

SAFETY DATA SHEET

ARQUAD 2HT-75

Version 1

Revision Date 09.11.2017

Print Date 23.07.2019

RU / EN

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

Product Information

Trade name : ARQUAD 2HT-75

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

Flammable solids, 2, H228, Based on product data or assessment

Acute toxicity, 5, H313, Calculation method

Serious eye damage, 1, H318, Calculation method

Acute aquatic toxicity, 1, H400, Calculation method

Chronic aquatic toxicity, 1, H410, Calculation method

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

GHS-Labeling

Hazard pictograms :



Signal word : Danger

Hazard statements : H228 Flammable solid.
H313 May be harmful in contact with skin.
H318 Causes serious eye damage.
H410 Very toxic to aquatic life with long lasting effects.

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Precautionary statements	:	Prevention:	
		P210	Keep away from heat/sparks/open flames/hot surfaces. No smoking.
		P273	Avoid release to the environment.
		P280	Wear protective gloves/ eye protection/ face protection.
		Response:	
		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.
		P312	Call a POISON CENTER/doctor if you feel unwell.
		P370 + P378	In case of fire: Use dry sand, dry chemical or alcohol-resistant foam to extinguish.

Other hazards which do not result in classification

No further data available.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Pure substance/mixture : Mixture

Hazardous components

Chemical name	CAS-No.	Classification	MAC value mg/m ³ TSEL value	Concentration (%)
Di(hydrogenated tallow) dimethylammonium chloride	61789-80-8	Acute Tox. 5; H313 Eye Dam. 1; H318 Aquatic Acute 1; H400 Aquatic Chronic 1; H410 M-Factor (Acute): 1 M-Factor (Chronic): 1		>= 70 - < 90
2-Propanol	67-63-0	Flam. Liq. 2; H225 Eye Irrit. 2A; H319 STOT SE 3; H336	10 mg/m ³ Class 3 - Dangerous 50 mg/m ³ Class 3 - Dangerous	>= 10 - < 20

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

The following substances have multiple CAS-number

Di(hydrogenated tallow) : 92129-33-4
dimethylammonium chloride

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 : Consult a physician after significant exposure.
- Skin contact : Take off contaminated clothing and shoes immediately.
Wash the skin immediately with soap and water.
- 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.

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.

Risks : May be harmful in contact with skin.
Causes serious eye damage.

Treatment : Treat symptomatically.

5. FIREFIGHTING MEASURES

Flammable properties

- Flash point : 25 °C
Method: Abel-Pensky DIN 51755
- Ignition temperature : > 100 °C
- Upper explosion limit : No data available
- Lower explosion limit : No data available
- Flammability (solid, gas) : The substance or mixture is a flammable solid with the category 2.
- Flammability (liquids) : Not applicable
- Suitable extinguishing media : Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
- Unsuitable extinguishing media : High volume water jet
- Specific hazards during firefighting / Specific hazards arising from the chemical : Water spray may be ineffective unless used by experienced firefighters.
Do not allow run-off from fire fighting to enter drains or water courses.
- Combustion products : Carbon oxides
Nitrogen oxides (NO_x)
Halogenated compounds
Hydrogen chloride
- Special protective equipment for firefighters : In the event of fire, wear self-contained breathing apparatus.
- Further information : Use water spray to cool unopened containers.
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.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

- Personal precautions : Use personal protective equipment.
Ensure adequate ventilation.
Remove all sources of ignition.
- Emergency measures on accidental release : Evacuate personnel to safe areas.
Only qualified personnel equipped with suitable protective equipment may intervene.

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Prevent unauthorised persons entering the zone.

Environmental precautions : Prevent product from entering drains.
If the product contaminates rivers and lakes or drains inform respective authorities.

Methods for cleaning up /
Methods for containment : Contain spillage, and then collect with an electrically protected vacuum cleaner or by wet-brushing and place in container for disposal according to local regulations (see section 13).
Keep in suitable, closed containers for disposal.

Reference to other sections : For disposal considerations see section 13.

For personal protection see section 8.

7. HANDLING AND STORAGE

Handling

Advice on safe handling : For personal protection see section 8.
Smoking, eating and drinking should be prohibited in the application area.
Open drum carefully as content may be under pressure.
Dispose of rinse water in accordance with local and national regulations.

Advice on protection against fire and explosion : Provide appropriate exhaust ventilation at places where dust is formed.
Keep away from sources of ignition - No smoking.
No sparking tools should be used.

Storage

Requirements for storage areas and containers : No smoking.
Keep container tightly closed in a dry and well-ventilated place.
Electrical installations / working materials must comply with the technological safety standards.

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

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Components with workplace control parameters

Components	CAS-No.	Value	Control parameters	Update	Basis	Form of exposure
2-Propanol	67-63-0	MPC-TWA	10 mg/m ³	2011-07-12	RU OEL	vapour and/or gas
	Further information	:	3: Class 3 - Dangerous			
		MPC-STEL	50 mg/m ³	2011-07-12	RU OEL	vapour and/or gas
	Further information	:	3: Class 3 - Dangerous			

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ACGIH: American Conference of Governmental Industrial Hygienists
BEI: Biological Exposure Index
MAC: Maximum Allowable Concentration
NIOSH: National Institute for Occupational Safety and Health
OEL: OEL: Occupational exposure limit.
STEL: Short term exposure limit
TWA: Time Weighted Average

Occupational exposure limits of decomposition products

Decomposition products	CAS-No.	Value	Control parameters	Update	Basis	Form of exposure
Hydrogen chloride	7647-01-0, 7647-01-0	MPC- STEL	5 mg/m ³	2011-07-12	RU OEL	vapour and/or gas
	Further information	:	O: Substances that need automatic monitoring of their content in the air 2: Class 2 - Highly dangerous			

Engineering controls

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

Personal protective equipment

Respiratory protection : In the case of vapour formation use a respirator with an approved filter.
Wear full face mask supplied with:
Combination filter: ABEKP.

Handle in accordance with good industrial hygiene and safety practice.

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.
Wash hands before breaks and at the end of workday.

Environmental exposure controls

General advice : Prevent product from entering drains.
If the product contaminates rivers and lakes or drains inform respective authorities.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance

Form : paste

Colour : off-white

Odour : alcohol-like

Odour Threshold : No data available

Safety data

pH	: 5 - 9 at 5 % solution
Melting point/range	: 30 - 35 °C
Boiling point/boiling range	: 80 °C
Flash point	: 25 °C Method: Abel-Pensky DIN 51755
Ignition temperature	: > 100 °C
Evaporation rate	: Not applicable
Flammability (solid, gas)	: The substance or mixture is a flammable solid with the category 2.
Flammability (liquids)	: Not applicable
Lower explosion limit	: No data available
Upper explosion limit	: No data available
Vapour pressure	: 170 hPa at 50 °C
Relative vapour density	: 2.1
Density	: 850 kg/m ³ at 60 °C
Relative density	: ca. 0.85 at 60 °C
Water solubility	: dispersible
Solubility in other solvents	: Soluble in 2-propanol.
Partition coefficient: n-octanol/water	: No data available
Auto-ignition temperature	: No data available
Decomposition temperature	: No data available
Viscosity, dynamic	: 70 mPa.s at 60 °C
Viscosity, kinematic	: ca. 82 mm ² /s at 60 °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.

10. STABILITY AND REACTIVITY

Conditions to avoid	: Heat, flames and sparks.
Materials to avoid	: None known.

Hazardous decomposition products	: Halogenated compounds Hydrogen chloride
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.

11. TOXICOLOGICAL INFORMATION

PRODUCT INFORMATION:

Hazard Summary

Acute toxicity	: May be harmful in contact with skin.
Skin corrosion/irritation	: Not classified based on available information.
Serious eye damage/eye irritation	: Causes serious eye damage.
Respiratory or skin sensitisation	: Respiratory sensitisation: Not classified based on available information. Skin sensitisation: Not classified based on available information.
Germ cell mutagenicity	: Not classified based on available information.
Carcinogenicity	: Not classified based on available information.
Reproductive toxicity	: Not classified based on available information.
STOT - single exposure	: Not classified based on available information.
STOT - repeated exposure	: Not classified based on available information.
Aspiration hazard	: Not classified based on available information.

Potential Health Effects

Inhalation	: Thermal decomposition can lead to release of irritating gases and vapours.
Skin	: May be harmful in contact with skin.
Eyes	: Causes serious eye damage.
Ingestion	: 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.

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Further information : No further data available.

Test result

Acute dermal toxicity : Acute toxicity estimate: 3,334 mg/kg
Method: Calculation method

TOXICOLOGY DATA FOR THE COMPONENTS:

Toxicology Assessment

Component: 2-Propanol

CMR effects : Mutagenicity: Not mutagenic in Ames Test

Test result

Component: Di(hydrogenated tallow) dimethylammonium chloride

Acute oral toxicity : LD50: > 5,000 mg/kg
Species: Rat

Acute dermal toxicity : LD50: > 2,000 mg/kg
Species: Rat
Method: OECD Test Guideline 402

Skin irritation : Species: Rabbit
Classification: No skin irritation
Method: OECD Test Guideline 404

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

Component: 2-Propanol

Acute oral toxicity : LD50: 5,840 mg/kg
Species: Rat
Method: OECD Test Guideline 401
Literature data.

Acute inhalation toxicity : LC50 (Rat): > 10000 ppm
Exposure time: 6 h
Test atmosphere: vapour
Method: OECD Test Guideline 403

Acute dermal toxicity : LD50: > 12,800 mg/kg
Species: Rabbit
Method: OECD Test Guideline 402
Literature data.

Skin irritation : Species: Rabbit
Result: No skin irritation
Exposure time: 4 h
Literature data.

Eye irritation : Species: Rabbit

	Result: Irritating to eyes. Method: OECD Test Guideline 405 Literature data.
Sensitisation	: Buehler Test Species: Guinea pig Result: Does not cause skin sensitisation. Method: OECD Test Guideline 406 Literature data.
Germ cell mutagenicity Genotoxicity in vitro	: Ames test Bacteria Result: negative Method: OECD Test Guideline 471 Literature data.
Genotoxicity in vivo	: Species: Mouse Method: Mutagenicity (micronucleus test) Result: negative Literature data.
Target Organ Systemic Toxicant - Single exposure	: Exposure routes: Inhalation, Ingestion May cause drowsiness or dizziness.

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.

COMPONENTS:

Test result

Component: Di(hydrogenated tallow) dimethylammonium chloride

Ecotoxicity effects

Toxicity to fish : LC50: > 10 - 100 mg/l
Exposure time: 96 h
Species: Pimephales promelas (fathead minnow)

Toxicity to daphnia and other aquatic invertebrates : EC50: > 1 - 10 mg/l
Exposure time: 48 h
Species: Daphnia magna (Water flea)
Method: OECD Test Guideline 202

Toxicity to algae : EC50: > 0.1 - 1 mg/l
Exposure time: 72 h
Species: Pseudokirchneriella subcapitata (green algae)
Method: OECD Test Guideline 201

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NOEC: > 0.01 - 0.1 mg/l
Exposure time: 5 d
Species: Pseudokirchneriella subcapitata (microalgae)

M-Factor (Acute) : 1

M-Factor (Chronic) : 1

Toxicity to fish (Chronic toxicity) : NOEC: > 0.01 - 0.1 mg/l
Exposure time: 35 d
Species: Pimephales promelas (fathead minnow)
Method: OECD Test Guideline 210
Read-across (Analogy)

Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) : NOEC: > 0.01 - 0.1 mg/l
Exposure time: 21 d
Species: Daphnia magna (Water flea)
Method: OECD Test Guideline 211

Elimination information (persistence and degradability)

Bioaccumulation : Bioaccumulation is unlikely.

Mobility : immobile

Biodegradability : Result: Not readily biodegradable.
Method: OECD Test Guideline 301D

Further information on ecology

Biochemical Oxygen Demand (BOD) : No data available

Component: 2-Propanol

Ecotoxicity effects

Toxicity to fish : LC50: 1,400 mg/l
Exposure time: 96 h
Species: Lepomis macrochirus (Bluegill sunfish)

Toxicity to daphnia and other aquatic invertebrates : EC50: 2,285 mg/l
Exposure time: 48 h
Species: Daphnia magna (Water flea)

Elimination information (persistence and degradability)

Bioaccumulation : Not expected considering the low log Pow value.

Mobility : No data available

Biodegradability : Result: Readily biodegradable.

Further information on ecology

Biochemical Oxygen Demand : 1,171 mg/g

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Demand (BOD)
Chemical Oxygen Demand : 2,294 mg/g
(COD)

Hygienic standards:

(Allowable concentration in air, water, including fishery waters, soil)

Components	Air	Water	Soil	Data Source
2-Propanol 67-63-0	MPC maximum value: 0.6 mg/m ³ Limiting health hazard indicator: reflectory Class 3 - moderately dangerous	Maximum Allow able Concentration: 0.25 mg/l Limiting health hazard indicator: organoleptic; changes the smell of water Hazard class: Class 4 - low hazard Maximum Permissible Concentration 0.01 Milligrams per cubed decimeter Limiting health hazard indicator: toxic Hazard class: 3 Maximum Permissible Concentration 0.01 Milligrams per cubed decimeter Limiting health hazard indicator: toxic Hazard class: 4		

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.
Do not burn, or use a cutting torch on, the empty drum.

14. TRANSPORT INFORMATION

International Regulations

ADR

UN number : UN 3175
Proper shipping name : SOLIDS CONTAINING FLAMMABLE LIQUID, N.O.S.
(Isopropyl alcohol)
Class : 4.1
Packing group : II
Classification Code : F1
Hazard Identification Number : 40
Labels : 4.1
Tunnel restriction code : (E)
Environmentally hazardous : yes

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IATA-DGR

UN/ID No. : UN 3175
Proper shipping name : Solids containing flammable liquid, n.o.s.
(Isopropyl alcohol)
Class : 4.1
Packing group : II
Labels : 4.1
Packing instruction (cargo aircraft) : 448
Packing instruction (passenger aircraft) : 445
Packing instruction (LQ) : Y441
Environmentally hazardous : yes

IMDG-Code

UN number : UN 3175
Proper shipping name : SOLIDS CONTAINING FLAMMABLE LIQUID, N.O.S.
(Isopropyl alcohol)
Class : 4.1
Packing group : II
Labels : 4.1
EmS Code : F-A, S-I
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.

Further information for transport

Tank transport:
UN 1993, FLAMMABLE LIQUID N.O.S.

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

16. OTHER INFORMATION

Full text of H-Statements

H225 : Highly flammable liquid and vapour.
H228 : Flammable solid.
H313 : May be harmful in contact with skin.
H318 : Causes serious eye damage.

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- H319 : Causes serious eye irritation.
H336 : May cause drowsiness or dizziness.
H400 : Very toxic to aquatic life.
H410 : Very toxic to aquatic life with long lasting effects.

Full text of other abbreviations

- RU OEL : Russia. Hygienic standards GN 2.2.5.1313-03 Permissible concentration (MAC) of harmful substances in the air of the working area
- RU OEL / MPC-STEL : Maximum Permissible Concentration - Short Term Exposure
RU OEL / MPC-TWA : Maximum Permissible Concentration - Time Weighted Average

ADN - European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways; ADR - European Agreement concerning the International Carriage of Dangerous Goods by Road; AICS - Australian Inventory of Chemical Substances; ASTM - American Society for the Testing of Materials; bw - Body weight; CMR - Carcinogen, Mutagen or Reproductive Toxicant; 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; 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; NO(A)EC - No Observed (Adverse) Effect Concentration; NO(A)EL - No Observed (Adverse) Effect Level; NOELR - No Observable Effect Loading Rate; 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; RID - Regulations concerning the International Carriage of Dangerous Goods by Rail; SADT - Self-Accelerating Decomposition Temperature; SDS - Safety Data Sheet; TCSI - Taiwan Chemical Substance Inventory; 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

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.