

**Total Hardness N°1**

Version number: GHS 1.0

Date of compilation: 2026-04-22

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

**1.1 Product identifier**

Trade name	<b>Total Hardness N°1</b>
Article number	POL20TH1
UFI	JCNV-83A2-7125-TMS0

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

Relevant identified uses	Reagent for water analysis
Uses advised against	Other.

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

Water-i.d. GmbH  
Daimlerstrasse 20  
76344 Eggenstein  
Germany

Telephone: +49 (0) 721-78 20 29-0  
e-mail: lab@water-id.com  
Website: <https://www.water-id.com>  
e-mail (competent person)

lab@water-id.com

**1.4 Emergency telephone number**

Poison centre	
Name	Telephone
National Chemical Emergency Centre (NCEC)	+44 1235 239670

**SECTION 2: Hazards identification**

**2.1 Classification of the substance or mixture**

Classification (acc. to GB CLP)

Section	Hazard class	Category	Hazard class and category	Hazard statement
3.10	acute toxicity (oral)	4	Acute Tox. 4	H302
3.2	skin corrosion/irritation	2	Skin Irrit. 2	H315
3.3	serious eye damage/eye irritation	2	Eye Irrit. 2	H319
3.9	specific target organ toxicity - repeated exposure	2	STOT RE 2	H373

For full text of abbreviations: see SECTION 16.

The most important adverse physicochemical, human health and environmental effects  
Delayed or immediate effects can be expected after short or long-term exposure.

**2.2 Label elements**

Labelling (acc. to GB CLP)

- Signal word            warning

**Total Hardness N°1**

Version number: GHS 1.0

Date of compilation: 2026-04-22

- Pictograms

GHS07, GHS08



- Hazard statements

- H302 Harmful if swallowed.
- H315 Causes skin irritation.
- H319 Causes serious eye irritation.
- H373 May cause damage to organs through prolonged or repeated exposure.

- Precautionary statements

- P270 Do not eat, drink or smoke when using this product.
- P280 Wear protective gloves/protective clothing/eye protection/face protection/hearing protection.
- P337+P313 If eye irritation persists: Get medical advice/attention.
- P501 Dispose of contents/container to industrial combustion plant.

Tactile warning of danger yes

- Hazardous ingredients for labelling ethanediol

**2.3 Other hazards**

Results of PBT and vPvB assessment

Does not contain a PBT-/vPvB-substance at a concentration of  $\geq 0,1\%$ .

Endocrine disrupting properties

Does not contain an endocrine disruptor (ED) at a concentration of  $\geq 0,1\%$ .

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

**3.1 Substances**

Not relevant (mixture)

**3.2 Mixtures**

Description of the mixture

Mixture of substances listed below with additional ingredients that are not fulfilling the criteria relating to physical hazards, health hazards or environmental hazards.

Name of substance	Identifier	Wt%	Classification acc. to GHS
ethanediol	CAS No 107-21-1  EC No 203-473-3  Index No 603-027-00-1	25 - < 50	Acute Tox. 4 / H302 STOT RE 2 / H373
sodium hydroxide	CAS No 1310-73-2  EC No 215-185-5  Index No 011-002-00-6	1 - < 5	Skin Corr. 1A / H314 Eye Dam. 1 / H318

**Total Hardness N°1**

Version number: GHS 1.0

Date of compilation: 2026-04-22

Name of substance	Specific Conc. Limits	M-Factors	ATE	Exposure route
ethanediol	-	-	500 mg/kg	oral
sodium hydroxide	Skin Corr. 1A; H314: C ≥ 5 % Skin Corr. 1B; H314: 2 % ≤ C < 5 % Skin Irrit. 2; H315: 0.5 % ≤ C < 2 % Eye Dam. 1; H318: C ≥ 2 % Eye Irrit. 2; H319: 0.5 % ≤ C < 2 %	-	-	

**Remarks**

For full text of abbreviations: see SECTION 16

**SECTION 4: First aid measures**

**4.1 Description of first aid measures**

**General notes**

Do not leave affected person unattended. Remove victim out of the danger area. Keep affected person warm, still and covered. Take off immediately all contaminated clothing. In all cases of doubt, or when symptoms persist, seek medical advice. In case of unconsciousness place person in the recovery position. Never give anything by mouth.

**Following inhalation**

If breathing is irregular or stopped, immediately seek medical assistance and start first aid actions. In case of respiratory tract irritation, consult a physician. Provide fresh air.

**Following skin contact**

Wash with plenty of soap and water.

**Following eye contact**

Remove contact lenses, if present and easy to do. Continue rinsing. Irrigate copiously with clean, fresh water for at least 10 minutes, holding the eyelids apart.

**Following ingestion**

Rinse mouth with water (only if the person is conscious). Do NOT induce vomiting.

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

Symptoms and effects are not known to date.

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

none

**SECTION 5: Firefighting measures**

**5.1 Extinguishing media**

**Suitable extinguishing media**

Water spray, BC-powder, Carbon dioxide (CO2)

**Unsuitable extinguishing media**

Water jet

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

**Hazardous combustion products**

Nitrogen oxides (NOx), Carbon monoxide (CO), Carbon dioxide (CO2)

**5.3 Advice for firefighters**

In case of fire and/or explosion do not breathe fumes. Co-ordinate firefighting measures to the fire surroundings. Do not allow firefighting water to enter drains or water courses. Collect contaminated firefighting water separately. Fight fire with normal precautions from a reasonable distance.

**SECTION 6: Accidental release measures**

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

For non-emergency personnel

**Total Hardness N°1**

Version number: GHS 1.0

Date of compilation: 2026-04-22

Remove persons to safety.

For emergency responders

Wear breathing apparatus if exposed to vapours/dust/spray/gases.

**6.2 Environmental precautions**

Keep away from drains, surface and ground water. Retain contaminated washing water and dispose of it.

**6.3 Methods and material for containment and cleaning up**

Advice on how to contain a spill

Covering of drains

Advice on how to clean up a spill

Wipe up with absorbent material (e.g. cloth, fleece). Collect spillage: sawdust, kieselgur (diatomite), sand, universal binder

Appropriate containment techniques

Use of adsorbent materials.

Other information relating to spills and releases

Place in appropriate containers for disposal. Ventilate affected area.

**6.4 Reference to other sections**

Hazardous combustion products: see section 5. Personal protective equipment: see section 8. Incompatible materials: see section 10. Disposal considerations: see section 13.

**SECTION 7: Handling and storage**

**7.1 Precautions for safe handling**

Recommendations

- Measures to prevent fire as well as aerosol and dust generation

Use local and general ventilation. Use only in well-ventilated areas.

Advice on general occupational hygiene

Wash hands after use. Do not eat, drink and smoke in work areas. Remove contaminated clothing and protective equipment before entering eating areas. Never keep food or drink in the vicinity of chemicals. Never place chemicals in containers that are normally used for food or drink. Keep away from food, drink and animal feedingstuffs.

**7.2 Conditions for safe storage, including any incompatibilities**

Control of effects

Protect against external exposure, such as

frost

- Packaging compatibilities

Only packagings which are approved (e.g. acc. to ADR) may be used.

**7.3 Specific end use(s)**

See section 16 for a general overview.

**SECTION 8: Exposure controls/personal protection**

**8.1 Control parameters**

Occupational exposure limit values (Workplace Exposure Limits)											
Country	Name of agent	CAS No	Identifier	TWA [ppm]	TWA [mg/m³]	STEL [ppm]	STEL [mg/m³]	Ceiling-C [ppm]	Ceiling-C [mg/m³]	Notation	Source
GB	ethane-1,2-diol	107-21-1	WEL		10					H, particle	EH40/2005
GB	ethane-1,2-diol	107-21-1	WEL	20	52	40	104			vap	EH40/2005

**Total Hardness N°1**

Version number: GHS 1.0

Date of compilation: 2026-04-22

Occupational exposure limit values (Workplace Exposure Limits)											
Country	Name of agent	CAS No	Identifier	TWA [ppm]	TWA [mg/m <sup>3</sup> ]	STEL [ppm]	STEL [mg/m <sup>3</sup> ]	Ceiling-C [ppm]	Ceiling-C [mg/m <sup>3</sup> ]	Notation	Source
GB	sodium hydroxide	1310-73-2	WEL				2				EH40/2005

**Notation**

- Ceiling-C ceiling value is a limit value above which exposure should not occur
- H absorbed through the skin
- particle as airborne particles
- STEL short-term exposure limit: a limit value above which exposure should not occur and which is related to a 15-minute period (unless otherwise specified)
- TWA time-weighted average (long-term exposure limit): measured or calculated in relation to a reference period of 8 hours time-weighted average (unless otherwise specified)
- vap as vapours

Relevant DNELs of components						
Name of substance	CAS No	Endpoint	Threshold level	Protection goal, route of exposure	Used in	Exposure time
ethanediol	107-21-1	DNEL	35 mg/m <sup>3</sup>	human, inhalatory	worker (industry)	chronic - local effects
ethanediol	107-21-1	DNEL	106 mg/kg bw/day	human, dermal	worker (industry)	chronic - systemic effects
sodium hydroxide	1310-73-2	DNEL	1 mg/m <sup>3</sup>	human, inhalatory	worker (industry)	chronic - local effects

**8.2 Exposure controls**

Appropriate engineering controls

General ventilation.

Individual protection measures (personal protective equipment)

Eye/face protection

Wear eye/face protection.

Skin protection

- Hand protection

Chemical protection gloves are suitable, which are tested according to EN 374. >480 minutes (permeation: level 6).

- Other protection measures

Preventive skin protection (barrier creams/ointments) is recommended. Wash hands thoroughly after handling. Protective clothing against liquid chemicals.

Respiratory protection

In case of inadequate ventilation wear respiratory protection.

Environmental exposure controls

Use appropriate container to avoid environmental contamination. Keep away from drains, surface and ground water.

**SECTION 9: Physical and chemical properties**

**9.1 Information on basic physical and chemical properties**

Physical state	liquid
Colour	light yellow
Odour	odourless

**Total Hardness N°1**

Version number: GHS 1.0

Date of compilation: 2026-04-22

Melting point/freezing point	not determined
Boiling point or initial boiling point and boiling range	100 °C at 1.013 mPa
Flammability	non-combustible
Lower and upper explosion limit	not determined
Flash point	not determined
Auto-ignition temperature	398 °C (auto-ignition temperature (liquids and gases))
Decomposition temperature	not relevant
pH (value)	8.1
Kinematic viscosity	not determined
Solubility(ies)	not determined

Partition coefficient

Partition coefficient n-octanol/water (log value)	this information is not available
---	-----------------------------------

Vapour pressure	32 hPa at 25 °C
-----------------	-----------------

Density and/or relative density

Density	not determined
Relative vapour density	information on this property is not available

Particle characteristics	not relevant (liquid)
--------------------------	-----------------------

**9.2 Other information**

Information with regard to physical hazard classes	hazard classes acc. to GHS (physical hazards): not relevant
--	---

Other safety characteristics

Liquid content	84.65 %
Solid content	16.69 %

**SECTION 10: Stability and reactivity**

**10.1 Reactivity**

Concerning incompatibility: see below "Conditions to avoid" and "Incompatible materials".

**10.2 Chemical stability**

See below "Conditions to avoid".

**10.3 Possibility of hazardous reactions**

No known hazardous reactions.

**Total Hardness N°1**

Version number: GHS 1.0

Date of compilation: 2026-04-22

**10.4 Conditions to avoid**

There are no specific conditions known which have to be avoided.

**10.5 Incompatible materials**

Oxidisers

**10.6 Hazardous decomposition products**

Reasonably anticipated hazardous decomposition products produced as a result of use, storage, spill and heating are not known. Hazardous combustion products: see section 5.

**SECTION 11: Toxicological information**

**11.1 Information on toxicological effects**

Test data are not available for the complete mixture.

**Classification procedure**

The method for classification of the mixture is based on ingredients of the mixture (additivity formula).

**Classification acc. to GHS**

**Acute toxicity**

Harmful if swallowed.

**- Acute toxicity estimate (ATE)**

Oral 1,232 mg/kg

Acute toxicity estimate (ATE) of components			
Name of substance	CAS No	Exposure route	ATE
ethanediol	107-21-1	oral	500 mg/kg

**Skin corrosion/irritation**

Causes skin irritation.

**Serious eye damage/eye irritation**

Causes serious eye irritation.

**Respiratory or skin sensitisation**

Shall not be classified as a respiratory or skin sensitiser.

**Germ cell mutagenicity**

Shall not be classified as germ cell mutagenic.

**Carcinogenicity**

Shall not be classified as carcinogenic.

**Reproductive toxicity**

Shall not be classified as a reproductive toxicant.

**Specific target organ toxicity - single exposure**

Shall not be classified as a specific target organ toxicant (single exposure).

**Specific target organ toxicity - repeated exposure**

May cause damage to organs through prolonged or repeated exposure.

**Aspiration hazard**

Shall not be classified as presenting an aspiration hazard.

**SECTION 12: Ecological information**

**12.1 Toxicity**

Shall not be classified as hazardous to the aquatic environment.

**12.2 Persistence and degradability**

Data are not available.

## Total Hardness N°1

Version number: GHS 1.0

Date of compilation: 2026-04-22

### 12.3 Bioaccumulative potential

Data are not available.

### 12.4 Mobility in soil

Data are not available.

### 12.5 Results of PBT and vPvB assessment

Does not contain a PBT-/vPvB-substance at a concentration of  $\geq 0,1\%$ .

### 12.6 Endocrine disrupting properties

Does not contain an endocrine disruptor (ED) at a concentration of  $\geq 0,1\%$ .

### 12.7 Other adverse effects

Data are not available.

## SECTION 13: Disposal considerations

### 13.1 Waste treatment methods

Sewage disposal-relevant information

Do not empty into drains. Avoid release to the environment. Refer to special instructions/safety data sheets.

Waste treatment of containers/packagings

It is a dangerous waste; only packagings which are approved (e.g. acc. to ADR) may be used. Completely emptied packages can be recycled. Handle contaminated packages in the same way as the substance itself.

#### Remarks

Please consider the relevant national or regional provisions. Waste shall be separated into the categories that can be handled separately by the local or national waste management facilities.

## SECTION 14: Transport information

14.1	UN number	not assigned
14.2	UN proper shipping name	not assigned
14.3	Transport hazard class(es)	none
14.4	Packing group	not assigned
14.5	Environmental hazards	non-environmentally hazardous acc. to the dangerous goods regulations
14.6	Special precautions for user	Provisions for dangerous goods (ADR) should be complied within the premises.
14.7	Maritime transport in bulk according to IMO instruments	The cargo is not intended to be carried in bulk.

### Information for each of the UN Model Regulations

#### Agreement concerning the International Carriage of Dangerous Goods by Road (ADR) - Additional information

not assigned

#### International Maritime Dangerous Goods Code (IMDG) - Additional information

not assigned

#### International Civil Aviation Organization (ICAO-IATA/DGR) - Additional information

not assigned

## SECTION 15: Regulatory information

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

**Total Hardness N°1**

Version number: GHS 1.0

Date of compilation: 2026-04-22

**Relevant provisions of the European Union (EU)**

**Deco-Paint Directive**

VOC content	41.92 %
-------------	---------

**Industrial Emissions Directive (IED)**

VOC content	41.92 %
-------------	---------

**Directive on the restriction of the use of certain hazardous substances in electrical and electronic equipment (RoHS)**

none of the ingredients are listed

**Regulation concerning the establishment of a European Pollutant Release and Transfer Register (PRTR)**

none of the ingredients are listed

**Water Framework Directive (WFD)**

List of pollutants (WFD)			
Name of substance	CAS No	Listed in	Remarks
sodium hydroxide		a)	

Legend

a) Indicative list of the main pollutants

**Regulation on persistent organic pollutants (POP)**

none of the ingredients are listed

**Restrictions of occupation**

Directive 94/33/EC on the protection of young people at work / Observe national regulations on protection of young people at work.  
 Directive 92/85/EEC on the introduction of measures to encourage improvements in the safety and health at work of pregnant workers and workers who have recently given birth or are breastfeeding / Observe national regulations on maternity protection.

**National regulations (GB)**

**List of substances subject to authorisation (GB REACH, Annex 14) / SVHC - candidate list**

none of the ingredients are listed

**Restrictions according to GB REACH, Annex 17**

Dangerous substances with restrictions (GB REACH, Annex 17)			
Name of substance	Name acc. to inventory	CAS No	No
Total Hardness N°1	this product meets the criteria for classification in accordance with Regulation No 1272/2008/EC		3

**National inventories**

Country	Inventory	Status
AU	AIIC	all ingredients are listed
CN	IECSC	all ingredients are listed
EU	ECSI	all ingredients are listed
EU	REACH Reg.	not all ingredients are listed
US	TSCA	all ingredients are listed (ACTIVE)

## Total Hardness N°1

Version number: GHS 1.0

Date of compilation: 2026-04-22

### Legend

AIIC	Australian Inventory of Industrial Chemicals
ECSI	EC Substance Inventory (EINECS, ELINCS, NLP)
IECSC	Inventory of Existing Chemical Substances Produced or Imported in China
REACH Reg.	REACH registered substances
TSCA	Toxic Substance Control Act

### 15.2 Chemical Safety Assessment

Chemical safety assessments for substances in this mixture were not carried out.

## SECTION 16: Other information

### Abbreviations and acronyms

Abbr.	Descriptions of used abbreviations
Acute Tox.	Acute toxicity
ADR	Accord relatif au transport international des marchandises dangereuses par route (Agreement concerning the International Carriage of Dangerous Goods by Road)
ATE	Acute Toxicity Estimate
CAS	Chemical Abstracts Service (service that maintains the most comprehensive list of chemical substances)
Ceiling-C	Ceiling value
DGR	Dangerous Goods Regulations (see IATA/DGR)
DNEL	Derived No-Effect Level
EC No	The EC Inventory (EINECS, ELINCS and the NLP-list) is the source for the seven-digit EC number, an identifier of substances commercially available within the EU (European Union)
ED	Endocrine disruptor
EH40/2005	EH40/2005 Workplace exposure limits ( <a href="http://www.nationalarchives.gov.uk/doc/open-government-licence/">http://www.nationalarchives.gov.uk/doc/open-government-licence/</a> )
EINECS	European Inventory of Existing Commercial Chemical Substances
ELINCS	European List of Notified Chemical Substances
Eye Dam.	Seriously damaging to the eye
Eye Irrit.	Irritant to the eye
GB CLP	The Chemicals (Health and Safety) and Genetically Modified Organisms (Contained Use) (Amendment etc.) (EU Exit) Regulations 2019, SI 2019/720 (as amended)
GB REACH	The REACH etc. (Amendment etc.) (EU Exit) Regulations 2019, SI 2019/758 (as amended)
GHS	"Globally Harmonized System of Classification and Labelling of Chemicals" developed by the United Nations
IATA	International Air Transport Association
IATA/DGR	Dangerous Goods Regulations (DGR) for the air transport (IATA)
ICAO	International Civil Aviation Organization
IMDG	International Maritime Dangerous Goods Code
index No	The Index number is the identification code given to the substance in Part 3 of Annex VI to Regulation (EC) No 1272/2008
NLP	No-Longer Polymer
PBT	Persistent, Bioaccumulative and Toxic
ppm	Parts per million
RID	Règlement concernant le transport International ferroviaire des marchandises Dangereuses (Regulations concerning the International carriage of Dangerous goods by Rail)

**Total Hardness N°1**

Version number: GHS 1.0

Date of compilation: 2026-04-22

Abbr.	Descriptions of used abbreviations
Skin Corr.	Corrosive to skin
Skin Irrit.	Irritant to skin
STEL	Short-term exposure limit
STOT RE	Specific target organ toxicity - repeated exposure
TWA	Time-weighted average
UFI	Unique formula identifier
VOC	Volatile Organic Compounds
vPvB	Very Persistent and very Bioaccumulative
WEL	Workplace exposure limit

**Key literature references and sources for data**

The REACH etc. (Amendment etc.) (EU Exit) Regulations 2019, SI 2019/758 (as amended). The Chemicals (Health and Safety) and Genetically Modified Organisms (Contained Use) (Amendment etc.) (EU Exit) Regulations 2019, SI 2019/720 (as amended). GB mandatory classification and labelling.

Agreement concerning the International Carriage of Dangerous Goods by Road (ADR). Regulations concerning the International Carriage of Dangerous Goods by Rail (RID). International Maritime Dangerous Goods Code (IMDG). Dangerous Goods Regulations (DGR) for the air transport (IATA).

**Classification procedure**

Physical and chemical properties: The classification is based on tested mixture.

Health hazards, Environmental hazards: The method for classification of the mixture is based on ingredients of the mixture (additivity formula).

**List of relevant phrases (code and full text as stated in section 2 and 3)**

Code	Text
H302	Harmful if swallowed.
H314	Causes severe skin burns and eye damage.
H315	Causes skin irritation.
H318	Causes serious eye damage.
H319	Causes serious eye irritation.
H373	May cause damage to organs through prolonged or repeated exposure.

**Disclaimer**

This information is based upon the present state of our knowledge. This SDS has been compiled and is solely intended for this product.