

Safety data sheet
 according to 1907/2006/EC, Article 31

Printing date 07.12.2020

Version number 2

Revision: 23.02.2020

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

· **1.1 Product identifier**

· **Trade name:** Cap A

· **Article number:** 0336

· **Registration number**

A registration number is not available for this substance as the substance or its uses are exempted from registration or the annual tonnage does not require a registration.

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

No further relevant information available.

· **Application of the substance / the mixture**

Chemical for research, development, manufacturing, laboratory chemical for analysis.

· **1.3 Details of the supplier of the safety data sheet**

· **Manufacturer/Supplier:**

Biosolve Chimie

20 Rue Roger Husson, 57260 Dieuze, France

Tel: +33 3 878 675 80/81/82/83/84/85

Email: info@biosolvechimie.com

Biosolve B.V.

Leenderweg 78, 5555 CE Valkenswaard, the Netherlands.

Tel: +31-(0)40-2071300

Fax: +31-(0)40-2048537

Email: info@biosolve-chemicals.com

· **Further information obtainable from:** Product safety department.

· **1.4 Emergency telephone number:**

Contact list of appointed bodies for information relating to emergency health response, according to Art. 45(1) Reg. (EC) No 1272/2008.

see: <https://poisoncentres.echa.europa.eu/home>.

Help desk: <http://echa.europa.eu/web/guest/support/helpdesks/national-helpdesks/list-of-national-helpdesks>.

Data from: ECHA - EUROPEAN CHEMICALS AGENCY

For more information see section 16.

SECTION 2: Hazards identification

· **2.1 Classification of the substance or mixture**

· **Classification according to Regulation (EC) No 1272/2008**



GHS02 flame

Flam. Liq. 2 H225 Highly flammable liquid and vapour.



GHS08 health hazard

Carc. 2 H351 Suspected of causing cancer.



GHS05 corrosion

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

Eye Dam. 1 H318 Causes serious eye damage.



GHS07

STOT SE 3 H335 May cause respiratory irritation.

· 2.2 Label elements

· Labelling according to Regulation (EC) No 1272/2008

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

· Hazard pictograms



GHS02

GHS05

GHS07

GHS08

· Signal word Danger

· Hazard-determining components of labelling:

tetrahydrofuran

Acetic anhydride

· Hazard statements

H225 Highly flammable liquid and vapour.

H314 Causes severe skin burns and eye damage.

H351 Suspected of causing cancer.

H335 May cause respiratory irritation.

· Precautionary statements

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

P405 *Store locked up.*

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

· Additional information:

EUH019 *May form explosive peroxides.*

· 2.3 Other hazards

· Results of PBT and vPvB assessment

· **PBT:** Not applicable.

· **vPvB:** Not applicable.

SECTION 3: Composition/information on ingredients

· 3.2 Chemical characterisation: Mixtures

· **Description:** Mixture of substances listed below with nonhazardous additions.

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Dangerous components:

CAS: 109-99-9 EINECS: 203-726-8 Index number: 603-025-00-0 Reg.nr.: 01-2119444314-46-XXXX	tetrahydrofuran ⚠ Flam. Liq. 2, H225; ⚠ Carc. 2, H351; ⚠ Eye Irrit. 2, H319; STOT SE 3, H335	75-100%
	Acetic anhydride ⚠ Flam. Liq. 3, H226; ⚠ Skin Corr. 1, H314; ⚠ Acute Tox. 4, H302; Acute Tox. 4, H332	2.5-10%

· **Additional information:** For the wording of the listed hazard phrases refer to section 16.

SECTION 4: First aid measures

- **4.1 Description of first aid measures**
- **General information:** Immediately remove any clothing soiled by the product.
- **After inhalation:** In case of unconsciousness place patient stably in side position for transportation.
- **After skin contact:** Immediately wash with water and soap and rinse thoroughly.
- **After eye contact:** Rinse opened eye for several minutes under running water. Then consult a doctor.
- **After swallowing:** Drink plenty of water and provide fresh air. 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.
- **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.

SECTION 6: Accidental release measures

- **6.1 Personal precautions, protective equipment and emergency procedures**
 Mount respiratory protective device.
 Wear protective equipment. Keep unprotected persons away.
- **6.2 Environmental precautions:**
 Dilute with plenty of water.
 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.

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- **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.

SECTION 7: Handling and storage

- **7.1 Precautions for safe handling**
Ensure good ventilation/exhaustion at the workplace.
Open and handle receptacle with care.
Prevent formation of aerosols.
- **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:** Store in a cool location.
- **Information about storage in one common storage facility:** Not required.
- **Further information about storage conditions:**
Keep container tightly sealed.
Store in cool, dry conditions in well sealed receptacles.
- **7.3 Specific end use(s)** No further relevant information available.

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:**

CAS: 109-99-9 tetrahydrofuran

IOELV	Short-term value: 300 mg/m ³ , 100 ppm Long-term value: 150 mg/m ³ , 50 ppm Skin
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- **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.
Store protective clothing separately.
Avoid contact with the eyes.
Avoid contact with the eyes and skin.
- **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:

Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.



Protective gloves

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation. Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

· Material of gloves

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.

· Penetration time of glove material

The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

· Eye protection:


Tightly sealed goggles

SECTION 9: Physical and chemical properties

· 9.1 Information on basic physical and chemical properties
· General Information
· Appearance:

Form:	Solution
Colour:	Colourless
Odour:	Ether-like
Odour threshold:	No data available.

· pH-value:	No data available
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· Change in condition

Melting point/freezing point:	No data available.
Initial boiling point and boiling range:	65 °C

· Flash point:	< 0 °C
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· Flammability (solid, gas):	Not applicable.
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· Ignition temperature:	230 °C
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· Decomposition temperature:	No data available
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· Auto-ignition temperature:	Product is not selfigniting.
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· Explosive properties:	May form explosive peroxides.
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· Explosion limits:	
Lower:	1.5 Vol %
Upper:	12 Vol %
· Vapour pressure at 20 °C:	200 hPa
· Density at 20 °C:	0.91 g/cm ³
· Relative density	No data available
· Vapour density	No data available
· Evaporation rate	No data available
· Solubility in / Miscibility with water:	Fully miscible.
· Partition coefficient: n-octanol/water:	No data available
· Viscosity:	
Dynamic:	Not determined.
· Solvent content:	
Organic solvents:	100.0 %
Solids content:	0.0 %
· 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** No further relevant information available.
- **10.5 Incompatible materials:** No further relevant information available.
- **10.6 Hazardous decomposition products:** No dangerous decomposition products known.

SECTION 11: Toxicological information

- **11.1 Information on toxicological effects**
- **Acute toxicity** Based on available data, the classification criteria are not met.

· LD/LC50 values relevant for classification:
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CAS: 109-99-9 tetrahydrofuran

Oral	LD50	2,500 mg/kg (rat)
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- **Primary irritant effect:**
- **Skin corrosion/irritation**
Causes severe skin burns and eye damage.
- **Serious eye damage/irritation**
Causes serious 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.

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- **Carcinogenicity**
Suspected of causing cancer.
- **Reproductive toxicity** *Based on available data, the classification criteria are not met.*
- **STOT-single exposure**
May cause respiratory irritation.
- **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) (Self-assessment): slightly hazardous for water
Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.
Must not reach sewage water or drainage ditch undiluted or unneutralised.
- **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.

· **European waste catalogue**

HP3	Flammable
HP5	Specific Target Organ Toxicity (STOT)/Aspiration Toxicity
HP7	Carcinogenic
HP8	Corrosive
HP15	Waste capable of exhibiting a hazardous property listed above not directly displayed by the original waste.

- **Uncleaned packaging:**
- **Recommendation:** *Disposal must be made according to official regulations.*
- **Recommended cleansing agents:** *Water, if necessary together with cleansing agents.*

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SECTION 14: Transport information

· 14.1 UN-Number · ADR, IMDG, IATA	UN2924
· 14.2 UN proper shipping name · ADR · IMDG, IATA	UN2924 FLAMMABLE LIQUID, CORROSIVE, N.O.S. (TETRAHYDROFURAN, ACETIC ANHYDRIDE) FLAMMABLE LIQUID, CORROSIVE, N.O.S. (TETRAHYDROFURAN, ACETIC ANHYDRIDE)
· 14.3 Transport hazard class(es) · ADR	
	
· Class · Label	3 (FC) Flammable liquids. 3+8
· IMDG	
	
· Class · Label	3 Flammable liquids. 3/8
· IATA	
	
· Class · Label	3 Flammable liquids. 3 (8)
· 14.4 Packing group · ADR, IMDG, IATA	II
· 14.5 Environmental hazards: · Marine pollutant:	No
· 14.6 Special precautions for user · Hazard identification number (Kemler code): · EMS Number: · Segregation groups · Stowage Category · Stowage Code	Warning: Flammable liquids. 338 F-E,S-C Acids B SW2 Clear of living quarters.
· 14.7 Transport in bulk according to Annex II of Marpol and the IBC Code	Not applicable.

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· Transport/Additional information:

· ADR

- **Limited quantities (LQ)**
- **Excepted quantities (EQ)**

1L
Code: E2
Maximum net quantity per inner packaging: 30 ml
Maximum net quantity per outer packaging: 500 ml

- **Transport category**
- **Tunnel restriction code**

2
D/E

· IMDG

- **Limited quantities (LQ)**
- **Excepted quantities (EQ)**

1L
Code: E2
Maximum net quantity per inner packaging: 30 ml
Maximum net quantity per outer packaging: 500 ml

· UN "Model Regulation":

UN 2924 FLAMMABLE LIQUID, CORROSIVE, N.O.S. (TETRAHYDROFURAN, ACETIC ANHYDRIDE), 3 (8), II

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** None of the ingredients is listed.
- **Seveso category P5c FLAMMABLE LIQUIDS**
- **Qualifying quantity (tonnes) for the application of lower-tier requirements** 5,000 t
- **Qualifying quantity (tonnes) for the application of upper-tier requirements** 50,000 t
- **REGULATION (EC) No 1907/2006 ANNEX XVII** Conditions of restriction: 3

· DIRECTIVE 2011/65/EU on the restriction of the use of certain hazardous substances in electrical and electronic equipment – Annex II

None of the ingredients is listed.

· 15.2 Chemical safety assessment: A Chemical Safety Assessment has not 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.

· Relevant phrases

- H225 Highly flammable liquid and vapour.
- H226 Flammable liquid and vapour.
- H302 Harmful if swallowed.
- H314 Causes severe skin burns and eye damage.
- H319 Causes serious eye irritation.
- H332 Harmful if inhaled.
- H335 May cause respiratory irritation.
- H351 Suspected of causing cancer.

· Department issuing SDS: Product safety department

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· Contact:

EU Poison Centers:

Country Telephone number

Austria +4314064343

Belgium 070 245245

Bulgaria (+)35929154233

Croatia (+3851)23-48-342

Czech Republic +420224919293; +420224915402

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Italy BERGAMO Ospedali Riuniti di Bergamo Tel. 800 88.33.00

FIRENZE Azienda Ospedaliera Careggi Tel. 055 79.47.819

MILANO Azienda Ospedaliera Niguarda Cà Granda Tel. 02 66.10.10.29

NAPOLI Ospedale Vincenzo Cardarelli Tel. 081 74.72.870

PAVIA Fondazione Salvatore Maugeri Tel. 0382 24.444

ROMA Policlinico Universitario "A. Gemelli" Tel. 06 30.54.343

ROMA Università degli Studi di Roma "La Sapienza" Tel. 06 49.97.80.00

Germany Berlin : 030/19240

Bonn : 0228/19240

Erfurt : 0361/730730

Freiburg : 0761/19240

Göttingen : 0551/19240

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Portugal 808250143

Slovakia (NTIC) +421 2 54 774 166

Spain +34915620420

Sweden 112 (begär

Giftinformation);+46104566786

Switzerland 145

· Abbreviations and acronyms:

RID: Règlement international concernant le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail)

IATA-DGR: Dangerous Goods Regulations by the "International Air Transport Association" (IATA)

ICAO: International Civil Aviation Organisation

ICAO-TI: Technical Instructions by the "International Civil Aviation Organisation" (ICAO)

ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)

IMDG: International Maritime Code for Dangerous Goods

IATA: International Air Transport Association

GHS: Globally Harmonised System of Classification and Labelling of Chemicals

EINECS: European Inventory of Existing Commercial Chemical Substances

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ELINCS: European List of Notified Chemical Substances
CAS: Chemical Abstracts Service (division of the American Chemical Society)
LC50: Lethal concentration, 50 percent
LD50: Lethal dose, 50 percent
PBT: Persistent, Bioaccumulative and Toxic
vPvB: very Persistent and very Bioaccumulative
Flam. Liq. 2: Flammable liquids – Category 2
Flam. Liq. 3: Flammable liquids – Category 3
Acute Tox. 4: Acute toxicity - oral – Category 4
Skin Corr. 1: Skin corrosion/irritation – Category 1
Eye Dam. 1: Serious eye damage/eye irritation – Category 1
Eye Irrit. 2: Serious eye damage/eye irritation – Category 2
Carc. 2: Carcinogenicity – Category 2
STOT SE 3: Specific target organ toxicity (single exposure) – Category 3
· *** Data compared to the previous version altered.**

EU