



C

Safety Data Sheet dated 24/9/2013, version 2  
In compliance with Regulation (EC) 453/2010

## 1. IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

- 1.1. Product identifier  
Mixture identification:  
Trade name: BRIGHT ECO  
Product type: Caustic chlorinated cleaner
- 1.2. Relevant identified uses of the substance or mixture and uses advised against  
Recommended use:  
Washing and cleaning products (including solvent based products)  
Uses advised against:  
Not available
- 1.3. Details of the supplier of the safety data sheet  
Supplier:  
AirChem Consumables. Sharjah Airport International Zone (SAIF Zone, A2-099), Sharjah, UAE. P.O. BOX 8994.  
TEL: +971 6 552 8946 FAX: +971 6 552 8947, Email: [airacc@acc.ae](mailto:airacc@acc.ae)  
Competent person responsible for the safety data sheet:  
[airacc@acc.ae](mailto:airacc@acc.ae)
- 1.4. Emergency telephone number  
AirChem Consumables, TEL: +971 6 552 8946 FAX: +971 6 552 8947, Email: [airacc@acc.ae](mailto:airacc@acc.ae)

## SECTION 2: Hazards identification




- 2.1. Classification of the substance or mixture  
Directive criteria, 67/548/CE, 99/45/EC and following amendments thereof:  
Properties / Symbols:  
C Corrosive  
R Phrases:  
R35 Causes severe burns.
- Adverse physicochemical, human health and environmental effects:  
The product is highly corrosive and, if brought into contact with the skin, causes serious burning, with the rapid destruction of the entire thickness of skin tissue.
- 2.2. Label elements  
Directive criteria, 67/548/CE, 99/45/EC and following amendments thereof:



C

- Symbols:  
C Corrosive  
R Phrases:  
R35 Causes severe burns.  
S Phrases:  
S26 In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.  
S28.1 After contact with skin, wash immediately with plenty of water and soap  
S36/37/39 Wear suitable protective clothing, gloves and eye/face protection.  
S45 In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).  
S50.1 Do not mix with ACIDS  
Contents:  
Potassium hydroxide
- Special provisions according to Annex XVII of REACH and subsequent amendments:  
None
- 2.3. Other hazards  
vPvB Substances: None - PBT Substances: None  
Other Hazards:  
No other hazards

## SECTION 3: Composition/information on ingredients

- 3.1. Substances  
Not applicable
- 3.2. Mixtures  
Hazardous components within the meaning of EEC directive 67/548 and CLP regulation and related classification:  
10-20 % Potassium hydroxide  
REACH N°: 01-2119487136-33, Index number: 019-002-00-8, CAS: 1310-58-3, EC: 215-181-3  
Xn,C; R22-35
-  2.16/1 Met. Corr. 1 H290
-  3.2/1A Skin Corr. 1A H314
-  3.1/4/Oral Acute Tox. 4 H302
- 1-5% Sodium hypochlorite

# Safety Data Sheet

## BRIGTE ECO

REACH N°: 01-2119488154-34-XXXX, Index number: 017-011-00-1, CAS: 7681-52-9, EC: 231-668-3

Xi,C,N; R37-31-34-50



2.16/1 Met. Corr. 1 H290



3.2/1B Skin Corr. 1B H314



3.8/3 STOT SE 3 H335



4.1/A1 Aquatic Acute 1 H400

For the complete text of the hazard and risk phrases refer to paragraph 16

Declaration of ingredients according to Detergent Regulation 648/2004:

chlorine-based bleaching agents, phosphonates

< 5 %

### SECTION 4: First aid measures

#### 4.1. Description of first aid measures

In case of skin contact:

Immediately take off all contaminated clothing.

OBTAIN IMMEDIATE MEDICAL ATTENTION.

Wash thoroughly the body (shower or bath).

Remove contaminated clothing immediately and dispose off safely.

After contact with skin, wash immediately with soap and plenty of water.

In case of eyes contact:

After contact with the eyes, rinse with water with the eyelids open for a sufficient length of time, then consult an

ophthalmologist immediately.

Protect uninjured eye.

In case of Ingestion:

Do NOT induce vomiting.

Give nothing to eat or drink.

In case of Inhalation:

Remove casualty to fresh air and keep warm and at rest.

If breathing is irregular or stopped, administer artificial respiration.

In case of inhalation, consult a doctor immediately and show him packing or label.

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

None

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

In case of accident or unwellness, seek medical advice immediately (show directions for use or safety data sheet if possible).

Treatment:

None

### SECTION 5: Firefighting measures

#### 5.1. Extinguishing media

Suitable extinguishing media:

Water.

Carbon dioxide (CO<sub>2</sub>).

Extinguishing media which must not be used for safety reasons:

None in particular.

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

Do not inhale explosion and combustion gases.

Burning produces heavy smoke.

#### 5.3. Advice for firefighters

Use suitable breathing apparatus .

Collect contaminated fire extinguishing water separately. This must not be discharged into drains.

Move undamaged containers from immediate hazard area if it can be done safely.

### SECTION 6: Accidental release measures

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

Wear personal protection equipment.

Remove persons to safety.

See protective measures under point 7 and 8.

#### 6.2. Environmental precautions

Do not allow to enter into soil/subsoil. Do not allow to enter into surface water or drains.

Retain contaminated washing water and dispose it.

In case of gas escape or of entry into waterways, soil or drains, inform the responsible authorities.

Suitable material for taking up: absorbing material, organic, sand

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

Wash with plenty of water.

#### 6.4. Reference to other sections

See also section 8 and 13

### SECTION 7: Handling and storage

#### 7.1. Precautions for safe handling

Avoid contact with skin and eyes, inhalation of vapours and mists.

Don't use empty container before they have been cleaned.

Before making transfer operations, assure that there aren't any incompatible material residuals in the containers.

# Safety Data Sheet

## BRIGHT ECO

Contaminated clothing should be changed before entering eating areas.

Do not eat or drink while working.

See also section 8 for recommended protective equipment.

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

Keep away from food, drink and feed.

Incompatible materials:

Instructions as regards storage premises:

Adequately ventilated premises.

### 7.3. Specific end use(s)

For more information see Technical data bulletin

None in particular

## SECTION 8: Exposure controls/personal protection

### 8.1. Control parameters

Contained substances

Potassium hydroxide - CAS: 1310-58-3

ACGIH - STE mg/m<sup>3</sup>: 2 - STE ppm: 0.87 - Behaviour: Binding - Notes: Short: C. Irritation of the skin, respiratory and eye irritation.

EU - LTE mg/m<sup>3</sup>: 2 - STE mg/m<sup>3</sup>: 2 - STE ppm: 0.87 - Behaviour: Binding

### DNEL Exposure Limit Values

Potassium hydroxide - CAS: 1310-58-3

Worker Professional: 1 mg/m<sup>3</sup> - Consumer: 1 - U.M.: mg/m<sup>3</sup> - Exposure: Human Inhalation - Frequency: Long Term, local effects

Sodium hypochlorite - CAS: 7681-52-9

Worker Professional: 3.1 mg/m<sup>3</sup> - Exposure: Human Inhalation - Frequency: Short Term, systemic effects

Worker Professional: 3.1 mg/m<sup>3</sup> - Consumer: 3.1 - U.M.: mg/m<sup>3</sup> - Exposure: Human Inhalation - Frequency: Short Term, local effects

Worker Professional: 1.55 mg/m<sup>3</sup> - Consumer: 1.55 - U.M.: mg/m<sup>3</sup> - Exposure: Human Inhalation - Frequency: Long Term, systemic effects

### PNEC Exposure Limit Values

Sodium hypochlorite - CAS: 7681-52-9

Target: Fresh Water - Value: 0.21 µg/l

Target: Marine water - Value: 0.042 µg/l

Target: Occasional issue - Value: 0.26 µg/l

### 8.2. Exposure controls

Eye protection:

Use close fitting safety goggles, don't use eye lens.

Protection for skin:

Use clothing that provides comprehensive protection to the skin, e.g. cotton, rubber, PVC or viton.

Protection for hands:

Use protective gloves that provides comprehensive protection, e.g. P.V.C., neoprene or rubber.

Respiratory protection:

Not needed for normal use.

Thermal Hazards:

None

Environmental exposure controls:

None

## SECTION 9: Physical and chemical properties

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

Appearance and colour:

yellow clear liquid

Odour:

chlorine

Odour threshold:

n.av. mg/m<sup>3</sup>

pH:

> 12

Melting point / freezing point:

initial 0 °C

Initial boiling point and boiling range:

100 °C

Solid/gas flammability:

na

Upper/lower flammability or explosive limits:

na % v/v

Vapour density (air=1):

> 1

Flash point:

none °C

Evaporation rate:

na

Vapour pressure:

3.2 kPa

Relative density:

1,2 g/ml

Solubility in water:

complete

Solubility in oil:

n.av.

Partition coefficient (n-octanol/water):

n.av.

Auto-ignition temperature:

none °C

Decomposition temperature:

< 35 °C

Viscosity:

n.av. mPa.s

Explosive properties:

none

Oxidizing properties:

contains active chlorine

### 9.2. Other information

Miscibility:

complete in water

Fat Solubility:

n.av.

Conductivity:

n.av.

# Safety Data Sheet

## BRIGHT ECO

Substance Groups relevant properties:

n.av.

### SECTION 10: Stability and reactivity

- 10.1. Reactivity  
Stable under normal conditions
- 10.2. Chemical stability  
Stable under normal conditions
- 10.3. Possibility of hazardous reactions  
It may generate flammable gases on contact with halogenated organic substances, and elementary metals.
- 10.4. Conditions to avoid  
Stable under normal conditions.
- 10.5. Incompatible materials  
None in particular.
- 10.6. Hazardous decomposition products  
None.

### SECTION 11: Toxicological information

- 11.1. Information on toxicological effects  
Toxicological information of the main substances found in the mixture:  
Potassium hydroxide - CAS: 1310-58-3
  - a) acute toxicity:  
LD50 Oral Rat = 333 mg/kgSodium hypochlorite - CAS: 7681-52-9
  - a) acute toxicity:  
LD50 Oral Rat > 1100 mg/kg male  
LD50 Skin Rabbit > 20 g/kg  
LC50 Inhalation Rat > 10.5 mg/l 1h female

If not differently specified, the information required in Regulation 453/2010/EC listed below must be considered as N.AV.:

- a) acute toxicity;
- b) skin corrosion/irritation;
- c) serious eye damage/irritation;
- d) respiratory or skin sensitisation;
- e) germ cell mutagenicity;
- f) carcinogenicity;
- g) reproductive toxicity;
- h) STOT-single exposure;
- i) STOT-repeated exposure;
- j) aspiration hazard.

### SECTION 12: Ecological information

- 12.1. Toxicity  
Based on the information available it is not expected that this product may cause any adverse environmental effect when use instructions and disposal recommendations are followed.  
Adopt good working practices, so that the product is not released into the environment.  
List of substances hazardous to the environment and eco-toxicological information available:  
  
Potassium hydroxide - CAS: 1310-58-3
  - a) Aquatic acute toxicity:  
LC50 Fish = 80 mg/l 96 Gambusia affinis  
LC50 Bacteria = 80 mg/l 24 MosquitoSodium hypochlorite - CAS: 7681-52-9
  - a) Aquatic acute toxicity:  
LC50 Fish > 0.01 mg/l 96  
EC50 Daphnia = 0.141 mg/l 24 Daphnia magna  
LC50 Algae = 0.24 mg/l 24 Phaeodactylum tricornutum  
LC50 Algae > 0.1 mg/l 96 Myriophyllum spicatum
- 12.2. Persistence and degradability  
Potassium hydroxide - CAS: 1310-58-3  
Biodegradability: Non-readily biodegradable - Test: Not applicable - Duration: Not applicable - %: Not applicable - Notes: Not applicable  
Regulation (EC) No. 648/2004 on Detergents and amendments:  
Not applicable
- 12.3. Bioaccumulative potential  
Not applicable
- 12.4. Mobility in soil  
Not applicable
- 12.5. Results of PBT and vPvB assessment  
vPvB Substances: None - PBT Substances: None
- 12.6. Other adverse effects  
None

### SECTION 13: Disposal considerations

- 13.1. Waste treatment methods  
Product and its residue:  
Do not dispose in the canals of wastewater, waterways and soil.

# Safety Data Sheet

## BRIGHT ECO

The codes indicating the type of waste are considered based on the recommendations and scheduled use of this product. Different codes may be assigned based on the end user's use and the characteristics of the disposal.

Waste code CER/EWC (2000/532/CE), attributable to the product as:

07 06 01\* aqueous solution of washing and mother liquors

H8 corrosive

Any remaining product should be disposed of with the material.

Containers/contaminated packaging

Containers, even completely empty, must not be disposed in the environment. The packagings which can not be cleaned should be disposed of as the material.

Recover, if possible. Send to authorised disposal plants or for incineration under controlled conditions. In so doing, comply with the local and national regulations currently in force.

### SECTION 14: Transport information



- 14.1. UN number  
ADR-UN Number: 3266  
IATA-UN Number: 3266  
IMDG-UN Number: 3266
- 14.2. UN proper shipping name  
ADR-Shipping Name: CORROSIVE LIQUID, BASIC, INORGANIC, N.O.S. (Potassium hydroxide, Sodium hypochlorite)  
IATA-Shipping Name: CORROSIVE LIQUID, BASIC, INORGANIC, N.O.S. (Potassium hydroxide, Sodium hypochlorite)  
IMDG-Shipping Name: CORROSIVE LIQUID, BASIC, INORGANIC, N.O.S. (Potassium hydroxide, Sodium hypochlorite)
- 14.3. Transport hazard class(es)  
ADR-Class: 8  
ADR-Label: E  
ADR - Hazard identification number: 80  
IATA-Class: 8  
IATA-Label: 8  
IMDG-Class: 8
- 14.4. Packing group  
ADR-Packing Group: II  
IATA-Packing group: II  
IMDG-Packing group: II
- 14.5. Environmental hazards  
ADR-Environmental Pollutant: No  
IMDG-Marine pollutant: No
- 14.6. Special precautions for user  
ADR-Subsidiary risks: -  
ADR-S.P.: 274  
ADR-Tunnel Restriction Code: (E)  
IATA-Passenger Aircraft: 851  
IATA-Subsidiary risks: -  
IATA-Cargo Aircraft: 855  
IATA-S.P.: -  
IATA-ERG: 8L  
IMDG-EmS: F-A , S-B  
IMDG-Subsidiary risks: -  
IMDG-Storage category: Category B  
IMDG-Storage notes: Clear of living quarters. "Separated from" acids.
- 14.7. Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code  
No

### SECTION 15: Regulatory information

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

1999/13/EC (VOC directive)

Volatile Organic compounds - VOCs = 0.00 %

Volatile Organic compounds - VOCs = 0.00 g/l

Volatile CMR substances = 0.00 %

Halogenated VOCs which are assigned the risk phrase R40 = 0.00 %

Organic Carbon - C = 0.00

- 15.2. Chemical safety assessment

Not available

### SECTION 16: Other information

Full text of phrases referred to in Section 3:

R22 Harmful if swallowed.

R31 Contact with acids liberates toxic gas.

# Safety Data Sheet

## BRIGTE ECO

R34 Causes burns.  
R35 Causes severe burns.  
R37 Irritating to respiratory system.  
R50 Very toxic to aquatic organisms.

H290 May be corrosive to metals.  
H314 Causes severe skin burns and eye damage.  
H302 Harmful if swallowed.  
H335 May cause respiratory irritation.  
H400 Very toxic to aquatic life.

Paragraphs modified from the previous revision:

SECTION 3: Composition/information on ingredients  
SECTION 8: Exposure controls/personal protection  
SECTION 11: Toxicological information  
SECTION 12: Ecological information  
SECTION 13: Disposal considerations  
SECTION 14: Transport information  
SECTION 15: Regulatory information

This document was prepared by a competent person who has received appropriate training.

This MSDS cancels and replaces any preceding release.

Where applicable, refer to the following regulatory provisions :

Council Directive 67/548/EEC (Classification, packaging and labelling of dangerous substances) and subsequent amendments;  
Regulation (EC) n° 1272/2008; Regulation (EC) N. 790/2009 (annex VI), Regulation (EC) n. 1907/2006 (REACH).

Commission Directive 1999/45/EC (Classification, packaging and labelling of dangerous preparation) and subsequent amendments; Commission Directive n. 2006/8/CE.

Regulation (EC) nr 648/2004 and CE N. 907/2006 (Detergents).

Directive 2003/105/EC ('Activities linked to risks of serious accidents') and subsequent amendments.

Directive 2013/10/EU (aerosols) amending Directive 75/324/EEC on the approximation of the laws of the Member States relating to aerosol dispensers in order to adapt its labelling provisions to Regulation (EC) n° 1272/2008 on classification, labelling and packaging of substances and mixtures and subsequent amendments.

Regulation (EC) No 1223/2009 on cosmetic products and subsequent amendments.

Regulation (EU) No 126/2013 amending Annex XVII to Regulation (EC) No 1907/2006 on the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH) and subsequent amendments. Regulation (EC) N. 304/2003 and subsequent amendments.

Regulation (EU) No 528/2012 concerning the making available on the market and use of biocidal products and subsequent amendments.

Directives 91/156/CEE, 91/689/CEE, 94/62/CE (Disposal of waste ) and subsequent amendments.

The European Agreement concerning the International Carriage of Dangerous Goods by Road (ADR), current edition.

regulations IATA/ICAO = Dangerous Goods Regulations by air, current edition.

RID = Regulations concerning the International Carriage of Dangerous Goods by Rail, current edition.

IMDG Code = International Maritime Dangerous Goods Code produced by the International Maritime Organization (IMO), current edition.

Directive 91/271/EEC and 91/676/CEE (protection of waters) and subsequent amendments.

Main bibliographic sources:

ESIS: European chemical Substances Information System and Environmental hazard classification.

Occupational exposure limit values (Commission Directives 2000/39/EC and 2006/15/CE)

ACGIH - TLV's for 2010

NIOSH - Registry of toxic effects of chemical substances (1983)

Material Safety Data Sheets of chemicals, REACH database

Material Safety Data Sheet and Technical Data of raw material as by Supplier

The ISS National Inventory of Chemical Substances (INSC)

Abbreviations and acronyms:

TLV-TWA = Threshold Limit Value- time-weighted average, 8-hour workday, 40-hour workweek; TLV-STEL-15 min = Threshold Limit Values - Short Term Exposure Limit; TLV-C = Ceiling exposure limit; Notes: IBE= Biological Exposure Indices; SEN= sensitizer; Skin= Can be absorbed through the skin. Carcinogenicity categories: A1 / A2 = confirmed / suspected human carcinogen; A3 = Animal carcinogen; A4 / A5 = Not Classifiable/not suspected as a human carcinogen. ACGIH = American Conference on Governmental Industrial Hygienists. OEL =Occupational Exposure Limit. VLPE = Occupational Exposure Limit Values. LTE =long term exposure, STE=short term exposure.

n.av.= Not Available, n.a. = not applicable; LD50=lethal dose (solids and liquids), LC50=lethal concentration (gases) that will kill 50% of the test animals; ADR= European Agreement concerning the International Carriage of Dangerous Goods by Road.

Regulations IATA/ICAO = Dangerous Goods Regulations by air, current edition.

RID = Regulations concerning the International Carriage of Dangerous Goods by Rail, current edition. IMDG Code = International Maritime Dangerous Goods Code produced by the International Maritime Organization (IMO), current edition.

PBT = Persistent, Bioaccumulative and Toxic substances. ; vPvB = very Persistent and very Bioaccumulative substances; CMR = Carcinogenic, mutagenic or reproduction toxic substances.

The information contained herein is based on our state of knowledge at the above-specified date. It refers solely to the product indicated and constitutes no guarantee of particular quality.

It is the duty of the user to ensure that this information is appropriate and complete with respect to the specific use intended.