



SAFETY DATA SHEET

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

Trade name	ARQUAD® MCB-50
Chemical description/Application	Biocide
Supplier	Akzo Nobel Surface Chemistry Pte Ltd 41 Science Park Road #03-03 The Gemini, Singapore Science Park II SINGAPORE 117610 Tel: +65 6773 8488 Fax: +65 6773 8484
Emergency telephone	+65 63162701 x 112 (Akzo Nobel Surface Chemistry Pte Ltd) +31 570679211 (Akzo Nobel Chemicals, The Netherlands)
Producer	Akzo Nobel Surface Chemistry Pte Ltd 40 Jurong Island Highway, Jurong Island Singapore 627830 Tel: +65 63162701*112

2. COMPOSITION/INFORMATION ON INGREDIENTS

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

Substance name	EU number	CAS number	Concentration	Symbols	Risk phrases
Ethylene glycol	203-473-3	107-21-1	~2 %	Xn	R-22
Cocobenzylidimethylammonium chloride	270-325-2	68424-85-1	~50 %	C ,N	*R-34, 21/22, 50
Water	231-791-2	7732-18-5	~48 %	-	

Other information All components are registered in EINECS. *Classification of the substance with respect to corrosive effects can not be used for calculating according to the Directive 1999/45/EC, Annex II. For explanation of riskphrases, see section 16.

3. HAZARDS IDENTIFICATION

Corrosive. Harmful. Dangerous for the environment.
Causes burns. Harmful in contact with skin and if swallowed. Very toxic to aquatic organisms.

4. FIRST AID MEASURES

General	Obtain medical attention immediately (show this Safety Data Sheet).
Inhalation	Not likely to occur. In case of exposure: Rinse nose and mouth with water. Obtain medical attention.
Skin	Remove immediately contaminated clothing and shoes. Wash the skin immediately with

	soap and water. Obtain medical attention.
Eyes	Immediately rinse with water for several minutes. Hold eyelids apart. Get medical attention immediately. Continue to rinse during transport.
Ingestion	Only when conscious, rinse mouth, give plenty of water to drink (approx. 500 ml). Do not induce vomiting! Obtain medical attention immediately.

5. FIRE FIGHTING MEASURES

Extinguishing media	Water spray, fog or mist, foam, powder, carbon dioxide.
Unsuitable extinguishing media	Waterjet.
Special fire fighting procedures	Treat as an oil fire. Wear self contained breathing apparatus.
Unusual fire hazards	Non-flammable. If involved in a fire it will support combustion and may decompose to give off toxic materials. Do not breathe fumes.
Hazardous combustion products	No typical hazardous decomposition products known.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions	For personal protection see Section 8.
Environmental precautions	Should not be allowed to enter drains or water courses. Dispose of this material and its container at hazardous or special waste collection point.
Methods for cleaning up	Contain spill with inert material. Place in container for disposal according to local regulations. Cover the remainder with inert absorbent (e.g. vermiculite) for disposal. In case of large spillages contact the local authority.

7. HANDLING AND STORAGE

Handling	The usual precautions for handling chemicals should be observed. When using do not eat, drink or smoke. Avoid spilling, skin and eye contact.
Storage	To maintain quality: Store at ambient temperatures. Avoid elevated temperatures. For further information see product information sheet.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Exposure limits			
Ingredient name	Exposure limit 8 hours	Short term exposure	References
Ethylene glycol	10 mg/m ³		OEL,s
Comments	OELs = EH40/2002 Occupational Exposure Limits 2002.		
Engineering controls	Provide eyewash station and safety shower.		
Personal protection			
Respiratory	Keep respiratory equipment available. If use conditions can generate aerosol or mist, wear suitable respiratory equipment. Wear full face mask supplied with: Combination filter ABEKP.		
Hand	Use protective gloves made of: Neoprene or nitrile.		
Eyes	Wear tightly fitting safety goggles and full face visor or shield.		
Skin and body	Use suitable protective clothing as protection against splashing or contamination. Launder clothes before re-use.		

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	Liquid.		
Colour	Colourless to yellowish		
Odour	Characteristic.		
Boiling point/range (°C)	102	Pressure (kPa)	
Melting point/range (°C)	< 0		
Flash point (°C)	> 105	Method	
Autoignition temperature (°C)	370		
Lower explosion limit (vol %)	-		
Upper explosion limit (vol %)	-		
Vapour pressure	~ 12 kPa	Temperature (°C)	50
Relative vapour density (air=1)	-		
Density (kg/m³)	980	Temperature (°C)	20
Bulk density (kg/m³)	-		
Viscosity	~ 130 mPas	Temperature (°C)	20
pH value	-		
pH value diluted solution	6-9	Conc. (%)	10
Solubility in water	Soluble.		
Solubility in other solvents	Soluble in 2-propanol.		
Partition coefficient (log Pow)	<3		

(These data are typical for the product and not a specification)

10. STABILITY AND REACTIVITY

Stability	Avoid elevated temperatures. Stable under recommended storage and handling conditions (see section 7).
Hazardous decomposition products	No typical hazardous decomposition products known.

11. TOXICOLOGICAL INFORMATION

Toxicological data	Acute toxicity. LD50. oral Rat. 795 mg/kg
Health effects	
Respiratory	The inhalation of aerosols may cause irritation of the respiratory tract.
Skin	Causes burns. Harmful in contact with skin.
Eyes	Causes burns. Risk of serious and permanent damage to eye.
Ingestion	Harmful if swallowed. May cause burns in mucous membranes in throat, oesophagus and stomach.
Component	Cocobenzyldimethylammonium chloride
Toxicological data	Acute toxicity. LD50. oral Rat. 200-2000 mg/kg

	Acute toxicity. LD50. dermal Rat. 400-2000 mg/kg
Sensitization	Not sensitizing.
Genotoxicity	Ames' test: Not mutagenic. In vitro gene mutation test (CHO cells): Not mutagenic. In vitro cytogenetic test in CHO cells: Does not induce structural chromosome aberrations.

12. ECOLOGICAL INFORMATION

Ecotoxicological data

Ecotoxicology	The product contains substance(s) considered very toxic to aquatic organisms.
Degradation	The product contains only readily biodegradable substances. The surfactant(s) contained in this preparation complies(comply) with the biodegradability criteria as laid down in Regulation (EC) No.648/2004 on detergents. Data to support this assertion are held at the disposal of the competent authorities of the Member States and will be made available to them at their direct request or at the request of a detergent manufacturer.
Partition coefficient (log Pow)	<3

Component **Cocobenzylidimethylammonium chloride**

Ecotoxicological data	Acute toxicity. LC50 96 hours fish 1-10 mg/l Acute toxicity. EC50 48 hours Daphnia < 1 mg/l Acute toxicity. IC50 72 hours algae < 1 mg/l
Ecotoxicology	Very toxic to aquatic organisms.
Degradation	Readily biodegradable. >60% BOD, 28 days, Closed Bottle Test (OECD 301D).

13. DISPOSAL CONSIDERATIONS

Disposal methods	Incineration is recommended. Dispose of in accordance with local authority requirements. Nitrous gases may be formed by incineration.
Waste category	Hazardous waste in accordance with the Council Directive 91/689/EEC of 12 December 1991 on hazardous waste.

14. TRANSPORT INFORMATION

Proper shipping name Corrosive liquid, n.o.s. (Fractionated coco) benzyldimethylammonium chloride solution)

Land transport

UN number	1760	RID-class	8
ADR class	8	RID packing group	II
ADR packing group	II		
Classification code	C9		
CEFIC number	80GC9-II+III	Tremcard internal code	5200

Sea transport

UN number	1760		
IMDG class	8	EmS	F-A, S-B
IMDG packing group	II	Marine pollutant	No.

Air transport

UN number	1760	Subsidiary risk	-
IATA/ICAO class	8	Packing group	II

15. REGULATORY INFORMATION

Substance name Ethylene glycol
Cocobenzyltrimethylammonium chloride

Symbols



Risk phrases R-21/22 Harmful in contact with skin and if swallowed.
R-34 Causes burns.
R-50 Very toxic to aquatic organisms.

Safety phrases S-26 In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
S-28 After contact with skin, wash immediately with plenty of soap and water.
S-36/37/39 Wear suitable protective clothing, gloves and eye/face protection.
S-45 In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).
S-57 Use appropriate containment to avoid environmental contamination.

EU directive Safety Data Sheet according to EC-directive 2001/58/EC
Directive 98/8/EC concerning the placing of biocidal products on the market; the active ingredient is notified as BKC (Benzalkonium chloride) under N200J.

Water hazard classification WGK: 2 (Germany).

16. OTHER INFORMATION

This information only concerns the above mentioned product as supplied and may not be valid if used with other product(s) or in any process. It remains the user's own responsibility to make sure that the information is appropriate and complete for his special use of this product.

Important changes were made in section 2, 3, 15.

Composed by Kristina Sterky

Eva Cassel

Explanations to R-phrases in section 2 R-22 Harmful if swallowed. R-34 Causes burns. R-21/22 Harmful in contact with skin and if swallowed. R-50 Very toxic to aquatic organisms.*

Date of major revision 2005-05-13

Date of printing 2005-06-16