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|---------------|---------------------|----------------|-------------|----------|---|
| Trading name: | ACID ALCOHOL | | | | |
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SECTION 1: Identification of the substance/mixture and of the company/undertaking

| | | |
|-----|---|--|
| 1.1 | Product identifier | |
| | Trading name: | ACID ALCOHOL |
| | Chemical name: | - |
| | Catalogue number: | KA-OT-X** |
| 1.2 | Relevant identified uses of the substance or mixture and uses advised against | |
| | Uses: | Reagent for differentiation during regressive hematoxylin staining method. |
| | Uses advised against: | Only the identified uses are advised. |
| | Reason why uses advised against: | The product is intended for use only as an <i>in vitro</i> diagnostic medical device, registered at the Agency for Medicinal Products and Medical Devices and there is no reason to use it for other purposes. |
| 1.3 | Details of the supplier of the safety data sheet | |
| | Supplier: | BioGnost Ltd. |
| | Address: | Medjugorska 59, Zagreb |
| | Telephone number: | +385 1 2409997 |
| | Telefax.: | +385 1 2404039 |
| | e-mail of competent person: | msds@biognost.hr |
| | National contact: | - |
| 1.4 | Emergency telephone number | |
| | National Protection and Rescue Directorate: | 112 |
| | Medical information: | +385 1 2348 342 |
| | Other information: | - |

SECTION 2. Hazards identification

| | | |
|--|--|---------------------|
| 2.1 | Classification of the substance or mixture | |
| 2.1.1 | Classification according to Regulation (EC) No 1272/2008 (CLP) | |
| | Hazard class and category code: | Hazard statements*: |
| | Flam. Liq. 2 | H225 |
| 2.1.2. | Additional information | |
| | - | |
| *For full text of Hazard- and EU Hazard-statements: see SECTION 16 | | |
| 2.2 | Label elements | |
| | Product identification: | ACID ALCOHOL |
| | Identification number: | - |
| | Authorization number: | - |

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| Hazard pictograms: |  |
| | GHS02 |
| Signal word: | Danger |
| Hazard statements: | H225 Highly flammable liquid and vapor. |
| Precautionary statements: | P210 Keep away from heat, hot sparks, open flames and other ignition sources. No smoking. P233 Keep container tightly closed. P280 Wear protective gloves/protective clothing/eye/protection/face protection. |
| Supplemental hazard information (EU): | - |

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| 2.3 | Other hazards |
| | <p>The product has no other known specific hazards for human or environment.</p> <p>Results of PBT and vPvB assessment: Based on available data, the product does not contain any PBT or vPvB substances.</p> <p>Endocrine disrupting property: Based on available data, does not contain endocrine disruptors.</p> |

SECTION 3. Composition/information on ingredients

| CAS/ EC/ Index number | REACH Registration No | Weight % content (or range) | Identification name | Classification according to Regulation (EC) No 1272/2008 (CLP) |
|--|---------------------------|--------------------------------|------------------------|--|
| 64-17-5/ 200-578-6/ 603-002-00-5 | 01-2119457610-43- 0147 | 70 - 90 % | ethanol | Flam. Liq. 2; H225 |
| 7647-01-0/ 231-595-7/ 017-002-00-2 | - | < 1 % | hydrochloric acid, 37% | Skin Corr. 1B; H314 STOT SE 3; H335 |

SECTION 4. First aid measures

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|-----------------------|--|
| 4.1 | Description of first aid measures |
| General notes: | If the suggested first aid measures do not prove sufficient, seek medical attention. |
| Following inhalation: | Take the victim into fresh air, loosen his clothes and place him in a comfortable position. If breathing difficulty occurs, administer artificial respiration. In case of complaints call a physician. |

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| | Following skin contact: | Remove the contaminated clothes. Wash the skin surface under plenty of running water. Seek medical assistance if the symptoms of irritation remain. |
| | Following eye contact: | In case of contact with eyes flush with water holding eyelids apart and moving the eyeballs (for at least 10 minutes). If the symptoms remain, immediately call in ophthalmologist. |
| | Following ingestion: | Place the victim in a comfortable position. Rinse the mouth with clean water. If the victim is conscious induce vomiting. Do not give the victim anything orally, and do not induce vomiting if the victim is unconscious or suffers from convulsions. |
| | Self-protection of the first aider: | - |
| 4.2 | Most important symptoms and effects, both acute and delayed | |
| | Following inhalation: | Inhalation of larger quantities may affect the central nervous system. |
| | Following skin contact: | Prolonged or repeated dermal contact may cause the defatting and dryness of the skin. |
| | Following eye contact: | May irritate the eyes. |
| | Following ingestion: | Ingestion of larger quantities may affect the central nervous system. |
| 4.3 | Indication of any immediate medical attention and special treatment needed | |
| | If larger quantities have entered the body, obtain medical treatment (gastric lavage, activated carbon). | |

| | | |
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| SECTION 5. Firefighting measures | | |
| 5.1 | Extinguishing media | |
| | Suitable extinguishing media: | Extinguishing powder, alcohol-resistant foam, water, carbon-dioxide. |
| | Unsuitable extinguishing media: | Water with full jet. |
| 5.2 | Special hazards arising from the substance or mixture | |
| | Hazardous combustion products: | Highly flammable liquid and vapour. In case of fire, smoke, and other combustion products (carbon monoxide, carbon dioxide) may be formed, the inhalation of such combustion products can have serious adverse effects on health. Vapours may form an explosive mix with air. Vapours may be ignited by open flames, sparks, electrical equipment, or static charge. Vapours may travel to great distances, ignite in contact with ignition sources and flash back to the primer source (container). Vapours of ethyl alcohol mix greatly with air and may form an explosive mixture. Air containing 3.3 – 19 % ethyl alcohol vapours may explode in contact with ignition sources. Diluting the mixture with large amounts of water results in the loss of its flammability (around 10 % concentration of ethyl alcohol). |
| 5.3 | Advice for firefighters | |
| | Wear full protective clothing and self-contained breathing apparatus. Cool the fire affected containers with water spray. Use water spray to dissipate alcohol vapours. | |

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| 5.4 | Additional information |
| | - |

SECTION 6. Accidental release measures

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|--------|---|---|
| 6.1 | Personal precautions, protective equipment and emergency procedures | |
| 6.1.1. | For non-emergency personnel | |
| | Protective equipment: | Use personal protective equipment (see Section 8). |
| | Accident prevention methods: | Evacuate members of all non-essential personnel and those members without protective equipment. |
| | Emergency procedures: | Mark the area using proper signs. |
| 6.1.2. | For emergency responders: | |
| | Avoid contact with skin, eyes and clothing and inhaling gases, vapours and aerosols. Ensure adequate ventilation. Vapours may accumulate at floor level in low and confined spaces. Remove all heat, ignition and spark sources, turn off machines. Ignition spark arrestor must not be operated in the danger area. Use spark-proof tools. Be aware of the risk of slipping. | |
| 6.2 | Environmental precautions: | |
| | Dispose of the spillage and the resulting waste according to the applicable environmental regulations. Do not allow the product and the resulting waste to enter sewers/soil/surface or ground water. Notify the respective authorities in accordance with local law in the case of environmental pollution immediately. | |
| 6.3 | Methods and material for containment and cleaning up | |
| 6.3.1. | Bundling, covering of drains; capping procedures: | Sand protective barrier or barriers made of similar materials. |
| 6.3.2. | Cleaning up: | Collect the spilled product with inert, non-combustible absorbent (e.g. sand, vermiculite, earth) then place into a suitable, closed, properly labelled chemical waste container for removal/disposal. During the collection, placement, disposal of the waste, wear appropriate individual protective equipment. Flush the remains with plenty of water. The product loses its flammability, if diluted with significant amount of water (approx. 10% solution). |
| 6.3.3. | Other information: | Secure proper ventilation. Do not use incompatible materials (see Section 10). |
| 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

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|--------|-------------------------------|
| 7.1 | Precautions for safe handling |
| 7.1.1. | Protection measures |

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| | Measures to prevent fire: | Use in well ventilated storage rooms. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Use non-sparkling tools and equipment. |
| | Measures to prevent aerosol and dust generation: | Ensure adequate ventilation. |
| | Measures to protect the environment: | Prevent spilling into the sewage system and waterways. |
| | Other measures: | Protect against electrostatic charges. |
| 7.1.2. | Advice on general occupational hygiene: | |
| | Do not eat, drink or smoke in the workspace. Thoroughly wash hands after work and before eating. | |
| 7.2 | Conditions for safe storage, including any incompatibilities | |
| | Technical measures and storage conditions: | Store in a well-ventilated place, protected from sunlight, away from sources of heat and ignition, in its original, unopened and hermetically sealed packaging, away from oxidizing agents, food, feed and articles of consumption. |
| | Packaging materials: | Manufacturer's original packaging. |
| | Requirements for storage rooms and vessels: | Keep away from food and drink. Keep the containers tightly closed. |
| | Advices for storage equipment: | The storage must be made of hard material; floors must be resistant to chemicals. There must be no drain that directly leads into sewage system. Secure proper ventilation. |
| | Further information on storage conditions: | Do not place the unused material in the storage room and do not use empty containers for storing other chemicals. Do not store with incompatible materials (see Section 10). |
| 7.3 | Specific end use(s) | |
| | Recommendations: | - |
| | Industrial sector specific solutions: | - |

SECTION 8. Exposure controls/personal protection

| | | | | |
|-------------------|---------------------------|--|-------------------|-------------------------|
| 8.1 | Control parameters | | | |
| | | Occupational exposure limit values/short term values | | Biological limit values |
| Substance | CAS No | ppm | mg/m ³ | |
| Ethanol | 64-17-5 | 1000/- | 1900/- | - |
| Hydrogen chloride | 7647-01-0 | 5/10 | 8/15 | - |

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|-----------------|---|---------|---|--|
| Substance name: | - | | | |
| EC No: | - | CAS No: | - | |

DNEL

Industrial

| Route of exposure: | Acute effect local | Acute effect systemic | Chronic effect local | Chronic effect systemic |
|--------------------|----------------------------------|-----------------------|----------------------|---------------------------------|
| Oral | - | - | - | - |
| Inhalation | 1900 mg/m ³ (ethanol) | - | - | 380 mg/m ³ (ethanol) |
| Dermal | - | - | - | 343 mg/kg (ethanol) |

Critical physical parameters: solubility, flammability, corrosivity: -

Consumer

| Route of exposure: | Acute effect local | Acute effect systemic | Chronic effect local | Chronic effect systemic |
|--------------------|---------------------------------|-----------------------|----------------------|---------------------------------|
| Oral | - | - | - | 87 mg/kg bw/day (ethanol) |
| Inhalation | 950 mg/m ³ (ethanol) | - | - | 114 mg/m ³ (ethanol) |
| Dermal | - | - | - | 206 mg/kg (ethanol) |

PNEC

| Environmental protection target | PNEC |
|------------------------------------|--------------------------|
| Fresh water | 0.96 mg/l (ethanol) |
| Freshwater sediments | 3.6 mg/kg (ethanol) |
| Marine water | 0.79 mg/l (ethanol) |
| Marine sediments | 2.9 mg/kg (ethanol) |
| Food chain | 380-720 mg/kg (ethanol) |
| Microorganisms in sewage treatment | 580 mg/l (ethanol) |
| Soil (agricultural) | 0.63 mg/kg (ethanol) |
| Air | no information available |

8.2 Exposure controls

8.2.1. Appropriate engineering controls

Substance/mixture related measures to prevent exposure during identified uses:

In case of a hazardous material with no controlled concentration limit it is the employer's duty to keep concentration levels down to a minimum achievable by existing scientific and technological means, where the hazardous substance poses no harm to workers.

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| | Structural measures to prevent exposure: | In accordance with Section 7. |
| | Organisational measures to prevent exposure: | Organization of work in order to reduce other worker's influence during work process. |
| | Technical measures to prevent exposure: | In pursuance of work is proper foresight needed to avoid spilling onto clothes and floors and to avoid contact with eyes and skin. Use according to general application methods and with adequate ventilation. Use non-sparkling ventilation system. Provide appropriate personal protective equipment, safety shower and eye-wash station. |
| 8.2.2. | Personal protection equipment | |
| 8.2.2.1. | Eye and face protection: | Use appropriate, chemical-proof protective glasses/face shield (EN ISO 16321-1:2022, EN 166). |
| 8.2.2.2. | Skin protection | |
| | Hand protection: | Use appropriate, chemical-resistant protective gloves (EN 374). |
| | Other skin protection: | Use appropriate protective clothing. |
| 8.2.2.3. | Respiratory protection: | In case of normal usage and ventilation, it is not necessary. If concentration of ethyl alcohol exceeds occupational exposure limits in the air, use a self-contained breathing apparatus. For short contact and if the oxygen content of the air is greater than 18 %, use a protective gas mask with filter A (EN 14837/A1). |
| 8.2.2.4. | Thermal hazards: | No thermal hazards known. |
| 8.2.3. | Environmental exposure controls | |
| | Substance/mixture related measures to prevent exposure: | See Section 6 |
| | Structural measures to prevent exposure: | Use modern equipment. |
| | Organisational measures to prevent exposure: | Adapt the work process to the required working conditions of the workplace. |
| | Technical measures to prevent exposure: | See Section 6 |

SECTION 9. Physical and chemical properties

| | | | |
|-----|---|------------|--------------------------|
| 9.1 | Information on basic physical and chemical properties | | |
| | | Value | Method |
| | Physical state: | liquid | No information available |
| | Colour: | colourless | No information available |

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| Odour/odour threshold: | ethanol like/no information available | No information available |
| Melting point / freezing point: | No information available | No information available |
| Boiling point or initial boiling point and boiling range: | No information available | No information available |
| Flammability: | No information available | No information available |
| Lower and upper explosion limit: | No information available | No information available |
| Flash point: | 21 °C | No information available |
| Auto-ignition temperature: | No information available | No information available |
| Decomposition temperature: | No information available | No information available |
| pH: | 1.2 – 1.5 (20°C) | No information available |
| Kinematic viscosity: | No information available | No information available |
| Solubility: | No information available | No information available |
| Partition coefficient n-octanol/water (log value): | No information available | No information available |
| Vapour pressure: | No information available | No information available |
| Density and/or relative density: | No information available | No information available |
| Relative vapour density: | No information available | No information available |
| Particle characteristics: | No information available | No information available |
| 9.2 | Other information | |
| | - | |

SECTION 10. Stability and reactivity

| | | |
|------|-------------------------------------|--|
| 10.1 | Reactivity: | See Section 10.5. |
| 10.2 | Chemical stability: | Stable within normal temperature and general work conditions. |
| 10.3 | Possibility of hazardous reactions: | See Section 10.5. |
| 10.4 | Conditions to avoid: | Keep away from heat, sparks, open flames, strong heating and ignition sources. No smoking. |
| 10.5 | Incompatible materials: | Strong oxidizing agents (inorganic strong acid, nitric acid, perchlorates, peroxy compounds, perchloric acid, permanganates etc.), alkali metals, alkali earth metals. |
| 10.6 | Hazardous decomposition products: | Carbon monoxide and carbon dioxide. |

SECTION 11. Toxicological information

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| 11.1 | Information on hazard classes as defined in Regulation (EC) No 1272/2008 |
| | Acute toxicity: |

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| Route of exposure: | Method | Species | Dose LD ₅₀ /LC ₅₀ or ATE _{mix} | Exposure time | Results |
|--------------------|--------|------------------|---|---------------|--------------|
| Oral: | - | rat (ethanol) | LD ₅₀ | - | 7.060 mg/kg |
| Dermal: | - | rabbit (ethanol) | LD ₅₀ | - | >20.000 mg/l |
| Inhalation: | - | rat (ethanol) | LC ₅₀ | 4 h | >8.000 mg/l |

Specific target organ toxicity – single exposure (STOT SE):

| | Specific effects | Target organ | Note |
|-------------|--------------------------|--------------------------|------|
| Oral: | No information available | No information available | - |
| Dermal: | No information available | No information available | - |
| Inhalation: | No information available | No information available | - |

Aspiration hazard: No information available.

Irritation and corrosion

| | Exposure time | Species | Evaluation | Method | Note |
|-------------------------------|---------------|---------|------------|--------|------|
| Skin corrosion/irritation: | - | - | - | - | - |
| Serious eye damage/irritation | - | - | - | - | - |

Sensitization

| | |
|----------------------------|---------------------------|
| Skin sensitization: | No information available. |
| Respiratory sensitization: | No information available. |

Symptoms related to the physical, chemical and toxicological characteristics

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| Oral exposure: | Absorption of great quantities may cause dizziness, drunkenness, euphoria, unconsciousness and alcohol poisoning. In case of swallowing great quantities, nausea and vomiting may occur. Repeated or prolonged exposure may lead to liver cirrhosis. |
| Dermal exposure: | After prolonged or repeated exposure symptoms may include: defatting, dryness and cracking of skin. |
| Inhalation exposure: | Inhalation of great quantities may cause dizziness, euphoria and mild irritation of the mucous membranes. |
| Eye exposure: | May cause irritation and redness. |

Repeated dose toxicity (subacute, subchronic, chronic)

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| | Dose | Exposure time | Species | Method | Evaluation | Note |
|-----------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|------|
| Subacute oral | No information available | No information available | No information available | No information available | No information available | - |
| Subacute dermal | No information available | No information available | No information available | No information available | No information available | - |
| Subacute inhalation | No information available | No information available | No information available | No information available | No information available | - |
| Subchronic oral | No information available | No information available | No information available | No information available | No information available | - |
| Subchronic dermal | No information available | No information available | No information available | No information available | No information available | - |
| Subchronic inhalation | No information available | No information available | No information available | No information available | No information available | - |
| Chronic oral | No information available | No information available | No information available | No information available | No information available | - |
| Chronic dermal | No information available | No information available | No information available | No information available | No information available | - |
| Chronic inhalation | No information available | No information available | No information available | No information available | No information available | - |

Specific target organ toxicity – repeated exposure (STOT RE):

| | Specific effects | Target organ | Note |
|-----------------------|--------------------------|--------------------------|------|
| Subacute oral | No information available | No information available | - |
| Subacute dermal | No information available | No information available | - |
| Subacute inhalation | No information available | No information available | - |
| Subchronic oral | No information available | No information available | - |
| Subchronic dermal | No information available | No information available | - |
| Subchronic inhalation | No information available | No information available | - |
| Chronic oral | No information available | No information available | - |
| Chronic dermal | No information available | No information available | - |

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| Chronic inhalation | No information available | No information available | - |
| CMR effects (carcinogenicity; mutagenicity; reproductive toxicity) | | | |
| Carcinogenicity: | Based on available data, the classification criteria are not met. | | |
| Mutagenicity <i>in vitro</i> : | Based on available data, the classification criteria are not met. | | |
| Genotoxicity: | Based on available data, the classification criteria are not met. | | |
| Mutagenicity <i>in vivo</i> : | Based on available data, the classification criteria are not met. | | |
| Germ cell mutagenicity: | Based on available data, the classification criteria are not met. | | |
| Reproductive toxicity: | Based on available data, the classification criteria are not met. | | |
| Summary of evaluation of the CMR properties: | | Based on available data, the classification criteria are not met. | |
| 11.2 | Information on other hazards: | | |
| 11.2.1. | Endocrine disrupting properties: | | |
| | Based on available data, does not contain endocrine disruptors. | | |
| 11.2.2. | Other information: | | |
| | - | | |

| SECTION 12. Ecological information | | | | | | |
|------------------------------------|------------------|---------------|---------------|--------------------------|----------------------------|------|
| 12.1 Toxicity | | | | | | |
| Acute (short-term) toxicity | Dose | Exposure time | Species | Method | Evaluation | Note |
| Fish | LC ₅₀ | 96 hours | golden orf | No information available | 8.140 mg/l /48 h (ethanol) | - |
| Crustacea: | EC ₅₀ | 48 hours | daphnia magna | No information available | 7.800 mg/l (ethanol) | - |
| Algae/aquatic plants | IC ₅₀ | 4 days | algae | No information available | 5.000 mg/l / 7d (ethanol) | - |
| Other organisms | - | - | - | - | - | - |
| Chronic (long-term) toxicity | Dose | Exposure time | Species | Method | Evaluation | Note |

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| Fish | LC ₅₀ | 96 hours | No information available | No information available | No information available | - |
| Crustacea: | EC ₅₀ | 48 hours | No information available | No information available | No information available | - |
| Algae/aquatic plants | IC ₅₀ | 72 hours | No information available | No information available | No information available | - |
| Other organisms | - | - | - | - | - | - |

12.2 Persistence and degradability

Abiotic degradation

| | Degradation half-lives | Method | Evaluation | Note |
|--------------|--------------------------|--------------------------|--------------------------|------|
| Marine water | No information available | No information available | No information available | - |
| Fresh water | No information available | No information available | No information available | - |
| Air | No information available | No information available | No information available | - |
| Soil | No information available | No information available | No information available | - |

Biodegradation

| % Degradation | Time (days) | Method | Evaluation | Note |
|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|
| No information available | No information available | No information available | No information available | No information available |
| | | | | |

12.3 Bioaccumulative potential

Octanol-water partition coefficient (log K_{ow})

| Value | Concentration | pH | °C | Method | Evaluation | Note |
|-----------------|---------------|----|----|--------|------------|------------------------------------|
| Log Pow: ~ 0.32 | - | - | - | - | - | The product does not bioaccumulate |
| | | | | | | |

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| Bioconcentration factor (BCF) | | | | |
|-------------------------------|--------------------------|--------------------------|--------------------------|------|
| Value | Species | Method | Evaluation | Note |
| BCF: 0.66 | No information available | No information available | No information available | - |
| | | | | |

| Chronic ecotoxicity | | | | | | |
|--|------------------|--------------------------|--------------------------|--------------------------|--------------------------|------|
| Value | Dose | Exposure time | Species | Method | Evaluation | Note |
| Chronic toxicity on fish | LC ₅₀ | No information available | No information available | No information available | No information available | - |
| Chronic toxicity on crustacea (<i>Daphnia</i>) | EC ₅₀ | No information available | No information available | No information available | No information available | - |

12.4 Mobility in soil

| Known or predicted distribution in environmental compartments: | | | | | | |
|--|--------------------------|--------------------------|--------------------------|------|--|--|
| No information available | | | | | | |
| Surface tension: | | | | | | |
| Value | °C | Concentration | Method | Note | | |
| No information available | No information available | No information available | No information available | - | | |
| | | | | | | |

| Adsorption / desorption | | | | | |
|-------------------------|-------------------------------------|--------------------------|--------------------------|--------------------------|------|
| Transport | A/D coefficient Henry's constant | log Kow | Evaporation rate | Method | Note |
| Soil-water | No information available | No information available | No information available | No information available | - |
| Water-air | No information available | No information available | No information available | No information available | - |
| Soil-air | No information available | No information available | No information available | No information available | - |

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| 12.5 | Results of PBT and vPvB assessment |
| | Based on available data, the product does not contain any PBT or vPvB substances. |

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| 12.6. | Endocrine disrupting properties |
| | Based on available data, does not contain endocrine disruptors. |

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| 12.7. | Other adverse effects |
| | Do not let the product or its residues reach sewer system, waterways and soil. |

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| SECTION 13. Disposal considerations | |
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|------|-------------------------|
| 13.1 | Waste treatment methods |
|------|-------------------------|

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|---------|--|
| 13.1.1. | Product/Packaging disposal: |
| | Submit for disposal to the legal person authorized by the Ministry of Environmental and Nature Protection. |

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|---------|--|
| 13.1.2. | Waste codes/waste designations according to Law: |
| | Packaging that contains residual hazardous substances or is contaminated with hazardous substances |

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| 13.1.3. | Waste treatment – relevant information: |
| | No information available |

| | |
|---------|---|
| 13.1.4. | Sewage disposal – relevant information: |
| | Waste must not be disposed of into the sewage system. |

| | |
|---------|---|
| 13.1.5. | Other disposal recommendations: |
| | Do not dispose of the product's remains into the sewage system. Submit the remains to the collectors authorized by the ministry in charge. Do not dispose of the packaging into the sewage system. Submit the packaging to the collectors authorized by the ministry in charge. Unused product residues may be burnt. |

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| 13.1.6. | Relevant Community provisions: |
| | Disposal must be made according to official regulations. |

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| SECTION 14 TRANSPORT INFORMATION | |
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|-------------------------------------|------------------|
| Transporting/shipment by road (ADR) | |
| UN number: | 1170 |
| UN proper shipping name: | Ethanol solution |

| | | | | | |
|---------------|---------------------|----------------|-------------|----------|---|
| Trading name: | ACID ALCOHOL | | | | |
| Product code: | KA-OT-X** | Revision date: | 21 Dec 2022 | Version: | 7 |

| | |
|-------------------------------|----|
| Transport hazard class(es): | 3 |
| Packing group: | II |
| Environmentally hazardous: | - |
| Special precautions for user: | - |

Transporting/shipment by rail (RID)

| | |
|-------------------------------|------------------|
| UN number: | 1170 |
| UN proper shipping name: | Ethanol solution |
| Transport hazard class(es): | 3 |
| Packing group: | II |
| Environmentally hazardous: | - |
| Special precautions for user: | - |

Inland waterway transport (ADN)

| | |
|-------------------------------|------------------|
| UN number: | 1170 |
| UN proper shipping name: | Ethanol solution |
| Transport hazard class(es): | 3 |
| Packing group: | II |
| Environmentally hazardous: | - |
| Special precautions for user: | - |

Transporting/shipment by sea (IMDG)

| | |
|---|------------------|
| UN number: | 1170 |
| UN proper shipping name: | Ethanol solution |
| Transport hazard class(es): | 3 |
| Packing group: | II |
| Environmentally hazardous: | - |
| Special precautions for user: | - |
| Transport in bulk according to Annex II of MARPOL 73/78 and the IBC code: | - |

Transporting/shipment by air (ICAO-TI/IATA-DGR)

| | |
|-------------------------------|------------------|
| UN number: | 1170 |
| UN proper shipping name: | Ethanol solution |
| Transport hazard class(es): | 3 |
| Packing group: | II |
| Environmentally hazardous: | - |
| Special precautions for user: | - |

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|----------------------|---|
| Further information: | - |
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|---------------|---------------------|----------------|-------------|----------|---|
| Trading name: | ACID ALCOHOL | | | | |
| Product code: | KA-OT-X** | Revision date: | 21 Dec 2022 | Version: | 7 |

SECTION 15. Regulatory information

| | | |
|------|--|--|
| 15.1 | Safety, health and environmental regulations/legislation specific for the substance or mixture | |
| | EU regulations | |
| | Authorization and/or restrictions of use | |
| | Authorizations: | - |
| | Restrictions: | - |
| | Other EU regulations: | <p>Regulation (EC) No 1907/2006 of the European Parliament and of the Council of 18 December 2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH), establishing a European Chemicals Agency, amending Directive 1999/45/EC and repealing Council Regulation (EEC) No 793/93 and Commission Regulation (EC) No 1488/94 as well as Council Directive 76/769/EEC and Commission Directives 91/155/EEC, 93/67/EEC, 93/105/EC and 2000/21/EC;</p> <p>Directive 2004/42/CE of the European Parliament and of the Council of 21 April 2004 on the limitation of emissions of volatile organic compounds due to the use of organic solvents in certain paints and varnishes and vehicle refinishing products and amending Directive 1999/13/EC;</p> <p>Council Directive 98/24/EC of 7 April 1998 on the protection of the health and safety of workers from the risks related to chemical agents at work;</p> <p>Regulation (EC) No 1272/2008 of the European Parliament and of the Council of 16 December 2008 on classification, labelling and packaging of substances and mixtures, amending and repealing Directives 67/548/EEC and 1999/45/EC, and amending Regulation (EC) No 1907/2006;</p> <p>COMMISSION REGULATION (EU) 2020/878 of 18 June 2020 amending Annex II to Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH).</p> <p>REACH Restrictions on the manufacturing, placing on the market and use of certain dangerous substances, mixtures and articles (Annex XVII);</p> |
| | Information according 1999/13/EC about limitation of emissions of volatile organic compounds (VOC-guideline) | |
| | National legislation: | <p>Chemicals Act, Regulation on classification, packaging and labeling of dangerous substances, Ordinance on occupational exposure limit values and on biological limit values, Regulation on categories, types and classification of waste with a waste catalog and list of hazardous waste, Ordinance on writing Material safety data sheet, Transport of Hazardous Substances Act</p> |
| 15.2 | Chemical safety assessment | |
| | None | |

SECTION 16. Other information

| | | |
|------|------------------------|---|
| 16.1 | Indication of changes: | - |
|------|------------------------|---|

| | | | | | |
|---------------|---------------------|----------------|-------------|----------|---|
| Trading name: | ACID ALCOHOL | | | | |
| Product code: | KA-OT-X** | Revision date: | 21 Dec 2022 | Version: | 7 |

| | | |
|-------|---|---|
| 16.2 | Abbreviations and acronyms: | <p>ADR: Accord relatif au transport international des marchandises dangereuses par route (European Agreement Concerning the International Carriage of Dangerous Goods by Road)</p> <p>IMDG: International Maritime Code for Dangerous Goods</p> <p>IATA: International Air Transport Association</p> <p>GHS: Globally Harmonised System of Classification and Labelling of Chemicals</p> <p>EINECS: European Inventory of Existing Commercial Chemical Substances</p> <p>CAS: Chemical Abstracts Service (division of the American Chemical Society)</p> <p>DNEL: Derived No-Effect Level (UK REACH)</p> <p>LC50: Lethal concentration, 50 percent</p> <p>LD50: Lethal dose, 50 percent</p> <p>PBT: Persistent, Bioaccumulative and Toxic</p> <p>vPvB: very Persistent and very Bioaccumulative</p> |
| 16.3. | Key literature references and source of data: | - |
| 16.4. | Classification and procedure used to derive the classification for mixture according to Regulation (EC) 1272/2008 (CLP) | |
| | Classification | Classification procedure |
| | - | - |
| 16.5. | Relevant H statements (number and full text) | |
| | H: | <p>225 Highly flammable liquid and vapour.</p> <p>314 Causes severe skin burns and eye damage.</p> <p>335 May cause respiratory irritation.</p> |
| 16.6. | Training advice: | - |
| 16.7. | Further information: | <p>** "X" in the product code marks different volumes (different packagings of the product)</p> <p>We are not responsible for consequences in case of failure to comply with instructions for use or improper use of the product described in this material safety data sheet.</p> |

ANNEX: Exposure scenario resulting to chemical safety assessment

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