

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

#### 1.1. Product identifier

Product form : Mixture  
 Product name : CLARIFI  
 Product code : 369  
 Product group : Mixture

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

##### 1.2.1. Relevant identified uses

Main use category : Industrial use, Professional use  
 Industrial/Professional use spec : Industrial  
 For professional use only  
 Use of the substance/mixture : Cleaning/washing agents and additives

##### 1.2.2. Uses advised against

No additional information available

#### 1.3. Details of the supplier of the safety data sheet

##### Manufacturer

Clover Chemicals Ltd  
 Clover House Macclesfield Road  
 SK23 7DQ Whaley Bridge – Derbyshire  
 United Kingdom  
 T 01663 733114 - F 01663 733115  
[info@cloverchemicals.com](mailto:info@cloverchemicals.com) - [www.cloverchemicals.com](http://www.cloverchemicals.com)

##### Supplier

Christeyns NV  
 Afrikalaan 182  
 9000 GENT  
 Belgium  
 T +32 (0)9/ 223 38 71 - F +32 (0)9/ 233 03 44  
[info@christeyns.be](mailto:info@christeyns.be) - [www.christeyns.com](http://www.christeyns.com)

#### 1.4. Emergency telephone number

Country	Official advisory body	Address	Emergency number	Comment
Ireland	National Poisons Information Centre Beaumont Hospital	PO Box 1297 Beaumont Road 9 Dublin	+353 1 809 2566 (Healthcare professionals- 24/7) +353 1 809 2166 (public, 8am - 10pm, 7/7)	
United Kingdom	National Poisons Information Service (Birmingham Centre) City Hospital	Dudley Road B18 7QH Birmingham	0344 892 0111	Only for healthcare professionals

### SECTION 2: Hazards identification

#### 2.1. Classification of the substance or mixture

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

Skin Corr. 1B H314  
 Aquatic Acute 1 H400  
 Aquatic Chronic 2 H411

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

##### Adverse physicochemical, human health and environmental effects

No additional information available

#### 2.2. Label elements

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

Hazard pictograms (CLP) :



GHS05

GHS09

CLP Signal word : Danger  
 Contains : Sodium hydroxide, Sodium hypochlorite  
 Hazard statements (CLP) : H314 - Causes severe skin burns and eye damage.  
 H410 - Very toxic to aquatic life with long lasting effects.  
 Precautionary statements (CLP) : P102 - Keep out of reach of children.  
 P264 - Wash hands thoroughly after handling.  
 P280 - Wear protective gloves, eye protection.  
 P273 - Avoid release to the environment.

# CLARIFI

## Safety Data Sheet

according to the REACH Regulation (EC) 1907/2006 amended by Regulation (EU) 2020/878

P303+P361+P353 - IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water or shower.  
P332+P313 - If skin irritation occurs: Get medical advice/attention.  
P305+P351+P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.  
P337+P313 - If eye irritation persists: Get medical advice/attention.  
P363 - Wash contaminated clothing before reuse.  
P391 - Collect spillage.

EUH-statements

: EUH206 - Warning! Do not use together with other products. May release dangerous gases (chlorine).

### 2.3. Other hazards

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

Contains no PBT/vPvB substances  $\geq 0.1\%$  assessed in accordance with REACH Annex XIII

The mixture does not contain substance(s) included in the list established in accordance with Article 59(1) of REACH for having endocrine disrupting properties, or is not identified as having endocrine disrupting properties in accordance with the criteria set out in Commission Delegated Regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605

## SECTION 3: Composition/information on ingredients

### 3.1. Substances

Not applicable

### 3.2. Mixtures

Name	Product identifier	%	Classification according to Regulation (EC) No. 1272/2008 [CLP]
Sodium hydroxide substance with national workplace exposure limit(s) (IE, GB)	CAS-no: 1310-73-2 Einecs nr: 215-185-5 EG annex nr: 011-002-00-6 REACH-no: 01-2119457892-27	3 – 5	Skin Corr. 1A, H314 Eye Dam. 1, H318 Met. Corr. 1, H290
Sodium hypochlorite	CAS-no: 7681-52-9 Einecs nr: 231-668-3 EG annex nr: 017-011-00-1 REACH-no: 01-2119488154-34	3 – 5	Met. Corr. 1, H290 Skin Corr. 1B, H314 Aquatic Acute 1, H400 (M=10)

### Specific concentration limits:

Name	Product identifier	Specific concentration limits
Sodium hydroxide	CAS-no: 1310-73-2 Einecs nr: 215-185-5 EG annex nr: 011-002-00-6 REACH-no: 01-2119457892-27	( 0.5 $\leq$ C < 2) Eye Irrit. 2, H319 ( 0.5 $\leq$ C < 2) Skin Irrit. 2, H315 ( 2 $\leq$ C < 5) Skin Corr. 1B, H314 ( 5 $\leq$ C < 100) Skin Corr. 1A, H314
Sodium hypochlorite	CAS-no: 7681-52-9 Einecs nr: 231-668-3 EG annex nr: 017-011-00-1 REACH-no: 01-2119488154-34	( 5 $\leq$ C $\leq$ 100) EUH031

Full text of H- and EUH-statements: see section 16

## SECTION 4: First aid measures

### 4.1. Description of first aid measures

General advice

: Never give anything by mouth to an unconscious person. If you feel unwell, seek medical advice (show the label where possible).

Inhalation

: Remove person to fresh air and keep comfortable for breathing. Immediately call a POISON CENTER/doctor.

Skin contact

: Take off immediately all contaminated clothing. Rinse skin with water/shower. Immediately call a POISON CENTER/doctor.

Eye contact

: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER/doctor.

Ingestion

: Rinse mouth. Do NOT induce vomiting. Immediately call a POISON CENTER/doctor.

# CLARIFI

## Safety Data Sheet

according to the REACH Regulation (EC) 1907/2006 amended by Regulation (EU) 2020/878

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

Symptoms/effects	: Causes severe skin burns and eye damage.
Acute effects skin	: Causes severe burns.
Acute effects eyes	: Causes serious eye damage.
Acute effects oral route	: Burns or irritation of the linings of the mouth, throat, and gastrointestinal tract. Abdominal pain, nausea.

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

No additional information available

## SECTION 5: Firefighting measures

### 5.1. Extinguishing media

Suitable extinguishing media : Water.

### 5.2. Special hazards arising from the substance or mixture

Hazardous decomposition products in case of fire : Corrosive vapours. Toxic fumes may be released.

### 5.3. Advice for firefighters

Firefighting instructions	: Use water spray or fog for cooling exposed containers. Exercise caution when fighting any chemical fire. Prevent fire fighting water from entering the environment.
Protection during firefighting	: Do not enter fire area without proper protective equipment, including respiratory protection.

## SECTION 6: Accidental release measures

### 6.1. Personal precautions, protective equipment and emergency procedures

#### 6.1.1. For non-emergency personnel

Emergency procedures : Evacuate unnecessary personnel.

#### 6.1.2. For emergency responders

Protective equipment : Equip cleanup crew with proper protection.  
Emergency procedures : Ventilate area.

### 6.2. Environmental precautions

Prevent entry to sewers and public waters. Notify authorities if liquid enters sewers or public waters. Avoid release to the environment.

### 6.3. Methods and material for containment and cleaning up

Methods for cleaning up : Soak up spills with inert solids, such as clay or diatomaceous earth as soon as possible. Collect spillage. Store away from other materials.

### 6.4. Reference to other sections

See Section 8. Exposure controls and personal protection.

## SECTION 7: Handling and storage

### 7.1. Precautions for safe handling

Precautions for safe handling	: Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work. Provide good ventilation in process area to prevent formation of vapour. Do not breathe dust/fume/gas/mist/vapours/spray.
Hygiene measures	: Wash hands, forearms and face thoroughly after handling. Wash contaminated clothing before reuse.

### 7.2. Conditions for safe storage, including any incompatibilities

Technical measures	: Comply with applicable regulations.
Storage conditions	: Store in a cool, well-ventilated place. Keep container tightly closed.
Incompatible products	: Strong acids.
Incompatible materials	: Sources of ignition. Direct sunlight.
Packaging materials	: polyethylene.

### 7.3. Specific end use(s)

No additional information available

## SECTION 8: Exposure controls/personal protection

### 8.1. Control parameters

#### 8.1.1 National occupational exposure and biological limit values

Sodium hydroxide (1310-73-2)	
Ireland - Occupational Exposure Limits	
Local name	Sodium hydroxide
OEL STEL	2 mg/m <sup>3</sup>
Regulatory reference	Chemical Agents Code of Practice 2021

# CLARIFI

## Safety Data Sheet

according to the REACH Regulation (EC) 1907/2006 amended by Regulation (EU) 2020/878

Sodium hydroxide (1310-73-2)	
United Kingdom - Occupational Exposure Limits	
Local name	Sodium hydroxide
WEL STEL (OEL STEL)	2 mg/m <sup>3</sup>
Regulatory reference	EH40/2005 (Fourth edition, 2020). HSE

### 8.1.2. Recommended monitoring procedures

No additional information available

### 8.1.3. Air contaminants formed

No additional information available

### 8.1.4. DNEL and PNEC

No additional information available

### 8.1.5. Control banding

No additional information available

## 8.2. Exposure controls

### 8.2.1. Appropriate engineering controls

#### Appropriate engineering controls:

Ensure that there is a suitable ventilation system.

### 8.2.2. Personal protection equipment

#### Personal protective equipment:

Avoid all unnecessary exposure.

#### Personal protective equipment symbol(s):



#### 8.2.2.1. Eye and face protection

##### Eye protection:

Chemical goggles or face shield

#### 8.2.2.2. Skin protection

##### Protective equipment:

Wear suitable protective clothing

##### Hand protection:

Wear protective gloves.

#### 8.2.2.3. Respiratory protection

No additional information available

#### 8.2.2.4. Thermal hazards

No additional information available

### 8.2.3. Environmental exposure controls

#### Other information:

Do not eat, drink or smoke during use.

## SECTION 9: Physical and chemical properties

### 9.1. Information on basic physical and chemical properties

Physical state	: Liquid
Colour	: Light yellow.
Physical state/form	: Liquid.
Odour	: Characteristic.
Odour threshold	: Not available
Melting point/range	: 0 °C

# CLARIFI

## Safety Data Sheet

according to the REACH Regulation (EC) 1907/2006 amended by Regulation (EU) 2020/878

Freezing point	: Not available
Boiling point/Boiling range	: 100 °C
Flammability	: Non flammable.
Explosive limits	: Not available
Lower explosion limit	: Not available
Upper explosion limit	: Not available
Flash point	: Not available
Autoignition temperature	: Not available
Decomposition temperature	: Not available
pH	: 13 – 14
Viscosity, kinematic	: Not available
Solubility	: Soluble in water.
Partition coefficient n-octanol/water (Log Kow)	: Not available
Vapour pressure	: Not available
Vapour pressure at 50 °C	: Not available
Density	: Not available
Relative density	: 1.105
Relative vapour density at 20 °C	: Not available
Particle characteristics	: Not applicable

### 9.2. Other information

#### 9.2.1. Information with regard to physical hazard classes

No additional information available

#### 9.2.2. Other safety characteristics

No additional information available

## SECTION 10: Stability and reactivity

### 10.1. Reactivity

Thermal decomposition generates : Corrosive vapours.

### 10.2. Chemical stability

Stable under normal conditions of use.

### 10.3. Possibility of hazardous reactions

No dangerous reactions known under normal conditions of use.

### 10.4. Conditions to avoid

Direct sunlight. Extremely high or low temperatures.

### 10.5. Incompatible materials

Strong acids.

### 10.6. Hazardous decomposition products

fume. Carbon monoxide. Carbon dioxide. Thermal decomposition generates : Corrosive vapours.

## SECTION 11: Toxicological information

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

Acute toxicity (oral)	: Not classified
Acute toxicity (dermal)	: Not classified
Acute toxicity (inhalation)	: Not classified

Sodium hypochlorite (7681-52-9)	
LD50 oral rat	> 2000 mg/kg
LD50 dermal rabbit	> 2000 mg/kg
Skin corrosion/irritation	: Causes severe skin burns. pH: 13 – 14
Serious eye damage/irritation	: Assumed to cause serious eye damage pH: 13 – 14
Respiratory or skin sensitisation	: Not classified
Additional information	: Based on available data, the classification criteria are not met
Germ cell mutagenicity	: Not classified
Additional information	: Based on available data, the classification criteria are not met
Carcinogenicity	: Not classified

# CLARIFI

## Safety Data Sheet

according to the REACH Regulation (EC) 1907/2006 amended by Regulation (EU) 2020/878

Additional information	: Based on available data, the classification criteria are not met
Reproductive toxicity	: Not classified
Additional information	: Based on available data, the classification criteria are not met
STOT-single exposure	: Not classified
Additional information	: Based on available data, the classification criteria are not met
STOT-repeated exposure	: Not classified
Additional information	: Based on available data, the classification criteria are not met
Aspiration hazard	: Not classified
Additional information	: Based on available data, the classification criteria are not met

### 11.2. Information on other hazards

#### 11.2.1. Endocrine disrupting properties

No additional information available

#### 11.2.2. Other information

Potential adverse human health effects and symptoms : Based on available data, the classification criteria are not met

## SECTION 12: Ecological information

### 12.1. Toxicity

Ecology - water	: Very toxic to aquatic life. Toxic to aquatic life with long lasting effects.
Hazardous to the aquatic environment, short-term (acute)	: Very toxic to aquatic life.
Hazardous to the aquatic environment, long-term (chronic)	: Toxic to aquatic life with long lasting effects.
Not rapidly degradable	

#### Sodium hydroxide (1310-73-2)

LC50 - Fish [1]	> 35 mg/l
EC50 - Crustacea [1]	40.4 mg/l (Ceriodaphnia)
EC50 - Other aquatic organisms [1]	> 33 mg/l waterflea

#### Sodium hypochlorite (7681-52-9)

LC50 - Fish [1]	0.06 mg/l (fresh water)
LC50 - Fish [2]	0.032 mg/l (marine water)
EC50 - Crustacea [1]	0.141 mg/l (Daphnia magna - fresh water)
EC50 - Other aquatic organisms [1]	0.026 mg/l (Crassostrea virginica - marine water)

### 12.2. Persistence and degradability

#### CLARIFI

Persistence and degradability	May cause long-term adverse effects in the environment.
-------------------------------	---

#### Sodium hydroxide (1310-73-2)

Persistence and degradability	Not applicable.
-------------------------------	-----------------

#### Sodium hypochlorite (7681-52-9)

Persistence and degradability	Strong oxidizing agent. It will react with organic substances present in soil and sediments and degrades rapidly to chloride. Sodium hypochlorite is substantially removed in biological treatment processes.
-------------------------------	---

### 12.3. Bioaccumulative potential

#### CLARIFI

Bioaccumulative potential	No bioaccumulation.
---------------------------	---------------------

#### Sodium hydroxide (1310-73-2)

Log Pow	-3.88
Bioaccumulative potential	No bioaccumulation.

#### Sodium hypochlorite (7681-52-9)

Bioaccumulative potential	Bioaccumulation unlikely.
---------------------------	---------------------------

# CLARIFI

## Safety Data Sheet

according to the REACH Regulation (EC) 1907/2006 amended by Regulation (EU) 2020/878

### 12.4. Mobility in soil

No additional information available

### 12.5. Results of PBT and vPvB assessment

#### CLARIFI

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. Endocrine disrupting properties

No additional information available

### 12.7. Other adverse effects

Additional information : Avoid release to the environment.

## SECTION 13: Disposal considerations




### 13.1. Waste treatment methods

Product/Packaging disposal recommendations : Dispose in a safe manner in accordance with local/national regulations. Dispose of contents/container to hazardous or special waste collection point, in accordance with local, regional, national and/or international regulation.

Waste / unused products : Avoid release to the environment.

## SECTION 14: Transport information

In accordance with ADR / IMDG / IATA

ADR	IMDG	IATA
<b>14.1. UN number or ID number</b>		
UN 1719	UN 1719	UN 1719
<b>14.2. UN proper shipping name</b>		
CAUSTIC ALKALI LIQUID, N.O.S.	CAUSTIC ALKALI LIQUID, N.O.S.	Caustic alkali liquid, n.o.s.
<b>Transport document description</b>		
UN 1719 CAUSTIC ALKALI LIQUID, N.O.S. (Sodium hydroxide), 8, III, (E), ENVIRONMENTALLY HAZARDOUS	UN 1719 CAUSTIC ALKALI LIQUID, N.O.S. (Sodium hydroxide), 8, III, MARINE POLLUTANT/ENVIRONMENTALLY HAZARDOUS	UN 1719 Caustic alkali liquid, n.o.s. (Sodium hydroxide), 8, III, ENVIRONMENTALLY HAZARDOUS
<b>14.3. Transport hazard class(es)</b>		
8	8	8
		
<b>14.4. Packing group</b>		
III	III	III
<b>14.5. Environmental hazards</b>		
Dangerous for the environment: Yes	Dangerous for the environment: Yes Marine pollutant: Yes	Dangerous for the environment: Yes
No supplementary information available		

### 14.6. Special precautions for user

#### Overland transport

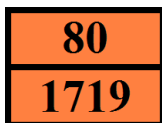
Classification code (ADR) : C5  
Special provisions (ADR) : 274  
Limited quantities (ADR) : 5I  
Packing instructions (ADR) : P001, IBC03, R001  
Mixed packing provisions (ADR) : MP19  
Portable tank and bulk container instructions (ADR) : T7  
Portable tank and bulk container special provisions (ADR) : TP1, TP28  
Tank code (ADR) : L4BN

# CLARIFI

## Safety Data Sheet

according to the REACH Regulation (EC) 1907/2006 amended by Regulation (EU) 2020/878

Vehicle for tank carriage : AT  
Transport category (ADR) : 3  
Special provisions for carriage - Packages (ADR) : V12  
Hazard identification number (Kemler No.) : 80  
Orange plates :



Tunnel code : E  
EAC code : 2R

### Transport by sea

Special provisions (IMDG) : 223, 274  
Limited quantities (IMDG) : 5 L  
Packing instructions (IMDG) : P001  
IBC packing instructions (IMDG) : IBC03

### Air transport

PCA Limited quantities (IATA) : Y841  
PCA limited quantity max net quantity (IATA) : 1L  
PCA packing instructions (IATA) : 852  
PCA max net quantity (IATA) : 5L  
CAO packing instructions (IATA) : 856  
CAO max net quantity (IATA) : 60L  
Special provisions (IATA) : A3, A803

### 14.7. Maritime transport in bulk according to IMO instruments

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

Contains no substance subject to Regulation (EU) No 649/2012 of the European Parliament and of the Council of 4 July 2012 concerning the export and import of hazardous chemicals.

Contains no substance subject to Regulation (EU) No 2019/1021 of the European Parliament and of the Council of 20 June 2019 on persistent organic pollutants

Contains no substance subject to REGULATION (EU) No 1005/2009 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 16 September 2009 on substances that deplete the ozone layer.

Contains no substance subject to Regulation (EU) 2019/1148 of the European Parliament and of the Council of 20 June 2019 on the marketing and use of explosives precursors.

Contains no substance subject to Regulation (EC) 273/2004 of the European Parliament and of the Council of 11 February 2004 on the manufacture and the placing on market of certain substances used in the illicit manufacture of narcotic drugs and psychotropic substances.

#### 15.1.2. National regulations

No additional information available

### 15.2. Chemical safety assessment

No chemical safety assessment has been carried out

## SECTION 16: Other information

Data sources : 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.

Other information : None.

### Full text of H- and EUH-statements:

Aquatic Acute 1	Hazardous to the aquatic environment — Acute Hazard, Category 1
-----------------	---



# CLARIFI

## Safety Data Sheet

according to the REACH Regulation (EC) 1907/2006 amended by Regulation (EU) 2020/878

Full text of H- and EUH-statements:	
Aquatic Chronic 2	Hazardous to the aquatic environment — Chronic Hazard, Category 2
EUH031	Contact with acids liberates toxic gas.
EUH206	Warning! Do not use together with other products. May release dangerous gases (chlorine).
Eye Dam. 1	Serious eye damage/eye irritation, Category 1
Eye Irrit. 2	Serious eye damage/eye irritation, Category 2
H290	May be corrosive to metals.
H314	Causes severe skin burns and eye damage.
H315	Causes skin irritation.
H318	Causes serious eye damage.
H319	Causes serious eye irritation.
H400	Very toxic to aquatic life.
H411	Toxic to aquatic life with long lasting effects.
Met. Corr. 1	Corrosive to metals, Category 1
Skin Corr. 1A	Skin corrosion/irritation, Category 1, Sub-Category 1A
Skin Corr. 1B	Skin corrosion/irritation, Category 1, Sub-Category 1B
Skin Irrit. 2	Skin corrosion/irritation, Category 2

Classification and procedure used to derive the classification for mixtures according to Regulation (EC) 1272/2008 [CLP]:		
Skin Corr. 1B	H314	Calculation method
Aquatic Acute 1	H400	Calculation method
Aquatic Chronic 2	H411	

Safety Data Sheet (SDS), EU

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.