

According to directive 1907/2006/EC, 2020/878  
Version 2.0 Revision date: 03-03-2023  
Trade name: Polish Astra | Bona | Komet | Lemon I | White

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

### **1.1 Product identification:**

Product name: Polish Astra | Bona | Komet | Lemon I | White  
Product form: Mixture  
Product type: Solvent  
UFI code: 8WPV-H0JG-800G-CM31

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

Identified use(s): Cleaning agent, Technical applications.  
Uses advised against: No advised uses are currently identified.

### **1.3 Details of the supplier of the safety data sheet:**

Manufacturer : ASSYST bvba / A.S.O.W. bvba  
Hellegatstraat 13a  
2590 Berlaar  
Belgium  
Tel: +32 495 50 61 14 / +32 496 83 70 27  
Website: [www.assyst.org](http://www.assyst.org) / [www.artsuppliesonweb.com](http://www.artsuppliesonweb.com)  
Email: [ao@assyst.org](mailto:ao@assyst.org) / [vera.opsommer@assyst.org](mailto:vera.opsommer@assyst.org)

### **1.4 Emergency phone number:**

For Belgium:

Call the **Poison Control Center (070 245 245 - free)**, if not available: **02 264 96 30** (normal rate) or your doctor. In life-threatening situations, always call the European emergency number **112**.

NHS 24 Direct

For help from a GP, visit your GP surgery's website, use an online service to contact your GP, or call the surgery. **For urgent medical help**, use the NHS 111 online service, or **call 111** if you are unable to get help online. **For life-threatening emergencies, call 999** for an ambulance. There is more information about getting medical help on the NHS website.

## **SECTION 2: Hazard identification**

### **2.1 Classification of the substance or mixture:**

**Classification according to directive (EC) No 1272/2008 and its amendments.**

The product is classified according to current legislation.

**Classification in accordance with Regulation (EC) No 1272/2008 as amended.**

Flammable liquids - Category 2 - Hazard (Flam. Liq. 2; H225)

Eye irritation - Category 2 - Warning (Eye Irrit. 2; H319)

Full text of H phrases in section 16.

**Most significant adverse effects:**

**Human health:**

See section 11 for toxicological information.

**Physical and chemical hazards:**

See section 9/10 for physicochemical information.

**Potential environmental impacts:**

See section 12 for environmental information.

### **2.2 Labelling elements:**

**Labelling according to regulation (EC) No 1272/2008 [CLP/GHS]:**



**Hazard pictograms:**

**Signal word**

Danger.

**Hazardous ingredients to be declared on the label:**

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- Ethanol

**Hazard statements:**

H225 Highly flammable liquid and vapour.

H319 Causes severe eye irritation.

**Precautions****Prevention:**

P210 Keep away from heat, hot surfaces, sparks, open flames and other sources of ignition. Do not smoke.

P233 Keep in tightly closed container.

P280 Wear protective gloves/protective clothing/eye protection/face protection.

**Action:**

P303 + P361 + P353 IF ON SKIN (or hair): remove contaminated clothing immediately. Rinse skin with water.

P337 + P313 In case of persistent eye irritation: consult a doctor.

P370 + P378 In case of fire: extinguish with dry sand or alcohol-resistant foam.

**Disposal instructions:**

P501 Dispose of contents and/or packaging in accordance with local regulations.

**2.3 Other hazards:**

This substance/mixture does not contain any components that can be considered persistent, bioaccumulative and toxic (PBT) or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

**Ecological information:**

The substance/mixture does not contain components believed to have endocrine-disrupting properties according to REACH article 57(f) or Commission Delegated Regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at level 0.1% or higher.

**Toxicological information:**

The substance/mixture does not contain components believed to have endocrine-disrupting properties according to REACH article 57(f) or Commission Delegated Regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at level 0.1% or higher.

**SECTION 3: Composition and information on ingredients****3.2 Mixtures:**

| Chemical Name | Cas no.<br>EC No.<br>Index no.<br>Reach Registration number | Classification (Regulation (EC)<br>No 1272/008)                                                                | Concentration (%) |
|---------------|-------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------|-------------------|
| Ethanol       | 64-17-5<br>200-578-6<br>603-002-00-5<br>01-2119457610-43    | Flam. Liq. 2; H225<br>Eye Irrit. 2; H319<br><br>Specific concentration limits<br>Eye Irrit. 2; H319<br>>= 50 % | > 90 - <= 100     |
| propane-2-ol  | 67-63-0<br>200-661-7<br>603-117-00-0<br>01-2119457558-25    | Flam. Liq. 2; H225<br>Eye Irrit. 2; H319<br>STOT SE 3; H336                                                    | >= 3 - < 10       |

For the full text of H phrases referred to in this section, see section 16.

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

Remove exposure, put down.

Remove contaminated clothing immediately.

**By inhalation:**

Transfer to fresh air.

In case of irregular breathing or respiratory arrest, apply artificial respiration.

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If unconscious, lay person on his side.  
Consult a doctor after significant exposure.

**On contact with skin:**

Immediately wash with soap and plenty of water.  
If skin irritation persists, consult a doctor.

**On contact with eyes:**

Rinse immediately with plenty of water, including under the eyelids, for at least 5 minutes.  
Immediately consult an ophthalmologist.  
Go to an eye hospital if possible.

**If swallowed:**

Clean mouth with water and then drink lots of water.  
Never let an unconscious person drink (or eat).  
DO NOT induce vomiting.  
Placing someone lying on their back and vomiting in a stable side position.  
Call a doctor immediately.

**4.2 Main acute and delayed symptoms and effects:**

**Symptoms:**

Inhalation of high vapour concentrations may cause symptoms such as headache, dizziness, fatigue, nausea and vomiting.

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

**Effects:**

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

**4.3 Indication of immediate medical attention and special treatment required:**

**Treatment:**

Symptomatic treatment.

**SECTION 5: Fire-fighting measures**

**5.1 Extinguishing media:**

**Suitable extinguishing agents:**

Use water spray, alcohol-resistant foam, drying powder or carbon dioxide.

**Unsuitable extinguishing media:**

Strong water jet.

**5.2 Special hazards arising from the substance or mixture:**

**Specific hazards in firefighting:**

The vapour may be invisible, heavier than air and spread over the ground.

Vapours can form explosive mixtures with air.

Fire recoil possible over a considerable distance.

The product is insoluble and floats on water.

**Hazardous combustion products:**

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

**5.3 Advice for firefighters:**

**Special protective equipment for firefighters:**

In case of fire, wear a compressed air mask.

Wear personal protective clothing.

**Further advice:**

Cool closed containers near the fire with water spray.

Pressure increase when heated - risk of cracking.

Collect contaminated firefighting water separately.

It should not drain to the sewerage system.

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## **SECTION 6: Measures in case of accidental release of the substance or mixture**

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

#### **Personal precautions:**

Keep away from heat and ignition sources.  
Use personal protective equipment.  
Keep unprotected persons away.  
Ensure adequate air ventilation.  
Avoid contact with eyes and skin.  
Do not inhale vapours or spray mist.

### **6.2 Environmental precautions:**

#### **Environmental precautions:**

Do not drain into surface water or the sewerage system.  
Avoid penetration into the soil.

### **6.3 Methods and materials for containment and cleaning:**

Containment and cleaning methods and materials:

Contain spill and collect with non-combustible absorbent materials, (e.g. sand, earth, diatomaceous earth, vermiculite) and transfer to a container for disposal according to local/national regulations (see section 13).

### **6.4 Reference to other sections:**

See Section 1 for emergency contact details.  
See Section 8 for information on personal protective equipment.  
See section 13 for information on waste treatment.

## **SECTION 7: Handling and storage:**

### **7.1 Precautions for safe handling of the substance or mixture:**

#### **Safe handling advice:**

Keep in tightly closed container.  
Ensure adequate ventilation.  
Use personal protective equipment.  
Avoid contact with eyes, skin and clothing.  
Do not inhale vapours or spray mist. In an emergency, eye showers should be available nearby.

#### **Hygiene measures:**

Keep away from food, drink and animal feed.  
No smoking, eating and drinking in the workplace.  
Wash hands before every work break and at the end of the working day.  
Remove all soiled clothing immediately.

### **7.2 Conditions for safe storage, including incompatibilities:**

#### **Requirements for storage areas and containers:**

Store in original container.  
Store in an area fitted with a solvent-resistant floor.

#### **Advice on protection against fire and explosion:**

Keep away from sources of ignition - No smoking.  
The vapour may be invisible, heavier than air and spread over the ground.  
Vapours can form explosive mixtures with air.  
Take measures to prevent the generation of electrostatic charge.  
Use only in an area equipped with explosion-proof equipment.

#### **Details of storage conditions:**

Store tightly closed in a dry and cool place.  
Do not expose to direct sunlight.  
Store in a well-ventilated place.

#### **Advice for mixed storage:**

Incompatible with oxidising agents.  
Do not store together with oxidising and self-igniting products.

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Keep away from food, drink and animal feed.

### 7.3 Specific end use:

No data available.

## SECTION 8: Exposure controls/personal protection measures

### 8.1 Control parameters:

|                                                                                                                                           |                        |
|-------------------------------------------------------------------------------------------------------------------------------------------|------------------------|
| <b>Component: ethanol   CAS No. 64-17-5</b>                                                                                               |                        |
| <b>Derived no-effect doses (DNEL) / derived minimum effect (DMEL)</b>                                                                     |                        |
| DNEL - Workers, long-term - systemic effects, Inhalation                                                                                  | 950 mg/m <sup>3</sup>  |
| DNEL - Workers, Acute - local effects, Inhalation                                                                                         | 1900 mg/m <sup>3</sup> |
| DNEL - Workers, long-term - systemic effects, Skin contact                                                                                | 343 mg/kg bw/day       |
| DNEL - Consumers, long-term - systemic effects, Inhalation                                                                                | 114 mg/m <sup>3</sup>  |
| DNEL - Consumers, Acute - local effects, Inhalation                                                                                       | 950 mg/m <sup>3</sup>  |
| DNEL - Consumers, long-term - systemic effects, Skin contact                                                                              | 206 mg/kg bw/day       |
| DNEL - Consumers, long-term - systemic effects, Ingestion                                                                                 | 87 mg/kg bw/day        |
| <b>Predicted no-effect concentration (PNEC)</b>                                                                                           |                        |
| Freshwater                                                                                                                                | 0.96 mg/l              |
| Seawater                                                                                                                                  | 0.79 mg/l              |
| Intermittent releases                                                                                                                     | 2.75 mg/l              |
| Wastewater treatment plant                                                                                                                | 580 mg/l               |
| Freshwater deposition                                                                                                                     | 3.6 mg/kg dry weight   |
| Sea deposits                                                                                                                              | 2.9 mg/kg dry weight   |
| Bottom                                                                                                                                    | 0.63 mg/kg dry weight  |
| Secondary poisoning                                                                                                                       | 380 mg/kg food         |
| <b>Other occupational exposure limits</b>                                                                                                 |                        |
| Belgium. OEL, Time-weighted average (TWA):<br>1,000 ppm, 1,907 mg/m <sup>3</sup>                                                          |                        |
| Netherlands. OEL (binding), Skin indication:<br>On contact, the substance can be absorbed through the skin                                |                        |
| Netherlands. OEL (binding), Short-term exposure limit (STEL):<br>1,900 mg/m <sup>3</sup> , (15 minutes)<br>Section B: list of carcinogens |                        |
| Netherlands. OEL (binding), Time Weighted Average (TGG):<br>260 mg/m <sup>3</sup><br>Section B: list of carcinogens                       |                        |
| <b>Component: propane-2-ol   CAS No 67-63-0</b>                                                                                           |                        |
| <b>Derived no-effect doses (DNEL) / derived minimum effect (DMEL)</b>                                                                     |                        |
| DNEL - Workers, long-term - systemic effects, Skin contact                                                                                | 888 mg/kg bw/day       |
| DNEL - Workers, long-term - systemic effects, Inhalation                                                                                  | 500 mg/m <sup>3</sup>  |
| DNEL - Consumers, long-term - systemic effects, Skin contact                                                                              | 319 mg/kg bw/day       |
| DNEL - Consumers, long-term - systemic effects, Inhalation                                                                                | 89 mg/m <sup>3</sup>   |
| DNEL - Consumers, long-term - systemic effects, Ingestion                                                                                 | 26 mg/kg bw/day        |
| <b>Predicted no-effect concentration (PNEC)</b>                                                                                           |                        |
| Freshwater                                                                                                                                | 140.9 mg/l             |
| Seawater                                                                                                                                  | 140.9 mg/l             |
| Intermittent releases                                                                                                                     | 140.9 mg/l             |
| Wastewater treatment plant                                                                                                                | 2251 mg/l              |
| Sediment                                                                                                                                  | 552 mg/kg dry weight   |
| Bottom                                                                                                                                    | 28 mg/kg               |
| Secondary poisoning                                                                                                                       | 160 mg/kg of food      |
| <b>Other occupational exposure limits</b>                                                                                                 |                        |
| Belgium. OEL, Time-weighted average (TWA):<br>200 ppm, 500 mg/m <sup>3</sup>                                                              |                        |
| Belgium. OEL, Short-term exposure limit (STEL)<br>400 ppm, 1,000 mg/m <sup>3</sup> , (15 minutes)                                         |                        |

### 8.2 Exposure control measures:

#### Appropriate technical measures:

See protective measures in sections 7 and 8.

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**Personal protective equipment:**

**Respiratory protection:**

In case of inadequate ventilation, wear suitable respiratory protection.

When aerosol or mist is formed, use suitable respiratory protection.

Respiratory protection according to EN 141.

Filter type A for organic gases and vapours.

Filter type: A, brown

**Hand protection:**

Protective gloves according to EN 374.

Observe regulations on permeability and soak time, as supplied by the glove supplier.

Also take into account specific local conditions of use, such as danger of cuts, wear and tear and touch time.

Safety gloves should be replaced when worn.

Material:

Butyl rubber

Breakthrough time:

> 480 min

Glove thickness:

0.7 mm

**Eye protection:**

Safety dust goggles.

**Skin and body protection:**

Solvent-resistant protective clothing.

**Managing environmental exposure:**

Do not drain into surface water or the sewerage system.

Avoid penetration into the soil.

**SECTION 9: Physical and chemical properties**

9.1 Information on basic physical and chemical properties:

|                                                     |                                  |
|-----------------------------------------------------|----------------------------------|
| Form:                                               | No data available                |
| Physical state:                                     | liquid                           |
| Colour:                                             | colourless                       |
| Odour:                                              | alcoholic                        |
| Odour threshold value:                              | No data available                |
| Melting/freezing point:                             | -95°C                            |
| Boiling point/boiling range:                        | approximately 80°C               |
| Flammability:                                       | No data available                |
| Upper explosion limit / Upper flammability limit:   | No data available                |
| Lower explosion limit / Lower flammability limit:   | No data available                |
| Flash point:                                        | approximately 16°C               |
| Self-ignition temperature:                          | No data available                |
| Decomposition temperature:                          | No data available                |
| Self-accelerating decomposition temperature (SADT): | No data available                |
| pH:                                                 | around 7<br>Concentration: 100 % |

**Viscosity**

|                                         |                   |
|-----------------------------------------|-------------------|
| Viscosity, dynamic:                     | No data available |
| Viscosity, kinematic:                   | No data available |
| Expiry time:                            | No data available |
| Solubility in water:                    | No data available |
| Solubility in other solvents:           | No data available |
| Decomposition rate:                     | No data available |
| Partition coefficient: n-octanol/water: | No data available |

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|                           |                                     |
|---------------------------|-------------------------------------|
| Dispersion stability:     | No data available                   |
| Vapour pressure:          | approximately 57.26 hPa             |
| Relative density:         | No data available                   |
| Density:                  | approximately 0.8 g/cm <sup>3</sup> |
| Bulk specific gravity:    | No data available                   |
| Relative vapour density:  | No data available                   |
| Particle characteristics: | No data available                   |

## 9.2 Other information

No data available.

## **SECTION 10: Stability and reactivity**

### 10.1 Reactivity:

No decomposition if stored and applied as indicated.

### 10.2 Chemical Stability:

Stable under recommended storage conditions.

### 10.3 Potential Hazardous Reactions:

Exothermic reaction.

### 10.4 Conditions to avoid:

Heat, flames and sparks.

### 10.5 Chemically interacting Materials:

Strong oxidising agents.

### 10.6 Hazardous Decomposition Products:

In case of fire: Carbon oxides.

## **SECTION 11: Toxicological information**

### 11.1 Information on toxicological effects:

#### **Acute toxicity**

##### Oral

Acute toxicity estimates:

> 2000 mg/kg ) (Calculation method)

Based on available data; classification criteria not met.

##### Inhalation

Acute toxicity estimates:

> 20 mg/l (4 h; vapours) (Calculation method)

Based on available data; classification criteria not met.

##### Skin

Acute toxicity estimates:

> 2000 mg/kg ) (Calculation method)

Based on available data; classification criteria not met.

#### **Irritation**

##### Skin

Result : Based on available data; classification criteria not met.

##### Eyes

Result : (Causes severe eye irritation. )

#### **Sensitisation**

Result : Based on available data; classification criteria not met.

#### **CMR effects**

##### **CMR properties**

##### Carcinogenicity:

Based on available data; classification criteria not met.

##### Mutagenicity:

Based on available data; classification criteria not met.

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Teratogenicity:

Based on available data; classification criteria not met.

Reproductive toxicity:

No data available

**Specific target organ toxicity**

**Single exposure**

Comments : Based on available data; classification criteria not met.

**Repeated exposure**

Comments : Based on available data; classification criteria not met.

**Other toxic properties**

**Repeated-dose toxicity**

No data available.

**Aspiration hazard**

Based on available data; classification criteria not met.

**Component: ethanol CAS No 64-17-5**

**Acute toxicity**

Oral

LD50 : 10470 mg/kg (Rat, male and female) (Guideline test OECD 401)

Inhalation

LC50 : 51 mg/l (Rat; 4 h; vapours) (Guideline test OECD 403)

Skin

LD50 : > 2000 mg/kg (Rabbit) (Guideline test OECD 402)

**Irritation**

Skin

Result : No skin irritation (Rabbit) (Guideline test OECD 404)

Eyes

Result : Causes severe eye irritation. (Rabbit) (Guideline test OECD 405)

**Sensitisation**

Result : not hypersensitive (Guinea pig) (Maximalisation test)

non-sensitising (Mouse) (Guideline test OECD 429)

not sensitising (Inhalation; Rat)

**CMR effects**

Carcinogenicity

NOAEL : > 4,000 mg/kg bw/day

(Mouse, female)(Target organs: Liver)(Oral; 105 weeks;

Frequency of treatment: 5 days/week)

NOAEL : > 4,250 mg/kg bw/day

(Mouse, male)(Target organs: liver)(Oral; 105 weeks;

Frequency of treatment: 5 days/week)(OPPTS 870.4200)

NOAEL : > 3,000 mg/kg bw/day

(Rat)(Guideline test OECD 451)

**CMR properties**

Carcinogenicity:

Animal tests have shown no carcinogenic effects.

Mutagenicity:

In vitro tests showed no mutagenic effects.

In vivo tests showed no mutagenic effects.

Teratogenicity:

It is not considered teratogenic.

Reproductive toxicity:

It is not considered toxic to reproduction.

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## Genotoxicity in vitro

Result : negative (Ames test; Salmonella typhimurium) (Guideline test OECD 471)  
negative (Mouse lymphoma cells) (Guideline test OECD 476)  
Positive as well as negative results were obtained.  
(Back mutation test with bacteria; Escherichia coli) (No guideline followed)

## Genotoxicity in vivo

Result : Positive as well as negative results have been obtained.  
(Dominant lethal analysis; Mouse, male) (Oral; 5 days) (Guideline test OECD 478)  
Negative (In vivo test for chromosomal abnormalities;  
Hamster, male and female) (Oral; ) (Guideline test OECD 475)  
negative (In vivo micronucleus test; Mouse) (Guideline test OECD 475)

## Teratogenicity

LOAEL Development:  
8,200 mg/kg bw/day  
(Rat, Sprague-Dawley)(6 Weeks) (No guideline followed)Reduced skeletal bone formation.  
NOAEL Development:  
5,200 mg/kg bw/day  
(Rat, Sprague-Dawley)(6 Weeks) (No guideline followed)  
NOAEL Maternal:  
>= 20,000 ppm  
NOAEL Teratog...:  
16,000 ppm  
(Rat, Sprague-Dawley)(Inhalation; 10,000, 16,000, 20,000 ppm; 7 hours/day)(Guideline test OECD 414) Reduced maternal food consumption.

## Reproductive toxicity

NOAEL Parent:  
21.5 mg/kg bw/day  
(Mouse, male and female)(Guideline test OECD 416)  
No negative effects.  
NOAEL F1:  
13.8 mg/kg bw/day  
(Mouse, male and female)(Guideline test OECD 416)  
Reduction in sperm motility.

## Specific target organ toxicity

### Single exposure

Notes:

The substance or mixture is not classified as a specific target organ, single exposure.

### Repeated exposure

Notes:

The substance or mixture is not classified as specific target organ, repeated exposure.

## Other toxic properties

### Repeated-dose toxicity

NOAEL : 1730 mg/kg bw/day  
(Rat, female)(Oral; 90 days) (Guideline test OECD 408),  
Target organs: liver  
NOAEL : > 20 mg/l  
(Rat, male)(Inhalation; 21 days) (Guideline test OECD 403)

## Aspiration hazard

No classification for toxicity by aspiration...

## Further information

### Other relevant toxicological information:

Exposure to ethanol vapours may cause eye and nose irritation, drowsiness and headache.

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Other symptoms may include drowsiness, nausea, mental agitation or depression, vomiting, flushing and coma. It can cause respiratory irritation, intraocular tension, ataxia, drowsiness, narcosis, impaired perception and incoordination.

It can also lead to lowered inhibitions, dizziness, shallow breathing, unconsciousness and death.

Chronic symptoms of ingestion and/or exposure to vapour may include weight loss, liver cirrhosis, gastroenteritis, anorexia, diarrhoea, polyneuritis with pain, motor and sensory loss in the limbs, optic atrophy and loss or impairment of other faculties, agitation acute and chronic gastritis, malabsorption syndrome, acute and chronic pancreatitis, anaemia due to acute or chronic blood myopathy, alcoholic cardiomyopathy, lactic acidosis, hypomagnesaemia, hypourmia, hyperlipidaemia, pulmonary aspiration and respiratory infections. Chronic exposure can also lead to severe neurological and psychological disorders (e.g. brain damage, memory loss, sleep disorders and psychosis).

Other symptoms include mucosal irritation, central nervous system depression, dizziness, jaundice, upper abdominal pain on the right side and dizzy gait.

It can cause liver, kidney and heart damage.

Pupils are sometimes widely dilated and inactive to light.

The liquid can degrease the skin, producing a dermatitis characterised by drying and tearing.

It rarely causes temporary blindness. Intake of this compound can enhance the effects of coumarin, anticoagulants, antihistamines, hypnotics, sedatives, tranquillisers, insulin, monoamine oxidase inhibitors, and antidepressants.

May cause reproductive and teratogenic effects.

#### Experience of exposing people:

Repeated and sustained exposure to solvents can cause injury to brain and nervous system.

#### **Component: propane-2-ol CAS No 67-63-0**

##### **Acute toxicity**

###### Oral

LD50 : 5840 mg/kg (Rat) (Guideline test OECD 401)

###### Inhalation

LC50 : > 25 mg/l (Rat; 6 h; vapours) (Guideline test OECD 403)

###### Skin

LD50 : 13900 mg/kg (Rabbit) (Guideline test OECD 402)

##### **Irritation**

###### Skin

Result : No skin irritation (Guideline test OECD 404)

Degreases the skin, which can become dry and rough as a result.

Prolonged or repeated skin contact may lead to dermatitis.

###### Eyes

Result : Eye irritation (Guideline test OECD 405)

Splashes in the eyes can cause severe pain.

Vapour is irritating.

##### **Sensitisation**

Result : not sensitising (Buehler test; Skin; Guinea pig) (Guideline test OECD 406)

##### **CMR effects**

###### Carcinogenicity

NOEL : 5,000 ppm

(negative, Mouse, male and female) (Inhalation; 0, 500, 2500, 5000 ppm; 78 weeks; Frequency of treatment: 5 days/week)(Guideline test OECD 451)

##### **CMR properties**

###### Carcinogenicity:

Based on available data; classification criteria not met.

###### Mutagenicity:

In vitro tests showed no mutagenic effects.

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In vivo tests showed no mutagenic effects.

Teratogenicity:

No effects on or through lactation.

Reproductive toxicity:

Based on available data; classification criteria not met.

#### **Genotoxicity in vitro**

Result : negative (bacterial reverse mutation test; Salmonella typhimurium; with and without metabolic activation) (Guideline test OECD 471)

negative (In vitro gene mutation test in mammalian cells; CHO (Chinese hamster ovary) cells; with and without metabolic activation) (Guideline test OECD 476)

#### **Genotoxicity in vivo**

Result : negative (In vivo micronucleus test; Mouse, male and female) (intraperitoneal; ) (Guideline test OECD 474)

Teratogenicity

NOAEL Maternal:

400 mg/kg bw/day

NOAEL Development:

400 mg/kg bw/day

(Rat, Sprague-Dawley)(Oral)(Guideline test OECD 414) No side effects.

#### **Reproductive toxicity**

NOAEL Parent:

853 mg/kg bw/day

(One-generation reproduction toxicity study; Rat, wistar, male and female)(Oral)(Guideline test OECD 415) No adverse effects.

NOAEL Parent:

500 mg/kg bw/day

(Two-generation reproductive toxicity study; Rat, Sprague-Dawley, male and female)(Oral)(Guideline test OECD 416) No adverse effects.

#### **Specific target organ toxicity**

Single exposure

Inhalation:

Target organs: Central nervous system. Can cause drowsiness or dizziness.

Repeated exposure

Comments: Repeated oral and inhalation exposure studies have shown effects in target organs in male rats (kidneys) and target organs in male and female mice (thyroid) through mechanisms of action not relevant to humans.

#### **Other toxic properties**

Aspiration hazard

Aspiration hazard if swallowed - may enter lungs and cause damage.

Aspiration can cause pulmonary oedema and pneumonia.

Based on available data; classification criteria not met...,

#### 11.2. Information on other hazards

#### **Data for the product**

##### **Endocrine-disrupting properties**

Assessment : The substance/mixture does not contain any components believed to have endocrine-disrupting properties according to REACH article 57(f) or Commission Delegated Regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at level 0.1% or higher.

Component: propane-2-ol CAS No 67-63-0

##### **Endocrine-disrupting properties**

Assessment : No information available on endocrine disrupting properties for human health.

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## **SECTION 12: Ecological information**

### **12.1 Toxicity:**

Data for the product

#### **Acute toxicity**

(Acute) Short-term aquatic hazard

Result : Based on available data; classification criteria not met.

#### **Chronic toxicity**

(Chronic) Aquatic long-term hazard

Result : Based on available data; classification criteria not met.

Component: ethanol CAS No 64-17-5

#### **Acute toxicity**

##### **Fish**

LC50 : 15,300 mg/l (Pimephales promelas (American fathead); 96 h) (flow-through test; US-EPA)

LC50 11,200 mg/l (Salmo gairdneri; 24 h) (flow-through test; US-EPA)

LC50 13,000 mg/l (Oncorhynchus mykiss; 96 h) (Guideline test OECD 203)

##### **Toxicity to daphnia and other aquatic invertebrates**

EC50 : 858 mg/l (Artemia salina; 24 h) (OECD test guideline 202) Marine water

EC50 12,340 mg/l (Daphnia magna (large water flea); 48 h) (ASTM E 729-80) Freshwater

LC50 5,012 mg/l (Ceriodaphnia dubia (water flea); 48 h) (static test; ASTM E 729-80) Freshwater

##### **Algae**

EC50 : 275 mg/l (Chlorella vulgaris (freshwater algae); 72 h) (static test; Endpoint: Growth rate; OECD Test Guideline 201) Freshwater

EC10 11.5 mg/l (Chlorella vulgaris (freshwater algae); 72 h) (static test; OECD Test Guideline 201)

##### **Bacteria**

EC50 : 5800 mg/l (Paramecium caudatum; 4 h) (static test; No guideline followed)

#### **Chronic toxicity**

##### **Fish**

NOEC : 245 mg/l (30 d) (QSAR)

##### **aquatic invertebrates**

NOEC 9.6 mg/l (Ceriodaphnia dubia (water flea); 10 d) (semi-static test; Endpoint: Reproduction; No guideline followed)

NOEC 79 mg/l (Palaemonetes pugio; 12 d) (static test)

Component: propane-2-ol CAS No 67-63-0

#### **Acute toxicity**

##### **Fish**

LC50 : 9,640 mg/l (Pimephales promelas, mortality; 96 h) (flow-through test; Guideline test OECD 203)

##### **Toxicity to daphnia and other aquatic invertebrates**

LC50 : 9,714 mg/l (Daphnia magna, mortality rate; 24 h) (static test; OECD Test Guideline 202)

##### **Algae**

EC50 : > 100 mg/l (Scenedesmus subspicatus; 72 h)

LOEC 1000 mg/l (Algae; 8 d)

##### **Bacteria**

EC50 : > 100 mg/l (Bacteria) no harmful action

### **12.2 Persistence and Degradability:**

Data for the product

#### **Persistence and degradability**

##### **Persistence**

Result : The product is insoluble and floats on water.

The product evaporates easily from the water surface.

Component: ethanol CAS No 64-17-5

#### **Persistence and degradability**

##### **Persistence**

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Result : (to related: Water) non-significant hydrolysis

#### Biodegradability

Result : 97 % (aerobic; activated sludge; to related: CO2 formation (% of theoretical value).; Exposure time: 28 d)(OECD Test Guideline 301 B)

Easily biodegradable.

Component: propane-2-ol CAS No 67-63-0

#### **Persistence and degradability**

##### Persistence

Result : Transformation due to hydrolysis expectation not significant.

Transformation due to photolysis expectation not significant.

##### Biodegradability

Result : 53 % (aerobic; Domestic sewage; to related: O2 consumption; Exposure time: 5 d)(Directive 67/548/EEC, Annex V, C.5.)

Easily biodegradable.

#### 12.3 Bioaccumulation:

Component: ethanol CAS No 64-17-5

##### **Bioaccumulation**

Result : log Pow -0.35 (24 °C; pH 7.4) (Guideline test OECD 107): BCF: 0.66; Does not bioaccumulate.

Component: propane-2-ol CAS No 67-63-0

##### **Bioaccumulation**

Result : log Pow 0.05 (25 °C): Bioaccumulation is not expected.

#### 12.4 Mobility in soil:

Component: ethanol CAS No 64-17-5

##### **Mobility**

Water : The product is water-soluble.

Air : The product evaporates easily.

Soil : Is not expected to adsorb to soil.

Component: propane-2-ol CAS No 67-63-0

##### **Mobility**

Water : The product is water-soluble.

Soil : Mobile in soil.

#### 12.5 Results of PBT and vPvB assessment:

Data for the product

##### **Results of PBT and vPvB assessment**

Result : This substance/mixture does not contain any components that can be considered persistent, bioaccumulative and toxic (PBT) or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

Component: ethanol CAS No 64-17-5

##### **Results of PBT and vPvB assessment**

Result : This substance is not considered to be persistent, bioaccumulative nor toxic (PBT).

This substance is considered neither very persistent nor very bioaccumulative (vPvB).

Component: propane-2-ol CAS No 67-63-0

##### **Results of PBT and vPvB assessment**

Result : This substance is not considered to be persistent, bioaccumulative nor toxic (PBT).

This substance is considered neither very persistent nor very bioaccumulative (vPvB).

#### 12.6. Endocrine-disrupting properties

Data for the product

##### **Potential endocrine disruption:**

The substance/mixture does not contain any components believed to have endocrine-disrupting properties according to REACH article 57(f) or Commission Delegated Regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at level 0.1% or higher.

Component: propane-2-ol CAS No 67-63-0

##### **Potential endocrine disruption:**

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No information available on endocrine disrupting properties for the environment.

## 12.7 Other Harmful Effects:

Data for the product

### **Additional ecological information**

Result : Do not drain into surface water or the sewerage system.

Avoid penetration into the soil.

Component: ethanol CAS No 64-17-5

Biochemical oxygen demand (BOD)

Result : 100 mg/g

Chemical oxygen demand (COD)

Result : 1900 mg/g

### **Additional ecological information**

Result : Do not drain into surface water or the sewerage system.

Avoid penetration into the soil.

Component: propane-2-ol CAS No 67-63-0

### **Additional ecological information**

Result : Do not drain to surface water or the sewerage system.

Avoid penetration into the soil.

## **SECTION 13: Disposal instructions**

### **13.1 Waste treatment methods:**

#### **Product:**

Disposal together with normal waste is prohibited.

Special disposal is required according to local regulations.

Do not allow product to enter drains.

Contact waste management service.

#### **Contaminated packaging:**

Empty used containers thoroughly.

Packaging can be reused after thorough cleaning.

If reuse is not possible, dispose of according to local regulations.

Do not burn or handle the empty vessel with cutting torch.

Risk of explosion.

#### **European waste list number (EWCN):**

A waste code according to the European Waste Catalogue cannot be assigned for this product, as the intended use dictates the assignment.

The waste code is established in consultation with the regional waste disposal company.

## **SECTION 14: Information relating to transport**

### **14.1 UN number**

UN no: 1170

### **14.2 Proper cargo name according to UN model regulations**

ADR: ETHANOL, SOLUTION

RID: ETHANOL, SOLUTION

IMDG: ETHANOL SOLUTION

### **14.3 Transport hazard class(es)**

#### **ADR:**

-Class: 3

-Labels: 3

-Classification code: F1

-Danger identification no.: 33

-Tunnel restriction code: (D/E)

#### **RID:**

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-Class: 3  
-Labels: 3  
-Classification code: F1  
-Danger identification no.: 33

#### IMDG:

-Labels: 3  
-EMS: F-E, S-D

#### 14.4 Packing group

ADR: II  
RID: II  
IMDG: II

#### 14.5 Environmental hazards

Environmentally hazardous according to ADR: no  
Environmentally hazardous according to RID: no  
Marine pollution according to IMDG code: no

#### 14.6 Special precautions for the user

Expires.

14.7 Transport in bulk in accordance with Annex II to MARPOL 73/78 and the IBC Code  
Not applicable for product, as delivered.

### **SECTION 15: Statutory information**

#### 15.1 Safety, health and environmental regulations and legislation specific to the substance or mixture:

Netherlands : ABM: B (5)

Component: ethanol CAS No 64-17-5

#### **Regulation (EU) No 649/2012 on the export and import of dangerous chemicals:**

Substance/mixture is not covered by this legislation.

#### **EU. REACH, Annex XVII, Marketing and use restrictions (Regulation 1907/2006/EC):**

Item Neg.: , 3; Listed

Item Neg.: , 40; Listed

#### **EU Regulation No 1451/2007 [biocidal products], Annex I, active substances identified as existing:**

EC no.: , 200-578-6; Listed

#### **Directive 2012/18/EU - (SEVESO III) Annex I:**

Requirements for low threshold establishments: 5,000 tonnes;

Part 1: Categories of hazardous substances;

P5c: Flammable liquids, Category 2 or 3 not covered by P5a and P5b,

The information given is valid, if the product is stored below boiling point and at a pressure of 1013 hPa.

Requirements for high threshold establishments: 50,000 tonnes;

Part 1: Categories of hazardous substances;

P5c: Flammable liquids, Category 2 or 3 not covered by P5a and P5b,

The information given is valid, if the product is stored below its boiling point and at a pressure of 1013 hPa.

#### **Netherlands. Substances toxic to reproduction:**

Hazard class: ; May be harmful through breastfeeding.

#### **Netherlands. Carcinogenic substances and processes:**

Hazard class: ; Carcinogenic

#### **Netherlands. Substances toxic to reproduction:**

Hazard class: 1A; May cause harm to the unborn child.

#### **Netherlands. Substances toxic to reproduction:**

Hazard class: 1A; May impair fertility.

Component: propane-2-ol CAS No 67-63-0

#### **Regulation (EU) No 649/2012 on the export and import of dangerous chemicals:**

Substance/mixture is not covered by this legislation.

#### **EU. REACH, Annex XVII, Marketing and use restrictions (Regulation 1907/2006/EC):**

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Item Neg.: , 3; Listed  
Item Neg.: , 40; Listed

**EU Regulation No.1451/2007 [biocidal products], Annex I, active substances identified as existing:**

EC no: , 200-661-7; Listed

**Directive 2012/18/EU - (SEVESO III) Annex I:**

Requirements for low threshold establishments: 5,000 tonnes;

Part 1: Categories of hazardous substances;

P5c: Flammable liquids, Category 2 or 3 not covered by P5a and P5b,

The information given is valid, if the product is stored below its boiling point and at a pressure of 1013 hPa.

Requirements for high threshold establishments: 50,000 tonnes;

Part 1: Categories of hazardous substances;

P5c: Flammable liquids, Category 2 or 3 not covered by P5a and P5b,

The information given is valid, if the product is stored below its boiling point and at a pressure of 1013 hPa.

15.2 Chemical safety assessment:

The chemical safety assessment of substances in this mixture has been carried out.

**SECTION 16: Other information**

**Full text of H-phrases as listed in sections 2 and 3.**

H225 Highly flammable liquid and vapour.

H319 Causes severe eye irritation.

H336 May cause drowsiness or dizziness.

**Full text of notes mentioned in point 3.**

**Abbreviations and acronyms:**

|            |                                                                       |
|------------|-----------------------------------------------------------------------|
| AU AIICL:  | Australia. Industrial Chemicals Act (AIIC) List                       |
| BCF:       | Bioconcentration factor                                               |
| BOD:       | Biochemical oxygen demand                                             |
| CAS:       | Chemical Abstracts Service                                            |
| CLP:       | Classification, labelling and packaging                               |
| CMR:       | Carcinogenic, mutagenic or reprotoxic                                 |
| COD:       | Chemical oxygen demand                                                |
| DNEL:      | Derived dose without effect                                           |
| DSL:       | Canada. Environmental Protection Act, Domestic Substances List        |
| EINECS:    | European Inventory of Existing Commercial Chemical Substances         |
| ELINCS:    | European list of notified substances                                  |
| ENCS (JP): | Japan. Kashin-Hou Law List                                            |
| GHS:       | Globally harmonised classification and labelling system for chemicals |
| IECSC:     | China. Inventory of Existing Chemical Substances.                     |
| INSQ:      | Mexico. National Inventory of Chemical Substances.                    |
| ISHL (JP): | Japan. Inventory of Industrial Safety & Health.                       |
| KECI (KR): | Korea. Existing Chemicals Inventory.                                  |
| LC50:      | Lethal concentration 50%                                              |
| LOAEC:     | Lowest concentration at which an adverse effect was observed          |
| LOAEL:     | Lowest dose or concentration at which an adverse effect was observed  |
| LOEL:      | Lowest dose or concentration at which an effect was observed          |
| NDSL:      | Canada. Environmental Protection Act. Non-Domestic Substances List.   |
| NLP:       | No longer polymer                                                     |
| NOAEC:     | Concentration at which no adverse effect was observed                 |
| NOAEL:     | Dose or concentration at which no adverse effect was observed         |
| NOEC:      | Concentration with no observed effects                                |
| NOEL:      | Dose or concentration at which no effect was observed                 |
| NZIOC:     | New Zealand. Inventory of Chemicals                                   |

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|                        |                                                                                                  |
|------------------------|--------------------------------------------------------------------------------------------------|
| OECD:                  | Organisation for Economic Co-operation and Development                                           |
| OEL:                   | Occupational exposure limit value                                                                |
| ONT INV:               | Canada. Ontario Inventory List                                                                   |
| PBT:                   | Persistent, bioaccumulative and toxic                                                            |
| PHARM (JP):            | Japan. Pharmacopoeia Listing                                                                     |
| PICCS (PH):            | Philippines. Inventory of Chemicals and Chemical Substances.                                     |
| PNEC:                  | Predicted no-effect concentration                                                                |
| REACH aut. no:         | REACH authorisation number                                                                       |
| REACH council pl. No.: | REACH consultation number of application for authorisation                                       |
| STOT:                  | Specific target organ toxicity                                                                   |
| SVHC:                  | Substance of very high concern                                                                   |
| TCSI:                  | Taiwan. Existing Chemicals Inventory.                                                            |
| TH INV:                | Thailand. Existing Chemicals Inventory from FDA                                                  |
| TSCA:                  | US. Toxic Substances Control Act                                                                 |
| UVCB:                  | Substance of unknown or variable composition, complex reaction products and biological materials |
| UN INVL:               | Vietnam. National Chemical Inventory                                                             |
| zPzB:                  | Very persistent and very bioaccumulative                                                         |

## Further information

### Key literature references and data sources:

Supplier information and data from the "Database of Registered Substances" of the European Chemicals Agency (ECHA) were used to create this safety data sheet.

### Methods used for pr:

The classification for human health, physical and chemical risks and environmental hazards were derived from a combination of calculation methods and, where available, test data.

### Hints for training sessions:

Workers should be regularly trained on the safe handling of the products based on the information provided in the safety data sheet and the local conditions of the workplace information.

National regulations for training workers in handling hazardous substances must be followed.

### Other information:

The information provided here is correct and complete to the best of our knowledge at the date of issue of this safety data sheet.

The information relates only to the product mentioned and does not guarantee the quality and completeness of the product's properties, or in case the product is used together with other products or in any other process.