



Material Safety Data Sheet

MSDS# 15-0300

Section 1. Chemical Product and Company Identification

Product name	ARQUAD® 2C-75	
Material Uses	: Surfactant.	In Case of Emergency
Supplier/ Manufacturer	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

Physical State	Liquid.
Color	Amber.
Odor	Ammoniacal.
Emergency Overview	<p>DANGER! CAUSES EYE AND SKIN BURNS. VERY TOXIC TO AQUATIC ORGANISMS. CONTAINS MATERIAL WHICH CAUSES DAMAGE TO THE FOLLOWING ORGANS: RESPIRATORY TRACT, SKIN, CENTRAL NERVOUS SYSTEM, EYE, LENS OR CORNEA. FLAMMABLE LIQUID AND VAPOR. VAPOR MAY CAUSE FLASH FIRE. MAY BE HARMFUL IF SWALLOWED. CONTAINS MATERIAL WHICH MAY CAUSE DAMAGE TO THE FOLLOWING ORGANS: GASTROINTESTINAL TRACT. MAY BE HARMFUL TO ENVIRONMENT IF RELEASED IN LARGE AMOUNTS.</p> <p>Keep away from heat, sparks and flame. Do not get in eyes, on skin or on clothing. Do not ingest. Avoid breathing vapor or mist. 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>
Possible Carcinogenic Effects	<p>quaternary ammonium compounds, dicoco alkyldimethyl, chlorides: IARC, NTP, OSHA, ACGIH: Not listed. Isopropanol: IARC 3; ACGIH NTP OSHA Not listed. water: IARC, NTP, OSHA, ACGIH: Not listed. methyl chloride: ACGIH A4; IARC 3; NTP OSHA Not listed. amines, dicoco alkylmethyl: IARC, NTP, OSHA, ACGIH: Not listed. Di(cocoalkyl)methyl amine hydrochlorides: IARC, NTP, OSHA, ACGIH: Not listed.</p>
Routes of Entry	Absorbed through skin. Dermal contact. Eye contact. Inhalation.

See Toxicological Information (section 11)

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Section 3. Composition/ Information on Ingredients

Name	CAS #	% by Weight
quaternary ammonium compounds, dicoco alkyldimethyl, chlorides	61789-77-3	70-80
Isopropanol	67-63-0	15-20
water	7732-18-5	5-10
methyl chloride	74-87-3	0.06
amines, dicoco alkylmethyl	61788-62-3	0.001-2
Di(cocoalkyl)methyl amine hydrochlorides	Not Assigned	0.001-2

Section 4. First Aid Measures

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

Section 5. Fire Fighting Measures

Flammability of the Product	Flammable.
Auto-ignition Temperature	The lowest known value is 398°C (748.4°F) (quaternary ammonium compounds, dicoco alkyldimethyl, chlorides).
Flash Points	Closed cup: 23°C (73.4°F). (Pensky-Martens.)
Flammable Limits	The greatest known range is LOWER: 2% UPPER: 12.7% (Isopropanol)
Products of Combustion	These products are carbon oxides (CO, CO ₂), nitrogen oxides (NO, NO ₂ ...), halogenated compounds, hydrogen chloride.
Fire Hazards in Presence of Various Substances	Flammable in presence of open flames, sparks and static discharge.
Fire Fighting Media and Instructions	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.
Protective Clothing (Fire)	Be sure to use an approved/certified respirator or equivalent.
Special Remarks on Fire Hazards	No sparking tools should be used. Take precautionary measures against static discharges.

Section 6. Accidental Release Measures

Small Spill and Leak	Dilute with water and mop up, or absorb with an inert dry material and place in an appropriate waste disposal container.
Large Spill and Leak	Keep away from heat. Keep away from sources of ignition. Stop leak if without risk. Absorb with DRY earth, sand or other non-combustible material. Do not touch spilled material. Prevent entry into sewers, basements or confined areas; dike if needed.

Section 7. Handling and Storage

Handling	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.
Storage	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

Eyes	Splash goggles.
Body	Lab coat.
Respiratory	Vapor respirator. Be sure to use an approved/certified respirator or equivalent. Wear appropriate respirator when ventilation is inadequate.
Hands	Gloves.
Feet	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, dicoco alkyldimethyl, 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/m³ 15 minute(s). Form: All forms

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

TWA: 980 mg/m³ 10 hour(s). Form: All forms

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

OSHA PEL (United States, 1997).

TWA: 980 mg/m³ 8 hour(s). Form: All forms

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

OSHA PEL 1989 (United States, 1989).

STEL: 1225 mg/m³ 15 minute(s). Form: All forms

water	STEL: 500 ppm 15 minute(s). Form: All forms
methyl chloride	TWA: 980 mg/m ³ 8 hour(s). Form: All forms
	TWA: 400 ppm 8 hour(s). Form: All forms
	Not available.
	ACGIH TLV (United States, 2005). Skin Notes: Substance identified by other sources as a suspected or confirmed human carcinogen. 1996 Adoption Substances for which the TLV is higher than the OSHA Permissible Exposure Limit (PEL) and/or the NIOSH Recommended Exposure Limit (REL). See CFR 58(124) :36338-33351, June 30, 1993, for revised OSHA PEL. Refers to Appendix A -- Carcinogens.
	STEL: 207 mg/m ³ 15 minute(s). Form: All forms
	STEL: 100 ppm 15 minute(s). Form: All forms
	TWA: 103 mg/m ³ 8 hour(s). Form: All forms
	TWA: 50 ppm 8 hour(s). Form: All forms
	OSHA PEL 1989 (United States, 1989). Notes: See Table Z-2.
	STEL: 210 mg/m ³ 15 minute(s). Form: All forms
	STEL: 100 ppm 15 minute(s). Form: All forms
	TWA: 105 mg/m ³ 8 hour(s). Form: All forms
	TWA: 50 ppm 8 hour(s). Form: All forms
	OSHA PEL Z2 (United States, 1997).
	AMP: 300 ppm 5 minute(s). Form: All forms
	CEIL: 200 ppm Form: All forms
	TWA: 100 ppm 8 hour(s). Form: All forms
amines, dicoco alkylmethyl	Not available.
Di(cocoalkyl)methyl amine hydrochlorides	Not available.

Section 9. Physical and Chemical Properties

Physical State	Liquid.
Color	Amber.
Odor	Ammoniacal.
pH	6 to 9 [Basic.]
Boiling/Condensation Point	80°C (176°F)
Melting/Freezing Point	-16°C (3.2°F)
Pour Point	-13°C
Density	0.882 g/cm ³ (14°C / 57.2°F)
Vapor Pressure	5.9 kPa (44 mmHg) (at 20°C)
Solubility	Easily soluble in hot water, methanol, acetone. Soluble in cold water.
Dispersion Properties	See solubility in water, methanol, acetone.
Physical Chemical Comments	Viscosity = 430cp @ 38°C.

Section 10. Stability and Reactivity

Stability and Reactivity	The product is stable.
Incompatibility with Various Substances	Reactive with OXIDIZING AGENTS.
Hazardous Decomposition Products	These products are halogenated compounds, hydrogen chloride.
Hazardous Polymerization	Will not occur.

Section 11. Toxicological Information

Toxicity to Animals

Ingredient Name or Product name	Test	Result	Route	Species
quaternary ammonium compounds, dicoco alkyl dimethyl, chlorides Isopropanol	LD50	960 mg/kg	Oral	Rat based on data for: (similar material)
	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
methyl chloride amines, dicoco alkyl methyl	LD50	1800 mg/kg	Oral	Rat
	LD50	>1740 mg/kg	Oral	Rat

Special Remarks on Toxicity to Animals

amines, dicoco alkyl methyl: Sub-Chronic oral toxicity (LD50) = 1 mg/kg/day; 13 weeks (rat) based on data for: (similar material)

Chronic Effects on Humans

CARCINOGENIC EFFECTS: 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. [quaternary ammonium compounds, dicoco alkyl dimethyl, chlorides]. 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

Corrosive to the skin. Practically non-toxic in contact with skin.

Acute Effects Eyes

Corrosive to the eyes.

Section 12. Ecological Information

Ecotoxicity

Ingredient Name or Product name	Species	Period	Result
quaternary ammonium compounds, dicoco alkyl dimethyl, chlorides Isopropanol	Zebrafish (LC50)	96 hour(s)	0.26 mg/l
	Algae. (EC50)	72 hour(s)	0.06 mg/l
	Pimephales promelas (EC50)	48 hour(s)	10000 mg/l
	Lepomis macrochirus (LC50)	96 hour(s)	>1400 mg/l
	Pimephales promelas (LC50)	96 hour(s)	6550 mg/l
	Pimephales promelas (LC50)	96 hour(s)	9640 mg/l
	Pimephales promelas (LC50)	96 hour(s)	10400 mg/l
	Pimephales promelas (LC50)	96 hour(s)	11130 mg/l
	Lepomis macrochirus (LC50)	96 hour(s)	550 mg/l
	methyl chloride amines, dicoco alkyl methyl	Algae. based on data for: (similar material) (EC50)	72 hour(s)
Algae. based on data for: (similar material) (EC50)		72 hour(s)	0.05 mg/l

Biodegradability and Ecotoxicity Remarks

quaternary ammonium compounds, dicoco alkyl dimethyl, chlorides: 70% @ 214 day(s) CBT
amines, dicoco alkyl methyl: 82% @ 28 day(s) CBT

Products of Degradation

These products are carbon oxides (CO, CO₂) and water, nitrogen oxides (NO, NO₂...), halogenated compounds.





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
DOT Classification	UN2924	Flammable liquids, corrosive, n.o.s. (Isopropanol, Quaternary ammonium salts)	3 8	III		-
TDG Classification	UN2924	FLAMMABLE LIQUIDS, CORROSIVE, N.O.S. (Isopropanol, Quaternary ammonium salts)	3 8	III		-
IMDG Class	UN2924	FLAMMABLE LIQUIDS, CORROSIVE, N.O.S. (Isopropanol, Quaternary ammonium salts)	3 8	III		-
IATA-DGR Class	UN2924	Flammable liquid, corrosive, n.o.s. (Isopropanol, Quaternary ammonium salts)	3 8	III		-

Section 15. Regulatory Information

HCS Classification Flammable liquid
Target organ effects
Corrosive Material

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.: methyl chloride: 100 lbs. (45.36 kg);
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® 2C-75
SARA 311/312 MSDS distribution - chemical inventory - hazard identification: ARQUAD® 2C-75: Fire Hazard, Immediate (Acute) Health Hazard
SARA 313 Form R Reporting Requirements
Isopropanol
SARA 313 Supplier Notification

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Isopropanol

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State Regulations

Pennsylvania RTK: Isopropanol: (environmental hazard, generic environmental hazard); methyl chloride: (environmental hazard, generic environmental hazard)
 Massachusetts RTK: Isopropanol; methyl chloride
 New Jersey: Isopropanol; methyl chloride

California prop. 65: This product contains the following ingredients for which the State of California has found to cause cancer, birth defects or other reproductive harm, which would require a warning under the statute: methyl chloride

California prop. 65: This product contains the following ingredients for which the State of California has found to cause birth defects which would require a warning under the statute: methyl chloride

WHMIS (Canada)

Class B-2: Flammable liquid with a flash point lower than 37.8°C (100°F).
 Class E: Corrosive liquid.

CEPA DSL: quaternary ammonium compounds, dicoco alkyldimethyl, chlorides; Isopropanol; water; methyl chloride; amines, dicoco alkylmethyl

European Union

Component	EC Number	EC Status	EC Annex
quaternary ammonium compounds, dicoco alkyldimethyl, chlorides	263-087-6	Not available.	Not available.
Isopropanol	200-661-7	Not available.	603-117-00-0
water	231-791-2	Not available.	Not available.
methyl chloride	200-817-4	Not available.	602-001-00-7
amines, dicoco alkylmethyl	262-990-2	Not available.	Not available.
Di(cocoalkyl)methyl amine hydrochlorides	Not available.	Not available.	Not available.

Other International Lists

Australia (NICNAS): quaternary ammonium compounds, dicoco alkyldimethyl, chlorides; Isopropanol; water; methyl chloride; amines, dicoco alkylmethyl

China: quaternary ammonium compounds, dicoco alkyldimethyl, chlorides; Isopropanol; water; methyl chloride; amines, dicoco alkylmethyl

Germany water class: Isopropanol; methyl chloride

Japan (MITI): quaternary ammonium compounds, dicoco alkyldimethyl, chlorides; Isopropanol; water; methyl chloride; amines, dicoco alkylmethyl

Japan (MOL): Isopropanol

Korea (TCCL): quaternary ammonium compounds, dicoco alkyldimethyl, chlorides; Isopropanol; water; methyl chloride; amines, dicoco alkylmethyl

Philippines (RA6969): quaternary ammonium compounds, dicoco alkyldimethyl, chlorides; Isopropanol; water; methyl chloride

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

Health	3
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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Validated by

Print Date

Phone Number

Product Safety Specialist

5/15/2007.

312-544-7038

Notice to Reader

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