing point:	-73.1 °C
Initial boiling point and boiling range:	139.55 °C

Flash point: 49 °C**Flammability (solid, gas):** Not applicable.**Ignition temperature:** 330 °C**Decomposition temperature:** Not determined.**Auto-ignition temperature:** Not determined.**Explosive properties:** Product is not explosive. However, formation of explosive air/vapour mixtures are possible.**Explosion limits:**

Lower:	2 Vol %
Upper:	10.2 Vol %

Vapour pressure at 20 °C: 4.9 hPa

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Density at 20 °C:	1.082 g/cm ³
Relative density	Not determined.
Vapour density	Not determined.
Evaporation rate	Not determined.
Solubility in / Miscibility with water at 20 °C:	136 g/l
Partition coefficient: n-octanol/water:	Not determined.
Viscosity:	
Dynamic:	Not determined.
Kinematic:	Not determined.
9.2 Other information	No further relevant information available.

SECTION 10: Stability and reactivity

10.1 Reactivity No further relevant information available.

10.2 Chemical stability

Thermal decomposition / conditions to be avoided: No decomposition if used according to specifications.

10.3 Possibility of hazardous reactions No dangerous reactions known.

10.4 Conditions to avoid

Do not allow water to enter container because of violent reaction.

High temperatures, incompatible materials, ignition sources, excess heat.

10.5 Incompatible materials: Oxidizing agents

10.6 Hazardous decomposition products: No dangerous decomposition products known.

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Acute toxicity

Harmful if swallowed.

Fatal if inhaled.

LD/LC50 values relevant for classification:

Oral LD50 630 mg/kg (rat)

Inhalative LC100 1.67 mg/L (rat)

Primary irritant effect:

Skin corrosion/irritation

Causes severe skin burns and eye damage.

Serious eye damage/irritation

Causes severe skin burns and eye damage.

Respiratory or skin sensitisation Based on available data, the classification criteria are not met.

CMR effects (carcinogenicity, mutagenicity and toxicity for reproduction)

Germ cell mutagenicity Based on available data, the classification criteria are not met.

Carcinogenicity Based on available data, the classification criteria are not met.

Reproductive toxicity Based on available data, the classification criteria are not met.

STOT-single exposure Based on available data, the classification criteria are not met.

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STOT-repeated exposure Based on available data, the classification criteria are not met.

Aspiration hazard Based on available data, the classification criteria are not met.

SECTION 12: Ecological information**12.1 Toxicity**

Aquatic toxicity: No further relevant information available.

12.2 Persistence and degradability No further relevant information available.

12.3 Bioaccumulative potential No further relevant information available.

12.4 Mobility in soil No further relevant information available.

Additional ecological information:**General notes:**

Water hazard class 1 (German Regulation) (Assessment by list): slightly hazardous for water

Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.

12.5 Results of PBT and vPvB assessment

PBT: Not applicable.

vPvB: Not applicable.

12.6 Other adverse effects No further relevant information available.

SECTION 13: Disposal considerations**13.1 Waste treatment methods****Recommendation**

Must not be disposed together with household garbage. Do not allow product to reach sewage system.

Waste must be disposed of in accordance with federal, state and local environmental control regulations

Uncleaned packaging:

Recommendation: Disposal must be made according to official regulations.

SECTION 14: Transport information**14.1 UN-Number**

ADR, IMDG, IATA

UN1715

14.2 UN proper shipping name

ADR

1715 ACETIC ANHYDRIDE

IMDG, IATA


ACETIC ANHYDRIDE

14.3 Transport hazard class(es)


ADR

Class

8 Corrosive substances.

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Label	8+3
IMDG	
Class	8 Corrosive substances.
Label	8/3
IATA	
Class	8 Corrosive substances.
Label	8 (3)
14.4 Packing group ADR, IMDG, IATA	II
14.5 Environmental hazards:	Not applicable.
14.6 Special precautions for user	Warning: Corrosive substances.
Danger code (Kemler):	83
EMS Number:	8-04
Segregation groups	Acids, acids
Stowage Category	A
Stowage Code	SW2 Clear of living quarters.
14.7 Transport in bulk according to Annex II of Marpol and the IBC Code	Not applicable.
Transport/Additional information:	
ADR	
Limited quantities (LQ)	1L
Excepted quantities (EQ)	Code: E2 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 500 ml
Transport category	2
Tunnel restriction code	D/E
IMDG	
Limited quantities (LQ)	1L
Excepted quantities (EQ)	Code: E2 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 500 ml
UN "Model Regulation":	UN 1715 ACETIC ANHYDRIDE, 8 (3), II

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SECTION 15: Regulatory information

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

Directive 2012/18/EU

Named dangerous substances - ANNEX I Substance is not listed.

Seveso category P5c FLAMMABLE LIQUIDS

Qualifying quantity (tonnes) for the application of lower-tier requirements 5 t

Qualifying quantity (tonnes) for the application of upper-tier requirements 20 t

REGULATION (EC) No 1907/2006 ANNEX XVII Conditions of restriction: 3, 40

National regulations:

Substances of very high concern (SVHC) according to REACH, Article 57

The substance is not listed as SVHC.

15.2 Chemical safety assessment: A Chemical Safety Assessment has been carried out.

SECTION 16: Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

Annex: Exposure scenario

Short title of the exposure scenario Use in laboratories. - Industrial. Professional.

Sector of Use

SU22 Professional uses: Public domain (administration, education, entertainment, services, craftsmen)

Process category PROC15 Use as laboratory reagent

Environmental release category

ERC8a Widespread use of non-reactive processing aid (no inclusion into or onto article, indoor)

Description of the activities / processes covered in the Exposure Scenario

See section 1 of the annex to the Safety Data Sheet.


Conditions of use

Duration and frequency 8hrs (full working shift).

Worker 8hrs (full working shift).

Physical parameters

The data on the physical - chemical properties in the Exposure Scenario is based on the properties of the preparation.

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Physical state Fluid

Concentration of the substance in the mixture Raw material.

Used amount per time or activity Smaller than 100 g per application.

Other operational conditions

Other operational conditions affecting environmental exposure No special measures required.

Other operational conditions affecting worker exposure

Take precautionary measures against static discharge.

Keep away from sources of ignition - No smoking.

Avoid contact with eyes.

Avoid contact with the skin.

Do not breathe gas/vapour/aerosol.

Indoor application.

Other operational conditions affecting consumer exposure No special measures required.

Other operational conditions affecting consumer exposure during the use of the product Not applicable.

Risk management measures

Worker protection

Organisational protective measures No special measures required.

Technical protective measures

Provide explosion-proof electrical equipment.

Ensure that suitable extractors are available on processing machines

Personal protective measures

Do not inhale gases / fumes / aerosols.

Avoid contact with the skin.

Avoid contact with the eyes.

Tightly sealed goggles

In case of brief exposure or low pollution use respiratory filter device. In case of intensive or longer exposure use self-contained respiratory protective device.

Protective gloves

Measures for consumer protection Ensure adequate labelling.

Environmental protection measures

Water

Generally, prior to the introduction of wastewater into wastewater treatment plants a neutralisation is required.

Notes In case of unintended release of the product: See section 6 of the Safety Data Sheet.

Disposal measures Ensure that waste is collected and contained.

Disposal procedures

Must not be disposed together with household garbage. Do not allow product to reach sewage system.

Waste type Partially emptied and uncleaned packaging

Exposure estimation

Worker (dermal) The highest dermal exposure to be expected is 0.03 mg / kg / day.

Worker (inhalation) The highest inhalative exposure to be expected is 0.60 ppm.

Consumer Not relevant for this Exposure Scenario.

Guidance for downstream users No further relevant information available.