

## Forward DC

Revision: 2025-05-06

Version: 02.0

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

#### 1.1 Product identifier

Trade name: Forward DC

#### 1.2 Recommended use and restrictions on use

See product label.  
For professional use only.

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

SOLENIS VIETNAM COMPANY LIMITED

#### Contact details

Level 4&5, M-Building, Lot C7B-02A, Block A, No.9 Street 8, Zone Saigon South New Urban Area, Tan Phu Ward, District 7, Ho Chi Minh City, VIETNAM  
Tel. 0314996293

#### 1.4 Emergency telephone number

In case of medical emergency, please seek professional medical advice.

### SECTION 2: Composition/information on ingredients

#### 2.1 Substances / Mixtures

Ingredient(s)	CAS number	EC number	Classification	Weight percent
C12-14 alcohols, ethoxylated (7EO)	68439-50-9	[4]	Acute toxicity - Oral, Category 4 (H302) Serious eye damage, Category 1 (H318) Acute aquatic toxicity, Category 2 (H401) Chronic aquatic toxicity, Category 3 (H412)	3-10
sodium carbonate	497-19-8	207-838-8	Acute toxicity - Oral, Category 5 (H303) Eye irritation, Category 2A (H319)	3-10
n-alkyl dimethyl benzyl ammonium chloride	68424-85-1	270-325-2	Skin corrosion, Category 1B (H314) Acute toxicity - Oral, Category 4 (H302) Serious eye damage, Category 1 (H318) Acute aquatic toxicity, Category 1 M=10 (H400) Chronic aquatic toxicity, Category 1 M=1 (H410)	1-3

Workplace exposure limit(s), if available, are listed in subsection 8.1.  
ATE, if available, are listed in section 11.

### SECTION 3: Hazards identification

#### 3.1 Classification of the substance or mixture

Serious eye damage, Category 1  
Skin irritation, Category 2  
Acute aquatic toxicity, Category 2  
Chronic aquatic toxicity, Category 3

#### 3.2 Label elements



Signal word: Danger.

#### Hazard statements:

H315 - Causes skin irritation.  
H318 - Causes serious eye damage.  
H401 - Toxic to aquatic life.  
H412 - Harmful to aquatic life with long lasting effects.

#### Precautionary statements:

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P280 - Wear eye or face protection.

P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P310 - Immediately call a POISON CENTRE, doctor or physician.

### 3.3 Other hazards

No other hazards known. Exposure and appropriate engineering controls are specified in subsection 8.2 exposure controls.

### 3.4 Classification diluted product

Recommended maximum concentration (% w/w): 6

Acute aquatic toxicity, Category 3

### 3.5 Label elements diluted product

#### Hazard statements:

H402 - Harmful to aquatic life.

## SECTION 4: First aid measures

### 4.1 Description of first aid measures

<b>Inhalation:</b>	Get medical attention or advice if you feel unwell.
<b>Skin contact:</b>	Wash skin with plenty of lukewarm, gently flowing water. If skin irritation occurs: Get medical advice or attention.
<b>Eye contact:</b>	Hold eyelids apart and flush eyes with plenty of lukewarm water for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTRE, doctor or physician.
<b>Ingestion:</b>	Rinse mouth. Immediately drink 1 glass of water. Never give anything by mouth to an unconscious person. Get medical attention or advice if you feel unwell.
<b>Self-protection of first aider:</b>	Consider personal protective equipment as indicated in subsection 8.2.

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

<b>Inhalation:</b>	No known effects or symptoms in normal use.
<b>Skin contact:</b>	Causes irritation.
<b>Eye contact:</b>	Causes severe or permanent damage.
<b>Ingestion:</b>	No known effects or symptoms in normal use.

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

No information available on clinical testing and medical monitoring. Specific toxicological information on substances, if available, can be found in section 11.

## SECTION 5: Firefighting measures

### 5.1 Extinguishing media

Carbon dioxide. Dry powder. Water spray jet. Fight larger fires with water spray jet or alcohol-resistant foam.

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

No special hazards known.

### 5.3 Advice for firefighters

As in any fire, wear self contained breathing apparatus and suitable protective clothing including gloves and eye/face protection.

## SECTION 6: Accidental release measures

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

Wear eye/face protection. Repeated or prolonged contact: Wear suitable gloves.

### 6.2 Environmental precautions

Dilute with plenty of water. Do not allow to enter drainage system, surface or ground water. Do not allow to enter the ground/soil. Inform responsible authorities in case undiluted product reaches drainage system, surface or ground water or the ground/soil.

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

Dyke to collect large liquid spills. Absorb with liquid-binding material (sand, diatomite, universal binders). Do not place spilled materials back into the original container. Collect in closed and suitable containers for disposal.

### 6.4 Reference to other sections

For personal protective equipment see subsection 8.2. For disposal considerations see section 13.

## SECTION 7: Handling and storage

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**7.1 Precautions for safe handling****Measures to prevent fire and explosions:**

No special precautions required.

**Measures required to protect the environment:**

For environmental exposure controls see subsection 8.2.

**Advice on general occupational hygiene:**

Handle in accordance with good industrial hygiene and safety practice. Keep away from food, drink and animal feeding stuffs. Do not mix with other products unless advised by Diversey. Wash face, hands and any exposed skin thoroughly after handling. Take off contaminated clothing. Wash contaminated clothing before reuse. Avoid contact with skin and eyes. Do not breathe spray. Use only with adequate ventilation. See chapter 8.2, Exposure controls / Personal protection.

**7.2 Conditions for safe storage, including any incompatibilities**

Store in accordance with local and national regulations. Store in a closed container. Keep only in original packaging. Keep from freezing. For conditions to avoid see subsection 10.4. For incompatible materials see subsection 10.5.

**7.3 Specific end use(s)**

No specific advice for end use available.

**SECTION 8: Exposure controls/personal protection****8.1 Control parameters****Workplace exposure limits**

Air limit values, if available:

Biological limit values, if available:

**8.2 Exposure controls**

*The following information applies for the uses indicated in subsection 1.2 of the Safety Data Sheet. If available, please refer to the product information sheet for application and handling instructions. Normal use conditions are assumed for this section.*

**Recommended safety measures for handling the undiluted product:**

*Covering activities such as filling and transfer of product to application equipment, flasks or buckets*

**Appropriate engineering controls:** If the product is diluted by using specific dosing systems with no risk of splashes or direct skin contact, the personal protection equipment as described in this section is not required.

**Appropriate organisational controls:** Avoid direct contact and/or splashes where possible. Train personnel.

**Personal protective equipment****Eye / face protection:**

Safety glasses or goggles (EN 16321).

**Hand protection:**

Rinse and dry hands after use. For prolonged contact protection for the skin may be necessary.

Repeated or prolonged contact: Chemical-resistant protective gloves (EN 374). Verify instructions regarding permeability and breakthrough time, as provided by the gloves supplier. Consider specific local use conditions, such as risk of splashes, cuts, contact time and temperature.

Suggested gloves for prolonged contact: Material: butyl rubber Penetration time:  $\geq 480$  min Material thickness:  $\geq 0.7$  mm

Suggested gloves for protection against splashes: Material: nitrile rubber Penetration time:  $\geq 30$  min Material thickness:  $\geq 0.4$  mm

In consultation with the supplier of protective gloves a different type providing similar protection may be chosen.

**Body protection:**

No special requirements under normal use conditions.

**Respiratory protection:**

No special requirements under normal use conditions.

**Environmental exposure controls:**

No special requirements under normal use conditions.

**Recommended safety measures for handling the diluted product:****Recommended maximum concentration (% w/w): 6**

**Appropriate engineering controls:** Use only in well ventilated areas.

**Appropriate organisational controls:** No special requirements under normal use conditions.

**Personal protective equipment****Eye / face protection:**

No special requirements under normal use conditions.

**Hand protection:**

Rinse and dry hands after use. For prolonged contact protection for the skin may be necessary.

**Body protection:**

No special requirements under normal use conditions

**Respiratory protection:**

Trigger spray bottle application: No special requirements under normal use conditions. Apply technical measures to comply with the occupational exposure limits, if available.

**Environmental exposure controls:** Should not reach sewage water or drainage ditch undiluted.

## SECTION 9: Physical and chemical properties

### 9.1 Information on basic physical and chemical properties

	Method / remark
<b>Physical state:</b> Liquid	
<b>Colour:</b> Clear , from Green to Green	
<b>Odour:</b> Product specific	
<b>Odour threshold:</b> Not applicable	
<b>pH:</b> ≈ 11 (neat)	ISO 4316
<b>Dilution pH:</b> ≈ 11 (6 %)	ISO 4316
<b>Melting point/freezing point (°C):</b> Not determined	Not relevant to classification of this product
<b>Initial boiling point and boiling range (°C):</b> Not determined	

**Flammability (liquid):** Not flammable.  
**Flash point (°C):** Not determined  
**Sustained combustion:** Not applicable.  
*( UN Manual of Tests and Criteria, section 32, L.2 )*

<b>Evaporation rate:</b> Not determined	Not relevant to classification of this product
<b>Flammability (solid, gas):</b> Not applicable to liquids	
<b>Lower and upper explosion limit/flammability limit (%):</b> Not determined	
<b>Vapour pressure:</b> Not determined	
<b>Relative density:</b> ≈ 1.07 (20 °C)	OECD 109 (EU A.3)
<b>Relative vapour density:</b> No data available.	Not relevant to classification of this product
<b>Particle characteristics:</b> No data available.	Not applicable to liquids.
<b>Solubility in / Miscibility with water:</b> Fully miscible	
<b>Partition coefficient: n-octanol/water</b> No information available.	

Substance data, partition coefficient n-octanol/water (log Kow): see subsection 12.3

**Autoignition temperature:** Not determined  
**Decomposition temperature:** Not applicable.  
**Kinematic viscosity:** Not determined  
**Explosive properties:** Not explosive. Vapours may form explosive mixtures with air.  
**Oxidising properties:** Not oxidising.

### 9.2 Other information

**Surface tension (N/m):** Not determined  
**Corrosion to metals:** Not corrosive

## SECTION 10: Stability and reactivity

### 10.1 Reactivity

No reactivity hazards known under normal storage and use conditions.

### 10.2 Chemical stability

Stable under normal storage and use conditions.

### 10.3 Possibility of hazardous reactions

No hazardous reactions known under normal storage and use conditions.

### 10.4 Conditions to avoid

None known under normal storage and use conditions.

### 10.5 Incompatible materials

None known under normal use conditions.

### 10.6 Hazardous decomposition products

None known under normal storage and use conditions.

## SECTION 11: Toxicological information

### 11.1 Information on toxicological effects

Mixture data: .

**Relevant calculated ATE(s):**

ATE - Oral (mg/kg): &gt;5000

Substance data, where relevant and available, are listed below:.**Acute toxicity**

Acute oral toxicity

Ingredient(s)	Endpoint	Value (mg/kg)	Species	Method	Exposure time (h)
C12-14 alcohols, ethoxylated (7EO)	LD <sub>50</sub>	> 300 - 2000	Rat	Read across	
sodium carbonate	LD <sub>50</sub>	2800	Rat	OECD 401 (EU B.1)	
n-alkyl dimethyl benzyl ammonium chloride	LD <sub>50</sub>	304.5	Rat		

Acute dermal toxicity

Ingredient(s)	Endpoint	Value (mg/kg)	Species	Method	Exposure time (h)
C12-14 alcohols, ethoxylated (7EO)	LD <sub>50</sub>	> 2000	Rabbit	Method not given	
sodium carbonate	LD <sub>50</sub>	> 2000	Rabbit	Method not given	
n-alkyl dimethyl benzyl ammonium chloride	LD <sub>50</sub>	3412	Rabbit	Method not given	

Acute inhalative toxicity

Ingredient(s)	Endpoint	Value (mg/l)	Species	Method	Exposure time (h)
C12-14 alcohols, ethoxylated (7EO)		No data available			
sodium carbonate	LC <sub>50</sub>	> 2.3 (dust)		Weight of evidence	2
n-alkyl dimethyl benzyl ammonium chloride		No data available			

**Irritation and corrosivity**

Skin irritation and corrosivity

Ingredient(s)	Result	Species	Method	Exposure time
C12-14 alcohols, ethoxylated (7EO)	Not irritant		Read across	
sodium carbonate	Not irritant	Rabbit	OECD 404 (EU B.4)	
n-alkyl dimethyl benzyl ammonium chloride	Corrosive	Rabbit	Method not given	

Eye irritation and corrosivity

Ingredient(s)	Result	Species	Method	Exposure time
C12-14 alcohols, ethoxylated (7EO)	Severe damage	Rabbit	Read across	
sodium carbonate	Irritant	Rabbit	OECD 405 (EU B.5)	
n-alkyl dimethyl benzyl ammonium chloride	Severe damage		Method not given	

Respiratory tract irritation and corrosivity

Ingredient(s)	Result	Species	Method	Exposure time
C12-14 alcohols, ethoxylated (7EO)	No data available			
sodium carbonate	No data available			
n-alkyl dimethyl benzyl ammonium chloride	No data available			

**Sensitisation**

Sensitisation by skin contact

Ingredient(s)	Result	Species	Method	Exposure time (h)
C12-14 alcohols, ethoxylated (7EO)	Not sensitising	Guinea pig	OECD 406 (EU B.6) / GPMT	
sodium carbonate	Not sensitising		Method not given	
n-alkyl dimethyl benzyl ammonium chloride	Not sensitising	Guinea pig	OECD 406 (EU B.6) / Buehler test	

Sensitisation by inhalation

Ingredient(s)	Result	Species	Method	Exposure time
C12-14 alcohols, ethoxylated (7EO)	No data available			
sodium carbonate	No data available			
n-alkyl dimethyl benzyl ammonium chloride	No data available			

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**CMR effects (carcinogenicity, mutagenicity and toxicity for reproduction)**

## Mutagenicity

Ingredient(s)	Result (in-vitro)	Method (in-vitro)	Result (in-vivo)	Method (in-vivo)
C12-14 alcohols, ethoxylated (7EO)	No evidence for mutagenicity, negative test results	Read across	No data available	
sodium carbonate	No data available		No data available	
n-alkyl dimethyl benzyl ammonium chloride	No evidence of genotoxicity, negative test results	OECD 471 (EU B.12/13) OECD 476 OECD 473	No evidence of genotoxicity, negative test results	OECD 474 (EU B.12)

## Carcinogenicity

Ingredient(s)	Effect
C12-14 alcohols, ethoxylated (7EO)	No data available
sodium carbonate	No evidence for carcinogenicity, weight-of-evidence
n-alkyl dimethyl benzyl ammonium chloride	No data available

## Toxicity for reproduction

Ingredient(s)	Endpoint	Specific effect	Value (mg/kg bw/d)	Species	Method	Exposure time	Remarks and other effects reported
C12-14 alcohols, ethoxylated (7EO)			No data available				
sodium carbonate			No data available				
n-alkyl dimethyl benzyl ammonium chloride			No data available				

**Repeated dose toxicity**

## Sub-acute or sub-chronic oral toxicity

Ingredient(s)	Endpoint	Value (mg/kg bw/d)	Species	Method	Exposure time (days)	Specific effects and organs affected
C12-14 alcohols, ethoxylated (7EO)		No data available				
sodium carbonate		No data available				
n-alkyl dimethyl benzyl ammonium chloride		No data available				

## Sub-chronic dermal toxicity

Ingredient(s)	Endpoint	Value (mg/kg bw/d)	Species	Method	Exposure time (days)	Specific effects and organs affected
C12-14 alcohols, ethoxylated (7EO)		No data available				
sodium carbonate		No data available				
n-alkyl dimethyl benzyl ammonium chloride		No data available				

## Sub-chronic inhalation toxicity

Ingredient(s)	Endpoint	Value (mg/kg bw/d)	Species	Method	Exposure time (days)	Specific effects and organs affected
C12-14 alcohols, ethoxylated (7EO)		No data available				
sodium carbonate		No data available				
n-alkyl dimethyl benzyl ammonium chloride		No data available				

## Chronic toxicity

Ingredient(s)	Exposure route	Endpoint	Value (mg/kg bw/d)	Species	Method	Exposure time	Specific effects and organs affected	Remark
C12-14 alcohols, ethoxylated (7EO)			No data available					
sodium carbonate			No data available					
n-alkyl dimethyl benzyl ammonium chloride			No data available					

## STOT-single exposure

Ingredient(s)	Affected organ(s)
C12-14 alcohols, ethoxylated (7EO)	No data available
sodium carbonate	Not applicable
n-alkyl dimethyl benzyl ammonium chloride	No data available

STOT-repeated exposure

Ingredient(s)	Affected organ(s)
C12-14 alcohols, ethoxylated (7EO)	No data available
sodium carbonate	Not applicable
n-alkyl dimethyl benzyl ammonium chloride	No data available

**Aspiration hazard**

Substances with an aspiration hazard (H304), if any, are listed in section 3.

**Potential adverse health effects and symptoms**

Effects and symptoms related to the product, if any, are listed in subsection 4.2.

**SECTION 12: Ecological information****12.1 Toxicity**

No data is available on the mixture.

Substance data, where relevant and available, are listed below:

**Aquatic short-term toxicity**

Aquatic short-term toxicity - fish

Ingredient(s)	Endpoint	Value (mg/l)	Species	Method	Exposure time (h)
C12-14 alcohols, ethoxylated (7EO)	LC <sub>50</sub>	> 1 - 10	<i>Brachydanio rerio</i>	Read across	96
sodium carbonate	LC <sub>50</sub>	300	<i>Lepomis macrochirus</i>	Method not given	96
n-alkyl dimethyl benzyl ammonium chloride	LC <sub>50</sub>	0.515	<i>Fish</i>	Method not given	96

Aquatic short-term toxicity - crustacea

Ingredient(s)	Endpoint	Value (mg/l)	Species	Method	Exposure time (h)
C12-14 alcohols, ethoxylated (7EO)	EC <sub>50</sub>	> 1 - 10	<i>Daphnia magna Straus</i>	Method not given	48
sodium carbonate	EC <sub>50</sub>	200-227	<i>Ceriodaphnia dubia</i>	Method not given	96
n-alkyl dimethyl benzyl ammonium chloride	EC <sub>50</sub>	0.016	<i>Daphnia</i>	Method not given	48

Aquatic short-term toxicity - algae

Ingredient(s)	Endpoint	Value (mg/l)	Species	Method	Exposure time (h)
C12-14 alcohols, ethoxylated (7EO)	NOEC	> 0.1 - 1	<i>Not specified</i>	DIN 38412, Part 9 OECD 201 (EU C.3)	
sodium carbonate	EC <sub>50</sub>	> 800	<i>Selenastrum capricornutum</i>		72
n-alkyl dimethyl benzyl ammonium chloride	EC <sub>50</sub>	0.02	<i>Selenastrum capricornutum</i>	OECD 201 (EU C.3)	72

Aquatic short-term toxicity - marine species

Ingredient(s)	Endpoint	Value (mg/l)	Species	Method	Exposure time (days)
C12-14 alcohols, ethoxylated (7EO)		No data available			
sodium carbonate		No data available			
n-alkyl dimethyl benzyl ammonium chloride		No data available			

Impact on sewage plants - toxicity to bacteria

Ingredient(s)	Endpoint	Value (mg/l)	Inoculum	Method	Exposure time
C12-14 alcohols, ethoxylated (7EO)		> 1000	<i>Activated sludge</i>	DEV-L2	
sodium carbonate		No data available			
n-alkyl dimethyl benzyl ammonium chloride	EC <sub>20</sub>	5	<i>Activated sludge</i>	OECD 209	0.5 hour(s)

**Aquatic long-term toxicity**

Aquatic long-term toxicity - fish

Ingredient(s)	Endpoint	Value	Species	Method	Exposure	Effects observed
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		(mg/l)			time	
C12-14 alcohols, ethoxylated (7EO)	EC <sub>50</sub>	10-100	<i>Not specified</i>	Method not given	96 hour(s)	
sodium carbonate		No data available				
n-alkyl dimethyl benzyl ammonium chloride		No data available				

## Aquatic long-term toxicity - crustacea

Ingredient(s)	Endpoint	Value (mg/l)	Species	Method	Exposure time	Effects observed
C12-14 alcohols, ethoxylated (7EO)	EC <sub>50</sub>	10-100	<i>Not specified</i>	Method not given	48 hour(s)	
sodium carbonate		No data available				
n-alkyl dimethyl benzyl ammonium chloride	NOEC	0.025	<i>Daphnia magna</i>	OECD 211	21 day(s)	

## Aquatic toxicity to other aquatic benthic organisms, including sediment-dwelling organisms, if available:

Ingredient(s)	Endpoint	Value (mg/kg dw sediment)	Species	Method	Exposure time (days)	Effects observed
sodium carbonate		No data available				
n-alkyl dimethyl benzyl ammonium chloride		No data available				

## Terrestrial toxicity

## Terrestrial toxicity - soil invertebrates, including earthworms, if available:

Ingredient(s)	Endpoint	Value (mg/kg dw soil)	Species	Method	Exposure time (days)	Effects observed
sodium carbonate		No data available				
n-alkyl dimethyl benzyl ammonium chloride		No data available				

## Terrestrial toxicity - plants, if available:

Ingredient(s)	Endpoint	Value (mg/kg dw soil)	Species	Method	Exposure time (days)	Effects observed
sodium carbonate		No data available				
n-alkyl dimethyl benzyl ammonium chloride		No data available				

## Terrestrial toxicity - birds, if available:

Ingredient(s)	Endpoint	Value	Species	Method	Exposure time (days)	Effects observed
sodium carbonate		No data available				
n-alkyl dimethyl benzyl ammonium chloride		No data available				

## Terrestrial toxicity - beneficial insects, if available:

Ingredient(s)	Endpoint	Value (mg/kg dw soil)	Species	Method	Exposure time (days)	Effects observed
sodium carbonate		No data available				
n-alkyl dimethyl benzyl ammonium chloride		No data available				

## Terrestrial toxicity - soil bacteria, if available:

Ingredient(s)	Endpoint	Value (mg/kg dw soil)	Species	Method	Exposure time (days)	Effects observed
sodium carbonate		No data available				
n-alkyl dimethyl benzyl ammonium chloride		No data available				

## 12.2 Persistence and degradability

## Abiotic degradation

## Abiotic degradation - photodegradation in air, if available:

Ingredient(s)	Half-life time	Method	Evaluation	Remark

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sodium carbonate	No data available			
n-alkyl dimethyl benzyl ammonium chloride	No data available			

Abiotic degradation - hydrolysis, if available:

Ingredient(s)	Half-life time in fresh water	Method	Evaluation	Remark
sodium carbonate	No data available		Rapidly hydrolysible	
n-alkyl dimethyl benzyl ammonium chloride	No data available			

Abiotic degradation - other processes, if available:

Ingredient(s)	Type	Half-life time	Method	Evaluation	Remark
sodium carbonate		No data available			
n-alkyl dimethyl benzyl ammonium chloride		No data available			

### Biodegradation

Ready biodegradability - aerobic conditions

Ingredient(s)	Inoculum	Analytical method	DT <sub>50</sub>	Method	Evaluation
C12-14 alcohols, ethoxylated (7EO)		CO <sub>2</sub> production	> 60 % in 28 day(s)	OECD 301B	Readily biodegradable
sodium carbonate					Not applicable (inorganic substance)
n-alkyl dimethyl benzyl ammonium chloride		Oxygen depletion	> 60%	Read across	Readily biodegradable

Ready biodegradability - anaerobic and marine conditions, if available:

Ingredient(s)	Medium & Type	Analytical method	DT <sub>50</sub>	Method	Evaluation
sodium carbonate					No data available
n-alkyl dimethyl benzyl ammonium chloride					No data available

Degradation in relevant environmental compartments, if available:

Ingredient(s)	Medium & Type	Analytical method	DT <sub>50</sub>	Method	Evaluation
sodium carbonate					No data available
n-alkyl dimethyl benzyl ammonium chloride					No data available

### 12.3 Bioaccumulative potential

Partition coefficient n-octanol/water (log Kow)

Ingredient(s)	Value	Method	Evaluation	Remark
C12-14 alcohols, ethoxylated (7EO)	No data available		No bioaccumulation expected	
sodium carbonate	No data available		No bioaccumulation expected	
n-alkyl dimethyl benzyl ammonium chloride	0.004	Method not given	No bioaccumulation expected	at 20 °C

Bioconcentration factor (BCF)

Ingredient(s)	Value	Species	Method	Evaluation	Remark
C12-14 alcohols, ethoxylated (7EO)	No data available				
sodium carbonate	No data available			No bioaccumulation expected	
n-alkyl dimethyl benzyl ammonium chloride	79	<i>Lepomis macrochirus</i>		Low potential for bioaccumulation	

### 12.4 Mobility in soil

Adsorption/Desorption to soil or sediment

Ingredient(s)	Adsorption coefficient Log K <sub>oc</sub>	Desorption coefficient Log K <sub>oc</sub> (des)	Method	Soil/sediment type	Evaluation
C12-14 alcohols, ethoxylated (7EO)	No data available	≥ 4			Potential for adsorption to soil
sodium carbonate	No data available				Potential for mobility in soil, soluble in water
n-alkyl dimethyl benzyl ammonium chloride	No data available				

### 12.5 Other adverse effects

No other adverse effects known.

## SECTION 13: Disposal considerations

### 13.1 Waste treatment methods

Waste from residues / unused

The concentrated contents or contaminated packaging should be disposed of by a certified handler

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**products:** or according to the site permit. Release of waste to sewers is discouraged. The cleaned packaging material is suitable for energy recovery or recycling in line with local legislation.

**Empty packaging Recommendation:** Dispose of observing national or local regulations.  
**Suitable cleaning agents:** Water, if necessary with cleaning agent.

## SECTION 14: Transport information

### Land transport, Sea transport (IMDG), Air transport (ICAO-TI / IATA-DGR)

- 14.1 UN number: Non-dangerous goods
- 14.2 UN proper shipping name: Non-dangerous goods
- 14.3 Transport hazard class(es): Non-dangerous goods
- 14.4 Packing group: Non-dangerous goods
- 14.5 Environmental hazards: Non-dangerous goods
- 14.6 Special precautions for user: Non-dangerous goods
- 14.7 Transport in bulk according to Annex II of MARPOL and the IBC Code: Non-dangerous goods

## SECTION 15: Regulatory information

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

#### National regulations

- Decree 108/2008/NP-CP Circular No.: 04/2012/TT-BCT Regulations on the Classification and Labeling of Chemicals

## SECTION 16: Other information

*The information in this document is based on our best present knowledge. However, it does not constitute a guarantee for any specific product features and does not establish a legally binding contract*

**SDS code:** MS4800309

**Version:** 02.0

**Revision:** 2025-05-06

#### Abbreviations and acronyms:

- ATE - Acute Toxicity Estimate
- DNEL - Derived No Effect Limit
- EC50 - effective concentration, 50%
- LC50 - Lethal Concentration, 50% / Median Lethal Concentration
- LD50 - Lethal Dose, 50% / Median Lethal dose
- NOAEL - No observed adverse effect level
- NOEL - No observed effect level
- OECD - Organisation for Economic Cooperation and Development
- PNEC - Predicted No Effect Concentration
- STOT-RE - Specific target organ toxicity (repeated exposure)
- STOT-SE - Specific target organ toxicity (single exposure)
- H302 - Harmful if swallowed.
- H303 - May be harmful if swallowed.
- H314 - Causes severe skin burns and eye damage.
- H318 - Causes serious eye damage.
- H319 - Causes serious eye irritation.
- H400 - Very toxic to aquatic life.
- H410 - Very toxic to aquatic life with long lasting effects.
- H412 - Harmful to aquatic life with long lasting effects.

End of Safety Data Sheet