



SAFETY DATA SHEET

DOW CHEMICAL COMPANY LIMITED

Safety Data Sheet according to Reg. (EU) No 2015/830

Product name: BETACLEAN™ 3350

Revision Date: 26.08.2016

Version: 13.1

Print Date: 28.08.2017

DOW CHEMICAL COMPANY LIMITED 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/MIXTURE AND OF THE COMPANY/UNDERTAKING

1.1 Product identifier

Product name: BETACLEAN™ 3350

Chemical name of the substance: n-heptane

CASRN: 142-82-5

EC-No.: 205-563-8

REACH Registration Number: 01-2119457603-38

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 LIMITED

DIAMOND HOUSE, LOTUS PARK,

KINGSBURY CRESCENT,

STAINES

England

TW18 3AG

UNITED KINGDOM

Customer Information Number:

+44 (0) 203 139 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 Regulation (EC) No 1272/2008:

Flammable liquids - Category 2 - H225

Skin irritation - Category 2 - H315

Specific target organ toxicity - single exposure - Category 3 - H336
 Aspiration hazard - Category 1 - H304
 Acute aquatic toxicity - Category 1 - H400
 Chronic aquatic toxicity - Category 1 - H410
 For the full text of the H-Statements mentioned in this Section, see Section 16.

2.2 Label elements

Labelling according to Regulation (EC) No 1272/2008:

Hazard pictograms



Signal word: **DANGER**

Hazard statements

H225 Highly flammable liquid and vapour.
 H304 May be fatal if swallowed and enters airways.
 H315 Causes skin irritation.
 H336 May cause drowsiness or dizziness.
 H410 Very toxic to aquatic life with long lasting effects.

Precautionary statements

P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources.
 No smoking.
 P233 Keep container tightly closed.
 P261 Avoid breathing dust/ fume/ gas/ mist/ vapours/ spray.
 P301 + P310 IF SWALLOWED: Immediately call a POISON CENTER/doctor.
 P331 Do NOT induce vomiting.
 P370 + P378 In case of fire: Use dry sand, dry chemical or alcohol-resistant foam to extinguish.

2.3 Other hazards

No data available

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

3.1 Substances

This product is a substance.

| CASRN / EC-No. / Index-No. | REACH Registration Number | Concentration | Component | Classification: REGULATION (EC) No 1272/2008 |
|----------------------------------|---------------------------------|---------------|-----------|--|
| | | | | |

| | | | | |
|--|------------------|------------|-----------|---|
| CASRN 142-82-5 EC-No. 205-563-8 Index-No. 601-008-00-2 | 01-2119457603-38 | <= 100.0 % | n-heptane | Flam. Liq. - 2 - H225 Skin Irrit. - 2 - H315 STOT SE - 3 - H336 Asp. Tox. - 1 - H304 Aquatic Acute - 1 - H400 Aquatic Chronic - 1 - H410 |
|--|------------------|------------|-----------|---|

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

SECTION 4: FIRST AID MEASURES

4.1 Description of first aid measures

General advice: First Aid responders should pay attention to self-protection and use the recommended protective clothing (chemical resistant gloves, splash protection). If potential for exposure exists refer to Section 8 for specific personal protective equipment.

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: Wash off with plenty of water. Suitable emergency safety shower facility should be available in work area.

Eye contact: Flush eyes thoroughly with water for several minutes. Remove contact lenses after the initial 1-2 minutes and continue flushing for several additional minutes. If effects occur, consult a physician, preferably an ophthalmologist. Suitable emergency eye wash facility should be available in work area.

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), any additional important symptoms and effects are described in Section 11: Toxicology Information.

4.3 Indication of any immediate medical attention and special treatment needed

Notes to physician: Maintain adequate ventilation and oxygenation of the patient. The decision of whether to induce vomiting or not should be made by a physician. If lavage is performed, suggest endotracheal and/or esophageal control. Danger from lung aspiration must be weighed against toxicity when considering emptying the stomach. Exposure may increase "myocardial irritability". Do not administer sympathomimetic drugs such as epinephrine unless absolutely necessary. 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: FIREFIGHTING MEASURES

5.1 Extinguishing media

Suitable extinguishing media: Water fog or fine spray. Dry chemical fire extinguishers. Carbon dioxide fire extinguishers. Foam. General purpose synthetic foams (including AFFF type) or protein foams are preferred if available. Alcohol resistant foams (ATC type) may function.

Unsuitable extinguishing media: 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: 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. 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. Avoid accumulation of water. Product may be carried across water surface spreading fire or contacting an ignition source. Contain fire water run-off if possible. Fire water run-off, if not contained, may cause environmental damage. Review the "Accidental Release Measures" and the "Ecological Information" sections of this (M)SDS.

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). Avoid contact with this material during fire fighting operations. If contact is likely, change to full chemical resistant fire fighting clothing with self-contained breathing apparatus. If this is not available, wear full chemical resistant clothing with self-contained breathing apparatus and fight fire from a remote location. For protective equipment in post-fire or non-fire clean-up situations, refer to the relevant sections.

SECTION 6: ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures: Isolate area. Keep unnecessary and unprotected personnel from entering the area. 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: Spills or discharge to natural waterways is likely to kill aquatic organisms. 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.

6.4 Reference to other sections: References to other sections, if applicable, have been provided in the previous sub-sections.

SECTION 7: HANDLING AND STORAGE

7.1 Precautions for safe handling: Keep away from heat, sparks and flame. Avoid breathing vapor. Avoid contact with eyes, 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. Vapors are heavier than air and may travel a long distance and accumulate in low lying areas. Ignition and/or flash back may occur. Ignition sources can include and are not limited to pilot lights, flames, smoking, sparks, heaters, electrical equipment, and static discharges. Electrically bond and ground all containers and equipment before transfer or use of material. 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. Use of non-sparking or explosion-proof equipment may be necessary, depending upon the type of operation. Do not enter confined spaces unless adequately ventilated. Never use air pressure for transferring product unless a risk assessment has been conducted that includes consideration of the flammability of the product. See Section 8, EXPOSURE CONTROLS AND PERSONAL PROTECTION.

7.2 Conditions for safe storage, including any incompatibilities: 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 stability

Storage temperature:

> 5 - < 25 °C

7.3 Specific end use(s): See the technical data sheet on this product for further information.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 Control parameters

Exposure limits are listed below, if they exist.

| Component | Regulation | Type of listing | Value/Notation |
|-----------|------------|-----------------|---------------------------------|
| n-heptane | ACGIH | TWA | 400 ppm |
| | ACGIH | STEL | 500 ppm |
| | Dow IHG | TWA | 100 ppm |
| | 2000/39/EC | TWA | 2,085 mg/m ³ 500 ppm |

GB EH40

TWA

500 ppm

8.2 Exposure controls

Engineering controls: 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.

Individual protection measures

Eye/face protection: Use safety glasses (with side shields). Safety glasses (with side shields) should be consistent with EN 166 or equivalent.

Skin protection

Hand protection: Use chemical resistant gloves classified under Standard EN374: Protective gloves against chemicals and micro-organisms. Examples of preferred glove barrier materials include: Viton. Polyethylene. Neoprene. Chlorinated polyethylene. Nitrile/butadiene rubber ("nitrile" or "NBR"). Polyvinyl alcohol ("PVA"). Ethyl vinyl alcohol laminate ("EVAL"). Examples of acceptable glove barrier materials include: Butyl rubber. Polyvinyl chloride ("PVC" or "vinyl"). Avoid gloves made of: Natural rubber ("latex"). When prolonged or frequently repeated contact may occur, a glove with a protection class of 4 or higher (breakthrough time greater than 120 minutes according to EN 374) is recommended. When only brief contact is expected, a glove with a protection class of 1 or higher (breakthrough time greater than 10 minutes according to EN 374) is recommended. Glove thickness alone is not a good indicator of the level of protection a glove provides against a chemical substance as this level of protection is also highly dependent on the specific composition of the material that the glove is fabricated from. The thickness of the glove must, depending on model and type of material, generally be more than 0.35 mm to offer sufficient protection for prolonged and frequent contact with the substance. As an exception to this general rule it is known that multilayer laminate gloves may offer prolonged protection at thicknesses less than 0.35 mm. Other glove materials with a thickness of less than 0.35 mm may offer sufficient protection when only brief contact is expected. 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.

Other protection: Use protective clothing chemically resistant to this material. Selection of specific items such as face shield, boots, apron, or full body suit will depend on the task.

Respiratory protection: Respiratory protection should be worn when there is a potential to exceed the exposure limit requirements or guidelines. If there are no applicable exposure limit requirements or guidelines, use an approved respirator. Selection of air-purifying or positive-pressure supplied-air will depend on the specific operation and the potential airborne concentration of the material. For emergency conditions, use an approved positive-pressure self-contained breathing apparatus. 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)

Environmental exposure controls

See SECTION 7: Handling and storage and SECTION 13: Disposal considerations for measures to prevent excessive environmental exposure during use and waste disposal.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties

Appearance

| | |
|--|---|
| Physical state | Liquid. |
| Color | Colorless |
| Odor | Characteristic |
| Odor Threshold | No test data available |
| pH | No test data available |
| Melting point/range | No test data available |
| Freezing point | -90 °C <i>Literature</i> |
| Boiling point (760 mmHg) | 98 °C at 1,013 hPa <i>Literature</i> |
| Flash point | closed cup -4 °C <i>PMCC, ASTM D93</i> |
| Evaporation Rate (Butyl Acetate = 1) | No test data available |
| Flammability (solid, gas) | Flammable liquid |
| Lower explosion limit | 1 % vol <i>Literature</i> |
| Upper explosion limit | 6.7 % vol <i>Literature</i> |
| Vapor Pressure | 48 hPa at 20 °C <i>Literature</i> |
| Relative Vapor Density (air = 1) | No test data available |
| Relative Density (water = 1) | 0.71 <i>Literature</i> |
| Water solubility | Insoluble |
| Partition coefficient: n-octanol/water | log Pow: 4.397 <i>Estimated.</i> |
| Auto-ignition temperature | 215 °C <i>Literature</i> |
| Decomposition temperature | No test data available |
| Dynamic Viscosity | 0.4 mPa.s at 20 °C <i>Literature</i> |
| Kinematic Viscosity | No test data available |
| Explosive properties | No test data available |
| Oxidizing properties | No test data available |

9.2 Other information

| | |
|------------------|-------------------|
| Molecular weight | No data available |
|------------------|-------------------|

NOTE: The physical data presented above are typical values and should not be construed as a specification.

SECTION 10: STABILITY AND REACTIVITY

10.1 Reactivity: No dangerous reaction known under conditions of normal use.

10.2 Chemical stability: Stable under recommended storage conditions. See Storage, Section 7.

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: Strong oxidizers.

10.6 Hazardous decomposition products: Decomposition products depend upon temperature, air supply and the presence of other materials.

SECTION 11: TOXICOLOGICAL INFORMATION

Toxicological information appears in this section when such data is available.

11.1 Information on toxicological effects

Acute toxicity

Acute oral toxicity

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 effects. Swallowing may result in gastrointestinal irritation. May cause nausea and vomiting.

For similar material(s):

LD50, Rat, male and female, > 5,000 mg/kg

Acute dermal toxicity

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

For similar material(s):

LD50, Rabbit, > 2,000 mg/kg No deaths occurred at this concentration.

Acute inhalation toxicity

In confined or poorly ventilated areas, vapor can readily accumulate and can cause unconsciousness and death. Symptoms of excessive exposure may be anesthetic or narcotic effects; dizziness and drowsiness may be observed. May cause respiratory irritation and central nervous system depression. Symptoms may include headache, dizziness and drowsiness, progressing to incoordination and unconsciousness. Excessive exposure may increase sensitivity to epinephrine and increase myocardial irritability (irregular heartbeats). May cause nausea and vomiting.

LC50, Rat, male and female, 4 Hour, vapour, > 29.3 mg/l No deaths occurred at this concentration.

Skin corrosion/irritation

Brief contact may cause slight skin irritation with local redness.

May cause burning sensation.

May cause itching.

May cause drying and flaking of the skin.

May stain skin.

Serious eye damage/eye irritation

May cause slight temporary eye irritation.

May cause slight temporary corneal injury.

May cause pain disproportionate to the level of irritation to eye tissues.

Sensitization

For skin sensitization:

For similar material(s):

Did not cause allergic skin reactions when tested in guinea pigs.

For respiratory sensitization:

No data available.

Specific Target Organ Systemic Toxicity (Single Exposure)

May cause drowsiness or dizziness.

Route of Exposure: Inhalation

Target Organs: Central nervous system

Specific Target Organ Systemic Toxicity (Repeated Exposure)

Based on available data, repeated exposures are not anticipated to cause additional significant adverse effects.

Heptane is part of a mixture which caused polyneuropathy. However, there is no clear evidence that heptane causes peripheral nervous system effects.

Carcinogenicity

No relevant data found.

Teratogenicity

For similar material(s): Did not cause birth defects or any other fetal effects in laboratory animals.

Reproductive toxicity

For similar material(s): In animal studies, did not interfere with reproduction.

Mutagenicity

In vitro genetic toxicity studies were negative.

Aspiration Hazard

May be fatal if swallowed and enters airways.

SECTION 12: ECOLOGICAL INFORMATION

Ecotoxicological information appears in this section when such data is available.

12.1 Toxicity

Acute toxicity to fish

Material is highly toxic to aquatic organisms on an acute basis (LC50/EC50 between 0.1 and 1 mg/L in the most sensitive species tested).

LL50, *Oncorhynchus mykiss* (rainbow trout), 96 Hour, 5.738 mg/l

Acute toxicity to aquatic invertebrates

EC50, Daphnia magna (Water flea), static test, 48 Hour, 1.5 mg/l

EC50, crustacean Chaetogammarus marinus, 48 Hour, 0.2 mg/l

Acute toxicity to algae/aquatic plants

EL50, Pseudokirchneriella subcapitata (green algae), 72 Hour, Biomass, 4.34 mg/l

Other, Pseudokirchneriella subcapitata (green algae), 72 Hour, Biomass, 0.97 mg/l, Estimated.

12.2 Persistence and degradability

Biodegradability: Material is expected to biodegrade very slowly (in the environment). Fails to pass OECD/EEC tests for ready biodegradability. Biodegradation rate may increase in soil and/or water with acclimation.

12.3 Bioaccumulative potential

Bioaccumulation: Bioconcentration potential is moderate (BCF between 100 and 3000 or Log Pow between 3 and 5).

Partition coefficient: n-octanol/water(log Pow): 4.397 Estimated.

Bioconcentration factor (BCF): 552 Fish Measured

12.4 Mobility in soil

Expected to be relatively immobile in soil (Koc > 5000).

Partition coefficient (Koc): 2040 - 16000 Estimated.

12.5 Results of PBT and vPvB assessment

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

12.6 Other adverse effects

No data available

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 2008/98/EC. 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.

The definitive assignment of this material to the appropriate EWC group and thus its proper EWC code will depend on the use that is made of this material. Contact the authorized waste disposal services.

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

Classification for ROAD and Rail transport (ADR/RID):

| | |
|-----------------------------------|----------------------------------|
| 14.1 UN number | UN 1206 |
| 14.2 UN proper shipping name | HEPTANES |
| 14.3 Transport hazard class(es) | 3 |
| 14.4 Packing group | II |
| 14.5 Environmental hazards | Heptane |
| 14.6 Special precautions for user | Hazard Identification Number: 33 |

Classification for SEA transport (IMO-IMDG):

| | |
|---|--|
| 14.1 UN number | UN 1206 |
| 14.2 UN proper shipping name | HEPTANES |
| 14.3 Transport hazard class(es) | 3 |
| 14.4 Packing group | II |
| 14.5 Environmental hazards | Heptane |
| 14.6 Special precautions for user | EmS: F-E, S-D |
| 14.7 Transport in bulk according to Annex I or II of MARPOL 73/78 and the IBC or IGC Code | Consult IMO regulations before transporting ocean bulk |

Classification for AIR transport (IATA/ICAO):

| | |
|-----------------------------------|--------------------|
| 14.1 UN number | UN 1206 |
| 14.2 UN proper shipping name | Heptanes |
| 14.3 Transport hazard class(es) | 3 |
| 14.4 Packing group | II |
| 14.5 Environmental hazards | Not applicable |
| 14.6 Special precautions for user | No data available. |

This information is not intended to convey all specific regulatory or operational requirements/information relating to this product. Transportation classifications may vary by container volume and may be influenced by regional or country variations in regulations. Additional transportation system information can be obtained through an authorized sales or customer service representative. It is the responsibility of the transporting organization to follow all applicable laws, regulations and rules relating to the transportation of the material.

SECTION 15: REGULATORY INFORMATION

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture**REACH Regulation (EC) No 1907/2006**

This product contains only components that have been either pre-registered, are exempt from registration or are not subject to registration according to Regulation (EC) No. 1907/2006 (REACH). The aforementioned indications of the REACH registration status are provided in good faith and believed to be accurate as of the effective date shown above. However, no warranty, express or implied, is given. It is the buyer's/user's responsibility to ensure that his/her understanding of the regulatory status of this product is correct.

Seveso III: Directive 2012/18/EU of the European Parliament and of the Council on the control of major-accident hazards involving dangerous substances.

Listed in Regulation: FLAMMABLE LIQUIDS

Number in Regulation: P5c

5,000 t

50,000 t

Listed in Regulation: ENVIRONMENTAL HAZARDS

Number in Regulation: E1

100 t

200 t

15.2 Chemical safety assessment

Not applicable

SECTION 16: OTHER INFORMATION

Full text of H-Statements referred to under sections 2 and 3.

| | |
|------|---|
| H225 | Highly flammable liquid and vapour. |
| H304 | May be fatal if swallowed and enters airways. |
| H315 | Causes skin irritation. |
| H336 | May cause drowsiness or dizziness. |
| H400 | Very toxic to aquatic life. |
| H410 | Very toxic to aquatic life with long lasting effects. |

Revision

Identification Number: 101213682 / A279 / Issue Date: 26.08.2016 / Version: 13.1

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

Legend

| | |
|------------|--|
| 2000/39/EC | Europe. Commission Directive 2000/39/EC establishing a first list of indicative occupational exposure limit values |
| ACGIH | USA. ACGIH Threshold Limit Values (TLV) |
| Dow IHG | Dow Industrial Hygiene Guideline |
| GB EH40 | UK. EH40 WEL - Workplace Exposure Limits |
| STEL | Short-term exposure limit |
| TWA | Time weighted average |

Information Source and References

This SDS is prepared by Product Regulatory Services and Hazard Communications Groups from information supplied by internal references within our company.

DOW CHEMICAL COMPANY LIMITED 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.