SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006

ARQUAD 2HT-75

Version 3 Revision Date 09.12.2011 Print Date 07.08.2012 GB / EN

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

1.1 Product identifier

Trade name : ARQUAD 2HT-75

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

Use of the Substance/Mixture : Specific use(s): Refer to attached exposure scenario Annex.

1.3 Details of the supplier of the safety data sheet

Company : Akzo Nobel Surface Chemistry AB
Stenunge Allé 3
SE 444 85 Stenungsund
Sweden

Telephone : +4630385000
Telefax : +4630384659
E-mail address : Regulatory.AffairsSE@akzonobel.com

1.4 Emergency telephone number

Emergency telephone number : +31 570679211 (Akzo Nobel Chemicals Deventer, NL) / -
Nödtelefon Sverige: KEMIAKUTEN 020-996000

2. HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture

Classification (REGULATION (EC) No 1272/2008)

Flammable solids, 2, H228
Skin irritation, 2, H315
Serious eye damage, 1, H318
Acute aquatic toxicity, 1, H400
Chronic aquatic toxicity, 1, H410

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

Classification (67/548/EEC, 1999/45/EC)

Highly flammable, F, R11
Irritant, Xi, R38
, R41
Dangerous for the environment, N, R50/53

For the full text of the R-phrases mentioned in this Section, see Section 16.

2.2 Label elements

Labelling (REGULATION (EC) No 1272/2008)

Symbol(s) :

Signal word : Danger

Hazard statements :	H228	Flammable solid.
	H315	Causes skin irritation.
	H318	Causes serious eye damage.
	H410	Very toxic to aquatic life with long lasting effects.
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/ protective clothing/ eye protection/ face protection.
	Response:	
	P302 + P352	IF ON SKIN: Wash with plenty of soap and water.
	P305 + P351 + P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
	P308	IF exposed or concerned:
	P310	Immediately call a POISON CENTER or doctor/ physician.

Hazardous components which must be listed on the label:

Di(hydrogenated tallow) dimethylammonium chloride 61789-80-8

Labelling according to EC Directives (1999/45/EC)

Symbol(s) :

F Highly flammable

Xi Irritant

N Dangerous for the environment

R-phrase(s)	:	R11	Highly flammable.
		R38	Irritating to skin.
		R41	Risk of serious damage to eyes.
		R50/53	Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
S-phrase(s)	:	S22	Do not breathe dust.
		S26	In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
		S33	Take precautionary measures against static discharges.
		S37/39	Wear suitable gloves and eye/face protection.
		S57	Use appropriate container to avoid environmental contamination.
		S60	This material and its container must be disposed of as hazardous waste.

2.3 Other hazards

Vapours may form explosive mixtures with air.

3. COMPOSITION/INFORMATION ON INGREDIENTS

3.2 Mixtures

Hazardous substance

Chemical Name	PBT vPvB OEL	CAS-No. EC-No. REACH No.	Classification (REGULATION (EC) No 1272/2008)	Classification (67/548/EEC)	Concentration [%]
Di(hydrogenated tallow) dimethylammonium chloride		61789-80-8 263-090-2 01-2119485041 4 6	Skin Irrit. 2; H315 Eye Dam. 1; H318 Aquatic Acute 1; H400 Aquatic Chronic 1; H410	Xi-N; R38-R41-R50/53	70 - 80
2-Propanol		67-63-0 200-661-7	Flam. Liq. 2; H225 Eye Irrit. 2; H319 STOT SE 3; H336	F; R11 Xi; R36 R67	10 - 15

The following substances have multiple CAS-number

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

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

For the full text of the R-phrases mentioned in this Section, see Section 16.

Candidate List of Substances of Very High Concern for Authorisation

Candidate List of Substances of Very High Concern for Authorisation : Neither banned nor restricted

Non-hazardous substance

Chemical Name	CAS-No. EC-No. REACH No.	Concentration [%]
Water	7732-18-5 231-791-2	0 - 20

4. FIRST AID MEASURES

4.1 Description of 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.

If inhaled : If breathed in, move person into fresh air.
If symptoms persist, call a physician.

In case of skin contact	:	Take off contaminated clothing and shoes immediately. Wash the skin immediately with soap and water. If skin irritation persists, call a physician.
In case of 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.
If swallowed	:	Clean mouth with water and drink afterwards plenty of water. Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Obtain medical attention.

4.2 Most important symptoms and effects, both acute and delayed

Symptoms	:	No information available.
Risks	:	No information available.

4.3 Indication of any immediate medical attention and special treatment needed

Treatment	:	No information available.

5. FIREFIGHTING MEASURES

5.1 Extinguishing media

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

5.2 Special hazards arising from the substance or mixture

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.

5.3 Advice for firefighters

Special protective equipment for firefighters	:	Wear self-contained breathing apparatus and protective suit.
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. For safety reasons in case of fire, cans should be stored separately in closed containments.

6. ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures

Personal precautions	:	Use personal protective equipment.

Ensure adequate ventilation.
Remove all sources of ignition.

6.2 Environmental precautions

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

6.3 Methods and materials for containment and cleaning up

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.

6.4 Reference to other sections

Additional advice : For personal protection see section 8.

7. HANDLING AND STORAGE

7.1 Precautions for safe handling

Advice on safe handling : For personal protection see section 8.
Avoid contact with skin and eyes.
Smoking, eating and drinking should be prohibited in the application area.
Take precautionary measures against static discharges.
Container may be opened only under exhaust ventilation hood.
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.
Take measures to prevent the build up of electrostatic charge.

7.2 Conditions for safe storage, including any incompatibilities

Requirements for storage areas and containers : No smoking.
Store in cool place.
Electrical installations / working materials must comply with the technological safety standards.

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

7.3 Specific end uses

Specific use(s) : Refer to attached exposure scenario Annex.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 Control parameters

Components with workplace control parameters

Components	CAS-No.	Value	Control parameters	Update	Basis	Form of exposure
2-Propanol	67-63-0	STEL	500 ppm 1,250 mg/m3	2006-09-01	GB EH40	
		TWA	400 ppm 999 mg/m3	2006-09-01	GB EH40	

STEL: Short term exposure limit
TWA: Time Weighted Average (TWA)

Component: Di(hydrogenated tallow) dimethylammonium chloride

DNEL : Workers
Skin contact
Long-term - systemic effects
1.4 mg/kg bw/day

Workers
Inhalation
Long-term - systemic effects
9.7 mg/m3

Component: Di(hydrogenated tallow) dimethylammonium chloride

PNEC : Fresh water
6.2 µg/l

Marine water
0.62 µg/l

Sewage treatment plant
0.21 mg/l

Fresh water sediment
55 mg/kg dry weight

Marine sediment
11 mg/kg dry weight

Soil
7.3 mg/kg

8.2 Exposure controls

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.

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

9. PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties

Appearance

Form	:	paste
Colour	:	off-white
Odour	:	alcohol-like
Odour Threshold	:	no data available

Safety data

pH	:	5 - 9 (5%, 2-Propanol/water (1:1).)
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 subcategory 2.
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/m3 at 60 °C
Relative density	:	ca. 0.85 at 60 °C
Solubility in other solvents	:	Soluble in 2-propanol.
Water solubility	:	dispersible
Partition coefficient: n-octanol/water	:	no data available
Autoignition temperature	:	no data available
Decomposition temperature	:	no data available
Viscosity, dynamic	:	70 mPa.s at 60 °C
Viscosity, kinematic	:	ca. 82 mm2/s at 60 °C
Explosive properties	:	Not explosive
Oxidizing properties	:	Not classified as oxidising.

9.2 Other information

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

10. STABILITY AND REACTIVITY

10.1 Reactivity

Stable under normal conditions.

10.2 Chemical stability

Stable under recommended storage conditions.

10.3 Possibility of hazardous reactions

Chemical stability and Hazardous reactions	:	No dangerous reaction known under conditions of normal use.

10.4 Conditions to avoid

Conditions to avoid	:	Heat, flames and sparks.

10.5 Incompatible materials

Materials to avoid	:	None known.

10.6 Hazardous decomposition products

Hazardous decomposition products	:	No hazardous decomposition products are known.
Thermal decomposition	:	no data available

11. TOXICOLOGICAL INFORMATION

Product information:
Hazard Summary

Inhalation	:	Inhalation of aerosols may cause irritation to mucous membranes. Thermal decomposition can lead to release of irritating gases and vapours.
Skin	:	May cause skin irritation and/or dermatitis.
Eyes	:	May cause irreversible eye damage.
Ingestion	:	May cause irritation of the mucous membranes.

Toxicology Assessment

Further information	:	Solvents may degrease the skin.

11.1 Information on toxicological effects

Toxicology data for the components:
Toxicology Assessment
2-Propanol

CMR effects	:	Mutagenicity: Not mutagenic in Ames Test.

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

2-Propanol

Acute oral toxicity	:	LD50: 3,570 mg/kg Species: rat
Acute inhalation toxicity	:	LC50: 72.6 mg/l Exposure time: 4 h Species: rat LC50: 27.2 mg/l Exposure time: 4 h Species: mouse
Acute dermal toxicity	:	LD50: 12,800 mg/kg Species: rat

Eye irritation	:	Irritating to eyes.
Sensitisation	:	Not sensitizing.
Target Organ Systemic Toxicant - Single exposure	:	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 organisms, may cause long-term adverse effects in the aquatic environment.

12.1 Toxicity

Components:
Ecotoxicology Assessment
Di(hydrogenated tallow) dimethylammonium chloride

Results of PBT assessment	:	This substance is not considered to be a PBT (Persistent, Bioaccumulation, Toxic) This substance is not considered to be vPvB (very Persistent nor very Bioaccumulating)

2-Propanol

Results of PBT assessment	:	This substance is not considered to be a PBT (Persistent, Bioaccumulation, Toxic) This substance is not considered to be vPvB (very Persistent nor very Bioaccumulating)

Test result
Di(hydrogenated tallow) dimethylammonium chloride

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: > 0.1 - 1 mg/l Exposure time: 48 h Species: Daphnia magna (Water flea) Method: OECD Test Guideline 202
Toxicity to algae	:	ErC50: > 0.1 - 1 mg/l Exposure time: 72 h Species: Pseudokirchneriella subcapitata (green algae) Method: OECD Test Guideline 201

2-Propanol

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)

12.2 Persistence and degradability

Components:
Di(hydrogenated tallow) dimethylammonium chloride
Biodegradability : Not readily biodegradable.
<60% BOD, 28 days, Closed Bottle Test (OECD 301D).
The slow degradation in ready biodegradability test is attributed to the limited bioavailability.
The substance is degraded rapidly when dissolved in water.

2-Propanol
Biodegradability : Readily biodegradable.

12.3 Bioaccumulative potential

Components:
Di(hydrogenated tallow) dimethylammonium chloride
Bioaccumulation : Bioaccumulation is unlikely.

2-Propanol
Bioaccumulation : Not expected considering the low log Pow value.

12.4 Mobility in soil

Components:
Di(hydrogenated tallow) dimethylammonium chloride
Mobility : immobile

2-Propanol
Mobility : no data available

12.5 Results of PBT and vPvB assessment

Components:
Di(hydrogenated tallow) dimethylammonium chloride
PBT and vPvB assessment : This substance is not considered to be a PBT (Persistent, Bioaccumulation, Toxic)
This substance is not considered to be vPvB (very Persistent nor very Bioaccumulating)

2-Propanol
PBT and vPvB assessment : This substance is not considered to be a PBT (Persistent, Bioaccumulation, Toxic)
This substance is not considered to be vPvB (very Persistent nor very Bioaccumulating)

12.6 Other adverse effects

Components:
Di(hydrogenated tallow) dimethylammonium chloride
Biochemical Oxygen Demand (BOD) : no data available

2-Propanol

Biochemical Oxygen Demand (BOD) : 1,171 mg/g
Chemical Oxygen Demand (COD) : 2,294 mg/g

13. DISPOSAL CONSIDERATIONS

13.1 Waste treatment methods

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
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

14.1 UN number

ADR	:	3175
RID	:	3175
IMDG	:	3175
IATA	:	3175

14.2 Proper shipping name

ADR	:	SOLIDS CONTAINING FLAMMABLE LIQUID, N.O.S. (isopropyl alcohol)
RID	:	SOLIDS CONTAINING FLAMMABLE LIQUID, N.O.S. (isopropyl alcohol)
IMDG	:	SOLIDS CONTAINING FLAMMABLE LIQUID, N.O.S. (isopropyl alcohol)
IATA	:	Solids containing flammable liquid, n.o.s. (isopropyl alcohol)

14.3 Transport hazard class

ADR	:	4.1
RID	:	4.1
IMDG	:	4.1
IATA	:	4.1

14.4 Packing group

ADR		
Packaging group	:	II
Classification Code	:	F1
Hazard identification No	:	40
Labels	:	4.1
Tunnel restriction code	:	(E)
RID		
Packaging group	:	II
Classification Code	:	F1
Hazard identification No	:	40
Labels	:	4.1
IMDG		
Packaging group	:	II
Labels	:	4.1
EmS Number	:	F-A, S-I
IATA		

Packing instruction (cargo aircraft)	:	448
Packaging group	:	II
Labels	:	4.1

14.5 Environmental hazards

ADR

Environmentally hazardous	:	yes

RID

Environmentally hazardous	:	yes

IMDG

Marine pollutant	:	yes (Quarternary alkyl ammonium chloride)

IATA

Environmentally hazardous	:	yes

14.6 Special precautions for user

Tank transport:
UN1993, FLAMMABLE LIQUID N.O.S. (Isopropyl alcohol), 3, Packaging group III

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

15. REGULATORY INFORMATION

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

Major Accident Hazard Legislation	:	96/82/EC Update: 2003 Dangerous for the environment 9a Quantity 1: 100 t Quantity 2: 200 t
Water contaminating class (Germany)	:	WGK 2 water endangering

Notification status

CH INV	:	y (positive listing) The formulation contains substances listed on the Swiss Inventory
US.TSCA	:	y (positive listing) All chemical substances in this product are either listed on the TSCA Inventory or in compliance with a TSCA Inventory exemption.
DSL	:	y (positive listing) All components of this product are on the Canadian DSL list.
AICS	:	y (positive listing) On the inventory, or in compliance with the inventory
NZIoC	:	y (positive listing) On the inventory, or in compliance with the inventory
ENCS	:	y (positive listing) On the inventory, or in compliance with the inventory

ISHL	:	y (positive listing) On the inventory, or in compliance with the inventory
KECI	:	y (positive listing) On the inventory, or in compliance with the inventory
PICCS	:	y (positive listing) On the inventory, or in compliance with the inventory
IECSC	:	y (positive listing) On the inventory, or in compliance with the inventory

For explanation of abbreviation see section 16.

Further information
This product is to be considered as a preparation according to EU-legislation.

15.2 Chemical Safety Assessment

Di(hydrogenated tallow) dimethylammonium chloride	:	A Chemical Safety Assessment has been carried out for this substance.
2-Propanol	:	No information available.

16. OTHER INFORMATION

Full text of H-Statements referred to under sections 2 and 3.

H225	Highly flammable liquid and vapour.
H228	Flammable solid.
H315	Causes skin irritation.
H318	Causes serious eye damage.
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 R-phrases referred to under sections 2 and 3

R11	Highly flammable.
R36	Irritating to eyes.
R38	Irritating to skin.
R41	Risk of serious damage to eyes.
R50/53	Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
R67	Vapours may cause drowsiness and dizziness.

Explanations for possible abbreviations mentioned in section 2

PBT	:	PBT: Persistent, bioaccumulative and toxic.
vPvB	:	vPvB: Very persistent and very bioaccumulative.
OEL	:	OEL: Occupational exposure limit.

Notification status explanation

CH INV	Switzerland. New notified substances and declared preparations
US.TSCA	United States TSCA Inventory

DSL	Canadian Domestic Substances List (DSL)
AICS	Australia Inventory of Chemical Substances (AICS)
NZIoC	New Zealand. Inventory of Chemical Substances
ENCS	Japan. ENCS - Existing and New Chemical Substances Inventory
ISHL	Japan. ISHL - Inventory of Chemical Substances (METI)
KECI	Korea. Korean Existing Chemicals Inventory (KECI)
PICCS	Philippines Inventory of Chemicals and Chemical Substances (PICCS)
IECSC	China. Inventory of Existing Chemical Substances in China (IECSC)

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.