Dow

Safety Data Sheet

Dow Chemical Company Ltd

Product Name: BETACLEAN(TM) 4100

Revision Date: 2011/05/16

Print Date: 14 Dec 2011

Dow Chemical Company Ltd encourages and expects you to read and understand the entire (M)SDS, as there is important information throughout the document. We expect you to follow the precautions identified in this document unless your use conditions would necessitate other appropriate methods or actions.

Section 1. Identification of the substance/preparation and of the company/undertaking

1.1 Product identifiers Product Name

BETACLEAN™ 4100

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

Cleaner. For use in automotive applications.

1.3 Details of the supplier of the safety data sheet

COMPANY IDENTIFICATION

Dow Chemical Company Ltd Diamond House, Lotus Park Kingsbury Crescent TW18 3AG Staines, Middlesex United Kingdom

Customer Information Number: 0203 139 4000

SDSQuestion@dow.com

1.4 EMERGENCY TELEPHONE NUMBER

24-Hour Emergency Contact: 0031 115 694 982 **Local Emergency Contact:** 00 31 115 69 4982

Section 2. Hazards Identification

2.1 Classification of the substance or mixture

Classification according to EU Directives 67/548/EEC or 1999/45/EC

F	R11 Highly flammable		
Xi	R36 Irritating to eyes.	Irritating to eyes.	
	R67 Vapours may cau	se drowsiness and	
	dizziness.		

2.2 Label elements

®(TM)*Trademark

Labelling according to EC Directives

Hazard Symbol:

F - Highly flammable.

Xi - Irritant.

Risk Phrases:

R11 - Highly flammable.

R36 - Irritating to eyes.

R67 - Vapours may cause drowsiness and dizziness.

Safety Phrases:

S16 - Keep away from sources of ignition - no smoking.

S23 - Do not breathe vapour.

S24/25 - Avoid contact with skin and eyes.

S26 - In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.

S60 - This material and its container must be disposed of as hazardous waste.

2.3 Other Hazards

No information available.

Section 3. Composition/information on ingredients

3.2 Mixture

This product is a mixture.

CAS-No. / EC-No. / Index	REACH No.	Amount	Component	Classification: REGULATION (EC) No 1272/2008
CAS-No. 67-63-0 EC-No. 200-661-7 Index 603-117-00-0	_	> 85.0 - < 95.0 %	Propan-2-ol; isopropyl alcohol; isopropanol	Flam. Liq., 2, H225 Eye Irrit., 2, H319 STOT SE, 3, H336
CAS-No. 108-46-3 EC-No. 203-585-2 Index 604-010-00-1	_	< 10.0 %	Resorcinol; 1,3- benzenediol	Acute Tox., 4, H302 Eye cor/irr, 2, H319 Skin cor/irr, 2, H315 Aquatic Acute, 1, H400

CAS-No. / EC-No. / Index	Amount	Component	Classification: 67/548/EEC
CAS-No. 67-63-0 EC-No. 200-661-7 Index 603-117-00-0	> 85.0 - < 95.0 %	Propan-2-ol; isopropyl alcohol; isopropanol	F: R11; Xi: R36; R67
CAS-No. 108-46-3 EC-No. 203-585-2 Index 604-010-00-1	< 10.0 %	Resorcinol; 1,3- benzenediol	Xn: R22; Xi: R36/38; N: R50

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

See Section 16 for full text of R-phrases.

Section 4. First-aid measures

4.1 Description of first aid measures

Inhalation: Move person to fresh air. If not breathing, give artificial respiration; if by mouth to mouth use rescuer protection (pocket mask, etc). If breathing is difficult, oxygen should be administered by qualified personnel. Call a physician or transport to a medical facility.

Skin Contact: Remove material from skin immediately by washing with soap and plenty of water. Remove contaminated clothing and shoes while washing. Seek medical attention if irritation persists. Wash clothing before reuse. Discard items which cannot be decontaminated, including leather articles such as shoes, belts and watchbands.

Eye Contact: Wash immediately and continuously with flowing water for at least 30 minutes. Remove contact lenses after the first 5 minutes and continue washing. Obtain prompt medical consultation, preferably from an ophthalmologist.

Ingestion: Do not induce vomiting. Call a physician and/or transport to emergency facility immediately.

4.2 Most important symptoms and effects, both acute and delayed

Aside from the information found under Description of first aid measures (above) and Indication of immediate medical attention and special treatment needed (below), no additional symptoms and effects are anticipated.

4.3 Indication of immediate medical attention and special treatment needed

If lavage is performed, suggest endotracheal and/or esophageal control. Danger from lung aspiration must be weighed against toxicity when considering emptying the stomach. The decision of whether to induce vomiting or not should be made by a physician. Chemical eye burns may require extended irrigation. Obtain prompt consultation, preferably from an ophthalmologist. Maintain adequate ventilation and oxygenation of the patient. Consider hemodialysis for patients with persistent hypotension or coma unresponsive to standard therapy (isopropanol levels >400 - 500 mg/dl). (Goldfrank 1998, King et al, 1970). If burn is present, treat as any thermal burn, after decontamination. No specific antidote. Treatment of exposure should be directed at the control of symptoms and the clinical condition of the patient.

Skin contact may aggravate preexisting dermatitis.

Section 5. Fire Fighting Measures

5.1 Extinguishing Media

Water fog or fine spray. Dry chemical fire extinguishers. Carbon dioxide fire extinguishers. Foam. Alcohol resistant foams (ATC type) are preferred. General purpose synthetic foams (including AFFF) or protein foams may function, but will be less effective.

Extinguishing Media to Avoid: Do not use direct water stream. Straight or direct water streams may not be effective to extinguish fire.

5.2 Special hazards arising from the substance or mixture

Hazardous Combustion Products: During a fire, smoke may contain the original material in addition to combustion products of varying composition which may be toxic and/or irritating. Combustion products may include and are not limited to: Carbon monoxide. Carbon dioxide.

Unusual Fire and Explosion Hazards: Container may vent and/or rupture due to fire. When product is stored in closed containers, a flammable atmosphere can develop. Electrically ground and bond all equipment. Flammable mixtures of this product are readily ignited even by static discharge. Vapors are heavier than air and may travel a long distance and accumulate in low lying areas. Ignition and/or flash back may occur. Flammable mixtures may exist within the vapor space of containers at room temperature. Flammable concentrations of vapor can accumulate at temperatures above flash point; see Section 9.

5.3 Advice for firefighters

Fire Fighting Procedures: Keep people away. Isolate fire and deny unnecessary entry. Stay upwind. Keep out of low areas where gases (fumes) can accumulate. Water may not be effective in extinguishing fire. Use water spray to cool fire exposed containers and fire affected zone until fire is out and danger of reignition has passed. Burning liquids may be extinguished by dilution with water.

Do not use direct water stream. May spread fire. Eliminate ignition sources. Move container from fire area if this is possible without hazard. Burning liquids may be moved by flushing with water to protect personnel and minimize property damage. Use caution and test if material is burning before entering area. Material burns with invisible flame.

Special Protective Equipment for Firefighters: Wear positive-pressure self-contained breathing apparatus (SCBA) and protective fire fighting clothing (includes fire fighting helmet, coat, trousers, boots, and gloves). If protective equipment is not available or not used, fight fire from a protected location or safe distance.

Section 6. Accidental Release Measures

6.1 Personal precautions, protective equipment and emergency procedures: Evacuate area. Only trained and properly protected personnel must be involved in clean-up operations. Keep personnel out of low areas. Keep personnel out of confined or poorly ventilated areas. Keep upwind of spill. Ventilate area of leak or spill. No smoking in area. Confined space entry procedures must be followed before entering the area. Eliminate all sources of ignition in vicinity of spill or released vapor to avoid fire or explosion. Vapor explosion hazard. Keep out of sewers. For large spills, warn public of downwind explosion hazard. Check area with combustible gas detector before reentering area. Ground and bond all containers and handling equipment. Refer to Section 7, Handling, for additional precautionary measures. Use appropriate safety equipment. For additional information, refer to Section 8, Exposure Controls and Personal Protection.

6.2 Environmental precautions: Prevent from entering into soil, ditches, sewers, waterways and/or groundwater. See Section 12, Ecological Information.

6.3 Methods and materials for containment and cleaning up: Contain spilled material if possible. Absorb with materials such as: Cat litter. Sand. Sawdust. Ground and bond all containers and handling equipment. Pump with explosion-proof equipment. If available, use foam to smother or suppress. Collect in suitable and properly labeled containers. See Section 13, Disposal Considerations, for additional information.

Section 7. Handling and Storage

7.1 Precautions for safe handling Handling

General Handling: Keep away from heat, sparks and flame. Do not get in eyes. Avoid breathing vapor. Avoid contact with skin and clothing. Do not swallow. Wash thoroughly after handling. Keep container closed. Use only with adequate ventilation. No smoking, open flames or sources of ignition in handling and storage area. Electrically bond and ground all containers, personnel and equipment before transfer or use of material. Use of non-sparking or explosion-proof equipment may be necessary, depending upon the type of operation. Containers, even those that have been emptied, can contain vapors. Do not cut, drill, grind, weld, or perform similar operations on or near empty containers. Vapors are heavier than air and may travel a long distance and accumulate in low lying areas. Ignition and/or flash back may occur. Never use air pressure for transferring product. Do not enter confined spaces unless adequately ventilated. See Section 8, EXPOSURE CONTROLS AND PERSONAL PROTECTION.

7.2 Conditions for safe storage, including any incompatibilities Storage

Minimize sources of ignition, such as static build-up, heat, spark or flame. Keep container closed. Flammable mixtures may exist within the vapor space of containers at room temperature.

Storage temperature:

5 - 35 ℃

7.3 Specific end uses

See the technical data sheet on this product for further information.

Section 8. Exposure Controls / Personal Protection

8.1 Control parameters Exposure Limits

Component	List	Туре	Value
Propan-2-ol; isopropyl alcohol; isopropanol	UK WEL	TWA	999 mg/m3 400 ppm
	UK WEL	STEL	1,250 mg/m3 500 ppm
	ACGIH	TWA	200 ppm
	ACGIH	STEL	400 ppm
	Ireland OELV	TWA	200 ppm SKIN
	Ireland OELV	STEL	400 ppm SKIN
Resorcinol; 1,3-benzenediol	Ireland OELV	TWA	45 mg/m3 10 ppm SKIN Indicative OELV
	Ireland OELV	STEL	90 mg/m3 20 ppm SKIN Indicative OELV
	ACGIH	TWA	10 ppm
	ACGIH	STEL	20 ppm
	EU IOELV	TWA	45 mg/m3 10 ppm SKIN
	UK WEL	TWA	46 mg/m3 10 ppm SKIN
	UK WEL	STEL	92 mg/m3 20 ppm SKIN

A "skin" notation following the inhalation exposure guideline refers to the potential for dermal absorption of the material including mucous membranes and the eyes either by contact with vapors or by direct skin contact.

It is intended to alert the reader that inhalation may not be the only route of exposure and that measures to minimize dermal exposures should be considered.

8.2 Exposure controls Personal Protection

Eye/Face Protection: Use chemical goggles. Chemical goggles should be consistent with EN 166 or equivalent. Eye wash fountain should be located in immediate work area. If exposure causes eye discomfort, use a full-face respirator.

Skin Protection: Wear clean, body-covering clothing.

Hand protection: Use gloves chemically resistant to this material when prolonged or frequently repeated contact could occur. Use chemical resistant gloves classified under Standard EN374: Protective gloves against chemicals and micro-organisms. Examples of preferred glove barrier materials include: Viton. Butyl rubber. Polyethylene. Neoprene. Natural rubber ("latex"). Polyvinyl chloride ("PVC" or "vinyl"). Styrene/butadiene rubber. Ethyl vinyl alcohol laminate ("EVAL"). Examples of acceptable glove barrier materials include: Chlorinated polyethylene. Nitrile/butadiene rubber ("nitrile" or "NBR"). When prolonged or frequently repeated contact may occur, a glove with a protection class of 5 or higher (breakthrough time greater than 240 minutes according to EN 374) is recommended. When only brief contact is expected, a glove with a protection class of 3 or higher (breakthrough time greater than 60 minutes according to EN 374) is recommended. NOTICE: The selection of a specific glove for a particular application and duration of use in a workplace should also take into account all relevant workplace factors such as, but not limited to: Other chemicals which may be handled, physical requirements (cut/puncture protection, dexterity, thermal protection), potential body reactions to glove materials, as well as the instructions/specifications provided by the glove supplier.

Respiratory Protection: Atmospheric levels should be maintained below the exposure guideline. When respiratory protection is required, use an approved air-purifying or positive-pressure supplied-air respirator depending on the potential airborne concentration. For emergency and other conditions where the exposure guideline may be exceeded, use an approved positive-pressure self-contained breathing apparatus or positive-pressure air line with auxiliary self-contained air supply. In confined or poorly ventilated areas, use an approved self-contained breathing apparatus or positive pressure air

line with auxiliary self-contained air supply. Use the following CE approved air-purifying respirator: Organic vapor cartridge, type A (boiling point >65 °C)

Ingestion: Avoid ingestion of even very small amounts; do not consume or store food or tobacco in the work area; wash hands and face before smoking or eating.

Engineering Controls

Ventilation: Use engineering controls to maintain airborne level below exposure limit requirements or guidelines. If there are no applicable exposure limit requirements or guidelines, use only in enclosed systems or with local exhaust ventilation. Exhaust systems should be designed to move the air away from the source of vapor/aerosol generation and people working at this point. Lethal concentrations may exist in areas with poor ventilation.

Section 9. Physical and Chemical Properties

9.1 Information on basic physical and chemical properties

Appearance

Physical State Liquid.
Color Colorless
Odor Alcohol.

pH No test data availableMelting Point Not applicable to liquids

Freezing Point -88 ℃ Literature (major component)

Boiling Point (760 mmHg)

Flash Point - Closed Cup
Flammable Limits In Air

82 ℃ Literature (based on major component).

12 ℃ Literature (based on major component)

Lower: 2.3 %(V) Literature LFL of major ingredient

Upper: 12.7 %(V) Literature UFL of major ingredient

Vapor Pressure 47 hPa @ 21 °C *Literature* (based on major component)

Vapor Density (air = 1) 2.1 *Calculated* (major component)

Specific Gravity (H2O = 1) 0.81 Literature
Solubility in water (by Literature Soluble

weight)

Autoignition Temperature 425 °C *Literature*Decomposition No test data available

Temperature

Dynamic Viscosity

Explosive properties

Oxidizing properties

No test data available
no data available
no data available

9.2 Other information

Section 10. Stability and Reactivity

10.1 Reactivity

No dangerous reaction known under conditions of normal use.

10.2 Chemical stability

Thermally stable at typical use temperatures.

10.3 Possibility of hazardous reactions

Polymerization will not occur.

10.4 Conditions to Avoid: Exposure to elevated temperatures can cause product to decompose. Avoid static discharge.

10.5 Incompatible Materials: Avoid contact with: Aldehydes. Halogenated organics. Halogens. Strong acids. Strong oxidizers.

10.6 Hazardous decomposition products

Decomposition products depend upon temperature, air supply and the presence of other materials.

Section 11. Toxicological Information

11.1 Information on toxicological effects Acute Toxicity

Ingestion

Low toxicity if swallowed. Small amounts swallowed incidentally as a result of normal handling operations are not likely to cause injury; however, swallowing larger amounts may cause injury. May cause central nervous system depression. May cause nausea and vomiting. Signs and symptoms of excessive exposure may include: Facial flushing. Irregular heartbeats. Low blood pressure. Single dose oral LD50 has not been determined.

The data presented are for the following material: Isopropyl alcohol. Estimated. Lethal Dose, Human 100 ml

Aspiration hazard

Aspiration into the lungs may occur during ingestion or vomiting, causing lung damage or even death due to chemical pneumonia.

Dermal

Prolonged skin contact is unlikely to result in absorption of harmful amounts.

The dermal LD50 has not been determined.

Inhalation

In confined or poorly ventilated areas, vapor can readily accumulate and can cause unconsciousness and death. Excessive exposure (400 ppm) to isopropanol may cause eye, nose and throat irritation. Incoordination, confusion, hypotension, hypothermia, circulatory collapse, respiratory arrest and death may follow a longer duration or higher levels. Observations in animals include middle ear lining damage upon exposure to vapors of isopropanol. However, the relevance of this to humans is unknown

As product: The LC50 has not been determined.

Eve damage/eve irritation

May cause severe irritation with corneal injury which may result in permanent impairment of vision, even blindness. Chemical burns may occur. Vapor may cause eye irritation experienced as mild discomfort and redness. Vapor may cause lacrimation (tears).

Skin corrosion/irritation

Prolonged contact may cause skin irritation with local redness. Repeated contact may cause skin burns. Symptoms may include pain, severe local redness, swelling, and tissue damage. May cause drying and flaking of the skin.

Sensitization

Respiratory

No relevant data found.

Repeated Dose Toxicity

Contains component(s) which have been reported to cause effects on the following organs in animals: Liver. Central nervous system. Thyroid. Contains component(s) which have been reported to cause effects on the following organs in humans: Heart. Kidney. Liver. Spleen. For the minor component(s): May cause methemoglobinemia, thereby impairing the blood's ability to transport oxygen.

Chronic Toxicity and Carcinogenicity

Contains component(s) which did not cause cancer in laboratory animals.

Developmental Toxicity

Isopropanol has been toxic to the fetus in laboratory animals at doses toxic to the mother.

Reproductive Toxicity

Contains component(s) which did not interfere with reproduction in animal studies.

Genetic Toxicology

Contains component(s) which were negative in some in vitro genetic toxicity studies and positive in others. Contains component(s) which were negative in animal genetic toxicity studies.

Component Toxicology - Isopropanol

Skin Absorption	LD50, Rabbit 16.4 ml/kg			
Component Toxicology - 1,3-Dihydroxybenzene				
Skin Absorption	LD50, Rabbit 3,360 mg/kg			
Component Toxicology - Isopropanol				
Inhalation LC50, 6 h, Vapor, Rat, male and female > 10,000 ppm				

Section 12. Ecological Information

12.1 Toxicity

Data for Component: Propan-2-ol; isopropyl alcohol; isopropanol

Material is not classified as dangerous to aquatic organisms (LC50/EC50/IC50/LL50/EL50 greater than 100 mg/L in most sensitive species).

Fish Acute & Prolonged Toxicity

LC50, fathead minnow (Pimephales promelas), flow-through test, 96 h: 9,640 mg/l

Aquatic Invertebrate Acute Toxicity

LC50, water flea Daphnia magna, static, 24 h, immobilization: > 1,000 mg/l

Aquatic Plant Toxicity

NOEC, alga Scenedesmus sp., static, Growth inhibition (cell density reduction), 7 d: 1,800 mg/l

ErC50, alga Scenedesmus sp., static, Growth rate inhibition, 72 h: > 1,000 mg/l

Toxicity to Micro-organisms

EC50; activated sludge: > 1,000 mg/l

Aquatic Invertebrates Chronic Toxicity Value

water flea Daphnia magna, static renewal, 21 d, NOEC: 30 mg/l

Data for Component: Resorcinol; 1,3-benzenediol

Material is toxic to aquatic organisms (LC50/EC50/IC50 between 1 and 10 mg/L in the most sensitive species).

Fish Acute & Prolonged Toxicity

LC50, rainbow trout (Oncorhynchus mykiss), flow-through, 96 h: > 100 mg/l

Aquatic Invertebrate Acute Toxicity

LC50, grass shrimp (Palaemonetes pugio), 96 h, lethality: 42 mg/l LC50, water flea Daphnia magna, 48 h, immobilization: 1.28 mg/l

Aquatic Plant Toxicity

ErC50, alga Scenedesmus sp., Growth rate inhibition, 96 h: 60 mg/l

12.2 Persistence and Degradability

Data for Component: Propan-2-ol; isopropyl alcohol; isopropanol

Material is readily biodegradable. Passes OECD test(s) for ready biodegradability.

OECD Biodegradation Tests:

Biode	egradation	Exposure Time	Method	10 Day Window
	95 %	21 d	OECD 301E Test	pass
	53 % 5 d		EU Method C.6	pass
			(Degradation:	
			Chemical Oxygen	
			Demand)	

<u>Data for Component: Resorcinol; 1,3-benzenediol</u>

Material is expected to be readily biodegradable.

OECD Biodegradation Tests:

_	Biodegradation	Exposure Time	Method	10 Day Window
	66.7 %	14 d	OECD 301C Test	Not applicable
	97 %	4 d	OECD 302B Test	Not applicable
	90 - 95 %	7 - 15 d	OECD 302B Test	Not applicable

12.3 Bioaccumulative potential

Data for Component: Propan-2-ol; isopropyl alcohol; isopropanol

Bioaccumulation: Bioconcentration potential is low (BCF < 100 or Log Pow < 3).

Partition coefficient, n-octanol/water (log Pow): 0.05 Measured

Data for Component: Resorcinol; 1,3-benzenediol

Bioaccumulation: Bioconcentration potential is low (BCF < 100 or Log Pow < 3).

Partition coefficient, n-octanol/water (log Pow): 0.8 - 0.97 Estimated.

12.4 Mobility in soil

<u>Data for Component: Propan-2-ol; isopropyl alcohol; isopropanol</u>

Mobility in soil: Potential for mobility in soil is very high (Koc between 0 and 50).

Partition coefficient, soil organic carbon/water (Koc): 1.1 Estimated.

Henry's Law Constant (H): 3.38E-06 - 8.07E-06 atm*m3/mole; 25 ℃ Estimated.

<u>Data for Component: Resorcinol; 1,3-benzenediol</u>

Mobility in soil: No relevant data found.

12.5 Results of PBT and vPvB assessment

<u>Data for Component: Propan-2-ol; isopropyl alcohol; isopropanol</u>

This substance is not considered to be persistent, bioaccumulating and toxic (PBT). This substance is not considered to be very persistent and very bioaccumulating (vPvB).

Data for Component: Resorcinol; 1,3-benzenediol

This substance has not been assessed for persistence, bioaccumulation and toxicity (PBT).

12.6 Other adverse effects

<u>Data for Component: Propan-2-ol; isopropyl alcohol; isopropanol</u>

This substance is not in Annex I of Regulation (EC) 2037/2000 on substances that deplete the ozone layer.

Data for Component: Resorcinol; 1,3-benzenediol

No relevant data found.

Section 13. Disposal Considerations

13.1 Waste treatment methods

This product, when being disposed of in its unused and uncontaminated state should be treated as a hazardous waste according to EC Directive 91/689/EEC. Any disposal practices must be in compliance with all national and provincial laws and any municipal or local by-laws governing hazardous waste. For used, contaminated and residual materials additional evaluations may be required. Do not dump into any sewers, on the ground, or into any body of water. Incineration under approved, controlled conditions using incinerators suitable or designed for the disposal of hazardous chemical wastes, is the preferred method for disposal.

Treatment and disposal methods of used packaging: Empty containers should be recycled or otherwise disposed of by an approved waste management facility. CONTAMINATED PACKAGING: Any disposal of contaminated packaging and washings must be in accordance with State, Territory and/or Local government regulations. After container has been cleaned and labelling has been removed, empty containers can be sent for recycling or disposal. If the container is to be reconditioned, the reconditioning company should be made aware of the nature of the original contents.

Section 14. Transport Information

ROAD & RAIL

Proper Shipping Name: ISOPROPANOL, mixture

Hazard Class: 3 ID Number: UN1219 Packing Group: PG II

Classification: F1

Hazard identification No: 33 Tremcard Number: 30S1219 Environmental Hazard: No

OCEAN

Proper Shipping Name: ISOPROPANOL, mixture

Hazard Class: 3 ID Number: UN1219 Packing Group: PG II

EMS Number: F-E,S-Marine pollutant.: No

AIR

Proper Shipping Name: ISOPROPANOL, mixture

Hazard Class: 3 ID Number: UN1219 Packing Group: PG II

Cargo Packing Instruction: 364
Passenger Packing Instruction: 353

Environmental Hazard: No

INLAND WATERWAYS

Proper Shipping Name: ISOPROPANOL, mixture

Hazard Class: 3 ID Number: UN1219 Packing Group: PG II

Classification: F1

Hazard identification No: 33 Tremcard Number: 30S1219 Environmental Hazard: No

Section 15. Regulatory Information

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

European Inventory of Existing Commercial Chemical Substances (EINECS)

The components of this product are on the EINECS inventory or are exempt from inventory requirements.

EU. Regulation 648/2004, Annex VII, Content Labeling for Detergents

The constituents listed in Annex VII of the Detergent Regulation are not present in this product or are below the concentration limits laid down in the Regulation. For professional use only.

15.2 Chemical Safety Assessment

Not applicable.

Section 16. Other Information

Hazard statement in the composition section

H225 Highly flammable liquid and vapour.

H302 Harmful if swallowed. H315 Causes skin irritation.

H319 Causes serious eye irritation.
H336 May cause drowsiness or dizziness.

H400 Very toxic to aquatic life.

Risk-phrases in the Composition section

R11 Highly flammable.
R22 Harmful if swallowed.
R36 Irritating to eyes.

R36/38 Irritating to eyes and skin.

R50 Very toxic to aquatic organisms.

R67 Vapours may cause drowsiness and dizziness.

Revision

Identification Number: 83512 / 3005 / Issue Date 2011/05/16 / Version: 6.0

Most recent revision(s) are noted by the bold, double bars in left-hand margin throughout this document.

Dow Chemical Company Ltd urges each customer or recipient of this (M)SDS to study it carefully and consult appropriate expertise, as necessary or appropriate, to become aware of and understand the data contained in this (M)SDS and any hazards associated with the product. The information herein is provided in good faith and believed to be accurate as of the effective date shown above. However, no warranty, express or implied, is given. Regulatory requirements are subject to change and may differ between various locations. It is the buyer's/user's responsibility to ensure that his activities comply with all federal, state, provincial or local laws. The information presented here pertains only to the product as shipped. Since conditions for use of the product are not under the control of the manufacturer, it is the buyer's/user's duty to determine the conditions necessary for the safe use of this product. Due to the proliferation of sources for information such as manufacturer-specific (M)SDSs, we are not and cannot be responsible for (M)SDSs obtained from any source other than ourselves. If you have obtained an (M)SDS from another source or if you are not sure that the (M)SDS you have is current, please contact us for the most current version.