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

· **1.1 Product identifier**

· **Trade name: Cooltech 41 HD**

· **Registration number** Mixture
· **1.2 Relevant identified uses of the substance or mixture and uses advised against**
· **Product category** PC4 Anti-Freeze and de-icing products
· **Application of the substance / the mixture**
Antifreeze
Coolant
· **Uses advised against**
Any use carrying a risk of direct contact with eyes/skin where workers are exposed without adequate personal protective equipment (PPE).
Any use involving significant release of aerosol, vapour or dust in the breathing zone of workers where they are exposed without suitable respiratory protective equipment (RPE).
Processes involving extreme heat use advised against.
Processes involving the use of incompatible substances - refer to section 10.

· **1.3 Details of the supplier of the safety data sheet**
· **Supplier:**
Smith & Allan
Valley Street North
Darlington
County Durham
DL1 1QE
Tel: 01325 462228
Fax: 01325 368122
e-mail: enquiries@smithandallan.com

· **Further information obtainable from:** Product safety department.
· **1.4 Emergency telephone number:**
Members of the public seeking specific information on poisons should contact:
In England and Wales: NHS 111 - dial 111
In Scotland: NHS 24 - dial 111

SECTION 2: Hazards identification

· **2.1 Classification of the substance or mixture**
· **Classification according to GB-CLP**

Acute Tox. 4	H302	Harmful if swallowed.
Skin Irrit. 2	H315	Causes skin irritation.
Eye Irrit. 2	H319	Causes serious eye irritation.
Repr. 1B	H360FD	May damage fertility. May damage the unborn child.
STOT RE 2	H373	May cause damage to the kidneys through prolonged or repeated exposure. Route of exposure: Oral.

· **2.2 Label elements**
· **Labelling according to GB-CLP** The product is classified and labelled according to the GB CLP regulation.

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· **Hazard pictograms**

GHS07 GHS08

· **Signal word** Danger

· **Hazard-determining components of labelling:**
Ethanediol
disodium tetraborate, anhydrous

· **Hazard statements**
H302 Harmful if swallowed.
H315 Causes skin irritation.
H319 Causes serious eye irritation.
H360FD May damage fertility. May damage the unborn child.
H373 May cause damage to the kidneys through prolonged or repeated exposure. Route of exposure: Oral.

· **Precautionary statements**
P260 Do not breathe mist/vapours/spray.
P280 Wear protective gloves/protective clothing/eye protection/face protection.
P301+P312 IF SWALLOWED: Call a POISON CENTER/doctor if you feel unwell.
P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P405 Store locked up.
P501 Dispose of contents/container in accordance with local regulations.

· **2.3 Other hazards**
· **Results of PBT and vPvB assessment**
· **PBT:** Not applicable.
· **vPvB:** Not applicable.

SECTION 3: Composition/information on ingredients

· **3.2 Mixtures**
· **Description:** Mixture of ethylene glycol, water and additives.

· **Dangerous components:**

CAS: 107-21-1 EINECS: 203-473-3 Index number: 603-027-00-1 Reg.nr.: 01-2119456816-28-XXXX	Ethanediol STOT RE 2, H373; Acute Tox. 4, H302 ATE: LD50 oral: 500 mg/kg	50 – 100%

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CAS: 1330-43-4 EINECS: 215-540-4 Index number: 005-011-00-4 Reg.nr.: 01-2119490790-32-XXXX	disodium tetraborate, anhydrous Repr. 1B, H360FD; Eye Irrit. 2, H319 Note: 11	0.3 – < 1%
CAS: 1310-73-2 EINECS: 215-185-5 Index number: 011-002-00-6 Reg.nr.: 01-2119457892-27-XXXX	Sodium hydroxide Met. Corr.1, H290; Skin Corr. 1A, H314 Specific concentration limits: Skin Corr. 1A; H314: C ≥ 5 % Skin Corr. 1B; H314: 2 % ≤ C < 5 % Skin Irrit. 2; H315: 0.5 % ≤ C < 2 % Eye Irrit. 2; H319: 0.5 % ≤ C < 2 %	0.5 – < 1%

· **SVHC**

CAS: 1330-43-4	disodium tetraborate, anhydrous

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

SECTION 4: First aid measures

· **4.1 Description of first aid measures**
· **General information:**
Symptoms of poisoning may even occur after several hours; therefore medical observation for at least 48 hours after the accident.
Personal protection for the First Aider.
· **After inhalation:**
Supply fresh air.
If rapid recovery does not occur, transport to nearest medical facility for additional treatment.
· **After skin contact:**
Immediately wash with water and soap and rinse thoroughly.
If skin irritation continues, consult a doctor.
· **After eye contact:**
Check for and remove any contact lenses.
Rinse opened eye for several minutes under running water. If symptoms persist, consult a doctor.
· **After swallowing:**
Wash mouth out with water
Do not induce vomiting; call for medical help immediately.
If vomiting occurs spontaneously, keep head below hips to prevent aspiration.
· **Information for doctor:**
Contains ethanediol.
If ingested, early diagnosis and treatment is essential.
Refer to section 11.
· **4.2 Most important symptoms and effects, both acute and delayed**
No further relevant information available.
· **4.3 Indication of any immediate medical attention and special treatment needed**
Obtain medical attention urgently, informing the emergency services that a product containing ethylene glycol/ diethylene glycol has been ingested and that specific treatment is needed.
Gastric lavage may be effective when performed withing 4 hours of ingestion.

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SECTION 5: Firefighting measures

· **5.1 Extinguishing media**
· **Suitable extinguishing agents:**
CO2, powder or water spray. Fight larger fires with water spray or alcohol resistant foam.
Use fire extinguishing methods suitable to surrounding conditions.
· **For safety reasons unsuitable extinguishing agents:** Water with full jet
· **5.2 Special hazards arising from the substance or mixture**
Vapours are heavier than air and may travel a long distance and accumulate in low lying areas. Ignition and/or flash back may occur.
In case of fire, the following can be released:
Carbon monoxide and carbon dioxide
Under certain fire conditions, traces of other toxic gases cannot be excluded.
· **5.3 Advice for firefighters**
· **Protective equipment:**
Wear self-contained respiratory protective device.
Wear fully protective suit.
Do not inhale explosion gases or combustion gases.
· **Additional information**
Cool endangered receptacles with water spray.
Collect contaminated fire fighting water separately. It must not enter the sewage system.

SECTION 6: Accidental release measures

· **6.1 Personal precautions, protective equipment and emergency procedures**
Ensure adequate ventilation
Wear protective equipment. Keep unprotected persons away.
· **6.2 Environmental precautions:**
Do not allow to penetrate the ground/soil.
Do not allow to enter sewers/ surface or ground water.
Inform respective authorities in case of seepage into water course or sewage system.
· **6.3 Methods and material for containment and cleaning up:**
Contain and collect spillage with non-combustible, absorbent material e.g.sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations.
Ensure adequate ventilation.
· **6.4 Reference to other sections**
See Section 7 for information on safe handling.
See Section 8 for information on personal protection equipment.
See Section 13 for disposal information.

SECTION 7: Handling and storage

· **7.1 Precautions for safe handling**
Ensure good ventilation/exhaustion at the workplace.
Prevent formation of aerosols.
Safety showers and eye wash facilities should be available at the work area.
· **Information about fire - and explosion protection:** Keep respiratory protective device available.

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· **Handling:** Avoid direct personal contact (eyes, skin and inhalation).

· **7.2 Conditions for safe storage, including any incompatibilities**
· **Storage:**
· **Requirements to be met by storerooms and receptacles:**
Prevent any seepage into the ground.
Store only in the original receptacle.
· **Information about storage in one common storage facility:** Store away from oxidising agents.
· **Further information about storage conditions:**
Store in cool, dry conditions in well sealed receptacles.
Protect from heat and direct sunlight.
· **Storage class:** 6.1 C
· **7.3 Specific end use(s)** No further relevant information available.

SECTION 8: Exposure controls/personal protection

· **8.1 Control parameters**

· **Ingredients with limit values that require monitoring at the workplace:**	
CAS: 107-21-1 Ethanediol	
WEL	Short-term value: 104** mg/m³, 40** ppm Long-term value: 10* 52** mg/m³, 20** ppm Sk *particulate **vapour
CAS: 1330-43-4 disodium tetraborate, anhydrous	
WEL	Long-term value: 1 mg/m³
CAS: 1310-73-2 Sodium hydroxide	
WEL	Short-term value: 2 mg/m³

· **DNELs**		
CAS: 107-21-1 Ethanediol		
Dermal	Long-term systemic effects	53 mg/kg bw/day (general population) 106 mg/kg bw/day (worker)
Inhalative	Long-term local effects	7 mg/m³ (general population) 35 mg/m³ (worker)
CAS: 1310-73-2 Sodium hydroxide		
Inhalative	Long-term local effects	1 mg/m³ (general population) 1 mg/m³ (worker)

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

· **8.2 Exposure controls**
· **Appropriate engineering controls** No further data; see section 7.
· **Individual protection measures, such as personal protective equipment**
· **General protective and hygienic measures:**
The usual precautionary measures are to be adhered to when handling chemicals.
Take note of assigned Workplace Exposure Limits.
Keep away from foodstuffs, beverages and feed.
Immediately remove all soiled and contaminated clothing

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Wash hands before breaks and at the end of work.
Store protective clothing separately.
Avoid contact with the eyes and skin.
Ensure that eyewash stations and safety showers are close to the workstation location.

· **Respiratory protection:**
Use suitable respiratory protective device in case of insufficient ventilation.
Filter A-P2

· **Hand protection**

Protective gloves.
Use gloves tested and approved under appropriate government standards such as NIOSH (US) or EN374 (EU).

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

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

· **Penetration time of glove material**
Thickness: >0.35 mm.
Break-through time: >480 minutes
The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

· **Eye/face protection**

Safety glasses with side-shields conforming to EN166.
Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).

· **Body protection:**

Protective work clothing

Body protection must be chosen depending on product properties, activity and possible exposure.

· **Environmental exposure controls** Do not allow to enter drains, sewers or watercourses.
· **Risk management measures** The operators shall be instructed adequately.

SECTION 9: Physical and chemical properties

· **9.1 Information on basic physical and chemical properties**
· **General Information**
· **Physical state** Liquid

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· **Colour:**	Yellow
· **Odour:**	Characteristic
· **Melting point/freezing point:**	-37 °C
· **Boiling point or initial boiling point and boiling range**	> 100 °C
· **Flammability**	Not applicable.
· **Lower and upper explosion limit**	
· **Lower:**	3 Vol %
· **Upper:**	15 Vol %
· **Flash point:**	142 °C
· **Auto-ignition temperature:**	> 200 °C
· **Decomposition temperature:**	Not determined.
· **pH at 20 °C**	7.8 – 8.6
· **Viscosity:**	
· **Kinematic viscosity**	Not determined.
· **Dynamic:**	Not determined.
· **Solubility**	
· **water:**	Fully miscible.
· **Partition coefficient n-octanol/water (log value)**	Not determined.
· **Vapour pressure at 20 °C:**	23 hPa (CAS: 7732-18-5 Water)
· **Density and/or relative density**	
· **Density at 20 °C:**	1.076 g/cm³
· **Relative density**	Not determined.
· **Vapour density**	Not determined.

· **9.2 Other information**	
· **Appearance:**	
· **Form:**	Liquid
· **Important information on protection of health and environment, and on safety.**	
· **Ignition temperature:**	Product is not self-igniting.
· **Explosive properties:**	Product does not present an explosion hazard.
· **Solvent content:**	
· **VOC (EC)**	0.00 %
· **Change in condition**	
· **Evaporation rate**	Not determined.

· **Information with regard to physical hazard classes**	Not applicable

SECTION 10: Stability and reactivity

· **10.1 Reactivity** No further relevant information available.
· **10.2 Chemical stability**
· **Thermal decomposition / conditions to be avoided:** No decomposition if used according to specifications.
· **10.3 Possibility of hazardous reactions** Reacts with oxidising agents.
· **10.4 Conditions to avoid** Heat and static discharge.
· **10.5 Incompatible materials:** Strong oxidising agents.

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· **10.6 Hazardous decomposition products:** Carbon monoxide and carbon dioxide

SECTION 11: Toxicological information

· **11.1 Information on hazard classes as defined in Regulation (EC) No 1272/2008**
· **Acute toxicity** Harmful if swallowed.

· **LD/LC50 values relevant for classification:**		
ATE (Acute Toxicity Estimates)		
Oral	LD50	909.09 mg/kg

CAS: 107-21-1 Ethanediol		
Dermal	LD50	3,500 mg/kg (mouse)

· **Primary irritant effect:**
· **Skin corrosion/irritation**
Causes skin irritation.
· **Serious eye damage/irritation**
Causes serious eye irritation.
· **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** May damage fertility. May damage the unborn child.
· **STOT-single exposure** Based on available data, the classification criteria are not met.
· **STOT-repeated exposure**
May cause damage to the kidneys through prolonged or repeated exposure. Route of exposure: Oral.
· **Aspiration hazard** Based on available data, the classification criteria are not met.
· **Additional toxicological information:**
ROUTES OF EXPOSURE: Can be absorbed into the body by ingestion, by inhalation (mist and vapour) and through the skin.
Contains ethanediol. Ingestion of large quantities may cause damage to the kidneys.
There is a marked difference in acute oral toxicity between rodents and man, man being more susceptible than rodents.
The estimated fatal dose for man is 100 milliliters (1/2 cup).
This material has also been shown to be toxic and potentially lethal by ingestion to cats and dogs.
· **11.2 Information on other hazards**

· **Endocrine disrupting properties**
None of the ingredients are listed.

SECTION 12: Ecological information

· **12.1 Toxicity**

· **Aquatic toxicity:**	
CAS: 107-21-1 Ethanediol	
EC50 (96 h)	> 100 mg/l (Bacteria)

· **12.2 Persistence and degradability** Readily biodegradable
· **12.3 Bioaccumulative potential** Product is not expected to bioaccumulate.

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· **12.4 Mobility in soil** Potential for mobility in soil is very high (Koc between 0 and 50).
· **12.5 Results of PBT and vPvB assessment**
· **PBT:** Not applicable.
· **vPvB:** Not applicable.
· **12.6 Endocrine disrupting properties**
The product does not contain substances with endocrine disrupting properties.
· **12.7 Other adverse effects**
· **Additional ecological information:**
· **General notes:**
Water hazard class 1 (German Regulation) (Self-assessment): slightly hazardous for water
Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.

SECTION 13: Disposal considerations

· **13.1 Waste treatment methods**
· **Recommendation**
Recommended Hierarchy of Controls:
- Minimise waste;
- Reuse if not contaminated;
- Recycle, if possible; or
- Safe disposal (if all else fails).
Must not be disposed together with household garbage. Do not allow product to reach sewage system.
Contact waste processors for recycling information.
Used, degraded or contaminated product may be classified as hazardous waste. Anyone classifying hazardous waste and determining its fate must be qualified in accordance with state and international legislation.

· **UK List of Waste**	
16 00 00	WASTES NOT OTHERWISE SPECIFIED IN THE LIST
16 01 00	end-of-life vehicles from different means of transport (including off-road machinery) and wastes from dismantling of end-of-life vehicles and vehicle maintenance (except 13, 14, 16 06 and 16 08)
16 01 14*	antifreeze fluids containing hazardous substances

· **Uncleaned packaging:**
· **Recommendation:**
Empty contaminated packagings thoroughly. They may be recycled after thorough and proper cleaning.
Disposal must be made according to official regulations.
Containers, even those that are “empty,” may contain residues that can develop flammable and/or hazardous vapours upon heating. Do not cut, drill, grind, weld, or perform similar operations on or near empty containers.
· **Recommended cleansing agents:** Water, if necessary together with cleansing agents.

SECTION 14: Transport information

· **14.1 UN number or ID number**
· **ADR, IMDG, IATA** Not applicable

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· **14.2 UN proper shipping name** · **ADR, IMDG, IATA**	Not applicable
· **14.3 Transport hazard class(es)**	
· **ADR, ADN, IMDG, IATA** · **Class**	Not applicable
· **14.4 Packing group** · **ADR, IMDG, IATA**	Not applicable
· **14.5 Environmental hazards:**	Not applicable.
· **14.6 Special precautions for user**	Not applicable.
· **14.7 Maritime transport in bulk according to IMO instruments**	Not applicable.
· **Transport/Additional information:**	Not dangerous according to the above specifications.
· **UN "Model Regulation":**	Not applicable

SECTION 15: Regulatory information

· **15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture**
· **Poisons Act**

· **Regulated explosives precursors**
None of the ingredients are listed.

· **Regulated poisons**
None of the ingredients are listed.

· **Reportable explosives precursors**
None of the ingredients are listed.

· **Reportable poisons**

CAS: 1310-73-2	Sodium hydroxide	12% of total caustic alkalinity

· **Control Of Major Accident Hazards Regulations 2015 (COMAH)**
· **Named dangerous substances - ANNEX I** None of the ingredients are listed.

· **National regulations:**

· **Substances of very high concern (SVHC) according to UK REACH**

CAS: 1330-43-4	disodium tetraborate, anhydrous

· **15.2 Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

SECTION 16: Other information

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

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This Safety Data Sheet is in compliance with Regulation (EC) No 1907/2006, Article 31 as amended by Regulation (EU) 2020/878.

· **Relevant phrases**
H290 May be corrosive to metals.
H302 Harmful if swallowed.
H314 Causes severe skin burns and eye damage.
H315 Causes skin irritation.
H319 Causes serious eye irritation.
H360FD May damage fertility. May damage the unborn child.
H373 May cause damage to organs through prolonged or repeated exposure.

· **Training hints**
This product should only be handled by workers who have received sufficient training in the safe handling and use of chemical products.

· **Department issuing SDS:** Product safety department.

· **Abbreviations and acronyms:**
UK- REACH: The UK REACH etc. (Amendment etc.) (EU Exit) Regulations 2019 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals
GB- CLP: Retained GB CLP Regulation (EU) No. 1272/2008 as amended for Great Britain on the Classification, Labelling and Packaging of Chemicals.
ADR: Accord relatif au transport international des marchandises dangereuses par route (European Agreement Concerning the International Carriage of Dangerous Goods by Road)
IMDG: International Maritime Code for Dangerous Goods
IATA: International Air Transport Association
GHS: Globally Harmonised System of Classification and Labelling of Chemicals
EINECS: European Inventory of Existing Commercial Chemical Substances
ELINCS: European List of Notified Chemical Substances
CAS: Chemical Abstracts Service (division of the American Chemical Society)
VOC: Volatile Organic Compounds (USA, EU)
DNEL: Derived No-Effect Level (UK REACH)
LC50: Lethal concentration, 50 percent
LD50: Lethal dose, 50 percent
PBT: Persistent, Bioaccumulative and Toxic
vPvB: very Persistent and very Bioaccumulative
ATE: Acute toxicity estimate values
Met. Corr.1: Corrosive to metals – Category 1
Acute Tox. 4: Acute toxicity – Category 4
Skin Corr. 1A: Skin corrosion/irritation – Category 1A
Skin Irrit. 2: Skin corrosion/irritation – Category 2
Eye Irrit. 2: Serious eye damage/eye irritation – Category 2
Repr. 1B: Reproductive toxicity – Category 1B
STOT RE 2: Specific target organ toxicity (repeated exposure) – Category 2