

NISOTEC ANTIFRIZ S 40

Ревизия:
1

Дата на ревизията:
1.10.2023

1. IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

1.1. Product Identifier

Trade name	NISOTEC ANTIFRIZ S 40
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1.2. Relevant identified uses of the substance or mixture and uses advised against

Recommended use	Automotive coolant.
Uses advised against	Should not be used for any purposes other than recommended.

1.3. Details of the supplier of the safety data sheet

Manufacturer	NIS j.s.c. Novi Sad, Narodnog fronta 12, 21000 Novi Sad, Serbia. Phone: +381 08 0000 8888 (24h) Email: nis.maziva@nis.rs
Supplier	"Deny Trade" LTD, Office: Stara Zagora 6000, 92 Hristo Botev Str., 4th floor Warehouse: Zagora 6000, Kolyo Ganchev district, Agricultural aviation Tel./Fax: 042 606 899 office@denitrade.com

1.4. Emergency telephone

National emergency telephone	112
National Toxicological Information Center, MHAT and Emergency Medicine "N. I. Pirogov"	Emergency telephone / fax: +359 2 9154 409 Email: poison_centre@mail.orbitel.bg http://www.pirogov.bg

2. HAZARDS IDENTIFICATION

2.1. Classification of the substance or mixture

Classification according to Regulation (EC) No. 1272/2008 (CLP)	According to Regulation (EC) 1272/2008: Acute Tox. 4, H302 STOT RE 2, H373 For the full text of the H-Statements see Section 16. Adverse physicochemical, human health and environmental effects: No additional information available.
Further information	For the full text of the hazard statements and EU hazard statements: see SECTION 16

2.2. Label elements

Labeling according to Regulation (EC) No. 1272/2008 (CLP)	According to Regulation (EC) 1272/2008: Acute Tox. 4, H302 STOT RE 2, H373
Hazard pictograms	
Signal word	Warning
Hazard statements	H302 - Harmful if swallowed. H373 - May cause damage to organs through prolonged or repeated exposure.
Precautionary statements	P102 - Keep out of reach of children. P260 - Do not breathe mist/vapours. P264 - Wash hands thoroughly after handling. P301 + P312 - IF SWALLOWED: Call a POISON CENTER/doctor if you feel unwell. P314 - Get medical advice/attention if you feel unwell. P501 - Dispose of contents, container in accordance with local, regional, national and international regulation. Supplemental label information: Contain ethylene glycol.
Supplemental Hazard information (EU)	Not applicable.

2.3. Other hazards

Other hazards	The substance/mixture contains no components considered to be PBT/vPvB at levels of 0.1% or higher. The substance/mixture does not contain components considered 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 levels of 0.1% or higher.
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3. COMPOSITION/INFORMATION ON INGREDIENTS

3.1. Substances

Substances	Not applicable
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3.2. Mixtures

Index No.	CAS No.	EC No.	REACH Registration No.	CLP/GHS1	Substance name	Concentration range w/w %
603-027-00-1	107-21-1	203-473-3	01-2119456816-28	Acute Tox. 4, H302 STOT RE 2, H373	Ethylene glycol	50 - 60

4. FIRST AID MEASURES

4.1. Description of first aid measures

Following inhalation	Move casualty away from source of exposure. Provide fresh air. If symptoms persist get medical attention.
Following skin contact	Remove contaminated clothing and shoes. Wash place of contact with mild soap and water. If skin irritation or rash occurs, get medical advice. Wash contaminated clothing before reuse.
Following eye contact	Immediately rinse eyes with plenty of running water. When rinsing eyes, hold eyelid apart from eyeball to ensure a thorough rinsing (by forcibly holding the eye wide open with hands). Remove contact lenses, if any, and continue rinsing the eyes for at least 15 minutes. If irritation occurs, get medical attention.
Following ingestion	Never induce vomiting or give anything by mouth to an unconscious persons. If exposed person are conscious wash with water the oral cavity several times. Induce vomiting following the instructions of medical personnel to be a greater amount of harmful liquids cleared from the body. It is necessary to urgently seek medical advice. If not treated, ethylene glycol poisoning can be fatal after 24 to 36 hours of ingestion.

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

Ingestion acute effects	Irritation of the upper respiratory tract infection (sore throat, runny nose, cough).
Skin contact acute effects	Repeated or prolonged contact may cause skin irritation and dryness.
Eye contact acute effects	Direct eye contact may cause moderate irritation.
Ingestion delayed effects	May be harmful if swallowed. Nausea, vomiting, diarrhea, slurred speech, lethargy, agitation, ataxia, tremors, blurred vision, confusion, hallucinations, fever, tachycardia, the occurrence of crystals in the urine, anuria, cardiopulmonary collapse.

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

Notes to physician	The treatment be should be carried out based on symptoms present and the patient's clinical state. Symptoms may appear later. Warm the exposed person.
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5. FIREFIGHTING MEASURES

5.1. Extinguishing media

Suitable extinguishing media	Water mist/spray, dry chemical powder, carbon-oxide and alcohol resistant foam.
Unsuitable extinguishing media	Direct water jet, as it may spread the fire.

5.2. Special hazards arising from the substance or mixture

Hazards from the substance or mixture	This product is not classified as flammable. As products of combustion toxic gases can be formed such as carbon monoxide, carbon dioxide and other organic compounds.
5.3. Advice for firefighters	

6. ACCIDENTAL RELEASE MEASURES

6.1. Personal precautions, protective equipment and emergency procedures

Protective equipment for non-emergency personnel	No action shall be taken involving any personal risk or without suitable training. Evacuate the danger area, observe emergency procedures, contact emergency personnel. Avoid direct contact with skin and eyes. Do not touch or walk through spilled material. Use adequate personal protective clothing and equipment (refer to Section 8). Keep away from heat and sources of ignition. Remove all sources of ignition and sparking. Move to a well-ventilated place, away from the source of the accident.
Emergency procedures for emergency personnel	Use adequate personal protective clothing and equipment (refer to Section 8). Remove all sources of ignition and sparking. Isolate the danger area.

6.2. Environmental precautions

Environmental precautions	Avoid spreading of spillage, run off and contact with soil, waterways, drains and sewers. Inform the competent authorities in case of contamination of environment (soil, waterways or sewers).
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6.3. Methods and material for containment and cleaning up

For containment	Stop leaks if possible without risk to people involved in remediation. In the cleaning process, do not use sparking tools and equipment. Remove all sources of ignition from the spillage zone. In case of small leaks, use soil or some other inert, non-combustible absorbent material to collect spillage. Put the collected spillage into closed containers intended for further disposal. In case of large spillage construct sand and soil barriers and collect the spillage and dispose of it into containers intended for waste disposal. Disposal should be carried out by an authorized operator.
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6.4. Reference to other sections

Reference to other sections	Follow instructions under Section 8 related to personal protection and waste treatment and disposal instructions under section 13.
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7. HANDLING AND STORAGE

7.1. Precautions for safe handling

Protective measures	In the process of handling, avoid direct skin and eye contact. Use adequate personal protective equipment (for further information, refer to section 8.2). Store and use away from open flame, sparks, heat and other ignition sources. During handling, do not use sparking tools and equipment. Avoid static electricity discharge. Loading should be performed exclusively at prescribed places and into adequate tanks, using functional equipment and devices, by professionally trained and experienced personnel. After finishing the activity, keep in tightly closed containers. Obey occupational safety, fire protection and general hygiene measures. Do not eat, drink, or smoke during handling. Before breaks and after finishing the work, wash the hands thoroughly. Before entering a food service area, take off the contaminated clothing and protective equipment.
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7.2. Conditions for safe storage, including any incompatibilities

Technical measures and storage conditions	Store the product in a dry, cold, well ventilated place, protected from direct weather effects. Keep in original, undamaged, closed and labelled packaging. Avoid exposure to direct sunlight, heat sources, open flames, sparks and other sources of ignition. Electrostatic charge may accumulate and create a hazardous condition when handling this material. To minimize this hazard, bonding and grounding may be necessary. Review all operation which have the potential of generating and accumulating an electrostatic charge and/or a flammable atmosphere (including tank and container filling, splash filling, tank cleaning, sampling, gauging, switch loading, filtering, mixing, agitation, and vacuum truck operations) and use appropriate mitigating procedures. Store away from incompatible materials (refer to section 10.5.). Keep away from food, drink and animal feed. The recommended storage temperature: 0 - 40°C.
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7.3. Specific end use(s)

Recommendations	The identified uses of this product are detailed in sub-section 1.2.
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8. EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1. Control parameters

List of components with OEL value

Component	OEL Type	Long Term mg/m ³	Long Term ppm	Short Term mg/m ³	Short Term ppm	Index No	CAS No	EC No	Note
Ethylene glycol			TWA 52 TWA 20	STEL 52 STEL 104		603-027-00-1 107-21-1 203-473-3			Sk

Predicted No Effect Concentration (PNEC) values

Component	CAS No.	PNEC limit	Exposure Route	Exposure Frequency	Remark

Derived No Effect Level (DNEL)

Component	CAS No.	Worker Industry	Worker Professional	Consumers	Exposure Route	Exposure Frequency	Remark
	107-21-1				Inhalation	Long - term exposure - local effects Long - term exposure - local effects	35 mg/m3 (workers) 7 mg/m3 (general population)
					Dermal	Long - term exposure - systemic effects	Long - term exposure - systemic effects
						Long - term exposure - systemic effects	53 mg/kg bw/day (general population)

8.2. Exposure controls

Hygiene measures	Wash hands, forearms, and face thoroughly when finished working with product, before eating, drinking, smoking, or going to toilet. Wash contaminated clothing before reuse.
Technical measures to prevent exposure	Provide adequate ventilation of handling area to maintain airborne levels below recommended exposure limits.
Eye and face protection	Wear tightly fitting safety goggles providing adequate protection against sprays of liquid product in the eyes (EN 166).
Body protection	Wear protective clothing - long sleeve shirts and long trousers, according to the EN 340. Wear thermal protective clothing, when necessary.
Hand protection	Wear gloves resistant to chemicals (EN374). The glove material has to be impermeable and resistant to the chemical. Recommendation of manufacturers are neoprene gloves, butyl gloves, Viton and nitrile gloves. Recommended thickness of the material is 0.38 mm. Use gloves with a minimum protection index of 6 with a penetration time of 480 min. The gloves should be periodically inspected and replaced in case of wear and tear, perforation or contamination.

Respiratory protection	If follow recommendations for handling in well-ventilated areas, it not required use of protective equipment for respiratory protection. If the generated vapor or mist formation, use chemical respirator with organic vapour cartridge and full facepiece. Selection of respiratory protective equipment should be made in accordance with the specific activities, level of exposure and anticipated exposure period.
Environmental exposure controls	Apply adequate control measures to prevent contact with environment.

9. PHYSICAL AND CHEMICAL PROPERTIES

9.1. Information on basic physical and chemical properties

Physical State	liquid
Colour	blue
Odour	mild
Melting point/freezing point	≤ -37°C (ASTM D1177)
Boiling point or initial boiling point and boiling range	≥ 108°C (ASTM D1120)
Flammability	not applicable (liquid)
Lower and upper explosion limit	not determined, 1.8% - 12.8% for ethylene glycol
Flash point	not determined
Auto-ignition temperature	398°C for ethylene glycol
Decomposition temperature	not determined
pH	7,5 - 9 (ASTM D1287)
Kinematic viscosity	not determined
Solubility	soluble in water
Partition coefficient n-octanol/water (log value)	not available
Vapour pressure	1.63 mmHg at 20°C
Density and/or relative density	1072 kg/m3 at 20°C (ASTM D 5931)
Particle characteristics	not applicable

9.2. Other information

10. STABILITY AND REACTIVITY

10.1. Reactivity

Reactivity	No reactivity hazard is expected under recommended handling and storage conditions.
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10.2. Chemical stability

Chemical stability	Stable under recommended handling and storage conditions.
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10.3. Possibility of hazardous reactions

Possibility of hazardous reactions	Hazard reactions will not occur under recommended handling and storage conditions.
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10.4. Conditions to avoid

Conditions to avoid	Avoid exposure to high temperatures, open flame, sparks, and other ignition sources, storing with incompatible substances.
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10.5. Incompatible materials

Incompatible materials	Strong acids and strong oxidizing agents.
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10.6. Hazardous decomposition products

Hazardous decomposition products	Under regular and recommended conditions or storing and use, the product will not decompose and form hazardous products. In the combustion process toxic gases may be formed such as carbon dioxide and carbon monoxide.
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11. TOXICOLOGICAL INFORMATION

11.1. Information on hazard classes as defined in Regulation (EC) No. 1272/2008

Products have not been tested. Evaluation has been made through data of components.

Acute toxicity	Harmful if swallowed. The chemical is classified in the hazard class acute toxicity, category 4. The chemical has a harmful effect on the human body if swallowed. A single oral lethal dose of ethylene glycol for humans has been estimated at 100 ml for an adult. Inhalation of high concentrations of vapor or fog over a long period of time can lead to toxicity. Information on other hazards: The substance/mixture does not contain components considered 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 levels of 0.1% or higher.
Skin corrosion/irritation	Based on available data the classification criteria are not met.
Serious eye damage/irritation	Based on available data the classification criteria are not met.
Respiratory or skin sensitisation	Based on available data the classification criteria are not met.
Germ cell mutagenicity	Based on available data the classification criteria are not met.
Carcinogenicity	Based on available data the classification criteria are not met.
Reproductive toxicity	Based on available data the classification criteria are not met.
Delayed and immediate effects as well as chronic effects from short and long-term exposure	Repeated ingestion may cause kidney damage or worsen existing kidney disease.
STOT-single exposure	Based on available data the classification criteria are not met.
Specific target organ toxicity - repeated exposure	The chemical is classified in the hazard class Specific target organ toxicity-repeated exposure, Category 2. May cause damage to organs (kidney) through prolonged or repeated exposure.
Aspiration hazard	Based on available data the classification criteria are not met.
Information on likely routes of exposure	Inhalation, peroral, dermal and eye contact.
Symptoms related to the physical, chemical and toxicological characteristics	Characteristic symptoms resulting from exposure of product are specified in section 4.2.

Toxicological information on main components of the mixture

Index No CAS No EC No	Name	Acute toxicity
603-027-00-1 107-21-1 203-473-3	Ethylene glycol	LD50 7712 mg/kg (rat, oral) LC50/6h > 2.5 mg/l (rat, by inhalation) LD50 > 3500 mg/kg (mouse, dermal)
Repeated dose toxicity: 603-027-00-1 107-21-1 203-473-3	Ethylene glycol	NOAEL 150 mg/kg bw/day (rat, oral, systemic effects, sub-chronic) NOAEL 2200 mg/kg bw/day (dog, dermal, systemic effects, sub-acute)

12. ECOLOGICAL INFORMATION**12.1. Toxicity****List of components with eco-toxicological properties**

Component	Index No CAS No EC No	Ecotoxicological information
Ethylene glycol	603-027-00-1 107-21-1 203-473-3	LC50/96h 72860 mg/l (Pimephales promelas, EPA 600/4-90/027) EC50/48h > 100 mg/l (Daphnia magna, OECD 202) EC50/96h 6500-13000 mg/l (Pseudokirchneriella subcapitata, EPA 600/9-78/018) NOEC/7 дни 15380 mg/l (Pimephales promelas, EPA 600/4-89/021) NOEC/7 дни 8590 mg/l (Ceriodaphnia sp., EPA 600/4-89/021) EC20/30min > 1995 mg/l (активна утайка, ISO 8192)

12.2. Persistence and degradability

Index No CAS No EC No	Name	Test	Duration	Value	Result
603-027-00-1 107-21-1 203-473-3	Ethylene glycol	OECD TG 301A			90 - 100% after 10 days

12.3. Bioaccumulative potential

	Name	Duration	Value	Bioaccumulation Data
Index No CAS No EC No				
603-027-00-1 107-21-1 203-473-3	Ethylene glycol			Log Kow: -1.36

12.4. Mobility in soil

Known or predicted distribution to environmental compartments	Mobility in soil No data available.
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12.5. Results of PBT and vPvB assessment

Results of PBT and vPvB assessment	The mixture contains no components considered to be PBT/vPvB at levels of 0.1% or higher.
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12.6. Endocrine disrupting properties

Endocrine disrupting properties	The substance/mixture does not contain components considered 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 levels of 0.1% or higher.
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12.7. Other adverse effects

Other adverse effects	No data available.
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12.8. Additional information

13. DISPOSAL CONSIDERATIONS

13.1. Waste treatment methods

Disposal of unused substance and contaminated packaging	Disposal of unused substance and contaminated packaging: Where possible avoid waste accumulation or reduce it to minimum. Dispose of unused product in compliance with applicable local regulations.
Waste treatment-relevant information	Treat and dispose of contaminated packaging in compliance with applicable local regulations. Waste code: 16 01 14* - antifreeze fluids containing hazardous substances (categorization of waste is the responsibility of users).

14. TRANSPORT INFORMATION

14.1. UN number or ID number

UN number or ID number	Not applicable.
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14.2. UN proper shipping name

UN proper shipping name	Not applicable.
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14.3. Transport hazard class(es)

Transport hazard class(es)	Not applicable.
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14.4. Packing group

Packing group	Not applicable.
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14.5. Environmental hazards

Environmental hazards	Not applicable.
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14.6. Special precautions for user

Special precautions for user	Not applicable.
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14.7. Maritime transport in bulk according to IMO instruments

Maritime transport in bulk according to IMO instruments	Not applicable.
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15. REGULATORY INFORMATION

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

EU regulations	<p>Commission Regulation (EU) No 878/2020 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>Commission Regulation (EU) No 830/2015 of 28 May 2015 amending Regulation (EC) No 1907/2006 of the European Parliament and of the Council on the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH)</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>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>Regulation (EC) No 1907/2006, Annex XVII (the substances subject to restriction on marketing and use): none present</p> <p>Regulation (EC) No 1907/2006, Article 59 (the substances on Candidate List): none present</p> <p>Regulation (EC) No 1907/2006, Annex XIV (the substances subject to authorisation): none present.</p>
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15.2. Chemical Safety Assessment

Chemical Safety Assessment	No Chemical Safety Assessment has been carried out for this substance/mixture by the supplier.
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16. OTHER INFORMATION

Other information	<p>Section 1.1 Product identifier Section 1.3 Details of the supplier of the safety data sheet Section 2.2 Information of label elements Section 6.1 Information of personal precautions, protective equipment and emergency procedures Section 15.1 Information of Safety health and environmental regulations/legislation List of abbreviations and acronyms: Acute Tox. 4 - Acute toxicity, Category 4. STOT RE 2 - Specific target organ toxicity - repeated exposure, Category 2. OEL - Occupational Exposure Limit. SCBA - Self Contained Breathing Apparatus. TWA - Time Weighted average (frequent long-term exposure over 8-hour work day). STEL - Short Term Exposure Limit (short-term exposure, 15 minute). Sk - Can be absorbed through the skin. The assigned substances are those for which there are concerns that dermal absorption will lead to systemic toxicity. DNEL - Derived No Effect Level. PNEC - Predicted No Effect Concentration. STP - Sewage Treatment Plant. LD50 - Lethal dose 50 (Lethal dose 50 is a substance dose which is lethal to 50% of tested animals). bw - body weight. LC50 - Lethal concentration 50 (Lethal concentration 50 is the concentration which is lethal to 50% of tested animals). EC50 - Median effective concentration (Median effective concentration means the effective concentration of substance in the environment which produces a specific effect to 50% of tested organisms under a defined set of conditions). EC20 - Median Effective Concentration (the effective concentration of substance in the environment which produces a specific effect to 20% of tested organisms under a defined set of conditions). Log Kow - partition coefficient n-octanol/water. NOEC - No Observable Effect Concentration (a maximum dose not producing a harmful effect). NOAEL - No Observed (Adverse) Effect Level. OECD - Organisation for Economic Co-operation and Development. PBT - Persistent, bioaccumulative and toxic substance. vPvB - Very persistent and very bioaccumulative substance. ADR - European Agreement concerning the International Carriage of Dangerous Goods by Road. RID - International Rule for Transport of Dangerous Substances by Railway. ADN - European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways. IMDG - International Maritime Dangerous Goods. ICAO-TI - Technical Instructions for the Safe Transport of Dangerous Goods by Air. Basic literature and sources: Safety Data Sheet of components. www.echa.europa.eu List of hazard statements and the associated full text: H302 - Harmful if swallowed. H373 - May cause damage to organs through prolonged or repeated exposure. Procedure used to derive the classification according to Regulation (EC) No. 1272/2008 [CLP/GHS]: Calculation method. Training advice: Suitable training on safety in handling, storing and converting the product should be given to the employees based on all the existing information. Other Information: The information provided herein is correct to our up-to-date knowledge. The product must not be used for any purposes other than specified herein. We shall not accept any liability in case of non compliance with this Safety Data Sheet.</p>
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