

# MATERIAL SAFETY DATA SHEET

(according to the Regulation (EC) No 1272/2008 of European Parliament)

## SUPER SAVE BLEACH

Revision Date: April 2018

### 1. Identification of the Substance/Preparation and The Company/Undertaking

1.1 Product identifier: Super Save Bleach

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

Identified uses: Bleach agent  
Oxidizing agent  
Reagent  
Disinfectant

1.3 Details of the supplier of the safety data sheet

Supplier: Derfla Ltd.,  
Zachary House, Industrial Estate  
Marsa MRS3000,  
Malta.  
Emergency Tel. Nos.: 112, 8007 2204  
E-mail: [info@amsm.com.mt](mailto:info@amsm.com.mt)

### 2. Hazards Identification

2.1 Classification of the substance or mixture

Classified as hazardous according to the European regulation (EC) 1272/2008, as amended

| Hazard Class           | Hazard Category | Route of Exposure | H Phrases |
|------------------------|-----------------|-------------------|-----------|
| Skin corrosion         | Category 1B     | Dermal            | H314      |
| Acute aquatic toxicity | Category 1      |                   | H400      |

2.2 Label Elements

2.2.1. Name(s) on label Hazardous components: Sodium Hypochlorite (active chlorine) >4%

2.2.2. Signal word: Danger

2.2.3. Hazard pictograms



2.2.4. Hazard Statements

H314 Causes severe skin burns and eye damage.  
H400 Very Toxic to aquatic life.  
EUH031 Contact with acids liberates toxic gas.

## 2.2.5. Precautionary Statements

### Prevention

|      |  |
|------|--|
| P260 | Do not breathe dust/fume/gas/mist/vapours/spray.                             |
| P264 | Wash hands thoroughly after handling.  |
| P273 | Avoid release to the environment.  |
| P280 | Wear protective gloves/protective clothing/ eye protection/ face protection. |

### Response

|                    |  |
|--------------------|--|
| P310               | Immediately call a POISON CENTRE or doctor/physician.  |
| P303 + P361 + P353 | IF ON SKIN (or hair): Remove/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. |

### Storage

|             |  |
|-------------|--|
| P403 + P233 | Store in a well-ventilated place. Keep container tightly closed. |
|-------------|--|

**2.3. Other Hazards** No data available.

## 3. Composition/Information On Ingredients

### 3.1. Substance

| Substance Name                | Concentration | CAS       | EC        | Index No.    | Reach Registration Number |
|-------------------------------|---------------|-----------|-----------|--------------|---------------------------|
| Sodium Hypochlorite           | < 4%          | 7681-52-9 | 231-668-3 | 017-011-00-1 | 01-2119488154-34          |
| Sodium Chlorate (Impurities)  | < 1.25%       | 7775-09-9 | 231-887-4 | 017-005-00-9 |                           |
| Sodium Hydroxide (Impurities) | < 0.45%       | 1310-73-2 | 215-185-5 | 011-002-00-6 |                           |
| Sodium Carbonate (Impurities) | < 0.4%        | 497-19-8  | 207-838-8 | 011-005-00-2 |                           |

| Substance Name      | Hazard Class                                     | Hazard Category | Route of exposure | H Phrases |
|---------------------|--|-----------------|-------------------|-----------|
| Sodium Hypochlorite | Corrosive to metals                              | Category 1      |                   | H290      |
|                     | Skin corrosive                                   | Category 1B     |                   | H314      |
|                     | Serious eye damage                               | Category 1      |                   | H318      |
|                     | Target Organ Systemic Toxicant - Single exposure |                 |                   | H335      |
|                     | Acute aquatic hazard                             | Category 1      |                   | H400      |

| Substance Name  | Hazard Class                         | Hazard Category | Route of exposure | H Phrases |
|-----------------|--------------------------------------|-----------------|-------------------|-----------|
| Sodium Chlorate | Oxidizing Solids                     | Category 1      |                   | H271      |
|                 | Acute Oral Toxicity                  | Category 4      |                   | H302      |
|                 | Hazardous to the Aquatic environment | Category 2      |                   | H411      |

| Substance Name   | Hazard Class   | Hazard Category | Route of exposure | H Phrases |
|------------------|----------------|-----------------|-------------------|-----------|
| Sodium Carbonate | Eye Irritation | Category 2      |                   | H319      |

| Substance Name   | Hazard Class              | Hazard Category | Route of exposure | H Phrases |
|------------------|---------------------------|-----------------|-------------------|-----------|
| Sodium Hydroxide | Acute Toxicity Dermal     | Category 4      |                   | H312      |
|                  | Skin Corrosive Irritation | Category 1A     |                   | H314      |
|                  | Eye Damage Irritation     | Category 1      |                   | H314      |
|                  | Corrosive to Metals       | Category 1      |                   | H290      |

#### 4. First Aid Measures

##### 4.1 Description of first aid measures

###### 4.1.1 If inhaled:

- Move to fresh air.
- Oxygen or artificial respiration if needed.
- Lay down victim in recovery position, cover and keep warm.
- Call a physician immediately.

###### 4.1.2 In case of eye contact:

- Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes.
- In the case of difficulty of opening the eyelids, administer an analgesic eye wash.
- Call a physician immediately.
- Take victim immediately to skin.

###### 4.1.3 In case of skin contact:

- Take off contaminated clothing and shoes immediately.
- Wash skin immediately with plenty of water.
- Call a physician immediately.
- Wash contaminated clothing before re-use.

###### 4.1.4 If swallowed

- Call a physician or poison control centre immediately.
- Take victim immediately to skin.
- Rinse mouth with water (if the person is conscious).
- Do not induce vomiting.
- Artificial respiration and/or oxygen may be necessary.

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

###### 4.2.1 Inhalation

- Severe respiratory irritant.
- Irritating to mucous membranes.
- Symptoms: Breathing difficulties, cough, chemical pneumonitis, pulmonary oedema.
- Repeated or prolonged exposure: Nose bleeding, chronic bronchitis.

###### 4.2.2 Skin Contact

- Severe skin irritation.

- Symptoms: Redness, swelling of tissue, burn.
- Repeated or prolonged exposure: Ulceration.

#### 4.2.3 Eye Contact

- Severe eye irritation.
- May cause irreversible eye damage.
- May cause blindness.
- Symptoms: Redness, lachrymation, swelling of tissue, burn.

#### 4.2.4 Ingestion

- If ingested, severe burns of the mouth and throat, as well as danger of perforation of the oesophagus and the stomach.
- Risk of chemical pneumonitis from product inhalation.
- Risk of shock.
- Symptoms: Nausea, abdominal pain, bloody vomiting, diarrhea, suffocation, cough, severe shortness of breath.
- Risk of: Respiratory disorder.

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

The seriousness of the lesions and the prognosis of intoxication depend directly on the concentration and duration of exposure.

## 5. Fire-Fighting Measures

### 5.1 Extinguishing Media

5.1.1 Suitable extinguishing media: Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

5.1.2 Unsuitable extinguishing media: None.

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

- Not combustible.
- Hazardous decomposition products formed under fire conditions.

### 5.3 Advice for firefighters

- In the event of fire, wear self-contained breathing apparatus.
- Wear chemical resistant oversuit.
- Use of personal protective equipment.
- Cool containers/tanks with water spray.
- Suppress (knock down) gases/vapours/mists with a water spray jet.

## 6. Accidental Release Measures

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

#### 6.1.1 For non-emergency personnel

- Prevent further leakage or spillage if safe to do so.
- Keep away from incompatible products.

#### 6.1.2 For emergency responders

- Isolate the area.
- Evacuate personnel to safe areas.
- Keep people away from and upwind of spill/leak.
- Ventilate the area.
- Wear suitable protective clothing.
- Wear self-contained breathing apparatus in confined spaces, in cases where the oxygen level is depleted, or in case of significant emissions.

### 6.2 Environmental precautions

- Avoid release to the environment.

- Do not flush into surface water or sanitary sewer system.
- In case of accidental release or spill, immediately notify local authorities according to local regulations.

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

- Dam up.
- Soak up with inert absorbent material.
- Prevent products from entering drains.
- Keep in properly labelled containers.
- Keep in suitable, closed containers for disposal.

### 6.4 Reference to other sections

- Refer to protective measures listed in sections 7 and 8.

## 7. Handling and Storage

### 7.1 Precautions for safe handling

- Used in closed system.
- Use only in well-ventilated areas.
- Keep away from incompatible products.
- To avoid thermal decomposition, do not overheat.
- Use only equipment and materials which are compatible with the product.
- Do not confine the product in a circuit, between closed valves, or in a container without a vent.

### 7.2 Conditions for storage, including incompatibilities

#### 7.2.1 Storage

- Store in original container.
- Store in a well-ventilated place. Keep cool.
- Keep in properly labelled containers.
- Keep container closed.
- Keep in a bunded area.
- Do not freeze.
- Store in a cool and dark place to preserve the quality of the product.
- Keep away from the incompatible products.

#### 7.2.2 Packaging Material

|                      |                      |
|----------------------|----------------------|
| Suitable material:   | Reinforced polyester |
|                      | Steel coated         |
|                      | PVC                  |
|                      | Polyethylene         |
|                      | Glass                |
| Unsuitable material: | Metals               |

### 7.3 Specific end uses

- For further information, please contact supplier

## 8. Exposure Controls/Personal Protection

### 8.1 Control parameters

#### 8.1.1 Exposure Limit Values

##### Sodium Hypochlorite

- US. ACGIH Threshold Limit Values
- Remarks: none established

##### Sodium Chlorate

- US. ACGIH Threshold Limit Values
- Remarks: none established

##### Sodium Hydroxide

- UK. EH40 Workplace Exposure Limits (WELs) 2007
- Short term exposure limit = 2 mg/m<sup>3</sup>
- US. ACGIH Threshold Limit Values 2009

- Ceiling Limit Value = 2 mg/m<sup>3</sup>

### **Sodium Carbonate**

- SAEL (Solvay Acceptable Exposure Limit) 2007
  - TWA = 10 mg/m<sup>3</sup>
  - US. ACGIH Threshold Limit Values
- Remarks: none established

#### 8.1.2 Other information on limit values

##### Predicated No Effect Concentration

- Fresh water, 0.21 µg/l
- Marine water, 0.042 µg/l
- Sewage treatment plants, 0.03 mg/l

##### Derived No Effect Level / Derived minimal effect level

- Workers, Inhalation, Acute exposure, 3.1 mg/m<sup>3</sup>, Systemic effects, Local effects.
- Workers, Inhalation, Chronic exposure, 1.55 mg/m<sup>3</sup>, Systemic effects, Local effects.
- Workers, Dermal, Chronic exposure, 0.5%, Local effects.
- Consumers, Inhalation, Acute exposure, 3.1 mg/m<sup>3</sup>, Systemic effects, Local effects.
- Consumers, Inhalation, Chronic exposure, 1.55 mg/m<sup>3</sup>, Systemic effects, Local effects.
- Consumers, Oral, Chronic exposure, 0.26 mg/kg, Systemic effects.
- Consumers, Dermal, Chronic exposure, 0.5%, Local effects.

## **8.2 Exposure controls**

### 8.2.1 Appropriate engineering controls

- Provide appropriate local ventilation to the product decomposition risk (see section 10).
- Provide adequate ventilation.
- Apply technical measures to comply with the occupational exposure limits.

### 8.2.2 Individual protection measures

#### Respiratory protection

- Use respirator when performing operations involving potential exposure to vapour of the product.
- Respirator with combination filter for vapour/particulate (EN141).
- Self-contained breathing apparatus in medium confinement/insufficient oxygen/in case of large uncontrolled emissions/in all circumstances when the mask and cartridge do not give adequate protection.

#### Hand Protection

- Impervious gloves
- Take note of the information given by the producer concerning permeability and break through times, and of special workplace conditions (mechanical strain, duration of contact).
- Suitable material: PVC, Neoprene, Natural Rubber.

#### Eye Protection

- Chemical resistant goggles must be worn.
- If splashes are likely occur, wear: Tightly fitting safety goggles, Face-shield.

#### Skin and body protection

- Wear suitable protecting clothing.
- Chemical resistant apron.
- If splashes are likely to occur, wear: rubber or plastic boots.

#### Hygiene Measures

- Ensure that eyewash station and safety showers are close to the workstation location.
- Take off contaminated clothing and shoes immediately.
- Wash contaminated clothing before-use.
- When using do not eat, drink or smoke.
- Wash hands before breaks and at the end of workday.
- Handle in accordance with good industrial hygiene and safety practice.

### 8.2.3 Environment exposure controls

- Dispose of rinse water according to local regulations.

## 9. Physical And Chemical Properties

### 9.1 Information on basic physical and chemical properties

#### 9.1.1. General Information

|                   |                      |
|-------------------|----------------------|
| Appearance        | Liquid               |
| Colour            | Light Yellow         |
| Odour             | Slightly chlorinated |
| Molecular weight: | 74.44 g/mol          |

#### 9.1.2. Important health, safety and environment information

|  |   |
|--|---|
| Ph                                     | >12.5 Solution                              |
| pKa                                    | No data                                     |
| Melting point/freezing point           | -600 (Solution 15% Cl active)               |
| Boiling point/boiling range            | Not applicable                              |
| Flash point                            | Not applicable                              |
| Evaporation rate                       | No data                                     |
| Flammability (solid, gas)              | Not applicable                              |
| Flammability                           | The product is not flammable                |
| Explosive properties                   | Not explosive                               |
| Vapour pressure                        | 2.5kPa, at 20°C                             |
| Vapour density                         | 2.5   |
| Density <sup>1</sup>                   | No data                                     |
| Relative density                       | 1.25 (Solution 15% Cl active), at 20°C      |
| Bulk density                           | Not applicable                              |
| Solubility (ies)                       | No data                                     |
| Solubility/qualitative                 | Completely miscible (Water)                 |
| Partition coefficient: n-octanol/water | Log Pow -3.42, 20°C                         |
| Autoignition Temperature               | Not applicable                              |
| Decomposition Temperature              | 20°C, Slow decomposition                    |
| Viscosity                              | 2.6 mPa.s (Solution 15% Cl active), at 20°C |
| Oxidizing properties (15% Cl active)   | Does not propagate flame                    |

### 9.2 Other information

|                 |                   |
|-----------------|-------------------|
| Surface Tension | No data available |
|-----------------|-------------------|

## 10. Stability and Reactivity

### 10.1 Reactivity

- Risk of violent reaction.
- Risk of explosion.

### 10.2 Chemical Stability

- Stable under recommended storage conditions.

### 10.3 Possibility of hazardous reactions

- Corrosive in contact with metals.
- Contact with acids liberates toxic gas.
- Oxygen released in thermal decomposition may support combustion.
- Hazardous decomposition products formed under fire conditions.
- Decomposes on exposure to light.

### 10.4 Conditions to avoid

- Keep away from direct sunlight.
- To avoid thermal decomposition, do not overheat.
- Freezing.

### 10.5 Incompatible materials

- Metals, Salts of metals, Acids, Organic materials.

### 10.6 Hazardous decomposition products

- Risk of decomposition., Chlorine, Sodium Chlorate.

- Hypochlorous acid, predominant at acid pH, is 4 to 5 fold more toxic than hypochlorite ion., The release of other hazardous decomposition products is possible.

## 11. Toxicological Information

### 11.1 Acute Toxicity

#### Acute oral toxicity

- LD50, rat, >1,100 mg/kg (Chlorine)

#### Acute inhalation toxicity

- LC50, 1h, rat, >10.5 mg/l (Chlorine)

#### Acute dermal toxicity

- LD50, rabbit, >20,000 mg/kg (Chlorine)

### 11.2 Skin corrosion/irritation

- rabbit, corrosive effects

### 11.3 Serious eye damage/eye irritation

- rabbit, severe eye irritation

### 11.4 Respiratory or skin sensitization

- guinea pig, did not cause sensitization on laboratory animals.

### 11.5 Mutagenicity

- in vitro, Ambiguous mutagenic effect
- in vitro tests did not show mutagenic effects

### 11.6 Carcinogenicity

- Oral, rat, 10 mg/kg, NOEL

### 11.7 Toxicity for reproduction

- Oral, rat, 1 mg/kg, Effects on fertility, NOAEL (Chlorine)
- Oral, rat, 1.5 mg/kg, Development Toxicity, NOAEL (Chlorine)

### 11.8 Specific target organ toxicity – single exposure

- Human experience, Remarks: May cause respiratory irritation.

### 11.9 Repeated dose toxicity

- Oral, 90-day, rat 10 mg/kg, NOAEL

### 11.10 Other information

- Toxic effect linked with corrosive properties

## 12. Ecological Information

### 12.1 Toxicity

- Fishes, various species, LC50, 96 h, 0.02 mg/l, fresh water.
- Fishes, Menidia pelinsulae, NOEC, 96 h, 0.01 mg/l, salt water.
- Fishes, various species, 96 h, 0.032 mg/l, Marine water.
- Crustaceans, various species, EC50, 48 h, 0.008 mg/l.
- Crustaceans, Daphnia magna, EC50, 48 h, 0.35 mg/l, fresh water.

### 12.2 Persistence and degradability

#### Abiotic degradation

- Water, photolysis, t ½ = 12 min Result: photolysis Conditions: pH 8
- Water, photolysis, t ½ = 60 min Result: photolysis Conditions: pH 5
- Air, indirect photo-oxidation, t ½ 115 d Degradation products: Chlorine
- Water, Hydrolysis Result: Chemical degradation, Degradation products: Chlorides

#### Biodegradation

- The methods for determining biodegradability are not applicable to inorganic substances.



### 12.3 Bio accumulative potential

- Does not bioaccumulate.

### 12.4 Mobility

- Water/soil considerable solubility and mobility.
- Soil/sediments, log KOC:1.12 Highly mobile in soils.
- Air, Henry's law constant (H), 0.076 Pa.m<sup>3</sup>/mol, 20°C non-significant volatility

### 12.5 PBT and vPvB assessment

- This substance is not considered to be persistent, bioaccumulating nor toxic (PBT).
- This substance is not considered to be very persistent nor very bioaccumulating (vPvB).

### 12.6 Other adverse effects

- No data available.

## 13. Disposal Considerations

### 13.1. Waste disposal methods

- In accordance with local regulations.
- Reduce the product with sulfite or hydrogen peroxide.

### 13.2. Contaminated packaging

- Empty containers.
- Clean container with water.
- The empty and clean containers are to be reused in conformity with regulations.

## 14. Transport Information

### - IMDG

|                 |                  |
|-----------------|------------------|
| UN number       | UN 1791          |
| Class           | 8                |
| Packaging group | II               |
| IMDG-Labels     | 8 - Corrosive    |
| HI/UN No.       | 1791             |
| EmS             | F-A S-B          |
| Remarks         | Marine Pollutant |

### - ADR

|                 |                           |
|-----------------|---------------------------|
| UN number       | UN 1791                   |
| Class           | 8                         |
| Packaging group | II                        |
| IMDG-Labels     | 8 - Corrosive             |
| HI/UN No.       | 80/1791                   |
| Remarks         | Environmentally Hazardous |

## 15. Regulatory Information

### 15.1 Applicable Laws or Regulations

- 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.
- Directive 1999/45/EC of the European Parliament and of the Council of 31 May 1999 concerning the approximation of the laws, regulations and administrative provisions of the Member States relating to the classifications, packaging and labelling of dangerous preparations, 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.
- Council Directive 96/82/EC on the control of major-accident hazards involving dangerous substances, as amended.
- Council Directive 98/24/EC of 7 April 1998 on the protection of the health and safety of workers from the risks related to chemical agents at work, as amended.
- Regulation (EC) No 166/2006 of the European Parliament and of the Council of 18 January 2006 concerning the establishment of a European Pollutant Release and Transfer Register and amending Council Directives 91/689/EEC and 96/61/EC.
- Directive 2008/98/EC of the European Parliament and of the Council of 19 November 2008 on waste.
- EH40/2005. Workplace Exposure Limits, as amended through 1,10, 2007 (WELs) Published by the Health and Safety Executive (HSE). Issued under the Control of Substances Hazardous to Health Regulations, as amended.

#### 15.2 Chemical safety assessment:

- A chemical Safety assessment has been carried out for this substance.
- See Exposure scenario.

#### 15.3 Notification status

| Inventory Information                            | Status                       |
|--|------------------------------|
| Toxic Substance Control Act List (TSCA)          | In compliance with inventory |
| EU list of existing chemical substances (EINECS) | In compliance with inventory |

#### 16. Other Information

##### 16.1 Full text of H-Statement referred to under section 3

|             |   |
|-------------|---|
| <b>H271</b> | May cause fire or explosion; strong oxidizer    |
| <b>H302</b> | Harmful if swallowed                            |
| <b>H411</b> | Toxic to aquatic life with long lasting effects |
| <b>H319</b> | Causes serious eye irritation                   |
| <b>H312</b> | Harmful in contact with skin                    |
| <b>H314</b> | Causes severe skin burns and serious eye damage |
| <b>H290</b> | May be corrosive to metals                      |

##### 16.2 Other information

This material safety data sheet is only intended for the indicated country to which it is applicable. The European MSDS format compliant with applicable European legislation is not intended for use nor distribution in countries outside the European Union.