

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

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

Clover Chemicals Ltd
 Clover House
 Macclesfield Road
 SK23 7DQ Whaley Bridge - United Kingdom
 T 01663 733114 - F 01663 733115
info@cloverchemicals.com - www.cloverchemicals.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	

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 and H-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

Hazardous ingredients

: 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.

CLARIFI

Safety Data Sheet

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

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. 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

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	(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 ≤C < 2) Eye Irrit. 2, H319 (0.5 ≤C < 2) Skin Irrit. 2, H315 (2 ≤C < 5) Skin Corr. 1B, H314 (5 ≤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 ≤C ≤ 100) EUH031

Full text of H-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.

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.

CLARIFI

Safety Data Sheet

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

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 Heading 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

Sodium hydroxide (1310-73-2)

Ireland - Occupational Exposure Limits

Local name	Sodium hydroxide
OEL (15 min ref) (mg/m ³)	2 mg/m ³
Regulatory reference	Chemical Agents Code of Practice 2020

United Kingdom - Occupational Exposure Limits

Local name	Sodium hydroxide
WEL STEL (mg/m ³)	2 mg/m ³
Regulatory reference	EH40/2005 (Fourth edition, 2020). HSE

8.2. Exposure controls

Appropriate engineering controls:

Ensure that there is a suitable ventilation system.

CLARIFI

Safety Data Sheet

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

Personal protective equipment:

Avoid all unnecessary exposure.

Hand protection:

Wear protective gloves.

Eye protection:

Chemical goggles or face shield

Protective equipment:

Wear suitable protective clothing

Personal protective equipment symbol(s):



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
Physical state/form	: Liquid.
Colour	: Pale yellow.
Odour	: Characteristic.
Odour threshold	: No data available
pH	: 13 – 14
Relative evaporation rate (butylacetate=1)	: No data available
Melting point/range	: 0 °C
Freezing point	: No data available
Boiling point/Boiling range	: 100 °C
Flash point	: No data available
Autoignition 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	: 1.105
Solubility	: Soluble in water.
Log Pow	: No data available
Viscosity, kinematic	: No data available
Viscosity, dynamic	: No data available
Explosive properties	: No data available
Oxidising properties	: No data available
Explosive limits	: No data available

9.2. Other information

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.

CLARIFI

Safety Data Sheet

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

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 toxicological effects

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

Sodium hydroxide (1310-73-2)

ATE CLP (oral)	2000 mg/kg bodyweight
----------------	-----------------------

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
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
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.

Sodium hydroxide (1310-73-2)

LC50 fish 1	> 35 mg/l
EC50 Daphnia 1	40.4 mg/l (Ceriodaphnia)

CLARIFI

Safety Data Sheet

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

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 Daphnia 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.
---------------------------	---------------------------

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. 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 / RID / IMDG / IATA / ADN

ADR	IMDG	IATA
14.1. UN number		
UN 1719	UN 1719	UN 1719
14.2. UN proper shipping name		
CAUSTIC ALKALI LIQUID, N.O.S.	CAUSTIC ALKALI LIQUID, N.O.S.	Caustic alkali liquid, n.o.s.

CLARIFI


Safety Data Sheet

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

Transport document description		
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
14.3. Transport hazard class(es)		
8	8	8
		
14.4. Packing group		
III	III	III
14.5. Environmental hazards		
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
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. Transport in bulk according to Annex II of Marpol and the IBC Code

Not applicable

CLARIFI

Safety Data Sheet

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

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

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
Aquatic Chronic 2	Hazardous to the aquatic environment — Chronic Hazard, Category 2
EUH031	
Eye Dam. 1	Serious eye damage/eye irritation, Category 1
Eye Irrit. 2	Serious eye damage/eye irritation, Category 2
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
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.
EUH206	Warning! Do not use together with other products. May release dangerous gases (chlorine).

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	

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.