

# ENVIRONMENTAL ASSESSMENT

1. **Date:** November 19, 2010
2. **Name of Submitter:** Akzo Nobel Surface Chemistry AB
3. **Address:** Environmental Development  
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All communications in this matter are to be sent to:

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## 4. Description of the Proposed Action

### a. Requested action

The action requested in this submission is the notification of the use of Isopropanol (or 2-Propanol), referred to herein as the "food contact substance" (FCS). The FCS is used in the manufacturing process of a flotation agent mixture and acts as a solvent for the mixture components. The formulation is used as a flotation agent in the purification (flotation process) of raw calcite ore. The purified calcite (calcium carbonate) is intended to be used in the manufacture of paper and boards for contact with food, e.g. as a filler or in coatings. The FCS remains in the froth. The FCS (and the other flotation agents) is not intended to remain on the calcite, but residuals may be present as impurities in concentrations that are very small.

## **b. Need for action**

The role of the FCS is to dissolve the flotation agents of the formulation Lilafloc 1596. In the flotation process, the agents adsorb to impurities of calcite. Thus the impurities become hydrophobic and may be removed from the calcite by air bubbles (reversed flotation).

## **c. Location of use/disposal**

The FCS is used in its function as a flotation agent exclusively in Europe. All wastes generated in the production of the FCS are collected and are treated in accordance with all local, national and EU requirements. Because there will be no use (flotation process) of the FCS in the United States, there will be no U.S. occupational exposure or environmental release as a result of use of the FCS.

With respect to customer use of the calcite at paper board mills, it is expected that occupational exposure to the FCS will be minimal as the FCS is only an impurity of calcite which is used in the production of paper and board. During the normal operation of the paper board machines there is little need for direct human involvement of mill workers. Potential inhalation or dermal exposure to the FCS should be minimal when the recommendations for use of personal protective equipment are followed. The oral route of occupational exposure is generally not considered a major route of potential occupational exposure.

With respect to environmental release from customer mills, the primary route of disposal is expected to be through water discharge to wastewater treatment plants as a result of removal of the FCS-containing white water from the paper board making process.

Food-contact articles made with paper containing residual amounts of the FCS will be utilized in patterns corresponding to the national population density and will be widely distributed across the country. Therefore, it is anticipated that disposal will occur nationwide, with about 80% of the materials ultimately being deposited in land disposal sites, and about 20% incinerated<sup>1</sup>. The types of environments present at and adjacent to the disposal locations are the same as for the disposal of any other food-contact material in current use. Consequently, there are no special circumstances regarding the environment surrounding either the use or disposal of food-contact paper prepared using the FCS.

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<sup>1</sup> "Municipal Solid Waste in the United States, 2007 Facts and Figures," EPA/530-R-08-010, U.S. Environmental Protection Agency, Office of Solid Waste (5306P), November 2008

**5. Identification of substances that are the subject of the proposed action**

**a. Chemical Abstracts Service (CAS) name**

Isopropanol

**b. CAS Registry Number**

67-63-0

**c. Trade or Common Name**

None

**d. Other Chemical Names**

Propan-2-ol, Isopropyl alcohol, 2-Propanol

**e. Empirical Formula**

C<sub>3</sub>H<sub>8</sub>O

**f. Molecular Weight**

60.1 g/mol

**g. Structure**

CH<sub>3</sub>-CH(OH)-CH<sub>3</sub>

## 6. Introduction of Substances into the Environment

### a. Introduction of substances into the environment as a result of manufacture

No extraordinary circumstances apply to the manufacture of this processing aid.

### b. Introduction of substances into the environment as a result of use/disposal

The FCS is a processing aid for the purification of calcite which in turn is used in the production of paper and board for contact with food. When assessing the introduction of the FCS into the environment, several phases during the lifecycle of the FCS have to be considered:

#### I) Use of the FCS as a solvent of flotation agents for the purification of calcite:

In the flotation, the waste that mainly contains calcium carbonates and silicates is removed as froth (flotation tailing). The froth/waste is further dewatered in a dewatering step and most of the water is recycled back to the flotation step.

After the dewatering step, the waste which consists of concentrated particulate material (silicates, sulphides and calcium carbonate) is discharged via waste pipes into a dedicated area.

The flotation facility has an operational permit by a national authority. The volume of the waste that may be discharged to the dedicated area is specified in the operational permit. Moreover, an extensive environmental control program is in place to detect if there are any effects on the biota outside the dedicated waste area. The results from this environmental control program are continuously reported to the national authorities.

Based on production parameters for purification of calcite, we estimate that nearly all of the FCS remains in processing wastes. In a separate confidential attachment to the notification we computed the estimated introduction concentration (EIC) of the FCS in effluent discharged into the environment.

#### II) Fate of the FCS as impurity of calcite in paper manufacturing

According to information provided by a customer which is also presented in Form 3480 under section II.F.2, the amount of calcite in paper can be up to 57.5%. There is no information available on the partitioning of the FCS between paper and white water in the paper making process. Concentrations of the FCS in the paper were too low to be determined. To deal with this situation, one may assess the fate of the FCS under two contrarian worst-case assumptions.

IIa) 100% remain in the paper

In a separate confidential attachment to the notification we computed the estimated amount of the FCS in the paper.

Release of the FCS from paper during use as a food contact material is not expected. Emission into the environment under this worst case scenario, see III.

IIb) 100% of FCS remain in the white water

Paper manufacturing is a continuous process. To assess a worst case output of the FCS from the mill, the following values were used: paper mill with a daily paper production of 1000 tons and a water use of 99'000'000 liters. These values were taken from other Environmental Assessments dealing with paper chemicals available at the FDA website.

In a separate confidential attachment to the notification we computed the estimated concentration of the FCS in the white water.

It is believed that all of the paper mills that will use the product operate on-site treatment facilities. A total removal in waste water treatment of 2.3% of the FCS is estimated (EPIWIN v4.00). These solid wastes are expected to be disposed of by means of either landfilling at suitable sites or by incineration, with the ash from the incinerator being disposed of via landfill.

In a separate confidential attachment to the notification we computed the estimated concentration of the FCS in post-treated waste water (EIC).

III) Disposal of food contact materials containing residual amounts of FCS

Disposal by the ultimate consumer of food contact materials containing the FCS will be primarily by landfill or incineration.

MSDS of the FCS is attached to this assessment.

## 7. Fate of the Emitted Substance into the Environment

For the determination of the environmental fate of the FCS the following properties may be relevant:

| Physical / chemical characterization |                      |                    |
|--------------------------------------|----------------------|--------------------|
| Water solubility                     | completely soluble   | MSDS               |
| Octanol/Water Partition Coefficient  | $\log P_{ow} = 0.05$ | study <sup>2</sup> |
| Vapor pressure                       | 43.996 hPa / 20°C    | MSDS               |

| Depletion mechanisms             |                       |                           |
|----------------------------------|-----------------------|---------------------------|
| Sorption/Desorption ( $K_{OC}$ ) | 1.53 l/kg             | Calculated (KOCWIN v2.00) |
| Aerobic Biodegradation           | Readily biodegradable | MSDS                      |

The bioaccumulation potential of the FCS was estimated to be 3.162 l/kg wet weight according to the BCFBAF v3.00 model of EPIWIN v.40 thus indicating a low potential to bioaccumulate.

### a. Air

No significant effect on the concentrations of and exposure to any substances in the atmosphere are anticipated due to production and the proposed use of the FCS as well as disposal of food contact papers containing the FCS.

The FCS consists of carbon and hydrogen. These elements are commonly found in municipal and industrial solid waste. Based on the total amount of FCS produced, it may be concluded that the FCS will make up a very small portion of total municipal and industrial solid waste currently combusted, and the FCS will not significantly alter the emissions from properly operating solid waste combustors. The products of complete combustion of the FCS are carbon dioxide and water.

### b. Water

As shown in Item 6 above, the majority of the FCS is expected to be released into the environment as a component of effluents from waste water treatment facilities. The effluents from waste water treatment after the flotation and after paper making will be greatly diluted once the effluents enter the receiving water. In case of the flotation process (see 6.b.I), a dilution factor of 100 can be assumed as the effluent is directly released into the sea. In case of the paper production (see 6.b.II), a dilution factor of 10 can be assumed as the effluent is supposed to be released into rivers.

<sup>2</sup> experimental values from EPIWIN v4.00 database

In a separate confidential attachment to the notification we computed the expected environmental concentrations (EEC).

### c. Land

Solid waste containing the FCS is generated from production of the FCS, paper production (treatment of white water), and disposal of final food contact articles. A certain amount is disposed via landfill. In addition, ashes from combustion are also expected to be disposed in landfills.

Leaching of substances from landfills are not expected, as regulatory requirements with regard to the construction and operation of such facilities are in place to prevent leachate from entering ground and surface water (e.g. 40 C.F.R Part 258 for municipal solid waste landfill units).

## 8. Environmental Effects of the Released Substance

The following table lists relevant toxicity endpoints to assess potential adverse environmental effects of the FCS.

| Toxicity to                              | Species                                      | Value | Exposure time | Dose        |
|--|--|-------|---------------|-------------|
| fish                                     | <i>Lepomis macrochirus</i>                   | LC50  | 96 h          | 1400 mg/l   |
| daphnia and other aquatic invertebrates. | <i>Daphnia</i>                               | EC50  | 48 h          | 2285 mg/l   |
| algae                                    | <i>Desmodesmus subspicatus</i> (green algae) | IC50  | 72 h          | > 1000 mg/l |

As discussed in Item 7 above, the maximum concentration at which the FCS is expected to be present in the environment (EEC) is 450 µg/l. The minimum EC50/LC50/IC50 value presented in the table above is >1000 mg/l. This corresponds to a margin of safety of roughly 2'200.

Thus, it may be concluded that production and use of the FCS will not lead to adverse environmental effects.

## 9. Use of Resources and Energy

The proposed FCS is intended to replace flotation agents which have the same function. Therefore there should be no essentially no effect on the use of natural resources and energy.

## 10. Mitigation Measures

No adverse environmental effects have been identified therefore there is no need to discuss mitigation measures.

## 11. Alternatives to the Proposed Action

No adverse environmental effects have been identified therefore there is no need to discuss alternatives to the proposed action.

## 12. List of Preparers

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Akzo Nobel Surface Chemistry AB, 444 85 Stenungsund, Sweden

## 13. Certification

The undersigned official certifies that the information presented is true, accurate, and complete to the best of his knowledge

Date

November 19, 2010



Dr. Stefan Walbert

Harlan Laboratories Ltd.

on behalf Akzo Nobel Surface Chemistry AB

## **14. Confidential Attachment**

Calculation of Expected Introduction Concentrations (EIC) and Expected Environmental Concentrations (EEC) for the FCS

## **15. Attachments**

MSDS for FCS

Confidential attachment for FCS



# SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006

**AkzoNobel**  
Tomorrow's Answers Today

(b) (4)

Version 2

Revision Date 22.06.2010

Print Date 22.06.2010

GB / EN

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

Trade name : (b) (4)  
Use of the Substance/Mixture : Flotation agent

Company : Akzo Nobel Surface Chemistry AB  
Stenunge Allé 3  
SE 444 85 Stenungsund  
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Telephone : +4630385000  
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## 2. HAZARDS IDENTIFICATION

### Hazardous classification

Flammable  
Corrosive  
Harmful  
Dangerous for the environment

### Risk advice to man and the environment

Flammable.  
Causes burns.  
Harmful if swallowed.  
Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

### Additional risk and advice

Vapours may form explosive mixtures with air.

### 3. COMPOSITION/INFORMATION ON INGREDIENTS

#### Hazardous substance

| Chemical Name                               | PBT<br>vPvB<br>OEL | CAS-No. | EC-No. /<br>REACH<br>Reg.-No. | Classification           | Concentration [%] |
|---|--------------------|---------|-------------------------------|--------------------------|-------------------|
| Dicocodimethylammonium chloride             |                    |         | 263-087-6                     | C-N; R34-R22-<br>R50/53  | 50 - 60           |
| Alkylamine ethoxylate                       |                    |         |                               | Xn; R22-R41<br>N; R50    | 15 - 20           |
| 2-Propanol                                  |                    |         | 200-661-7                     | F; R11<br>Xi; R36<br>R67 | 10 - 15           |
| 2-Ethylhexanol                              |                    |         | 203-234-3                     | Xi; R36/38               | 1 - 5             |
| Distillates (petroleum), hydrotreated light |                    |         | 265-149-8                     | Xn; R65                  | 1 - 5             |

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

### 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 : If breathed in, move person into fresh air.  
Consult a physician after significant exposure.
- Skin contact : Take off contaminated clothing and shoes immediately.  
Wash the skin immediately with soap and water.  
Immediate medical treatment is necessary as untreated wounds from corrosion of the skin heal slowly and with difficulty.
- Eye contact : Rinse with plenty of water.  
Get medical attention immediately. Continue to rinse during transport.

Remove contact lenses.  
Protect unharmed eye.  
Small amounts splashed into eyes can cause irreversible tissue damage and blindness.

Ingestion : Clean mouth with water and drink afterwards plenty of water.  
Never give anything by mouth to an unconscious person.  
Take victim immediately to hospital.  
Do not induce vomiting! May cause chemical burns in mouth and throat.

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## 5. FIRE-FIGHTING MEASURES

Suitable extinguishing media : Dry chemical  
Alcohol-resistant foam

Specific hazards during fire fighting : Treat as oil fire.  
Water spray may be ineffective unless used by experienced firefighters.  
Do not allow run-off from fire fighting to enter drains or water courses.

Special protective equipment for fire-fighters : In the event of fire, wear self-contained breathing apparatus.

Further information : 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.

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## 6. ACCIDENTAL RELEASE MEASURES

Personal precautions : For personal protection see section 8.  
Use personal protective equipment.  
Ensure adequate ventilation.

Environmental precautions : Do not flush into surface water or sanitary sewer system.  
If the product contaminates rivers and lakes or drains inform respective authorities.

Methods for cleaning up : Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust).  
Keep in suitable, closed containers for disposal.

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## 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.  
Dispose of rinse water in accordance with local and national regulations.

Advice on protection against fire and explosion : Avoid formation of aerosol.  
Keep away from sources of ignition - No smoking.  
Take measures to prevent the build up of electrostatic charge.

### Storage

Requirements for storage areas and containers : No smoking.  
Keep container tightly closed in a dry and well-ventilated place.

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 |         | STEL  | 500 ppm<br>1 250 mg/m <sup>3</sup> | 2006-09-01 | GB EH40 |                  |
|            |         | TWA   | 400 ppm<br>999 mg/m <sup>3</sup>   | 2006-09-01 | GB EH40 |                  |

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

### Engineering Controls

Effective exhaust ventilation system  
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 : Glove material: Neoprene  
Nitrile rubber

Eye protection : Eye wash bottle with pure water  
Tightly fitting safety goggles  
Wear face-shield and protective suit for abnormal processing problems.

- Skin and body protection : Protective suit  
Choose body protection according to the amount and concentration of the dangerous substance at the work place.
- Hygiene measures : Handle in accordance with good industrial hygiene and safety practice.  
Wash hands before breaks and at the end of workday.

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## 9. PHYSICAL AND CHEMICAL PROPERTIES

### Appearance

- Form : liquid
- Colour : light yellow
- Odour : 2-Propanol.

### Safety data

- Flash point : 33 °C Method: Abel-Pensky DIN 51755
- Ignition temperature : > 150 °C
- pH : 9 at 1 % solution
- Pour point : < 10 °C
- Boiling point/boiling range : 80 °C
- Vapour pressure : 42 hPa at 20 °C
- Density : 900 kg/m<sup>3</sup> at 25 °C
- Solubility in other solvents : Soluble in ethanol and 2-propanol.
- Water solubility : dispersible
- Viscosity, dynamic : 93 mPa.s at 25 °C

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

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## 10. STABILITY AND REACTIVITY

- Conditions to avoid : Heat, flames and sparks.
- Hazardous decomposition products : No hazardous decomposition products are known.
- Hazardous reactions : Stable under normal conditions.

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## 11. TOXICOLOGICAL INFORMATION

### Product information

- Inhalation : Inhalation of aerosols may cause irritation to mucous membranes.  
Thermal decomposition can lead to release of irritating gases and vapours.
- Skin : Extremely corrosive and destructive to tissue.
- Eyes : May cause irreversible eye damage.  
Causes eye burns.
- Ingestion : Harmful if swallowed.  
Causes burns.
- Further information : Solvents may degrease the skin.

### Toxicology data for the components

#### Dicocodimethylammonium chloride

- Acute oral toxicity : LD50 rat  
Dose: 200 - 2 000 mg/kg
- Mutagenicity
- Genotoxicity in vitro : Ames' test: Not mutagenic.

#### Alkylamine ethoxylate

- Acute oral toxicity : LD50 rat  
Dose: 200 - 2 000 mg/kg  
The value is estimated from tests on similar products.

#### 2-Propanol

- Acute inhalation toxicity : LC50 rat  
Dose: 72,6 mg/l, 4 h
- : LC50 mouse  
Dose: 27,2 mg/l, 4 h
- Acute dermal toxicity : LD50 rat

- Dose: 12 800 mg/kg
- : LD50 rabbit  
Dose: 12 800 mg/kg
- Acute oral toxicity : LD50 rabbit  
Dose: 5 030 mg/kg
- : LD50 rat  
Dose: 3 570 mg/kg
- Irritation : Eye irritation test (rabbit):  
Severely irritating.
- : Skin irritation test (rabbit):  
irritating
- Sensitisation : Not sensitizing.

### 2-Ethylhexanol

- Acute dermal toxicity : LD50 rat male  
Dose: > 3 000 mg/kg  
Method: OECD Test Guideline 402
- : LD50 rat female  
Dose: > 3 000 mg/kg  
Method: OECD Test Guideline 402
- Acute oral toxicity : LD50 rat  
Dose: ca. 2 047 mg/kg  
Method: OECD Test Guideline 401
- Sensitisation : guinea pig  
Not sensitizing.
- Mutagenicity
- Genotoxicity in vitro : Ames' test: Not mutagenic.

### Distillates (petroleum), hydrotreated light

- Acute oral toxicity : LD50 rat  
Dose: > 5 000 mg/kg

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## 12. ECOLOGICAL INFORMATION

### Product information

- Ecotoxicity effects : The product contains substance(s) considered very toxic to aquatic organisms
- : 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.
- Biodegradability : Not readily biodegradable.
- : The limited bioavailability is attributed to strong adsorption onto solids.

### Toxicology data for the components

#### Dicocodimethylammonium chloride

- Toxicity to fish : LC50  
Species: Brachydanio rerio  
Dose: 0,195 mg/l  
Exposure time: 96 h
- Toxicity to daphnia and other aquatic invertebrates. : EC50  
Species: Daphnia magna  
Dose: 0,3 mg/l  
Exposure time: 48 h
- Toxicity to algae : EC50  
Species: algae  
Dose: 0,13 mg/l  
Exposure time: 72 h
- Biodegradability : Not readily biodegradable.

#### Alkylamine ethoxylate

- Toxicity to fish : LC50  
Species: Oncorhynchus mykiss  
Dose: 0,99 mg/l  
Exposure time: 96 h
- Toxicity to daphnia and other aquatic invertebrates. : EC50  
Species: Daphnia  
Dose: 0,47 mg/l  
Exposure time: 48 h
- Toxicity to algae : IC50  
Species: algae  
Dose: 1,9 mg/l  
Exposure time: 72 h

- Toxicity to bacteria : EC50  
Species: Nitrifying bacteria  
Dose: 180 mg/l  
Exposure time: 4 h
- Biodegradability : >60% CO<sub>2</sub>, 28 days, Modified Sturm Test (OECD 301B).  
  
Readily biodegradable.

### 2-Propanol

- Toxicity to fish : LC50  
Species: *Lepomis macrochirus*  
Dose: 1 400 mg/l  
Exposure time: 96 h
- Toxicity to daphnia and other aquatic invertebrates. : EC50  
Species: *Daphnia*  
Dose: 2 285 mg/l  
Exposure time: 48 h
- Toxicity to algae : IC50  
Species: *Desmodesmus subspicatus* (green algae)  
Dose: > 1 000 mg/l  
Exposure time: 72 h
- Biodegradability : Readily biodegradable.
- Biochemical Oxygen Demand (BOD) : 1 171 mg/g
- Chemical Oxygen Demand (COD) : 2 294 mg/g
- Bioaccumulation :  
Not expected considering the low log Pow value.

### 2-Ethylhexanol

- Toxicity to fish : LC50  
Species: *Leuciscus idus* (Golden orfe)  
Dose: 17,1 mg/l  
Exposure time: 96 h  
Method: 84/449/EEC C.1
- Toxicity to daphnia and other aquatic invertebrates. : EC50  
Species: *Daphnia Magna*  
Dose: 39 mg/l  
Exposure time: 48 h  
Method: 84/449/EEC C.2
- Toxicity to algae : EC50  
Species: *Desmodesmus subspicatus* (green algae)  
Dose: 11,5 mg/l

Exposure time: 72 h  
Method: 84/449/EEC C.3

Biodegradability :  
Readily biodegradable.

**Distillates (petroleum), hydrotreated light**

Toxicity to fish : LC50  
Species: fish  
Dose: > 100 mg/l  
Exposure time: 96 h

Toxicity to daphnia and other aquatic invertebrates. : EC50  
Species: Daphnia magna (Water flea)  
Dose: > 100 mg/l  
Exposure time: 48 h

Toxicity to algae : EC50  
Species: Desmodesmus subspicatus (green algae)  
Dose: > 100 mg/l  
Exposure time: 72 h

Biodegradability : Readily biodegradable.  
> 60 %<sub>28 d</sub>  
Method: OECD Guide-line 301 F - Ready Biodegradability:  
Manometric Respirometry Test

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**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

Contaminated packaging : Empty remaining contents.  
Dispose of as unused product.  
Do not re-use empty containers.  
Do not burn, or use a cutting torch on, the empty drum.

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**14. TRANSPORT INFORMATION**

**ADR**

UN-Number : 2920  
Description of the goods : CORROSIVE LIQUID, FLAMMABLE, N.O.S.  
(Quarternary alkyl ammonium chloride, mixture containing alcohols)  
Class : 8  
Packaging group : II

Classification Code : CF1  
Hazard identification No : 83  
Labels : 8 (3)

**IATA**

UN-Number : 2920  
Description of the goods : Corrosive liquid, flammable, n.o.s.  
(Quarternary alkyl ammonium chloride, mixture containing alcohols)  
Class : 8  
Packaging group : II  
Labels : 8 (3)  
Packing instruction (cargo aircraft) : 812  
Packing instruction (passenger aircraft) : 808  
Packing instruction (passenger aircraft) : Y808

**IMDG\_EU**

UN-Number : 2920  
Description of the goods : CORROSIVE LIQUID, FLAMMABLE, N.O.S.  
(Quarternary alkyl ammonium chloride, mixture containing alcohols)  
Class : 8  
Packaging group : II  
Labels : 8 (3)  
EmS Number : F-E  
S-C  
Marine pollutant : yes  
(Quarternary alkyl ammonium chloride, Fatty amine ethoxylate)

**RID**

UN-Number : 2920  
Description of the goods : CORROSIVE LIQUID, FLAMMABLE, N.O.S.  
(Quarternary alkyl ammonium chloride, mixture containing alcohols)  
Class : 8  
Packaging group : II  
Classification Code : CF1  
Hazard identification No : 83  
Labels : 8 (3)

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**15. REGULATORY INFORMATION**

**Labelling according to EC Directives 1999/45/EC**

Symbol(s) :  C Corrosive



N Dangerous for the environment

|              |   |  |
|--------------|---|--|
| R-phrases(s) | : R10<br>R22<br>R34<br>R50/53                           | Flammable.<br>Harmful if swallowed.<br>Causes burns.<br>Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.   |
| S-phrases(s) | : S26<br><br>S36/37/39<br><br>S45<br><br>S57<br><br>S60 | In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.<br>Wear suitable protective clothing, gloves and eye/face protection.<br>In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).<br>Use appropriate container to avoid environmental contamination.<br>This material and its container must be disposed of as hazardous waste. |

Hazardous components which must be listed on the label:

- Dicocodimethylammonium chloride
- Tallow alkylamine ethoxylate

#### Other regulations

|                                   |                               |              |
|-----------------------------------|-------------------------------|--------------|
| Major Accident Hazard Legislation | : 96/82/EC                    | Update: 2003 |
|                                   | Dangerous for the environment |              |
|                                   | Quantity 1: 100 t             |              |
|                                   | Quantity 2: 200 t             |              |
|                                   | : 96/82/EC                    | Update: 2003 |
|                                   | Flammable.                    |              |
|                                   | Quantity 1: 5 000 t           |              |
|                                   | Quantity 2: 50 000 t          |              |

#### Notification status

|        |                        |   |
|--------|------------------------|---|
| EINECS | : y (positive listing) | On the inventory, or in compliance with the inventory |
| TSCA   | : y (positive listing) | On TSCA Inventory                                     |
| AICS   | : y (positive listing) | On the inventory, or in compliance with the inventory |
| DSL    | : y (positive listing) |   |

All components of this product are on the Canadian DSL list.

|       |   |   |
|-------|---|---|
| ENCS  | : | n (Negative listing)<br>Not in compliance with the inventory                  |
| KECI  | : | y (positive listing)<br>On the inventory, or in compliance with the inventory |
| PICCS | : | y (positive listing)<br>On the inventory, or in compliance with the inventory |
| IECSC | : | y (positive listing)<br>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.

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## 16. OTHER INFORMATION

### Full text of R-phrases referred to under sections 2 and 3

|        |  |
|--------|--|
| R10    | Flammable.   |
| R11    | Highly flammable.  |
| R22    | Harmful if swallowed.  |
| R34    | Causes burns.  |
| R36    | Irritating to eyes.  |
| R36/38 | Irritating to eyes and skin.   |
| R41    | Risk of serious damage to eyes.  |
| R50    | Very toxic to aquatic organisms.   |
| R50/53 | Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment. |
| R65    | Harmful: may cause lung damage if swallowed.   |
| R67    | Vapours may cause drowsiness and dizziness.  |

PBT: Persistent, bioaccumulative and toxic according to 1907/2006/EC, Annex XIII. vPvB: Very persistent and very bioaccumulative according to 1907/2006/EC, Annex XIII. OEL: Occupational exposure limit Note: The above information is only given for substances that does not meet the classification criteria.

### Notification status explanation

|        |  |
|--------|--|
| EINECS | European Inventory of Existing Commercial Chemical Substances (EINECS) |
| TSCA   | TSCA Inventory   |
| AICS   | Australia Inventory of Chemical Substances (AICS)                      |
| DSL    | Domestic Substances List (DSL)   |
| ENCS   | Japan. ENCS - Existing and New Chemical Substances Inventory           |
| KECI   | Korea. Korean Existing Chemicals Inventory (KECI)                      |
| PICCS  | Inventory of Chemicals and Chemical Substances (PICCS)                 |

IECSC

China. Inventory of Existing Chemical Substances in China (IECSC)

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.

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