

## SAFETY DATA SHEET

according to the Globally Harmonized System

### ARQUAD 16-29

Version 3

Revision Date 09.11.2017

Print Date 23.07.2019

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

Product Information

Trade name : ARQUAD 16-29

Use of the Substance/Mixture : Specific use(s): Surfactant

Company : Nouryon Surface Chemistry AB  
Stenunge Alle 3  
SE 444 85 Stenungsund  
Sweden

Telephone : +4630385000  
Telefax : +4630384659  
E-mail address : Regulatory.Affairs@nouryon.com  
Emergency telephone number : 020 99 60 00 Kemiakuten, SE +31 57 06 79 211 24 hours emergency response number

#### 2. HAZARDS IDENTIFICATION

##### GHS-Classification

Acute toxicity, Category 4, Oral  
Acute toxicity, Category 4, Dermal  
Skin corrosion/irritation, Category 2  
Serious eye damage/eye irritation, Category 1  
Acute aquatic toxicity, Category 1  
Chronic aquatic toxicity, Category 1

##### GHS-Labeling

Hazard pictograms :



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Signal word	:	Danger	
Hazard statements	:	H302 + H312	Harmful if swallowed or in contact with skin.
		H315	Causes skin irritation.
		H318	Causes serious eye damage.
		H410	Very toxic to aquatic life with long lasting effects.
Precautionary statements	:	<b>Prevention:</b>	
		P264	Wash skin thoroughly after handling.
		P270	Do not eat, drink or smoke when using this product.
		P273	Avoid release to the environment.
		P280	Wear protective gloves/ protective clothing/ eye protection/ face protection.
		<b>Response:</b>	
		P301 + P312 + P330	IF SWALLOWED: Call a POISON CENTER/doctor if you feel unwell. Rinse mouth.
		P302 + P352 + P312	IF ON SKIN: Wash with plenty of water. Call a POISON CENTER/doctor if you feel unwell.
		P305 + P351 + P338 + P310	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER/doctor.
		P332 + P313	If skin irritation occurs: Get medical advice/ attention.
		P391	Collect spillage.
		<b>Disposal:</b>	
		P501	Dispose of contents/ container to an approved waste disposal plant.

## Other hazards which do not result in classification

No further data available.

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**3. COMPOSITION/INFORMATION ON INGREDIENTS**

Pure substance/mixture : Mixture

**Hazardous components**

Chemical name	CAS-No.	GHS Classification	Concentration[%]
Hexadecyltrimethylammonium chloride	112-02-7	Acute Tox. 4; H302 Acute Tox. 3; H311 Skin Corr./Irrit. 1C; H314 Eye Dam./Irrit. 1; H318 Aquatic Acute 1; H400 Aquatic Chronic 1; H410 M-Factor (Acute): 10 M-Factor (Chronic): 1	>= 25 - < 30

For the full text of the H-Statements mentioned in this Section, see Section 16.

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**4. FIRST AID MEASURES**

- General advice : Immediate medical attention is required.  
Move out of dangerous area.  
Show this safety data sheet to the doctor in attendance.
- Inhalation : If breathed in, move person into fresh air.  
Consult a physician after significant exposure.
- Skin contact : Take off contaminated clothing and shoes immediately.  
Rinse immediately with plenty of water.  
If skin irritation persists, call a physician.
- Eye contact : Rinse with plenty of water.  
Get medical attention immediately. Continue to rinse during transport.  
Remove contact lenses.  
Protect unharmed eye.  
Keep eye wide open while rinsing.
- Ingestion : Clean mouth with water and drink afterwards plenty of water.  
Never give anything by mouth to an unconscious person.  
Obtain medical attention.

**Notes to physician**

- Symptoms : The symptoms and effects are as expected from the hazards as shown in section 2. No specific product related symptoms are known.

Treatment : Treat symptomatically.

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## 5. FIREFIGHTING MEASURES

- Suitable extinguishing media : Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
- Specific hazards during firefighting / Specific hazards arising from the chemical : Do not allow run-off from fire fighting to enter drains or water courses.
- Combustion products : Carbon oxides  
Nitrogen oxides (NOx)  
Halogenated compounds  
Hydrogen chloride
- Special protective equipment for firefighters : In the event of fire, wear self-contained breathing apparatus.
- Further information : Collect contaminated fire extinguishing water separately. This must not be discharged into drains.  
Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations.

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## 6. ACCIDENTAL RELEASE MEASURES

### Personal precautions, protective equipment and emergency procedures

- Personal precautions : Use personal protective equipment.  
Ensure adequate ventilation.
- Emergency measures on accidental release : Evacuate personnel to safe areas.  
Only qualified personnel equipped with suitable protective equipment may intervene.  
Prevent unauthorised persons entering the zone.
- Environmental precautions : Do not flush into surface water or sanitary sewer system.  
If the product contaminates rivers and lakes or drains inform respective authorities.
- Methods for cleaning up /  
Methods for containment : Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust).  
Keep in suitable, closed containers for disposal.
- Reference to other sections : For disposal considerations see section 13.  
  
For personal protection see section 8.

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## 7. HANDLING AND STORAGE

### Handling

Advice on safe handling : For personal protection see section 8.  
Avoid contact with skin, eyes and clothing.  
Smoking, eating and drinking should be prohibited in the application area.  
Dispose of rinse water in accordance with local and national regulations.

Advice on protection against fire and explosion : Normal measures for preventive fire protection.

### Storage

Requirements for storage areas and containers : Keep container tightly closed in a dry and well-ventilated place.

Other data : No decomposition if stored and applied as directed.

## 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

### Components with workplace control parameters

Contains no substances with occupational exposure limit values.

Hydrogen chloride	7647-01-0, 7647-01-0	C	2 ppm	2007-01-01	ACGIH	
	Further information	:	URT irr: Upper Respiratory Tract irritation A4: Not classifiable as a human carcinogen			
		C	5 ppm 7 mg/m3	2013-10-08	NIOSH REL	
	Further information	:	Often used in an aqueous solution.			
		C	5 ppm 7 mg/m3	2006-02-28	OSHA Z-1	
	Further information	:	(b): The value in mg/m3 is approximate. (C): Ceiling limit is to be determined from breathing-zone air samples.			
		C	5 ppm 7 mg/m3	1989-01-19	OSHA P0	
		PEL	0,3 ppm 0,45 mg/m3	2014-11-26	CAL PEL	
		C	2 ppm	2014-11-26	CAL PEL	

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**Engineering controls**

Effective exhaust ventilation system

Ensure that eyewash stations and safety showers are close to the workstation location.

**Personal protective equipment**

Respiratory protection : In the case of vapour or aerosol formation use a respirator with an approved filter.

Hand protection : Neoprene  
Nitrile rubber

Eye protection : Tightly fitting safety goggles

Skin and body protection : Protective suit

Hygiene measures : Handle in accordance with good industrial hygiene and safety practice.  
When using do not eat or drink.  
When using do not smoke.  
Wash hands before breaks and at the end of workday.

**Environmental exposure controls**

General advice : Do not flush into surface water or sanitary sewer system.  
If the product contaminates rivers and lakes or drains inform respective authorities.

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**9. PHYSICAL AND CHEMICAL PROPERTIES****Appearance**

Form : liquid

Colour : light yellow

Odour : negligible

Odour Threshold : No data available

**Safety data**

pH : 6 - 9 at 10 % solution

Melting point/range : 5 °C

Boiling point/boiling range : 100 °C

Flash point : 100 - 199 °C

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Ignition temperature	: > 100 °C
Evaporation rate	: No data available
Flammability (solid, gas)	: Not applicable
Flammability (liquids)	: Not classified as a flammability hazard
Lower explosion limit	: Not applicable
Upper explosion limit	: Not applicable
Vapour pressure	: 23 hPa at 20 °C
Relative vapour density	: No data available
Density	: 970 kg/m <sup>3</sup> at 20 °C
Relative density	: 0,970 at 20 °C
Water solubility	: soluble
Solubility in other solvents	: Acetone Methanol soluble
Partition coefficient: n-octanol/water	: log Pow: 1,5
Auto-ignition temperature	: Not applicable
Decomposition temperature	: No data available
Viscosity, dynamic	: 9 mPa.s at 20 °C
Viscosity, kinematic	: 9,3 mm <sup>2</sup> /s at 20 °C
Explosive properties	: Not explosive
Oxidizing properties	: The substance or mixture is not classified as oxidizing.

This safety datasheet only contains information relating to safety and does not replace any product information or product specification.

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## 10. STABILITY AND REACTIVITY

Conditions to avoid	: None known.
Materials to avoid	: None known.
Hazardous decomposition products	: Halogenated compounds Hydrogen chloride

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Thermal decomposition	: No data available
Reactivity	: Stable under normal conditions.
Chemical stability	: Stable under recommended storage conditions.
Hazardous reactions	: No dangerous reaction known under conditions of normal use.

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## 11. TOXICOLOGICAL INFORMATION

### Product information:

#### Potential Health Effects

Inhalation	: Inhalation of aerosols may cause irritation to mucous membranes. Thermal decomposition can lead to release of irritating gases and vapours.
Skin	: Harmful in contact with skin. Causes skin irritation.
Eyes	: Causes serious eye damage.
Ingestion	: Harmful if swallowed. May cause irritation of the mucous membranes.
Aggravated Medical Condition	: None known.
Symptoms of Overexposure	: The symptoms and effects are as expected from the hazards as shown in section 2. No specific product related symptoms are known.

#### Toxicology Assessment

Further information	: No further data available.
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#### Test result

Skin irritation	: Species: Rabbit Result: Irritating to skin. Method: OECD Test Guideline 404
Eye irritation	: Species: Rabbit Result: Risk of serious damage to eyes. Method: OECD Test Guideline 405

#### Toxicology data for the components:



## Test result

### Component: Hexadecyltrimethylammonium chloride

Acute oral toxicity	: LD50: > 300 - 2 000 mg/kg Species: Rat Method: OECD Test Guideline 401
Acute dermal toxicity	: LD50: 528 mg/kg Species: Rabbit Method: OECD Test Guideline 402 Read-across (Analogy)
Skin irritation	: Species: Rabbit Result: Corrosive, category 1C - where responses occur after exposures between 1 hour and 4 hours and observations up to 14 days. Method: OECD Test Guideline 404 Read-across (Analogy)
Eye irritation	: Species: Rabbit Result: Risk of serious damage to eyes. Method: OECD Test Guideline 405
Sensitisation	: Buehler Test Species: Guinea pig Result: negative Method: OECD Test Guideline 406

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## 12. ECOLOGICAL INFORMATION

### Product information:

#### Ecotoxicology Assessment

Additional ecological information	: An environmental hazard cannot be excluded in the event of unprofessional handling or disposal. Very toxic to aquatic life with long lasting effects.
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### Components:

## Test result

### Component: Hexadecyltrimethylammonium chloride

#### Ecotoxicity effects

Toxicity to fish	: LC50: > 0,1 - 1 mg/l Exposure time: 96 h Species: Danio rerio (zebra fish) Method: OECD Test Guideline 203
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Toxicity to daphnia and other aquatic invertebrates	: EC50: > 0,01 - 0,1 mg/l Exposure time: 48 h Species: Daphnia magna (Water flea) Method: OECD Test Guideline 202 Read-across (Analogy)
Toxicity to algae	: EC50: > 0,01 - 0,1 mg/l Exposure time: 72 h Species: Pseudokirchneriella subcapitata (green algae) Method: OECD Test Guideline 201 Read-across (Analogy)
M-Factor (Acute)	: 10
M-Factor (Chronic)	: 1
Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity)	: NOEC: > 0,001 - 0,01 mg/l Exposure time: 21 d Species: Daphnia magna (Water flea) Method: OECD Test Guideline 211 Read-across (Analogy)

## Elimination information (persistence and degradability)

Bioaccumulation	: Bioaccumulation is unlikely.
Mobility	: No data available
Biodegradability	: Result: Readily biodegradable. Method: OECD Test Guideline 301D

## Further information on ecology

Biochemical Oxygen Demand (BOD)	: No data available
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## 13. DISPOSAL CONSIDERATIONS

Product	: The product should not be allowed to enter drains, water courses or the soil. Do not contaminate ponds, waterways or ditches with chemical or used container. Hazardous waste Dispose of contents/container in accordance with local regulation.
Contaminated packaging	: Empty remaining contents. Dispose of as unused product.

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## 14. TRANSPORT INFORMATION

### International Regulations

#### IATA-DGR

UN/ID No. : UN 3082  
Proper shipping name : Environmentally hazardous substance, liquid, n.o.s.  
(Quaternary alkyl ammonium chloride)  
Class : 9  
Packing group : III  
Labels : 9  
Packing instruction (cargo aircraft) : 964  
Packing instruction (passenger aircraft) : 964  
Packing instruction (LQ) : Y964  
Environmentally hazardous : yes

#### IMDG-Code

UN number : UN 3082  
Proper shipping name : ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID,  
N.O.S.  
(Quaternary alkyl ammonium chloride)  
Class : 9  
Packing group : III  
Labels : 9  
EmS Code : F-A, S-F  
Marine pollutant : yes  
(Quaternary alkyl ammonium chloride)

### Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Not applicable for product as supplied.

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## 15. REGULATORY INFORMATION

### Notification status

DSL : YES. All components of this product are on the Canadian DSL  
AICS : YES. On the inventory, or in compliance with the inventory  
NZIoC : YES. On the inventory, or in compliance with the inventory  
ENCS : YES. On the inventory, or in compliance with the inventory  
ISHL : YES. On the inventory, or in compliance with the inventory  
KECI : YES. On the inventory, or in compliance with the inventory  
PICCS : YES. On the inventory, or in compliance with the inventory  
IECSC : YES. On the inventory, or in compliance with the inventory  
TCSI : YES. On the inventory, or in compliance with the inventory  
TSCA : YES. All chemical substances in this product are either listed on the  
TSCA Inventory or in compliance with a TSCA Inventory exemption.

For explanation of abbreviation see section 16.

Further information : none

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**16. OTHER INFORMATION****Full text of H-Statements**

H302	: Harmful if swallowed.
H311	: Toxic in contact with skin.
H314	: Causes severe skin burns and eye damage.
H318	: Causes serious eye damage.
H400	: Very toxic to aquatic life.
H410	: Very toxic to aquatic life with long lasting effects.

**Full text of other abbreviations**

ACGIH	: USA. ACGIH Threshold Limit Values (TLV)
CAL PEL	: California permissible exposure limits for chemical contaminants (Title 8, Article 107)
NIOSH REL	: USA. NIOSH Recommended Exposure Limits
OSHA P0	: USA. OSHA - TABLE Z-1 Limits for Air Contaminants - 1910.1000
OSHA Z-1	: USA. Occupational Exposure Limits (OSHA) - Table Z-1 Limits for Air Contaminants

ACGIH / C	: Ceiling limit
CAL PEL / PEL	: Permissible exposure limit
CAL PEL / C	: Ceiling
NIOSH REL / C	: Ceiling value not be exceeded at any time.
OSHA P0 / C	: Ceiling limit
OSHA Z-1 / C	: Ceiling

AICS - Australian Inventory of Chemical Substances; ANTT - National Agency for Transport by Land of Brazil; ASTM - American Society for the Testing of Materials; bw - Body weight; CMR - Carcinogen, Mutagen or Reproductive Toxicant; CPR - Controlled Products Regulations; DIN - Standard of the German Institute for Standardisation; DSL - Domestic Substances List (Canada); ECx - Concentration associated with x% response; ELx - Loading rate associated with x% response; EmS - Emergency Schedule; ENCS - Existing and New Chemical Substances (Japan); ErCx - Concentration associated with x% growth rate response; ERG - Emergency Response Guide; GHS - Globally Harmonized System; GLP - Good Laboratory Practice; IARC - International Agency for Research on Cancer; IATA - International Air Transport Association; IBC - International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk; IC50 - Half maximal inhibitory concentration; ICAO - International Civil Aviation Organization; IECSC - Inventory of Existing Chemical Substances in China; IMDG - International Maritime Dangerous Goods; IMO - International Maritime Organization; ISHL - Industrial Safety and Health Law (Japan); ISO - International Organisation for Standardization; KECI - Korea Existing Chemicals Inventory; LC50 - Lethal Concentration to 50 % of a test population; LD50 - Lethal Dose to 50% of a test population (Median Lethal Dose); MARPOL - International Convention for the Prevention of Pollution from Ships; n.o.s. - Not Otherwise Specified; Nch - Chilean Norm; NO(A)EC - No Observed (Adverse) Effect Concentration; NO(A)EL - No Observed (Adverse) Effect Level; NOELR - No Observable Effect Loading Rate; NOM - Official Mexican Norm; NTP - National Toxicology Program; NZIoC - New Zealand Inventory of Chemicals; OECD - Organization for Economic Co-operation and Development; OPPTS - Office of Chemical Safety and Pollution Prevention; PBT - Persistent, Bioaccumulative and Toxic substance; PICCS - Philippines Inventory of

Chemicals and Chemical Substances; (Q)SAR - (Quantitative) Structure Activity Relationship; REACH - Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals; SADT - Self-Accelerating Decomposition Temperature; SDS - Safety Data Sheet; TCSI - Taiwan Chemical Substance Inventory; TDG - Transportation of Dangerous Goods; TSCA - Toxic Substances Control Act (United States); UN - United Nations; UNRTDG - United Nations Recommendations on the Transport of Dangerous Goods; vPvB - Very Persistent and Very Bioaccumulative; WHMIS - Workplace Hazardous Materials Information System

## Further information

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.