

# SAFETY DATA SHEET SODIUM HYPOCHLORITE SOLUTION 5% - < 20%

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

1.1. Product identifier

Product name SODIUM HYPOCHLORITE SOLUTION 5% - < 20%

Product number 47852

Synonyms; trade names BLEACH, HYPO, BRIDOS, EUROCHLOR, EVERCHLOR CLEAR, SODIUM

HYPOCHLORITE SOLUTION > 2.5%, SOD HYPOCHLORITE 14/15%, SOD

HYPOCHLORITE 14/15% SLY, SOD HYPOCHLORITE 5%, SODIUM HYPOCHLORITE 12 %, SODIUM HYPOCHLORITE 15% SOLUTION, SODIUM HYPOCHLORITE SOLUTION 16 -

18 %, SODIUM HYPOCHLORITE 7% SOLUTION, SODIUM HYPOCHLORITE 13% SOLUTION, SODIUM HYPOCHLORITE SOLUTION > 10%, SODIUM HYPOCHLORITE, GE6078360, GE6078364, GE6078358 SODIUM HYPOCHLORITE SOLUTION 14/15 %, GE6078358, GE6078363, GE6078365, GE6078359, SODIUM HYPOCHLORITE 15% UNI 901:2007, SODIUM HYPOCHLORITE 18% UNI 901:2007, SODIUM HYPOCHLORITE 12% UNI 901:2007, SOD HYPOCHLORITE 6% SOL, SODIUM HYPOCHLORITE 14%, BIOTREAT 4549, SODIUM HYPOCHLORITE 7.5% SOLUTION, SODIUM HYPOCHLORITE 14/15%, SODIUM HYPOCHLORITE LOW BROMATE, SOD HYPOCHLORITE 14/15% AKZO, SODIUM HYPOCHLORITE 150 g/l, CHLOROT(NATRIUMHYPOCHLORIET8%), SODIUM HYPOCHLORITE SOLUTION 47 - 50, BRIDOS CHLOR LIQ BLACK, BIOSPERSE 3001,

BROMAX, HYPOCHLORITE SDE  $55\,\mathrm{HT}$  (SODIUM HYPOCHLORITE)

REACH registration number 01-2119488154-34-XXXX

 CAS number
 7681-52-9

 EU index number
 017-011-00-1

 EC number
 231-668-3

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

Identified uses Detergent. Cleaning agent. Disinfectant. Chemical Intermediate

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

Supplier

Univar

Aquarius House

6 Mid Point Business Park

Bradford BD3 7AY

+44 1274 267300 sds@univar.com +44 1274 267306

# 1.4. Emergency telephone number

**Emergency telephone** SGS - +32 (0)3 575 55 55 (24h)

**Sds No.** 47852

### SECTION 2: Hazards identification

### 2.1. Classification of the substance or mixture

Classification (EC 1272/2008)

Physical hazards Met. Corr. 1 - H290

Health hazards Skin Corr. 1B - H314 Eye Dam. 1 - H318

**Environmental hazards** Aquatic Acute 1 - H400 Aquatic Chronic 2 - H411

Classification (67/548/EEC or C; R34. N; R50, R51/53. R31

1999/45/EC)

### 2.2. Label elements

EC number 231-668-3

### **Pictogram**





Signal word Danger

Hazard statements H290 May be corrosive to metals.

H314 Causes severe skin burns and eye damage.

H400 Very toxic to aquatic life.

H411 Toxic to aquatic life with long lasting effects.

**Precautionary statements** P234 Keep only in original container.

P260 Do not breathe vapour/ spray.

P301+P330+P331 IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.

P304+P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing. P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove

contact lenses, if present and easy to do. Continue rinsing.

P501 Dispose of contents/ container in accordance with national regulations.

Supplemental label

information

EUH031 Contact with acids liberates toxic gas.

SODIUM HYPOCHLORITE SOLUTION, ... % CI ACTIVE **Contains** 

# 2.3. Other hazards

This substance is not classified as PBT or vPvB according to current EU criteria.

### SECTION 3: Composition/information on ingredients

### 3.2. Mixtures

# SODIUM HYPOCHLORITE SOLUTION 5% - < 20%

SODIUM HYPOCHLORITE SOLUTION, ... % CI ACTIVE

5% - <20%

CAS number: 7681-52-9 EC number: 231-668-3 REACH registration number: 01-

2119488154-34-XXXX

M factor (Acute) = 10 M factor (Chronic) = 1

Classification Classification (67/548/EEC or 1999/45/EC)

Met. Corr. 1 - H290 C;R34 R31 N;R50

Skin Corr. 1B - H314
Eye Dam. 1 - H318
STOT SE 3 - H335
Aquatic Acute 1 - H400
Aquatic Chronic 1 - H410

The Full Text for all R-Phrases and Hazard Statements are Displayed in Section 16.

### SECTION 4: First aid measures

### 4.1. Description of first aid measures

Inhalation Remove person to fresh air and keep comfortable for breathing. Keep affected person warm

and at rest. Get medical attention immediately.

**Ingestion** Never give anything by mouth to an unconscious person. Do not induce vomiting. Rinse

mouth thoroughly with water. Get medical attention.

Skin contact Remove contaminated clothing immediately and wash skin with soap and water. Get medical

attention.

Eye contact Rinse immediately with plenty of water. Remove any contact lenses and open eyelids wide

apart. Continue to rinse for at least 15 minutes. Get medical attention immediately. Continue

to rinse.

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

**Inhalation** Gas or vapour in high concentrations may irritate the respiratory system. Generates toxic gas

in contact with acid. Chlorine.

**Ingestion** Ingestion may cause severe irritation of the mouth, the oesophagus and the gastrointestinal

tract.

Skin contact Chemical burns.

Eye contact Causes burns. Risk of serious damage to eyes. May cause permanent damage if eye is not

immediately irrigated.

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

Notes for the doctor Treat symptomatically.

### **SECTION 5: Firefighting measures**

### 5.1. Extinguishing media

Suitable extinguishing media Use fire-extinguishing media suitable for the surrounding fire. Extinguish with the following

media: Water spray.

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

Specific hazards Dry product is combustible Toxic to aquatic life with long lasting effects.

Hazardous combustion Thermal decomposition or combustion may liberate carbon oxides and other toxic gases or

products vapours. Chlorine. Oxygen.

### SODIUM HYPOCHLORITE SOLUTION 5% - < 20%

#### 5.3. Advice for firefighters

Protective actions during

firefighting

Cool containers exposed to heat with water spray and remove them from the fire area if it can

be done without risk. Contain and collect extinguishing water.

Special protective equipment

for firefighters

Wear positive-pressure self-contained breathing apparatus (SCBA) and appropriate protective

clothing.

### SECTION 6: Accidental release measures

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

**Personal precautions** Wear protective clothing as described in Section 8 of this safety data sheet. Avoid inhalation

of spray mist and contact with skin and eyes. Provide adequate ventilation.

#### 6.2. Environmental precautions

**Environmental precautions** Do not discharge into drains or watercourses or onto the ground. Spillages or uncontrolled

discharges into watercourses must be reported immediately to the Environmental Agency or

other appropriate regulatory body.

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

Methods for cleaning up Absorb spillage with inert, damp, non-combustible material. Flush contaminated area with

plenty of water. Collect and place in suitable waste disposal containers and seal securely. For

waste disposal, see Section 13. Contain and collect extinguishing water.

#### 6.4. Reference to other sections

Reference to other sections Wear protective clothing as described in Section 8 of this safety data sheet. For waste

disposal, see section 13.

# SECTION 7: Handling and storage

### 7.1. Precautions for safe handling

**Usage precautions** Avoid spilling. Avoid contact with skin and eyes. Avoid inhalation of vapours and spray/mists.

Provide adequate ventilation. Contact with acids liberates toxic gas. Chlorine.

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

Storage precautions Protect from freezing and direct sunlight. Store in tightly-closed, original container in a well-

ventilated place. Store away from the following materials: Acids. Flammable/combustible

materials. Ammonia. May be corrosive to metals.

Storage class Corrosive storage.

# 7.3. Specific end use(s)

**Specific end use(s)** The identified uses for this product are detailed in Section 1.2.

### SECTION 8: Exposure Controls/personal protection

### 8.1. Control parameters

# SODIUM HYPOCHLORITE SOLUTION, ... % CI ACTIVE (CAS: 7681-52-9)

**Ingredient comments** No exposure limits known for ingredient(s).

**DNEL** Industry - Inhalation; Long term: 1.55 mg/m<sup>3</sup>

Industry - Inhalation; Short term : 3.1 mg/m³
Consumer - Inhalation; Long term : 1.55 mg/m³
Consumer - Inhalation; Short term : 3.1 mg/m³

PNEC - Sediment (Freshwater); 0.00021 mg/l

Sediment (Marinewater); 0.000042 mg/l
Intermittent release; 0.00026 mg/l

- STP; 0.03 mg/l

### 8.2. Exposure controls

### Protective equipment







Appropriate engineering

controls

Provide adequate ventilation. Avoid inhalation of vapours. Observe any occupational exposure limits for the product or ingredients.

Eye/face protection

Wear tight-fitting, chemical splash goggles or face shield. EN 166

Hand protection

Chemical-resistant, impervious gloves complying with an approved standard should be worn if a risk assessment indicates skin contact is possible. To protect hands from chemicals, gloves should comply with European Standard EN374. The most suitable glove should be chosen in consultation with the glove supplier/manufacturer, who can provide information about the breakthrough time of the glove material. For exposure up to 8 hours, wear gloves made of the following material: Nitrile rubber. glove thickness 0.5mm

Other skin and body

protection

Wear rubber apron. Wear rubber footwear.

Hygiene measures Provide eyewash station and safety shower. Wash at the end of each work shift and before

eating, smoking and using the toilet. Remove contaminated clothing and wash the skin thoroughly with soap and water after work. Eating, smoking and water fountains prohibited in

immediate work area.

Respiratory protection If ventilation is inadequate, suitable respiratory protection must be worn. EN

136/140/145/143/149

### **SECTION 9: Physical and Chemical Properties**

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

Appearance Liquid.

Colour Green-yellow.

Odour Chlorine.

Odour threshold No information available.

pH (concentrated solution): > 11

Melting point No information available.

Initial boiling point and range No information available.

Flash point > 100°C

Evaporation rate

No information available.

Evaporation factor

No information available.

Flammability (solid, gas)

No information available.

Upper/lower flammability or

explosive limits

No information available.

# SODIUM HYPOCHLORITE SOLUTION 5% - < 20%

Other flammability

No information available.

Vapour pressure

No information available.

Vapour density Data lacking.

Relative density ~ 1.2

Bulk density No information available.

Solubility(ies) Soluble in water.

Partition coefficient Not available.

Auto-ignition temperature No information available.

**Decomposition Temperature** No information available.

Viscosity No information available.

**Explosive properties** Not considered to be explosive.

Explosive under the influence

of a flame

No information available.

Oxidising properties Does not meet the criteria for classification as oxidising.

9.2. Other information

Other information Not available.

Refractive index
No information available.

Particle size
No information available.

Molecular weight
No information available.

Volatility
No information available.

Saturation concentration

No information available.

Critical temperature

No information available.

Volatile organic compound

No information available.

### SECTION 10: Stability and reactivity

# 10.1. Reactivity

**Reactivity** Generates toxic gas in contact with acid.

10.2. Chemical stability

Stability Stable at normal ambient temperatures and when used as recommended. Titer reduction of

about 0.2 to 0.25  $^{\circ}$  chlorometric per day at 17  $^{\circ}$  C The stability of the solution decreases under the action of heat, light and in the presence of impurities (traces of iron, nickel, copper, cobalt,

aluminum, manganese)

### 10.3. Possibility of hazardous reactions

Possibility of hazardous

reactions

Generates toxic gas in contact with acid.

10.4. Conditions to avoid

Conditions to avoid Avoid excessive heat for prolonged periods of time. Avoid exposure to high temperatures or

direct sunlight.

### 10.5. Incompatible materials

# SODIUM HYPOCHLORITE SOLUTION 5% - < 20%

Materials to avoid Strong acids. Amines. contact with metals may result in decomposition with the formation of

Oxygen

10.6. Hazardous decomposition products

Hazardous decomposition

Oxygen. hypochlorus acid Chlorine.

products

### SECTION 11: Toxicological information

### 11.1. Information on toxicological effects

**Toxicological effects** No information available.

Skin corrosion/irritation

Animal data No information available.

Serious eye damage/irritation

Serious eye damage/irritation No information available.

Respiratory sensitisation

Respiratory sensitisation No information available.

Skin sensitisation

**Skin sensitisation** No information available.

Germ cell mutagenicity

**Genotoxicity - in vitro**No information available.

Carcinogenicity

Carcinogenicity No information available.

Reproductive toxicity

Reproductive toxicity - fertility No information available.

Specific target organ toxicity - single exposure

**STOT - single exposure** No information available.

Specific target organ toxicity - repeated exposure

**STOT - repeated exposure** No information available.

Aspiration hazard

Aspiration hazard No information available.

**Inhalation** Gas or vapour in high concentrations may irritate the respiratory system.

**Ingestion** May cause chemical burns in mouth, oesophagus and stomach.

Skin contact Causes burns.

**Eye contact** Causes burns. Causes serious eye damage.

### SODIUM HYPOCHLORITE SOLUTION, ... % CI ACTIVE

Acute toxicity - oral

Acute toxicity oral (LD<sub>50</sub> 1,100.0

mg/kg)

Species Rat

# SODIUM HYPOCHLORITE SOLUTION 5% - < 20%

Acute toxicity - dermal

Acute toxicity dermal (LD<sub>50</sub> 2,000.0

mg/kg)

Species Rat

Acute toxicity - inhalation

Acute toxicity inhalation

10,500.0

(LC<sub>50</sub> vapours mg/l)

Species Rat

ATE inhalation (vapours

mg/l)

10,500.0

Skin corrosion/irritation

**Skin corrosion/irritation** Corrosive to skin.

Serious eye damage/irritation

Serious eye

damage/irritation

Corrosive

Skin sensitisation

Skin sensitisation

Not sensitising.

Germ cell mutagenicity

Genotoxicity - in vitro

This substance has no evidence of mutagenic properties.

Carcinogenicity

Carcinogenicity

There is no evidence that the product can cause cancer.

Reproductive toxicity

Reproductive toxicity -

fertility

This substance has no evidence of toxicity to reproduction.

Specific target organ toxicity - single exposure

STOT - single exposure Irritating to respiratory system.

Specific target organ toxicity - repeated exposure

STOT - repeated exposure Based on available data the classification criteria are not met.

Aspiration hazard

Aspiration hazard None.

Inhalation

May cause damage to mucous membranes in nose, throat, lungs and bronchial

system. May cause respiratory system irritation.

**Ingestion** May cause chemical burns in mouth, oesophagus and stomach.

**Skin contact** May cause serious chemical burns to the skin.

**Eye contact** Causes burns. Causes serious eye damage.

SECTION 12: Ecological Information

**Ecotoxicity** Toxic to aquatic life with long lasting effects.

# SODIUM HYPOCHLORITE SOLUTION 5% - < 20%

### SODIUM HYPOCHLORITE SOLUTION, ... % CI ACTIVE

**Ecotoxicity** Very toxic to aquatic life with long lasting effects.

12.1. Toxicity

**Toxicity** Toxic to aquatic life with long lasting effects.

### SODIUM HYPOCHLORITE SOLUTION, ... % CI ACTIVE

**Toxicity** Very toxic to aquatic organisms.

Acute aquatic toxicity

**LE(C)**<sub>50</sub>  $0.01 < L(E)C50 \le 0.1$ 

M factor (Acute) 10

Acute toxicity - fish LC₅o, 96 hours: 0.06 mg/l, Freshwater fish

Acute toxicity - aquatic

invertebrates

EC<sub>50</sub>, 48 hours: 0.141 mg/l, Daphnia magna

Acute toxicity - aquatic

plants

EC₅o, 72 hours: 0.04 mg/l, Scenedesmus subspicatus

Chronic aquatic toxicity

M factor (Chronic)

Chronic toxicity - fish early NOEC, 28 days: 0.04 mg/l, Freshwater fish

life stage

### 12.2. Persistence and degradability

Persistence and degradability Substance is inorganic.

### SODIUM HYPOCHLORITE SOLUTION, ... % CI ACTIVE

Persistence and

degradability

Not applicable. Substance is inorganic.

# 12.3. Bioaccumulative potential

Bioaccumulative potential Bioaccumulation is unlikely.

Partition coefficient Not available.

### SODIUM HYPOCHLORITE SOLUTION, ... % CI ACTIVE

Bioaccumulative potential The product does not contain any substances expected to be bioaccumulating.

Partition coefficient : -3.42

12.4. Mobility in soil

**Mobility** The product is soluble in water.

### SODIUM HYPOCHLORITE SOLUTION, ... % CI ACTIVE

**Mobility** The product is soluble in water.

# 12.5. Results of PBT and vPvB assessment

Results of PBT and vPvB assessment

This substance is not classified as PBT or vPvB according to current EU criteria.

### SODIUM HYPOCHLORITE SOLUTION, ... % CI ACTIVE

Results of PBT and vPvB assessment

This substance is not considered to be persistent, bioaccumulating and toxic (PBT)

or very persistent nor very bioaccumulating (vPvB).

12.6. Other adverse effects

Other adverse effects None known.

### SODIUM HYPOCHLORITE SOLUTION, ... % CI ACTIVE

Other adverse effects Not known.

### **SECTION 13: Disposal considerations**

### 13.1. Waste treatment methods

**General information** Do not puncture or incinerate, even when empty. Waste is classified as hazardous waste.

Disposal methods

Dispose of waste to licensed waste disposal site in accordance with the requirements of the

local Waste Disposal Authority.

# **SECTION 14: Transport information**

**General** Wear protective clothing as described in Section 8 of this safety data sheet.

14.1. UN number

**UN No. (ADR/RID)** 1791

**UN No. (IMDG)** 1791

**UN No. (ICAO)** 1791

**UN No. (ADN)** 1791

### 14.2. UN proper shipping name

Proper shipping name

HYPOCHLORITE SOLUTION

(ADR/RID)

Proper shipping name (IMDG) HYPOCHLORITE SOLUTION

Proper shipping name (ICAO) HYPOCHLORITE SOLUTION

Proper shipping name (ADN) HYPOCHLORITE SOLUTION

# 14.3. Transport hazard class(es)

ADR/RID class 8

ADR/RID classification code C9

ADR/RID label 8

IMDG class 8

ICAO class/division 8

ADN class 8

# SODIUM HYPOCHLORITE SOLUTION 5% - < 20%

### Transport labels



### 14.4. Packing group

ADR/RID packing group II

IMDG packing group II

ADN packing group II

ICAO packing group III

### 14.5. Environmental hazards

### Environmentally hazardous substance/marine pollutant



### 14.6. Special precautions for user

EmS F-A, S-B

ADR transport category 2

Emergency Action Code 2X

Hazard Identification Number

(ADR/RID)

and the IBC Code

Tunnel restriction code (E)

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

80

Transport in bulk according to Not applicable.

Annex II of MARPOL 73/78

### SECTION 15: Regulatory information

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

**EU legislation** Regulation (EC) No 1907/2006 of the European Parliament and of the Council of 18

December 2006 concerning the Registration, Evaluation, Authorisation and Restriction of

Chemicals (REACH) (as amended).

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 (as

amended)

Commission Regulation (EU) No 2015/830 of 28 May 2015. This product may impact SEVESO storage regulations.

### 15.2. Chemical safety assessment

A chemical safety assessment has been carried out.

### Inventories

### **EU - EINECS/ELINCS**

All the ingredients are listed or exempt.

### SECTION 16: Other information

### SODIUM HYPOCHLORITE SOLUTION 5% - < 20%

Abbreviations and acronyms used in the safety data sheet

ATE: Acute Toxicity Estimate.

ADR: European Agreement concerning the International Carriage of Dangerous Goods by

Road.

ADN: European Agreement concerning the International Carriage of Dangerous Goods by

Inland Waterways.

CAS: Chemical Abstracts Service.

DNEL: Derived No Effect Level.

IATA: International Air Transport Association.

IMDG: International Maritime Dangerous Goods.

Kow: Octanol-water partition coefficient.

LC₅o: Lethal Concentration to 50 % of a test population.

LD₅o: Lethal Dose to 50% of a test population (Median Lethal Dose).

PBT: Persistent, Bioaccumulative and Toxic substance.

PNEC: Predicted No Effect Concentration.

REACH: Registration, Evaluation, Authorisation and Restriction of Chemicals Regulation

(EC) No 1907/2006.

RID: European Agreement concerning the International Carriage of Dangerous Goods by

Rail.

vPvB: Very Persistent and Very Bioaccumulative.

IARC: International Agency for Research on Cancer.

MARPOL 73/78: International Convention for the Prevention of Pollution From Ships, 1973 as

modified by the Protocol of 1978.

cATpE: Converted Acute Toxicity Point Estimate.

BCF: Bioconcentration Factor.

BOD: Biochemical Oxygen Demand.

EC₅: 50% of maximal Effective Concentration.

LOAEC: Lowest Observed Adverse Effect Concentration.

LOAEL: Lowest Observed Adverse Effect Level.

NOAEC: No Observed Adverse Effect Concentration.

NOAEL: No Observed Adverse Effect Level.

NOEC: No Observed Effect Concentration.

LOEC: Lowest Observed Effect Concentration.

DMEL: Derived Minimal Effect Level.

Classification abbreviations

and acronyms

Acute Tox. = Acute toxicity

Aquatic Acute = Hazardous to the aquatic environment (acute)

Aquatic Chronic = Hazardous to the aquatic environment (chronic)

Key literature references and

sources for data

ECHA Disseminated REACH Dossier

**Revision comments** NOTE: Lines within the margin indicate significant changes from the previous revision.

Revision date 08/03/2017

Revision 08

Supersedes date 22/11/2016

SDS number 47852

Version number 2.001

SDS status Approved.

Signature J Spenceley

Risk phrases in full R31 Contact with acids liberates toxic gas.

R34 Causes burns.

R37 Irritating to respiratory system. R50 Very toxic to aquatic organisms.

R50/53 Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic

environment.

R51/53 Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic

environment.

Hazard statements in full H290 May be corrosive to metals.

H314 Causes severe skin burns and eye damage.

H318 Causes serious eye damage. H335 May cause respiratory irritation.

H400 Very toxic to aquatic life.

H410 Very toxic to aquatic life with long lasting effects. H411 Toxic to aquatic life with long lasting effects.