



# Material Safety Data Sheet

MSDS# 15-0306

## Section 1. Chemical Product and Company Identification

<b>Product name</b>	<b>ARQUAD® 2HT-75</b>	
<b>Material Uses</b>	: Surfactant.	<b>In Case of Emergency</b>
<b>Supplier/ Manufacturer</b>	AKZO NOBEL SURFACE CHEMISTRY LLC 525 West Van Buren Chicago, IL 60607-3823 www.surfactants.akzonobel.com  AKZO NOBEL CHEMICALS LTD. 1 City Centre Drive, Suite 318 Mississauga, Ontario L5B 1M2 Canada	CHEMTREC: 800-424-9300 CANUTEC: 613-996-6666 Medical/Handling: 914-693-6946 Product/Technical: 800-906-9977

## Section 2. Hazards Identification

<b>Physical State</b>	Liquid.
<b>Color</b>	White.
<b>Odor</b>	Alcohol like.
<b>Emergency Overview</b>	<p>WARNING! CAUSES EYE IRRITATION. TOXIC TO AQUATIC ORGANISMS. FLAMMABLE LIQUID AND VAPOR. VAPOR MAY CAUSE FLASH FIRE. MAY CAUSE SKIN IRRITATION. CONTAINS MATERIAL WHICH MAY CAUSE DAMAGE TO THE FOLLOWING ORGANS: RESPIRATORY TRACT, SKIN, CENTRAL NERVOUS SYSTEM. MAY BE HARMFUL TO ENVIRONMENT IF RELEASED IN LARGE AMOUNTS.</p> <p>Keep away from heat, sparks and flame. Avoid contact with eyes, skin and clothing. Keep container closed. Use only with adequate ventilation. Wash thoroughly after handling. Avoid contact of spilled material and runoff with soil and surface waterways.</p>
<b>Possible Carcinogenic Effects</b>	<p><b>quaternary ammonium compounds, bis(hydrogenated tallow alkyl)dimethyl, chlorides:</b> ACGIH IARC Not listed. NTP = No Evidence. OSHA = None. <b>Isopropanol:</b> IARC 3; ACGIH NTP OSHA Not listed. <b>Amines, bis(hydrogenated tallow alkyl)methyl:</b> IARC, NTP, OSHA, ACGIH: Not listed. <b>Bis(hydrogenated tallowalkyl)methylamines hydrochloride:</b> IARC, NTP, OSHA, ACGIH: Not listed.</p>
<b>Routes of Entry</b>	Absorbed through skin. Dermal contact. Eye contact.

See Toxicological Information (section 11)

## Section 3. Composition/ Information on Ingredients

Name	CAS #	% by Weight
quaternary ammonium compounds, bis(hydrogenated tallow alkyl)dimethyl, chlorides	61789-80-8	74-77
Isopropanol	67-63-0	15-20
Amines, bis(hydrogenated tallow alkyl)methyl	61788-63-4	0.001-1.5
Bis(hydrogenated tallowalkyl)methylamines hydrochloride	Not Assigned	0.001-1.5

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## Section 4. First Aid Measures

<b>Eye Contact</b>	Check for and remove any contact lenses. In case of contact, immediately flush eyes with plenty of water for at least 30 minutes. Cold water may be used. Get medical attention immediately.
<b>Skin Contact</b>	In case of contact, immediately flush skin with plenty of water. Remove contaminated clothing and shoes. Cold water may be used. Wash clothing before reuse. Thoroughly clean shoes before reuse. Get medical attention.
<b>Inhalation</b>	If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention if symptoms appear.
<b>Ingestion</b>	Do NOT induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. Loosen tight clothing such as a collar, tie, belt or waistband. Get medical attention if symptoms appear.
<b>Medical Conditions Aggravated by Overexposure</b>	Repeated or prolonged exposure is not known to aggravate medical condition.

## Section 5. Fire Fighting Measures

<b>Flammability of the Product</b>	Flammable.
<b>Auto-ignition Temperature</b>	The lowest known value is 399°C (750.2°F) (Isopropanol).
<b>Flash Points</b>	Closed cup: 25°C (77°F). (Pensky-Martens.)
<b>Flammable Limits</b>	The greatest known range is LOWER: 2% UPPER: 12.7% (Isopropanol)
<b>Products of Combustion</b>	These products are carbon oxides (CO, CO <sub>2</sub> ).
<b>Fire Fighting Media and Instructions</b>	SMALL FIRE: Use DRY chemical powder. LARGE FIRE: Use alcohol foam, water spray or fog. Cool containing vessels with water jet in order to prevent pressure build-up, autoignition or explosion.
<b>Protective Clothing (Fire)</b>	Be sure to use an approved/certified respirator or equivalent.
<b>Special Remarks on Fire Hazards</b>	No sparking tools should be used. Take precautionary measures against static discharges.

## Section 6. Accidental Release Measures

<b>Small Spill and Leak</b>	Dilute with water and mop up, or absorb with an inert dry material and place in an appropriate waste disposal container.
<b>Large Spill and Leak</b>	Keep away from heat. Keep away from sources of ignition. Stop leak if without risk. If the product is in its solid form: Use a shovel to put the material into a convenient waste disposal container. If the product is in its liquid form: Absorb with DRY earth, sand or other non-combustible material. Absorb with an inert material and put the spilled material in an appropriate waste disposal. Do not touch spilled material. Prevent entry into sewers, basements or confined areas; dike if needed.

## Section 7. Handling and Storage

<b>Handling</b>	Keep away from heat, sparks and flame. Keep container closed. Use only with adequate ventilation. To avoid fire or explosion, dissipate static electricity during transfer by grounding and bonding containers and equipment before transferring material. Use explosion-proof electrical (ventilating, lighting and material handling) equipment.
<b>Storage</b>	Store in a segregated and approved area. Keep container in a cool, well-ventilated area. Keep container tightly closed and sealed until ready for use. Avoid all possible sources of ignition (spark or flame).

## Section 8. Exposure Controls/ Personal Protection

**Engineering Controls** Provide exhaust ventilation or other engineering controls to keep the airborne concentrations of vapors below their respective occupational exposure limits. Ensure that eyewash stations and safety showers are proximal to the work-station location.

### Personal Protection

<b>Eyes</b>	Splash goggles.
<b>Body</b>	Lab coat.
<b>Respiratory</b>	Vapor respirator. Be sure to use an approved/certified respirator or equivalent. Wear appropriate respirator when ventilation is inadequate.
<b>Hands</b>	Gloves.
<b>Feet</b>	Not applicable.

### Protective Clothing (Pictograms)



**Personal Protection in Case of a Large Spill** Splash goggles. Full suit. Vapor respirator. Boots. Gloves. A self-contained breathing apparatus should be used to avoid inhalation of the product. Suggested protective clothing might not be sufficient; consult a specialist BEFORE handling this product.

### Ingredient Name

quaternary ammonium compounds,  
bis(hydrogenated tallow alkyl)dimethyl,  
chlorides  
Isopropanol

### Exposure Limits United States

Not available.

### ACGIH TLV (United States, 2005). Notes: ACGIH 2003 Adoption Refers to Appendix A -- Carcinogens.

STEL: 400 ppm 15 minute(s). Form: All forms

TWA: 200 ppm 8 hour(s). Form: All forms

### NIOSH REL (United States, 2001).

STEL: 1225 mg/m<sup>3</sup> 15 minute(s). Form: All forms

STEL: 500 ppm 15 minute(s). Form: All forms

TWA: 980 mg/m<sup>3</sup> 10 hour(s). Form: All forms

TWA: 400 ppm 10 hour(s). Form: All forms

### OSHA PEL (United States, 1997).

TWA: 980 mg/m<sup>3</sup> 8 hour(s). Form: All forms

TWA: 400 ppm 8 hour(s). Form: All forms

### OSHA PEL 1989 (United States, 1989).

STEL: 1225 mg/m<sup>3</sup> 15 minute(s). Form: All forms

STEL: 500 ppm 15 minute(s). Form: All forms

TWA: 980 mg/m<sup>3</sup> 8 hour(s). Form: All forms

TWA: 400 ppm 8 hour(s). Form: All forms

Amines, bis(hydrogenated tallow  
alkyl)methyl

Not available.

Bis(hydrogenated tallowalkyl)methylamines  
hydrochloride

Not available.

## Section 9. Physical and Chemical Properties

<b>Physical State</b>	Liquid.
<b>Color</b>	White.
<b>Odor</b>	Alcohol like.
<b>pH</b>	6 to 9 [Basic.]
<b>Boiling/Condensation Point</b>	80°C (176°F)
<b>Melting/Freezing Point</b>	35°C (95°F)
<b>Pour Point</b>	40°C
<b>Density</b>	0.859 g/cm <sup>3</sup> (46°C / 114.8°F)

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Vapor Pressure	5.9 kPa (44 mmHg) (at 20°C)
Vapor Density	The highest known value is 2.07 (Air = 1) (Isopropanol).
Odor Threshold	The lowest known value is 37 to 600 ppm (Isopropanol)
Evaporation Rate	Weighted average: 1.28 compared to Butyl acetate.
Solubility	Soluble in methanol, acetone. Partially soluble in cold water.
Dispersion Properties	See solubility in water, methanol, acetone.
Physical Chemical Comments	Viscosity = 55cp @ 60°C; 50 cp @ 66°C.

## Section 10. Stability and Reactivity

Stability and Reactivity	The product is stable.
Incompatibility with Various Substances	Slightly reactive to reactive with OXIDIZING AGENTS.
Hazardous Polymerization	Will not occur.

## Section 11. Toxicological Information

### Toxicity to Animals

Ingredient Name or Product name	Test	Result	Route	Species
quaternary ammonium compounds, bis(hydrogenated tallow alkyl)dimethyl, chlorides Isopropanol	LD50	>9850 mg/kg	Oral	Rat
	LC50	>180 mg/l (1 hour(s))	Inhalation	Rat
	LD50	5045 mg/kg	Oral	Rat
	LD50	6410 mg/kg	Oral	Rabbit
	LD50	3600 mg/kg	Oral	Mouse
	LD50	12800 mg/kg	Dermal	Rabbit
	LDLo	1537 mg/kg	Oral	Dog
	LDLo	3570 mg/kg	Oral	human
	LDLo	5272 mg/kg	Oral	man
	LC50	12000 ppm (8 hour(s))	Inhalation	Rat
	LC50	16970 ppm (4 hour(s))	Inhalation	Rat
Amines, bis(hydrogenated tallow alkyl)methyl	LD50	>5000 mg/kg	Oral	Rat based on data for: (similar material)

### Chronic Effects on Humans

**CARCINOGENIC EFFECTS:** Classified None. by OSHA, None. by NIOSH [quaternary ammonium compounds, bis(hydrogenated tallow alkyl)dimethyl, chlorides]. Classified None. by NIOSH [Isopropanol]. Classified A4 (Not classifiable for human or animal.) by ACGIH, 3 (Not classifiable for human.) by IARC [Isopropanol].

**MUTAGENIC EFFECTS:** Non-mutagenic for bacteria and/or yeast. [Isopropanol].

Contains material which causes damage to the following organs: upper respiratory tract, skin, central nervous system (CNS), eye, lens or cornea.

Contains material which may cause damage to the following organs: gastrointestinal tract.

Acute Effects Skin	Moderately irritating to the skin. Practically non-toxic in contact with skin.
Acute Effects Eyes	Severely irritating to the eyes.

## Section 12. Ecological Information

### Ecotoxicity

Ingredient Name or Product name	Species	Period	Result
ARQUAD® 2HT-75	Fish (LC50)	96 hour(s)	1.33 mg/l
	Trout (LC50)	96 hour(s)	4.22 mg/l
	Algae (EC50)	96 hour(s)	0.21 mg/l

**Biodegradability and Ecotoxicity Remarks**

quaternary ammonium compounds, bis(hydrogenated tallow alkyl)dimethyl, chlorides: 68% @ 287 day(s) CBT  
 Amines, bis(hydrogenated tallow alkyl)methyl: 86% @ 14 day(s) CBT

**Products of Degradation** These products are carbon oxides (CO, CO<sub>2</sub>) and water.





**Section 13. Disposal Considerations**

**Waste Information** Waste must be disposed of in accordance with federal, state and local environmental control regulations.

**RCRA Classification** Code: D001 Ignitable Waste

Consult your local or regional authorities.

**Section 14. Transport Information**

Regulatory Information	UN number	Proper shipping name	Class	Packing Group	Label	Additional information
<b>DOT Classification</b>	UN1993	Flammable liquids, n.o.s. (Isopropanol)	3 -	III		-
<b>TDG Classification</b>	UN1993	FLAMMABLE LIQUID, N.O.S. (Isopropanol)	3 -	III		-
<b>IMDG Class</b>	UN1993	FLAMMABLE LIQUID, N.O.S. (Isopropanol)	3 -	III		-
<b>IATA-DGR Class</b>	UN1993	Flammable liquid, n.o.s. (Isopropanol)	3 -	III		-

**Section 15. Regulatory Information**

**HCS Classification** Flammable liquid  
Irritating material  
Target organ effects

**U.S. Federal Regulations** TSCA: All intentionally present components are listed on the TSCA inventory.  
 DSL: All intentionally present components are listed on the DSL.  
 TSCA 5(a)2 final significant rules: No products were found.  
 CERCLA: Hazardous substances.: No products were found.  
 SARA 302/304/311/312 extremely hazardous substances: No products were found.  
 SARA 302/304 emergency planning and notification: No products were found.  
 SARA 302/304/311/312 hazardous chemicals: ARQUAD® 2HT-75 (bulk)  
 SARA 311/312 MSDS distribution - chemical inventory - hazard identification: ARQUAD® 2HT-75 (bulk): Fire Hazard

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SARA 313 Form R Reporting Requirements Isopropanol	15-20
SARA 313 Supplier Notification Isopropanol	15-20

**State Regulations**

Pennsylvania RTK: Isopropanol: (environmental hazard, generic environmental hazard)  
 Massachusetts RTK: Isopropanol  
 New Jersey: Isopropanol  
 California prop. 65: No products were found.

**WHMIS (Canada)**

Class B-2: Flammable liquid with a flash point lower than 37.8°C (100°F).  
 Class D-2B: Material causing other toxic effects (TOXIC).  
 CEPA DSL: quaternary ammonium compounds, bis(hydrogenated tallow alkyl)dimethyl, chlorides;  
 Isopropanol; Amines, bis(hydrogenated tallow alkyl)methyl

**European Union**

Component	EC Number	EC Status	EC Annex
quaternary ammonium compounds, bis(hydrogenated tallow alkyl)dimethyl, chlorides	263-090-2	Not available.	Not available.
Isopropanol	200-661-7	Not available.	603-117-00-0
Amines, bis(hydrogenated tallow alkyl)methyl	262-991-8	Not available.	Not available.
Bis(hydrogenated tallowalkyl)methylamines hydrochloride	Not available.	Not available.	Not available.

**Other International Lists**

Australia (NICNAS): quaternary ammonium compounds, bis(hydrogenated tallow alkyl)dimethyl, chlorides; Isopropanol; Amines, bis(hydrogenated tallow alkyl)methyl

China: quaternary ammonium compounds, bis(hydrogenated tallow alkyl)dimethyl, chlorides; Isopropanol; Amines, bis(hydrogenated tallow alkyl)methyl

Germany water class: quaternary ammonium compounds, bis(hydrogenated tallow alkyl)dimethyl, chlorides; Isopropanol; Amines, bis(hydrogenated tallow alkyl)methyl

Japan (MITI): quaternary ammonium compounds, bis(hydrogenated tallow alkyl)dimethyl, chlorides; Isopropanol; Amines, bis(hydrogenated tallow alkyl)methyl

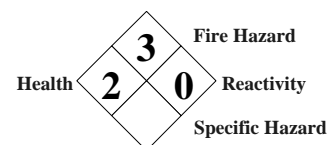
Japan (MOL): Isopropanol

Korea (TCCL): quaternary ammonium compounds, bis(hydrogenated tallow alkyl)dimethyl, chlorides; Isopropanol; Amines, bis(hydrogenated tallow alkyl)methyl

Philippines (RA6969): quaternary ammonium compounds, bis(hydrogenated tallow alkyl)dimethyl, chlorides; Isopropanol; Amines, bis(hydrogenated tallow alkyl)methyl

**Section 16. Other Information****Hazardous Material Information System (U.S.A.)**

Health	2
Fire Hazard	3
Reactivity	0
Personal Protection	

**National Fire Protection Association (U.S.A.)**

**Other Information** Arquad® is a registered trademark of Akzo Nobel or affiliated companies and is registered in one or more countries including the United States.

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**Notice to Reader**

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