SAFETY DATA SHEET

In compliance with EC Regulations No.: 1907/2006 and 453/2010.

Date last modified: 26 June 2015 - version 5.0

1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND OF THE COMPANY

1.1 Product Identifier

Product Name: MARICHEM OIL SPILL DISPERSANT
Product Code #: 832076 (30 lt), 832176 (210 lt)

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

Intended Use: Industrial applications; 3rd Generation (Type II/III) oil spill dispersant

Uses advised against: This product is not recommended for any industrial, professional or consumer use other than the Intended Uses above.

1.3 Details of the supplier of the safety data sheet

Company/undertaking identification

Supplier/Manufacturer:

Marichem Marigases Hellas SA
Sfaktirias 64,
185 45 Piraeus,
Greece
Tel. No.: ++30 210 4148800
Fax No.: ++30 210 4133985
http://www.marichem-marigases.com

e-mail: mail@marichem-marigases.com

1.4 Emergency telephone number

Tel. No.: ++30 210 4148800 (including working hours)

Emergency Information:
Inside U.S. and Canada: (800)-424-9300 (CHEMTREC)
Outside U.S. and Canada: 1-703-527-3887 (CHEMTREC)
National Emergency Centre (Greece): ++30 210 7793777
2. HAZARDS IDENTIFICATION

2.1 Classification of the mixture

Classification under EC 1272/2008 regulation - GHS classification.

Skin Corrosion/Irritation: Category 2
Serious Eye Damage/Eye Irritation: Category 1

SIGNAL WORD: WARNING

Hazard Statement(s):

H315: Causes skin irritation.
H318: Causes serious eye damage.

The substance is classified and labelled according to the CLP Regulation.

Hazard Pictograms

GHS05

Signal Word: WARNING

Hazard Statements

H315: Causes skin irritation.
H318: Causes serious eye damage.

Precautionary Statements

Prevention:

P262: Do not get in eyes, on skin or on clothing.
P264: Wash face, hands and any exposed skin thoroughly after handling.
P270: Do not eat, drink or smoke when using this product.
P280: Wear protective gloves/protective clothing/eye protection/face protection.

Response

P301+P310: IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician.
P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P302 + P352 IF ON SKIN: Wash with plenty of soap and water.

Storage:

P405: Store locked up.

Symbol: Xi (Irritant)

**Xi (Irritant)**

**R-phrases:**
- R36/38: Irritating to eyes and skin.

**S-phrases:**
- S2: Keep out of the reach of children.
- S26: In case of contact with eyes rinse immediately with plenty of water and seek medical advice.
- S39: Wear eye/face protection.

### 3. COMPOSITION/INFORMATION ON INGREDIENTS

#### 3.1 Chemical Composition:

<table>
<thead>
<tr>
<th>Ingredients</th>
<th>CAS Number</th>
<th>Proportion</th>
<th>Classification</th>
</tr>
</thead>
<tbody>
<tr>
<td>3-Butoxypropan-2-ol</td>
<td>5131-66-8</td>
<td>10% - 30%</td>
<td>H315; H319.</td>
</tr>
<tr>
<td>Sulfonic acids, C1416 (even numbered) alkane hydroxy and C1416 (even numbered) alkene, sodium salts</td>
<td>684390-57-6</td>
<td>10% - 40%</td>
<td>H315; H318.</td>
</tr>
<tr>
<td>Sodium Di-octyl Sulphosuccinate</td>
<td>577-11-7</td>
<td>1% - 10%</td>
<td>H315; H318.</td>
</tr>
<tr>
<td>Ingredients which do not contribute to the classification of the product</td>
<td>-</td>
<td>20% - 79%</td>
<td>-</td>
</tr>
</tbody>
</table>

*See section 16 for the full text of the Hazard Code(s) declared above.

Occupational Exposure Limits, if available, are listed in section 8.

### 4. FIRST AID MEASURES

#### 4.1 Description of first aid measures

**Protection of first-aiders**

No action shall be taken involving any personal risk or without suitable training. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. It may be dangerous to the person providing aid to give mouth to mouth resuscitation. Wash contaminated clothing thoroughly with water before removing it, or wear gloves.
**Inhalation**
Get medical attention immediately. Call a poison center or physician. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth to mouth resuscitation. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.

**Skin contact**
Get medical attention immediately. Call a poison center or physician. Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Wash contaminated clothing thoroughly with water before removing it, or wear gloves. Continue to rinse for at least 10 minutes. Chemical burns must be treated promptly by a physician. Wash clothing before reuse. Clean shoes thoroughly before reuse.

**Eye contact**
Get medical attention immediately. Call a poison center or physician. Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Continue to rinse for at least 10 minutes. Chemical burns must be treated promptly by a physician.

**Ingestion**
Get medical attention immediately. Call a poison center or physician. Wash out mouth with water. Remove dentures if any. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Stop if the exposed person feels sick as vomiting may be dangerous. Do not induce vomiting unless directed to do so by medical personnel. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Chemical burns must be treated promptly by a physician. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.

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

**Potential acute health effects**

**Eye contact:** Causes serious eye damage.
**Inhalation:** May give off gas, vapor or dust that is very irritating or corrosive to the respiratory system.
**Skin contact:** Causes skin irritation.
**Ingestion:** May cause burns to mouth, throat and stomach.

**Overexposure signs/symptoms**

**Eye contact:** Adverse symptoms may include the following:
- pain
- watering
- redness.

**Inhalation:** No specific data.

**Skin contact:** Adverse symptoms may include the following:
- pain or irritation
- redness
- blistering may occur.

**Ingestion:** Adverse symptoms may include the following:
- stomach pains.
4.3 Indication of any immediate medical attention and special treatment needed

Notes to physician: Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.

Specific treatments: No specific treatment.

5. FIRE-FIGHTING MEASURES

5.1 Extinguishing media

Appropriate extinguishing media: Use an extinguishing agent suitable for the surrounding fire.
Inappropriate extinguishing media: None known.

5.2 Unusual fire hazards arising from the substance or mixture

Hazards from the substance or mixture: In a fire or if heated, a pressure increase will occur and the container may burst.

Hazardous Combustion Products: Decomposition products may include the following materials:
- Carbon Dioxide
- Carbon Monoxide

5.3 Advise for fire-fighters

Special precautions for fire-fighters
Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training.

Special protective equipment for fire-fighters
Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full facepiece operated in positive pressure mode. Clothing for fire-fighters (including helmets, protective boots and gloves) conforming to European standard EN 469 will provide a basic level of protection for chemical incidents.

6. ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures

For non-emergency personnel
No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Do not breathe vapor or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.

For emergency responders
If specialised clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".
6.2 Environmental precautions

Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).

6.3 Methods and materials for containment and cleaning up

Small spill
Stop leak if without risk. Move containers from spill area. Dilute with water and mop up if water-soluble. Alternatively, or if water insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.

Large spill
Stop leak if without risk. Move containers from spill area. Approach release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Wash spillages into an effluent treatment plant or proceed as follows. Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations. Dispose of via a licensed waste disposal contractor. Contaminated absorbent material may pose the same hazard as the spilled product.

6.4 Reference to other sections

See Section 1 for emergency contact information.
See Section 8 for information on appropriate personal protective equipment.
See Section 13 for additional waste treatment information.

7. HANDLING AND STORAGE

7.1 Precautions for safe handling

Protective measures
Put on appropriate personal protective equipment (see Section 8). Do not get in eyes or on skin or clothing. Do not breathe vapor or mist. Do not ingest. If during normal use the material presents a respiratory hazard, use only with adequate ventilation or wear appropriate respirator. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Empty containers retain product residue and can be hazardous. Do not reuse container.

Advice on general occupational hygiene
Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.

7.2 Conditions for safe storage, including any incompatibilities

Store between the following temperatures: 5 to 40°C (41 to 104°F). Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well ventilated area, away from incompatible materials (see Section 10) and food and drink. Store locked up. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination.
7.3 Specific end use(s)

**Recommendations:** Not available.
**Industrial sector specific solutions:** Not available.

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### 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

#### 8.1 Exposure Limits

**Name of Substance:** 3-Butoxypropan-2-ol

<table>
<thead>
<tr>
<th>List</th>
<th>Type</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dow IHG</td>
<td>TWA</td>
<td>50 ppm</td>
</tr>
</tbody>
</table>

**Derived No Effect Level (DNEL)**

**Workers**

**Potential Health Effects**

<table>
<thead>
<tr>
<th>Acute - systemic effects</th>
<th>Skin Contact</th>
<th>no data available</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acute - systemic effects</td>
<td>Inhalation</td>
<td>no data available</td>
</tr>
<tr>
<td>Acute - local effects</td>
<td>Inhalation</td>
<td>50 %</td>
</tr>
<tr>
<td>Acute - local effects</td>
<td>Skin Contact</td>
<td>no data available</td>
</tr>
<tr>
<td>Long-term - systemic effects</td>
<td>Skin contact</td>
<td>44 mg/kg bw/day</td>
</tr>
<tr>
<td>Long-term - systemic effects</td>
<td>Inhalation</td>
<td>270.5 mg/m³</td>
</tr>
<tr>
<td>Long-term - local effects</td>
<td>Skin contact</td>
<td>50 %</td>
</tr>
<tr>
<td>Long-term - local effects</td>
<td>Inhalation</td>
<td>no data available</td>
</tr>
</tbody>
</table>

**Consumers**

<table>
<thead>
<tr>
<th>Acute - systemic effects</th>
<th>Skin Contact</th>
<th>no data available</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acute - systemic effects</td>
<td>Inhalation</td>
<td>no data available</td>
</tr>
<tr>
<td>Acute - systemic effects</td>
<td>Ingestion</td>
<td>no data available</td>
</tr>
<tr>
<td>Acute - local effects</td>
<td>Inhalation</td>
<td>no data available</td>
</tr>
<tr>
<td>Acute - local effects</td>
<td>Skin Contact</td>
<td>50 %</td>
</tr>
<tr>
<td>Long-term - systemic effects</td>
<td>Skin contact</td>
<td>16 mg/kg bw/day</td>
</tr>
<tr>
<td>Long-term - systemic effects</td>
<td>Inhalation</td>
<td>33.8 mg/m³</td>
</tr>
<tr>
<td>Long-term - systemic effects</td>
<td>Inhalation</td>
<td>8.75 mg/kg bw/day</td>
</tr>
<tr>
<td>Long-term - local effects</td>
<td>Skin contact</td>
<td>50 %</td>
</tr>
<tr>
<td>Long-term - local effects</td>
<td>Inhalation</td>
<td>no data available</td>
</tr>
</tbody>
</table>
Predicted No Effect Concentration (PNEC)

<table>
<thead>
<tr>
<th>Compartment</th>
<th>Values</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fresh water</td>
<td>0.525 mg/l</td>
</tr>
<tr>
<td>Marine water</td>
<td>0.0525 mg/l</td>
</tr>
<tr>
<td>Intermittent releases</td>
<td>5.25 mg/l</td>
</tr>
<tr>
<td>STP</td>
<td>10 mg/l</td>
</tr>
<tr>
<td>Fresh water sediment</td>
<td>2.36 mg/kg d.w.</td>
</tr>
<tr>
<td>Marine sediment</td>
<td>0.236 mg/kg d.w.</td>
</tr>
<tr>
<td>Soil</td>
<td>0.16 mg/kg d.w.</td>
</tr>
</tbody>
</table>

Name of Substance: Sulfonic acids, C\textsubscript{14-16} (even numbered) alkane hydroxy and C\textsubscript{14-16} (even numbered) alkene, sodium salts.

Europe: No exposure limit value known.
Germany: No exposure limit value known.
Spain: No exposure limit value known.

DNELs

<table>
<thead>
<tr>
<th>Exposure</th>
<th>Value</th>
<th>Population</th>
<th>Effects</th>
</tr>
</thead>
<tbody>
<tr>
<td>Long term Dermal</td>
<td>2158.33 mg/kg bw/day</td>
<td>Workers</td>
<td>Systemic</td>
</tr>
<tr>
<td>Long term Inhalation</td>
<td>152.22 mg/m\textsuperscript{3}</td>
<td>Workers</td>
<td>Systemic</td>
</tr>
<tr>
<td>Long term Dermal</td>
<td>1295 mg/kg bw/day</td>
<td>Consumers</td>
<td>Systemic</td>
</tr>
<tr>
<td>Long term Oral</td>
<td>12.95 mg/kg bw/day</td>
<td>Consumers</td>
<td>Systemic</td>
</tr>
</tbody>
</table>

PNECs

<table>
<thead>
<tr>
<th>Compartment Detail</th>
<th>Value</th>
<th>Method Detail</th>
</tr>
</thead>
<tbody>
<tr>
<td>Marine</td>
<td>0.0042 mg/l</td>
<td>Assessment Factors</td>
</tr>
<tr>
<td>Soil</td>
<td>0.0061 mg/kg</td>
<td>Equilibrium Partitioning</td>
</tr>
<tr>
<td>Marine water sediment</td>
<td>0.2025 mg/kg</td>
<td>Assessment Factors</td>
</tr>
<tr>
<td>Fresh water sediment</td>
<td>2.025 mg/kg</td>
<td>Equilibrium Partitioning</td>
</tr>
<tr>
<td>Fresh water</td>
<td>0.042 mg/l</td>
<td>Assessment Factors</td>
</tr>
<tr>
<td>Sewage Treatment Plant</td>
<td>4 mg/l</td>
<td>Assessment Factors</td>
</tr>
</tbody>
</table>

Name of Substance: Sodium Di-octyl Sulphosuccinate

Occupational Exposure Limit for Hazardous Agents in the Workplace - EU TWA

474 mg/m\textsuperscript{3} (total vapour and particulates)
150 ppm (total vapour and particulates)
10 mg/m\textsuperscript{3} (particulates)

Latvia - Occupational Exposure Limits - TWAs (AERs)

7 mg/m\textsuperscript{3}

Lithuania - Occupational Exposure Limits - TWAs (IPRDs)

7 mg/m\textsuperscript{3}
8.2 Exposure controls

**Engineering measures:** Use adequate local exhaust ventilation if airborne dusts, mists, or vapors will be generated.

**Hygiene measures:** Handle in accordance with good industrial hygiene and safety practice.

**Environmental exposure controls:** No information available.

**PERSONAL PROTECTIVE EQUIPMENT**

**Inhalation:** Use ventilation, local exhaust or breathing protection.

**Skin contact:** Wear protective gloves and protective clothing.

**Eye contact:** Wear safety spectacles.

**Ingestion:** Do not eat, drink, or smoke during work.

**Respiratory protection:** In case of mist, spray or aerosol exposure wear suitable personal respiratory protection and protective suit.
9. PHYSICAL AND CHEMICAL PROPERTIES

9.1. Information on basic physical and chemical properties

9.1.1. Appearance

Physical State: Liquid
Color: Yellow
Odor: Characteristic ether like odor

9.1.2. Basic data

Initial Boiling Point: Not Available
Final Boiling Point: Not Available
Flash Point: 90°C
Autoignition Temperature: Not Available
Lower Explosion Limit (vol %): Not Available
Upper Explosion Limit (vol %): Not Available
Vapour Pressure: Not Available
Relative vapor density (air=1): Not Available
Solubility in water: Soluble
Specific Gravity: 1.00-1.05 gr/cm³ at 15°C
pH: 7
Viscosity: 24,662 mPa s at 15°C
Cloud Point: -10 °C

9.2 Other Information: No further relevant information available.

10. STABILITY AND REACTIVITY

10.1 Chemical stability
Material is stable under normal conditions of use and storage.

10.2 Conditions to avoid
Avoid open flames, sparks, heating and high energy ignition sources.
10.3 Materials to avoid
Keep it away from strong oxidizing materials.

10.4 Hazardous Decomposition products
Material does not decompose at ambient temperatures.
Possible the formation of toxic Carbon Monoxide when no proper combustion takes place.

10.5 Hazardous polymerization
Will not occur.

11. TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects

EXPOSURE LIMITS

Name of Substance: 3-Butoxypropan-2-ol

Acute Toxicity

Ingestion
Low toxicity if swallowed. Small amounts swallowed incidentally as a result of normal handling operations are not likely to cause injury; however, swallowing larger amounts may cause injury.
LD50, rat, male and female 3,300 mg/kg.

Aspiration hazard
Based on physical properties, not likely to be an aspiration hazard.

Dermal
Prolonged skin contact is unlikely to result in absorption of harmful amounts.
LD50, rat, male and female > 2,000 mg/kg.

Inhalation
Brief exposure (minutes) is not likely to cause adverse effects. Based on the available data, respiratory irritation was not observed.
No deaths occurred at this concentration. LC50, 4 h, Vapor, rat > 3.5 mg/l.

Eye damage/eye irritation
May cause moderate eye irritation. May cause slight corneal injury. Effects are likely to heal readily. Vapor may cause eye irritation experienced as mild discomfort and redness.

Skin corrosion/irritation
Brief contact may cause moderate skin irritation with local redness.

Sensitization

Skin
Did not cause allergic skin reactions when tested in guinea pigs.

Respiratory
No relevant data found.

Repeated Dose Toxicity
Based on available data, repeated exposures are not anticipated to cause additional significant adverse effects.
**Chronic Toxicity and Carcinogenicity**
For similar material(s): Did not cause cancer in laboratory animals.

**Developmental Toxicity**
Did not cause birth defects or any other fetal effects in laboratory animals.

**Reproductive Toxicity**
For similar material(s): In animal studies, did not interfere with reproduction.

**Genetic Toxicology**
In vitro genetic toxicity studies were negative.

**Name of Substance:** Sulfonic acids, C14-16 (even numbered) alkane hydroxy and C14-16 (even numbered) alkene, sodium salts.

**Acute Toxicity**
LD50 Dermal Rabbit 6300 to 13500 mg/kg.
LD50 Oral Rat 2079 mg/kg.

**Acute Toxicity Estimates**
Not Available.

**Irritation/Corrosion**
Irritating to skin. Causes serious eye damage.

**Sensitiser**
Skin - Guinea Pig: Not sensitizing.

**Mutagenicity**
OECD 471 Bacterial Reverse Mutation Test
Experiment: In vitro
Subject: Bacteria
Result: Negative

OECD 473 *In vitro* Mammalian Chromosomal Aberration Test
Experiment: In vitro
Subject: MammalianHuman
Result: Negative

**Carcinogenicity**
Not Available.

**Reproductive Toxicity**
Not Available.

**Teratogenicity**
Not Available.
Specific Target Organ Toxicity (single exposure)

Category 3 - Route of exposure: Not applicable. Target Organs: Respiratory tract irritation.

Name of Substance: Sodium Di-octyl Sulphosuccinate

Acute Toxicity

LD50/Dermal: 10,000 mg/kg
LD50/Oral: 4200 mg/kg
LC50/inhalation: 20 mg/L

Chronic toxicity

Chronic toxicity: No data is available on the product itself.
Carcinogenicity: There are no known carcinogenic chemicals in this product.
Corrosivity: Causes burns. Risk of serious damage to eyes.
Sensitisation: No sensitizing effects known.
Mutagenic effects: No information available.
Reproductive toxicity: No information available.
Developmental Toxicity: No information available.
Other adverse effects: No information available.

12. ECOLOGICAL INFORMATION

ECOTOXICOLOGICAL DATA

12.1 Toxicity

Name of Substance: 3-Butoxypropan-2-ol

Material is not classified as dangerous to aquatic organisms (LC50/EC50/IC50/LL50/EL50 greater than 100 mg/L in most sensitive species).

Fish Acute & Prolonged Toxicity
LC50, Poecilia reticulata (guppy), static test, 96 h: > 560 - 1,000 mg/l

Aquatic Invertebrate Acute Toxicity
EC50, Daphnia magna (Water flea), static test, 48 h, immobilization: > 1,000 mg/l

Aquatic Plant Toxicity
EC50, Pseudokirchneriella subcapitata (green algae), static test, Growth inhibition (cell density reduction), 96 h: > 1,000 mg/l
NOEC, Pseudokirchneriella subcapitata (green algae), static test, Growth inhibition (cell density reduction), 96 h: 560 mg/l

Toxicity to Micro-organisms
EC50, activated sludge test (OECD 209), Respiration inhibition, 3 h: > 1,000 mg/l

Name of Substance: Sulfonic acids, C1416 (even numbered) alkane hydroxy and C14-16 (even numbered) alkene, sodium salts.
<table>
<thead>
<tr>
<th>RESULT</th>
<th>SPECIES</th>
<th>EXPOSURE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acute EC50 5.2 mg/l</td>
<td>Algae</td>
<td>72 hours</td>
</tr>
<tr>
<td>Acute EC50 4.53 mg/l</td>
<td>Daphnia</td>
<td>48 hours</td>
</tr>
<tr>
<td>Acute IC50 230 mg/l Static</td>
<td>Micro-organism</td>
<td>3 hours</td>
</tr>
<tr>
<td>Acute LC50 4.2 mg/l</td>
<td>Fish</td>
<td>96 hours</td>
</tr>
<tr>
<td>Chronic NOEC 6.7 mg/l</td>
<td>Daphnia</td>
<td>21 days Semistatic</td>
</tr>
</tbody>
</table>

Name of Substance: Sodium Di-octyl Sulphosuccinate

**LC50:** 10 - 50 mg/l (Golden orfs, 48 hrs)

**EC50/96hr/48hr/24hr:** 200 - 300 mg/l (Pseudomonas putida)
10 - 50 mg/l (Daphnia magna, 24 - 48 hrs)

**No Observable Effect Concentration/96hr/48hr/24hr** (NOEC): 10 - 25 mg/l (Scenedesmus subspicatus, 72 hrs)

12.2 Persistence and Degradability

Name of Substance: 3-Butoxypropan-2-ol

Material is readily biodegradable. Passes OECD test(s) for ready biodegradability.

<table>
<thead>
<tr>
<th>OECD Biodegradation Tests: Biodegradation</th>
<th>Exposure Time</th>
<th>Method</th>
<th>10 Day Window</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>90 %</td>
<td>28 d</td>
<td>OECD 301E Test pass</td>
</tr>
</tbody>
</table>

Name of Substance: Sulfonic acids, C1416 (even numbered) alkane hydroxy and C14-16 (even numbered) alkene, sodium salts.

OECD 306 Biodegradability in Seawater: > 90% - 28 days. Readily biodegradable.

Name of Substance: Sodium Di-octyl Sulphosuccinate

The substance is readily biodegradable (> 60%; OECD 301B).

12.3 Bioaccumulative potential

Name of Substance: 3-Butoxypropan-2-ol

**Bioaccumulation:** Bioconcentration potential is low (BCF < 100 or Log Pow < 3).

**Partition coefficient, n-octanol/water (log Pow):** 1.2 Measured

Name of Substance: Sulfonic acids, C1416 (even numbered) alkane hydroxy and C14-16 (even numbered) alkene, sodium salts.

\( \text{Log}P_{\text{oct}}: 1.3 \)

**BCF:** 70.8

**Potential:** low

Name of Substance: Sodium Di-octyl Sulphosuccinate

No data available.
12.4 Mobility in soil

Name of Substance: 3-Butoxypropan-2-ol

**Mobility in soil:** Potential for mobility in soil is very high (Koc between 0 and 50).
**Partition coefficient, soil organic carbon/water (Koc):** 1.3 - 6.0 Estimated.
**Henry's Law Constant (H):** 3.86E-06 atm*m3/mole; 25 °C Estimated.

Name of Substance: Sulfonic acids, C1416 (even numbered) alkane hydroxy and C14-16 (even numbered) alkene, sodium salts.

**Mobility:** Not available.
**Partition coefficient, soil organic carbon/water (Koc):** Not available.

Name of Substance: Sodium Di-octyl Sulphosuccinate

**Mobility:** Not applicable.

12.5 Results of PBT and vPvB assessment

Name of Substance: 3-Butoxypropan-2-ol

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

Name of Substance: Sulfonic acids, C1416 (even numbered) alkane hydroxy and C14-16 (even numbered) alkene, sodium salts.

Not applicable.

Name of Substance: Sodium Di-octyl Sulphosuccinate

No data available.

12.6 Other adverse effects

Name of Substance: 3-Butoxypropan-2-ol

This substance is not in Annex I of Regulation (EC) No 1005/2009 on substances that deplete the ozone layer.

Name of Substance: Sulfonic acids, C1416 (even numbered) alkane hydroxy and C14-16 (even numbered) alkene, sodium salts.

No known significant effects or critical hazards.

Name of Substance: Sodium Di-octyl Sulphosuccinate

Do not allow product to reach ground water, water course or sewage system.
Danger to drinking water if even small quantities leak into the ground.

The product is not harmful to the marine environment as per paragraphs 1.7.4 and 1.7.5. of Resolution MEPC. 219 (63) /Annex 24 - 2012 adoption of IMO’s MARPOL Annex V.
13. DISPOSAL CONSIDERATIONS

13.1 Waste disposal

Disposal recommendations are based on material as supplied. Disposal must be in accordance with current applicable laws and regulations, and material characteristics at time of disposal.

Disposal recommendation: Product is suitable for burning in an enclosed controlled burner for fuel value or disposal by supervised incineration at very high temperatures to prevent formation of undesirable combustion products.

Regulatory Disposal Information: European Waste Code: 08 XX XX

NOTE: These codes are assigned based upon the most common uses for this material and may not reflect contaminants resulting from actual use. Waste producers need to assess the actual process used when generating the waste and its contaminants in order to assign the proper waste disposal code(s).

13.2 Disposal of contaminated packaging

Disposal recommendation: Empty containers may contain residue and can be dangerous. Do not attempt to refill or clean containers without proper instructions. Empty drums should be completely drained and safely stored until appropriately reconditioned or disposed. Empty containers should be taken for recycling, recovery, or disposal through suitably qualified or licensed contractor and in accordance with governmental regulations.

DO NOT PRESSURISE, CUT, WELD, BRAZE, SOLDER, DRILL, GRIND, OR EXPOSE SUCH CONTAINERS TO HEAT, FLAME, SPARKS, STATIC ELECTRICITY, OR OTHER SOURCES OF IGNITION. THEY MAY EXPLODE AND CAUSE INJURY OR DEATH.

14. TRANSPORT INFORMATION

14.1 It is not classified as dangerous material for transportation according to ADR/RID, IMDG, US DOT & ICAO/IATA codes.

15. REGULATORY INFORMATION

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

If other regulatory information applies that is not already provided elsewhere in this safety data sheet, then it is described in this subsection.

15.2 Chemical Safety Assessment

A CSA has been carried out for the raw materials in this product, from the raw materials manufacturers (when needed to be carried out).
16. OTHER INFORMATION

16.1 Full text of Hazard Code(s) referred in Section 3

H318: May be fatal if swallowed and enters airways.
H319: Causes serious eye irritation.
H315: Causes skin irritation.

16.2 Abbreviations and acronyms

ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road).
RID: Règlement international concernant le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail).
IATA: International Air Transport Association.
ICAO: International Civil Aviation Organization.
bw: Body weight.
Carc.: Carcinogenicity.
CAS number: Chemical Abstracts Service number.
CLP: Classification Labelling Packaging Regulation.
CSA: Chemical Safety Assessment.
CSR: Chemical Safety Report.
DNEL: Derived No Effect Level.
dw: Dry weight.
EC number: EINECS and ELINCS number.
EC: European Commission.
EC50: Half maximal effective concentration.
EINECS: European Inventory of Existing Commercial Chemical Substances.
ELINCS: European List of Notified Chemical Substances.
EmS: Emergency Schedule.
ERC: Environmental Release Category.
ES: Exposure scenario.
food: oral feed.
GHS: Globally Harmonized System of Classification and Labelling of Chemicals.
Irrit.: Irritation.
LC50: Lethal concentration, 50 %.
LD50: Median Lethal dose.
LOAEC: Lowest Observed Adverse Effect Concentration.
LOAEL: Lowest Observed Adverse Effect Level.
MK value: Maximum Concentration value.
NCO: An international corporation that provides customer service contracting.
NOAEC: No Observed Adverse Effect Concentration.
NOAEL: No Observed Adverse Effect Level.
NOEC: No Observed Effect Concentration.
OECD: Organisation for Economic Cooperation and Development.
PBT: Persistent, Bioaccumulative and Toxic.
PNEC: Predicted No Effect Concentration.
PROC: Process category.
REACH: The Registration, Evaluation, Authorisation and Restriction of Chemicals.
Resp.: Respiratory.
Sens.: Sensitization.
STEL value: Short Term Exposure Limit value.
STOT RE: Specific target organ toxicity — repeated exposure.
16.3 Notice to reader

All information, instructions and statements contained in this Material Safety Data Sheet are compiled in accordance with European Directives, corresponding national legislation and on the basis of information given by our suppliers. The information disclosed in this Material Safety Data Sheet (which supersedes all previous versions) is believed to be correct, at the date of issue, to the best of our current knowledge and experience. It only relates to the specific product designated herein and it may not be valid when said product is used in combination with any other products or in any processed form, unless specified in the text. This document aims to provide the necessary health and safety information of the product and is not to be considered a warranty or quality specification. It is the responsibility of the recipient of this Material Safety Data Sheet to ensure that information given here is read and understood by all who use, handle, dispose of or in any way come in contact with the product. Also, it is the responsibility of the user to comply with local legislation relating to safety, health, environment and waste management. Data and information provided concerning the product are informative, exclusively presented to the customer.