

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

1.1. Product identifier

Product form : Mixture
 Name : SYSTEMSOFT CV
 Product code : 330033

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

1.2.1. Relevant identified uses

Use of the substance/mixture : Closed Hot Water Treatment

1.2.2. Uses advised against

No additional information available

1.3. Details of the supplier of the safety data sheet

Avf Water
 Van Konijnenburgweg 84
 4612 PL Bergen op Zoom - Nederland
 T +(31) 164 212 835 - F +(31) 164 212 831

1.4. Emergency telephone number

Emergency number : +(31) 164 212835

Country	Organisation/Company	Address	Emergency number	Comment
United Kingdom	National Poisons Information Service (Birmingham Centre) City Hospital, Guy's & St Thomas' Hospital Trust	Dudley Road B18 7QH Birmingham	0844 892 0111 (UK only, Monday to Friday, 08.00 to 18.00 hours)	

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification according to Regulation (EC) No. 1272/2008 [CLP]

Skin Corr. 1A H314

Full text of hazard classes and H-statements : see section 16

Adverse physicochemical, human health and environmental effects

May be corrosive to metals. Causes severe skin burns and eye damage. May cause an allergic skin reaction.

2.2. Label elements

Labelling according to Regulation (EC) No. 1272/2008 [CLP]

Hazard pictograms (CLP) :



GHS05

Signal word (CLP) : Danger
 Hazardous ingredients : potassium hydroxide, caustic potash
 Hazard statements (CLP) : H314 - Causes severe skin burns and eye damage
 Precautionary statements (CLP) : P260 - Do not breathe vapours, dust, gas, fume, mist, spray
 P280 - Wear protective gloves, protective clothing, eye protection, face protection
 P301+P330+P331 - IF SWALLOWED: rinse mouth. Do NOT induce vomiting
 P303+P361+P353 - IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower
 P305+P351+P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing
 P310 - Immediately call a POISON CENTER, a doctor

2.3. Other hazards

No additional information available

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SECTION 3: Composition/information on ingredients

3.1. Substance

Not applicable

3.2. Mixture

Name	Product identifier	%	Classification according to Regulation (EC) No. 1272/2008 [CLP]
potassium hydroxide, caustic potash	(CAS No) 1310-58-3 (EC no) 215-181-3 (EC index no) 019-002-00-8 (REACH-no) 01-2119487136-33	1 - 5	Met. Corr. 1, H290 Acute Tox. 4 (Oral), H302 Skin Corr. 1A, H314

Specific concentration limits:

Name	Product identifier	Specific concentration limits
potassium hydroxide, caustic potash	(CAS No) 1310-58-3 (EC no) 215-181-3 (EC index no) 019-002-00-8 (REACH-no) 01-2119487136-33	(0.5 =<C < 2) Eye Irrit. 2, H319 (0.5 =<C < 2) Skin Irrit. 2, H315 (2 =<C < 5) Skin Corr. 1B, H314 (C >= 5) Skin Corr. 1A, H314

Full text of H-statements: see section 16

SECTION 4: First aid measures

4.1. Description of first aid measures

- First-aid measures after inhalation : Remove person to fresh air and keep comfortable for breathing. If you feel unwell, seek medical advice.
- First-aid measures after skin contact : Rinse skin with water/shower. Remove/Take off immediately all contaminated clothing. Call a physician immediately.
- First-aid measures after eye contact : Rinse immediately and thoroughly, pulling the eyelids well away from the eye (15 minutes minimum). Remove contact lenses, if present and easy to do. Continue rinsing. Call a physician immediately.
- First-aid measures after ingestion : Do not give the affected person anything to drink, even if he is fully conscious. Rinse mouth. Do not induce vomiting. Call a physician immediately. If possible show him this sheet. Failing this, show him the packaging or label.

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

- Symptoms/injuries after skin contact : Burns.
- Symptoms/injuries after eye contact : Serious damage to eyes.
- Symptoms/injuries after ingestion : Burns.

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

No supplementary information available.

SECTION 5: Firefighting measures

5.1. Extinguishing media

- Suitable extinguishing media : Water spray. Dry powder. Foam. Carbon dioxide.
- Unsuitable extinguishing media : Strong water jet.

5.2. Special hazards arising from the substance or mixture

- Fire hazard : Cool down the containers exposed to heat with a water spray.
- Hazardous decomposition products in case of fire : Toxic fumes may be released.

5.3. Advice for firefighters

- Protection during firefighting : Do not attempt to take action without suitable protective equipment. Self-contained breathing apparatus. Complete protective clothing.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

6.1.1. For non-emergency personnel

- Emergency procedures : Evacuate area.

6.1.2. For emergency responders

- Protective equipment : Do not attempt to take action without suitable protective equipment.

6.2. Environmental precautions

Contain the spilled material by bunding. Do not allow product to spread into the environment.

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6.3. Methods and material for containment and cleaning up

Methods for cleaning up : Take up liquid spill into absorbent material.
Other information : Dispose of materials or solid residues at an authorized site.

6.4. Reference to other sections

For further information refer to section 8: "Exposure controls/personal protection". For disposal of solid materials or residues refer to section 13 : "Disposal considerations".

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Precautions for safe handling : Ensure good ventilation of the work station. Avoid contact with skin and eyes. Wear personal protective equipment.
Hygiene measures : Wash contaminated clothing before reuse. Contaminated work clothing should not be allowed out of the workplace. Do not eat, drink or smoke when using this product. Always wash hands after handling the product.

7.2. Conditions for safe storage, including any incompatibilities

Storage conditions : Store in a well-ventilated place. Keep cool. Protect from freezing.
Incompatible materials : Acids. Strong oxidizing agents.
Packaging materials : Recommended materials: Original packaging.

7.3. Specific end use(s)

No additional information available

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

potassium hydroxide, caustic potash (1310-58-3)		
Belgium	Local name	Potassium (hydroxyde de)
Belgium	Short time value (mg/m ³)	2 mg/m ³
Belgium	Remark (BE)	M
France	Local name	Potassium (hydroxyde de)
France	VLE (mg/m ³)	2 mg/m ³
Hungary	Local name	KÁLIUM-HIDROXID
Hungary	AK-érték	2 mg/m ³
Hungary	CK-érték	2 mg/m ³
Hungary	Megjegyzések (HU)	m; l.
Portugal	Local name	Hidróxido de potássio
Portugal	OEL - Ceilings (mg/m ³)	2 mg/m ³
Spain	Local name	Hidróxido de potasio
Spain	VLA-EC (mg/m ³)	2 mg/m ³
Sweden	Local name	Potassium hydroxide inhalable dust
Sweden	nivågränsvärde (NVG) (mg/m ³)	1 mg/m ³
United Kingdom	Local name	Potassium hydroxide
United Kingdom	WEL STEL (mg/m ³)	2 mg/m ³
USA - ACGIH	ACGIH Ceiling (mg/m ³)	2 mg/m ³
USA - ACGIH	Remark (ACGIH)	URT, eye, & skin irr

8.2. Exposure controls

Appropriate engineering controls:

Ensure good ventilation of the work station.

Hand protection:

Protective gloves made of rubber

Eye protection:

Safety glasses with side shields

Skin and body protection:

Wear suitable protective clothing

Respiratory protection:

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In the event of insufficient ventilation: Gas mask with filter type A

Environmental exposure controls:

Avoid release to the environment.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	: Liquid
Colour	: dark brown.
Odour	: characteristic.
Odour threshold	: No data available
pH	: 11.5 - 12.5
Relative evaporation rate (butylacetate=1)	: No data available
Melting point	: < 0 °C
Freezing point	: No data available
Boiling point	: 100 °C
Flash point	: No data available
Auto-ignition temperature	: No data available
Decomposition temperature	: No data available
Flammability (solid, gas)	: Non flammable
Vapour pressure	: No data available
Relative vapour density at 20 °C	: No data available
Relative density	: No data available
Density	: 1.13 g/cm ³ (20°C)
Solubility	: Soluble in water.
Log Pow	: No data available
Viscosity, kinematic	: No data available
Viscosity, dynamic	: No data available
Explosive properties	: Not explosive material according to EC criteria.
Oxidising properties	: Non oxidizing material according to EC criteria.
Explosive limits	: No data available

9.2. Other information

No additional information available

SECTION 10: Stability and reactivity

10.1. Reactivity

The product is non-reactive under normal conditions of use, storage and transport.

10.2. Chemical stability

Stable at ambient temperature and under normal conditions of use.

10.3. Possibility of hazardous reactions

No additional information available

10.4. Conditions to avoid

No additional information available

10.5. Incompatible materials

Acids. Strong oxidizing agents.

10.6. Hazardous decomposition products

On thermal decomposition (pyrolysis), releases : Carbon oxides (CO, CO₂), Nitrogen oxides.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity	: Not classified
Skin corrosion/irritation	: Causes severe skin burns and eye damage. pH: 11.5 - 12.5
Serious eye damage/irritation	: Serious eye damage, category 1, implicit pH: 11.5 - 12.5

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Respiratory or skin sensitisation	: Not classified
Germ cell mutagenicity	: Not classified
Carcinogenicity	: Not classified
Reproductive toxicity	: Not classified
Specific target organ toxicity (single exposure)	: Not classified
Specific target organ toxicity (repeated exposure)	: Not classified
Aspiration hazard	: Not classified

SECTION 12: Ecological information

12.1. Toxicity

Ecology - general : Before neutralisation, the product may represent a danger to aquatic organisms.

potassium hydroxide, caustic potash (1310-58-3)

LC50 fish 1	80 mg/l <i>Gambusia affinis</i> (Mosquito fish)
LC50 fish 2	165 mg/l <i>Poecilia reticulata</i>
EC50 Daphnia 1	40 - 240 mg/l 48 Hours (<i>Daphnia magna</i>)

12.2. Persistence and degradability

No additional information available

12.3. Bioaccumulative potential

No additional information available

12.4. Mobility in soil

No additional information available

12.5. Results of PBT and vPvB assessment

Component	
potassium hydroxide, caustic potash (1310-58-3)	This substance/mixture does not meet the PBT criteria of REACH regulation, annex XIII This substance/mixture does not meet the vPvB criteria of REACH regulation, annex XIII

12.6. Other adverse effects

No additional information available




SECTION 13: Disposal considerations

13.1. Waste treatment methods

Waste treatment methods : Dispose of contents/container in accordance with licensed collector's sorting instructions.
Ecology - waste materials : Avoid release to the environment.

SECTION 14: Transport information

In accordance with ADR / IATA / IMDG

ADR	IMDG	IATA
14.1. UN number 1719	1719	1719
14.2. UN proper shipping name CAUSTIC ALKALI LIQUID, N.O.S. (potassium hydroxide, caustic potash)	CAUSTIC ALKALI LIQUID, N.O.S. (potassium hydroxide, caustic potash)	Caustic alkali liquid, n.o.s. (potassium hydroxide, caustic potash)
Transport document description UN 1719 CAUSTIC ALKALI LIQUID, N.O.S. (potassium hydroxide, caustic potash), 8, II, (E)	UN 1719 CAUSTIC ALKALI LIQUID, N.O.S. (potassium hydroxide, caustic potash), 8, II	UN 1719 Caustic alkali liquid, n.o.s. (potassium hydroxide, caustic potash), 8, II
14.3. Transport hazard class(es) 8	8	8
		
14.4. Packing group II	II	II
14.5. Environmental hazards Dangerous for the environment : No	Dangerous for the environment : No Marine pollutant : No	Dangerous for the environment : No

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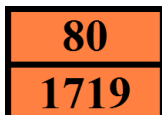
according to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2015/830

ADR	IMDG	IATA
No supplementary information available		

14.6. Special precautions for user

- Overland transport

Classification code (ADR)	: C5
Special provisions (ADR)	: 274
Limited quantities (ADR)	: 11
Tank code (ADR)	: L4BN
Transport category (ADR)	: 2
Hazard identification number (Kemler No.)	: 80
Orange plates	:



Tunnel restriction code (ADR)	: E
EAC code	: 2R

- Transport by sea

Special provisions (IMDG)	: 274
Limited quantities (IMDG)	: 1 L
EmS-No. (Fire)	: F-A
EmS-No. (Spillage)	: S-B
Segregation (IMDG)	: SG22, SG35

- Air transport

PCA Limited quantities (IATA)	: Y840
PCA limited quantity max net quantity (IATA)	: 0.5L
PCA packing instructions (IATA)	: 851
PCA max net quantity (IATA)	: 1L
CAO packing instructions (IATA)	: 855
CAO max net quantity (IATA)	: 30L
Special provisions (IATA)	: A3

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

Not applicable

SECTION 15: Regulatory information

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

15.1.1. EU-Regulations

Contains no REACH substances with Annex XVII restrictions
Contains no substance on the REACH candidate list
Contains no REACH Annex XIV substances

15.1.2. National regulations

Germany

VwVwS Annex reference	: Water hazard class (WGK) 1, low hazard to waters (Classification according to VwVwS, Annex 4)
12th Ordinance Implementing the Federal Immission Control Act - 12.BImSchV	: Is not subject of the 12. BImSchV (Hazardous Incident Ordinance)

Netherlands

SZW-lijst van kankerverwekkende stoffen	: None of the components are listed
SZW-lijst van mutagene stoffen	: None of the components are listed
NIET-limitatieve lijst van voor de voortplanting giftige stoffen – Borstvoeding	: None of the components are listed
NIET-limitatieve lijst van voor de voortplanting giftige stoffen – Vruchtbaarheid	: None of the components are listed
NIET-limitatieve lijst van voor de voortplanting giftige stoffen – Ontwikkeling	: None of the components are listed

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15.2. Chemical safety assessment

No chemical safety assessment has been carried out

SECTION 16: Other information

Indication of changes:

All chapters have been modified since the previous version.

Full text of H- and EUH-statements:

Acute Tox. 4 (Oral)	Acute toxicity (oral), Category 4
Met. Corr. 1	Corrosive to metals, Category 1
Skin Corr. 1A	Skin corrosion/irritation, Category 1A
H290	May be corrosive to metals
H302	Harmful if swallowed
H314	Causes severe skin burns and eye damage

SDS EU (REACH Annex II)

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product