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SECTION 1: Identification of the substance/mixture and of the company/undertaking**1.1 Product identifier**

DP Ultra

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

Relevant identified uses

Coolant for computer cooling systems

1.3 Details of the supplier of the safety data sheet**Manufacturer/Supplier**

Aqua Computer GmbH & Co. KG

Street/P.O. box

Gelliehäuser Str. 1

Nat. ID/Postal code/City

DE – 37130 Gleichen

Telephone / Telefax / E-mail

+49 (0) 5508-9749290 / +49 (0) 5508-9749291 / info@aquacomputer.de

1.4 Emergency telephone number

Europe: +49 5508-9749131 (Aqua Computer GmbH & Co. KG, Mo-Fri 9:00 a.m.-5 p.m. in German and English)

Germany: +49 6131-19240 (Giftinfo Mainz, 24 h in German and English)

Austria: +49 1406 43 43 (Gesundheit Österreich GmbH, 24 h)

Belgium: +32 70-245245 (Antigifcentrum/Centre Antipoisons, 24h)

France: +33 145-425959 (ORFILA / INRS)

SECTION 2: Hazards identification**2.1 Classification of the substance or mixture**

Not classified as hazardous according to Regulation (EC) No. 1272/2008.

2.2 Label elementsHazard pictograms: **No pictogram**Signal word: **No signal word**

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Hazard statements:

EUH210: Safety data sheet available on request.

Precautionary statements:

P101: If medical advice is needed, have product container or label at hand.

P102: Keep out of reach of children.

2.3 Other hazards

The mixture does not meet the PBT/vPvB criteria of REACH, annex XIII.

SECTION 3: Composition/information on ingredients**3.1 Substances**

This product is a mixture.

3.2 Mixtures**Composition/information on ingredients**

Ethanediol, ethylene glycol; EC No. 203-473-3; CAS No. 107-21-1

Concentration: 20-35 %

Classification according to Regulation (EC) No. 1272/2008:

Acute oral toxicity, category 4, H302

Specific target organ toxicity (repeated exposure) STOT RE 2, H373

Benzotriazole; EC No. 202-394-1; CAS No. 95-14-7

Concentration: < 1 %

Classification according to Regulation (EC) No. 1272/2008:

Acute oral toxicity, category 4, H302

Serious eye damage/eye irritation, category 2, H319

Aquatic hazard: Chronic, category 2, H411

Full text of hazard statements: see section 16.

Substances listed in the "Candidate List of Substances of Very High Concern (SVHC) for authorisation" of the European Chemicals Agency (ECHA) are no intentional ingredients of this product. It is therefore not expectable that the these substances are contained in the product in concentrations exceeding 0.1 %.

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SECTION 4: First aid measures

4.1 Description of first aid measures

General information:

Immediately remove any clothing soiled by the product.
Get medical advice/attention if you feel unwell.

Following inhalation:

Remove person to fresh air. If experiencing respiratory symptoms: Get medical advice/attention.

Following skin contact:

Wash with plenty of soap and water. If irritation persists: Get medical advice/attention.

Following eye contact:

Remove contact lenses. Rinse immediately with plenty of flowing water holding eyelids apart. Consult an ophthalmologist if necessary.

Following ingestion:

Rinse mouth thoroughly with water. Let water be drunken in little sips (dilution effect).
Call a physician immediately.

4.2 Most important symptoms and effects, both acute and delayed

Following eye contact: Causes mild irritation

Following skin contact: Localized erythema

Following ingestion: Abdominal pain, vomiting, circulatory collapse, dizziness

Following inhalation: Coughing

4.3 Indication of any immediate medical attention and special treatment needed

None.

SECTION 5: Firefighting measures

5.1 Extinguishing media

Suitable extinguishing media

Suitable: water spray jet, alcohol resistant foam, carbon dioxide (CO₂), powder, water mist.

Unsuitable extinguishing media

Full water jet.

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5.2 Special hazards arising from the substance or mixture

Hazardous combustion products: Carbon monoxide (CO), carbon dioxide (CO₂), nitrogen oxides (NO_x).

5.3 Advice for firefighters

Wear a self-contained breathing apparatus.
Use water spray jet to cool endangered containers.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

For non-emergency personnel

Use appropriate protection equipment (including personal protection equipment detailed in section 8 of the safety data sheet) to prevent contamination of skin, eyes and clothing. Avoid contact with skin, eyes and clothing.

6.2 Environmental precautions

Do not allow to enter into surface water or drains. Cover drains to prevent product from entering the drains.

6.3 Methods and material for containment and cleaning up

For cleaning up

For larger quantities: Use pump.

Remainder: Take up using absorbing material (sand, kieselguhr, chemical binding agents containing acids, universal binder). Place in appropriate containers for disposal.

For small quantities (up to approx. 5 L): Dilute and take up with plenty of water, dispose of water in drains.

For every accidental release: Ventilate affected area.

6.4 Reference to other sections

Hazardous combustion products: see section 5.

Personal protection equipment: see section 8.

Incompatible materials: see section 10.

Disposal: see section 13.

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SECTION 7: Handling an storage

7.1 Precautions for safe handling

Advices on safe handling

Close containers immediately after use.

Advice on general occupational hygiene

- When using do not eat, drink, smoke
- Wash hands before breaks and after work.
- Remove contaminated clothes and personal protection equipment before entering zones where food is consumed.

Fire preventions

No special fire protection measures are necessary, usual measures for fire prevention apply.

7.2 Conditions for safe storage, including any incompatibilities

Technical measures and storage conditions

Recommended storage temperature: 0 to 30 degrees Celsius.

Storage class according to VCI: 12: Non-flammable liquids.

Joint storage with the following substances is prohibited:

- Medicines, food and feedingstuffs.
- Substances releasing flammable gases when in contact with water.

7.3 Specific end use(s)

To be used as coolant in liquid cooled computer systems.

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SECTION 8: Exposure controls/personal protection

8.1 Control parameters

Occupational exposure limits

Country	Substance name	CAS No.	Remark	Type	SMW [mg/m ³]	KZW [mg/m ³]	Source
DE	Ethanediol	107-21-1	H1	AGW	26	52	TRGS 900
EU	Ethanediol (Ethylene glycol)	107-21-1		IOELV	52	104	2000/39/EC

Remarks:

SMW Long-term occupational exposure limit value, appraisal period 8 hours

KZW Short-term occupational exposure limit value, appraisal period 15 minutes unless otherwise stated

H1 As vapours and aerosols

Ethanediol (Ethylene glycol); CAS No. 107-21-1 / EC No. 203-473-3

DNEL values	Type of exposure	Duration of exposure	Effects	Value
(Worker)	dermal	Long-term (chronic)	systemic	106 mg/kg/day
	inhalation	Long-term (chronic)	local	35 mg/m ³

Ethanediol (Ethylene glycol); CAS No. 107-21-1 / EC No. 203-473-3

DNEL values	Type of exposure	Duration of exposure	Effects	Value
(Consumer)	dermal	Long-term (chronic)	systemic	53 mg/kg/day
	inhalation	Long-term (chronic)	local	7 mg/m ³

Ethanediol (Ethylene glycol); CAS No. 107-21-1 / EC No. 203-473-3

PNEC values	Environmental compartment	Type	Value
	Water	Freshwater	10 mg/L
	Water	Marine water	1 mg/L
	Water	Sweetwater sediment	20,9 mg/L
	Water	AQUA intermittent	10 mg/kg
	Soil	-	1,53 mg/kg
	Sewage treatment plant	-	199,5 mg/l

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8.2 Exposure controls

Appropriate engineering controls

Technical measures and the application of suitable work processes have priority over personal protection equipment. Provide adequate ventilation, either local exhaust ventilation or technical ventilation of work area.

Personal protective equipment

Personal protection equipment is to be selected depending on specific product concentration and product quantity for each workplace.

Respiratory protection

Respiratory protection necessary at: Aerosol or mist formation. Filter type: A (organic gases and vapours with boiling point > 65 °C, signature colour: brown).

Observe regulations regarding use of respiratory protection equipment and wear time limits according to DGUV Regulation 112-1902.

Hand protection

Wear tested gloves resistant to chemicals according to EN 374. For special purposes, it is recommended to check the resistance to chemicals of the protective gloves mentioned above together with the supplier of these gloves.

Suitable material: Nitrile rubber

Thickness (mm) 0.11

Permeation time (min.): 8 hours

Eye protection

Wear eye glasses with side protection according to EN 166:2001.

Environmental exposure controls

See sections 6 and 7.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Appearance

Physical state liquid

Colour colourless or coloured in various colours

Odour neutral

Data relevant with regard to safety characteristics

Flash point Not applicable

Auto-ignition temperature Not applicable

Auto-flammability The product is not self-igniting

Density 1,05 g/cm³ at 20 °C

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Freezing point	-20 °C
Boiling point	105 °C
Solubility in water	Fully miscible
Explosion risk	The product is not explosion capable; vapour/air mixtures can be explosive.
Explosive limits	lower: 3,2 vol% (Ethanediol) upper: 53 vol% (Ethanediol)

9.2 Other information

No additional information.

SECTION 10: Stability and reactivity

10.1 Reactivity

In case of warming: Vapours mixed with air may be explosive.

10.2 Chemical stability

Stable under normal conditions and under temperature and pressure conditions expected during storage and handling.

10.3 Possibility of hazardous reactions

Violent reaction with: Alkali (lye), concentrated; Sulfuric acid, concentrated; Oxidising agents, strong; Perchlorates.

10.4 Conditions to avoid

Avoid extreme temperatures. Do not let product evaporate until dry. Dried product can react like an oxidizing agent.

10.5 Incompatible materials

Various plastics. Zinc plated surfaces.

10.6 Hazardous decomposition products

Emission of flammable gases (for example hydrogen) or vapours in contact with strong oxidizing agents, alkali metals, acids possible.

Hazardous combustion products: see section 5.

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SECTION 11: Toxicological information**11.1 Information on toxicological effects**

No toxicity data available for the mixture itself.

Acute Toxicity:**Ethenediol (Ethylene glycol); CAS No. 107-21-1**

LDLo (oral, human): 786 mg/kg (source: RTECS)

LD50 (oral, rat): 7712 mg/kg (source: ECHA)

Benzotriazole; CAS No. 95-14-7

LD50 (oral, rat): 500 mg/kg (according to OECD Guideline 423; source: ECHA)

LD50 (dermal, rabbit): >2000 mg/kg (source: ECHA)

Skin corrosion/irritation

Based on available data, the classification criteria are not met.

Eye damage/irritation

Based on available data, the classification criteria are not met.

Sensitisation to the respiratory tract/skin

Based on available data, the classification criteria are not met. The mixture does not contain any substances that meet the classification criteria.

Germ cell mutagenicity

Based on available data, the classification criteria are not met. The mixture does not contain any substances that meet the classification criteria.

Carcinogenicity

Based on available data, the classification criteria are not met. The mixture does not contain any substances that meet the classification criteria.

Reproductive toxicity

Based on available data, the classification criteria are not met. The mixture does not contain any substances that meet the classification criteria.

Specific target organ toxicity (repeated exposure)

Based on available data, the classification criteria are not met. The mixture contains one substance classified "Specific target organ toxicity (repeated exposure) category 2". In accordance with classification criteria for category 2, the mixture itself does not meet classification criteria based in its composition.

Specific target organ toxicity (single exposure)

Based on available data, the classification criteria are not met. The mixture does not contain any substances that meet the classification criteria.

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Aspiration hazard

Based on available data, the classification criteria are not met. The mixture does not contain hydrocarbons.

SECTION 12: Ecological information**12.1 Toxicity****Ethanediol (Ethylene glycol); CAS No. 107-21-1**

LC50 (fish, 96h): 72860 mg/l (source: ECHA)

EC50 (aquatic invertebrates, 48h): > 100 mg/l (source: ECHA)

Benzotriazole; CAS No. 95-14-7

LC50 (Salmo gairdneri, 96h): 39 mg/l (source: EPA)

LC50 (Brachydanio rerio, 96h): > 100 mg/l (source: EPA/ECHA)

EC50 (aquatic invertebrates, 48h): 137 mg/l (source: ECHA)

12.2 Persistence and degradability

Readily biodegradable.

12.3 Bioaccumulative potential

No data available.

12.4 Mobility in soil

No data available.

12.5 Results of PBT- and vPvB assessment

Product does not meet the PBT/vPvB criteria of REACH, annex XIII.

12.6 Other adverse effects

No data available.

SECTION 13: Disposal considerations**13.1 Waste treatment methods**

Do not dispose of product quantities exceeding 1 litre through sewage system. Hazardous waste according to waste code regulation (European Waste Catalogue and Hazardous Waste List). Disposal must be made according to official, local regulation. Reconcile exact waste code with waste disposal contractor. This product

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is ash-free and can be disposed of in a suitable waste incineration plant.

Waste code

16 10 01 – Aqueous liquid wastes containing dangerous substances.

Uncleaned packaging

Emptied packaging containing liquid residues must be disposed of as packaging with dangerous contaminations.

15 01 10 (Packaging containing residues of or contaminated by dangerous substances)

Cleaned Packaging

Non-contaminated and cleaned packaging can be recycled.

Recommended cleansing agents: Water

SECTION 14: Transport information**14.1 UN number**

Transport regulations do not apply.

14.2 UN proper shipping name

Not relevant.

14.3 Transport hazard class(es)

Not relevant.

14.4 Packing group

Not relevant.

14.5 Environmental hazards

Not a hazardous good in terms of ADR, RID and ADN regulations.

Not a hazardous good in terms of IATA DGR and ICAO TI regulations.

Not a hazardous good in terms of IMDG regulations.

14.6 Special precautions for user

See sections 6 - 8

14.7 Transport in bulk according to Annex II of MARPOL and the IBC Code

Product is not transported in bulk.

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SECTION 15: Regulatory information

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

EU regulations

Regulation (EC) No. 1005/2009 (Substances that deplete the ozone layer):
 Not applicable.

Regulation (EC) No. 850/2004 (Persistent organic pollutants):
 Not applicable.

Regulation (EC) No. 649/2012 (Export and import of hazardous chemicals):
 Not applicable.

Regulation (EC) No. 648/2004 (Detergents):
 Not applicable.

Authorisations according to annex VII of Regulation (EC) No. 1907/2006 (REACH):
 None.

Restrictions according to annex VIII of Regulation (EC) No. 1907/2006 (REACH):
 None.

National regulations (Germany)

Wassergefährdungsklasse

Klasse 1 (Selbsteinstufung) gemäß VwVwS, Anhang 4.

Technische Anleitung zur Reinhaltung der Luft (TA-Luft)

Nummer	Stoffgruppe	Klasse	Konzentration	Massenstrom	Massenkonzentration	Hinweis
5.2.5	Organische Stoffe	keine	100 %	0,5 kg/h	50 mg/m ³	1

Hinweis 1: Abgegebener Massenstrom oder Massenkonzentration darf, jeweils angegeben als Gesamtkohlenstoff, insgesamt nicht überschritten werden.

Störfallverordnung (12. BImSchV)

Unterliegt nicht der StörfallVO.

Lösemittelverordnung (31. BImSchV)

VOC-Anteil: 0 %

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15.2 Chemical safety assessment

A chemical safety assessment has not been carried out.

SECTION 16: Other information

16.1 Indication of changes

Full revision of previous version (dated 02.07.2010) according to current regulations and data including CLP classification.

16.2 Abbreviations and acronyms

ADR	European agreement concerning the international carriage of dangerous goods by road
BImSchV	Verordnung zur Durchführung des Bundes-Immissionsschutzgesetzes
CAS	Chemical Abstracts Service (division of the American Chemical Society)
DIN	German Standards Institute / German industrial norm
EC	Effective Concentration
ECHA	European Chemicals Agency
EC	European Community
EN	European Norm
EPA	United States Environmental Protection Agency
IATA-DGR	International Air Transport Association-Dangerous Goods Regulations
IBC-Code	International code for safe carriage, in bulk by sea, of dangerous chemicals
ICAO-TI	International Civil Aviation Organization-Technical Instructions
IMDG-Code	International Maritime Code for Dangerous Goods
ISO	International Standards Organization
IUCLID	International Uniform Chemical Information Database
LC	Lethal Concentration
LD	Lethal Dose
LDLo	Lowest Lethal Dose
log Kow	n-octanol/water partition coefficient
MARPOL	Maritime Pollution Convention
OECD	Organisation for Economic Co-operation and Development
PBT	Persistent, Bioaccumulative, Toxic
RID	Regulations concerning the international carriage of dangerous goods by rail
RTECS	Registry of Toxic Effects of Chemical Substances
TRGS	Technische Regeln für Gefahrstoffe
UN	United Nations
VOC	Volatile Organic Compounds

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vPvB very Persistent and very Bioaccumulative
VwVwS Verwaltungsvorschrift wassergefährdender Stoffe
WGK Wassergefährdungsklasse (Water hazard class)

16.3 Key literature references and sources for data

Regulations

REACH Regulation (EC) No. 1907/2006, last amended by Regulation (EC) 2015/830
CLP Regulation (EC) No. 1272/2008, last amended by Regulation (EC) 2015/491

Internet

<http://www.baua.de>
<http://publikationen.dguv.de>
<http://www.gischem.de>
<http://echa.europa.eu/en/candidate-list-table>

16.4 Classification for mixtures and used evaluation method according to Regulation (EC) No. 1207/2008 (CLP)

Classification according to calculation method.

16.5 Relevant R-, H- and EUH-phrases (Number and full text) according to Regulation (EC) No. 1272/2008, referred to in sections 2 to 15:

H302 Acute toxicity (oral), category 4; Harmful if swallowed.

H319 Causes serious eye damage/irritation, category 2; Causes serious eye irritation.

H373 Health hazard STOT RE 2; May cause damage to kidneys through prolonged or repeated exposure.

H411 Hazardous to the Aquatic Environment: Chronic, category 2; Toxic to aquatic life with long lasting effects.