Safety Data Sheet
Dow Chemical Company Ltd

Product Name: BETAPRIME(TM) 5504

Revision Date: 2007/10/05
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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.

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

Product Name
BETAPRIME(TM) 5504

Use of the substance/preparation
A primer -- For use in automotive applications.

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

Customer Information Number: 0203 139 4000
For questions about this SDS, contact: SDSQuestion@dow.com

EMERGENCY TELEPHONE NUMBER
24-Hour Emergency Contact: +44 (0) 1553 761 251
Local Emergency Contact: 00 44 155 37 61 251

2. Hazards Identification

Highly flammable.
Harmful by inhalation.
Irritating to eyes, respiratory system and skin.
May cause sensitization by inhalation and skin contact.

3. Composition/information on ingredients

Component	Amount	Classification:	CAS #	EC #
Butanone; ethyl methyl ketone	>= 40.0 - <= 50.0 %	F: R11; Xi: R36; R66; R67	78-93-3	201-159-0

4,4'-Methylenediphenyl diisocyanate; diphenylmethane-4,4'-diisocyanate (MDI)	>= 1.0 - < 5.0 %	Xn: R20; Xi: R36/37/38; R42/43	101-68-8	202-966-0
Ethyl acetate	< 10.0 %	F: R11; Xi: R36; R66; R67	141-78-6	205-500-4
3-Isocyanatomethyl-3,5,5-trimethylcyclohexyl isocyanate; isophorone di-isocyanate	>= 0.5 - < 1.0 %	T: R23; Xi: R36/37/38; R42/43; N: R51/53	4098-71-9	223-861-6
3-Methoxy-1-butyl acetate##	>= 10.0 - <= 20.0 %	Not classified.	4435-53-4	224-644-9
Silicone modified urethane adduct	>= 1.0 - < 10.0 %	R53; Xi: R43	Not available	Newly notified substance

Voluntarily disclosed component(s).
See Section 16 for full text of R-phrases.

4. First-aid measures

Eye Contact: Immediately flush eyes with water; remove contact lenses, if present, after the first 5 minutes, then continue flushing eyes for at least 15 minutes. Obtain medical attention without delay, preferably from an ophthalmologist.
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. An MDI skin decontamination study demonstrated that cleaning very soon after exposure is important, and that a polyglycol-based skin cleanser or corn oil may be more effective than soap and water. Discard items which cannot be decontaminated, including leather articles such as shoes, belts and watchbands.
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.
Ingestion: If swallowed, seek medical attention. Do not induce vomiting unless directed to do so by medical personnel.
Notes to Physician: Maintain adequate ventilation and oxygenation of the patient. May cause asthma-like (reactive airways) symptoms. Bronchodilators, expectorants and antitussives may be of help. May cause respiratory sensitization or asthma-like symptoms. Bronchodilators, expectorants and antitussives may be of help. Treat bronchospasm with inhaled beta2 agonist and oral or parenteral corticosteroids. Respiratory symptoms, including pulmonary edema, may be delayed. Persons receiving significant exposure should be observed 24-48 hours for signs of respiratory distress. If you are sensitized to diisocyanates, consult your physician regarding working with other respiratory irritants or sensitizers. Inhalation of vapors may result in skin sensitization. In sensitized individuals, reexposure to very small amounts of vapor, mist, or liquid may cause a severe allergic skin reaction. No specific antidote. Treatment of exposure should be directed at the control of symptoms and the clinical condition of the patient.
Medical Conditions Aggravated by Exposure: Excessive exposure may aggravate preexisting asthma and other respiratory disorders (e.g. emphysema, bronchitis, reactive airways dysfunction syndrome). Skin contact may aggravate preexisting dermatitis.

5. Fire Fighting Measures

Extinguishing Media: Water fog or fine spray. Dry chemical fire extinguishers. Carbon dioxide fire extinguishers. Foam. Do not use direct water stream. Straight or direct water streams may not be effective to extinguish fire. Alcohol resistant foams (ATC type) are preferred. General purpose synthetic foams (including AFFF) or protein foams may function, but will be less effective.
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. Burning liquids may be moved by flushing with water to protect personnel and minimize property damage. 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.
Unusual Fire and Explosion Hazards: Product reacts with water. Reaction may produce heat and/or gases. Violent steam generation or eruption may occur upon application of direct water stream to hot liquids. 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.
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: Nitrogen oxides. Hydrogen cyanide. Carbon monoxide. Carbon dioxide.

6. Accidental Release Measures

Steps to be Taken if Material is Released or Spilled: Pump with explosion-proof equipment. If available, use foam to smother or suppress.
Personal Precautions: Eliminate all sources of ignition in vicinity of spill or released vapor to avoid fire or explosion. Vapor explosion hazard. Keep out of sewers. Check area with combustible gas detector before reentering area. Ground and bond all containers and handling equipment. See Section 10 for more specific information. For large spills, warn public of downwind explosion hazard.
Environmental Precautions: Prevent from entering into soil, ditches, sewers, waterways and/or groundwater. See Section 12, Ecological Information.

7. Handling and Storage

Handling
General Handling: 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. Electrically bond and ground all containers, personnel and equipment before transfer or use of material. Never use air pressure for transferring product. 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. Minimize sources of ignition, such as static build-up, heat, spark or flame. Keep container closed. Store in a dry place. Protect from atmospheric moisture.

Storage
Do not store product contaminated with water to prevent potential hazardous reaction. See Section 10 for more specific information.

Storage temperature:
5 - 35 °C

8. Exposure Controls / Personal Protection

Exposure Limits

Component	List	Type	Value
Butanone; ethyl methyl ketone	Ireland OELV	TWA	600 mg/m3 200 ppm SKIN
	Ireland OELV	STEL	900 mg/m3 300 ppm SKIN
	ACGIH	TWA	200 ppm BEI
	ACGIH	STEL	300 ppm BEI
	EU IOELV	TWA	600 mg/m3 200 ppm
	EU IOELV	STEL	900 mg/m3 300 ppm
	UK WEL	TWA	600 mg/m3 200 ppm SKIN
	UK WEL	STEL	899 mg/m3 300 ppm SKIN
4,4'-Methylenediphenyl diisocyanate; diphenylmethane-4,4'-diisocyanate (MDI)	Ireland OELV	TWA as NCO	0.02 mg/m3 SEN
	Ireland OELV	STEL as NCO	0.07 mg/m3 SEN
	ACGIH	TWA	0.005 ppm
	UK WEL	TWA as NCO	0.02 mg/m3 SEN
	UK WEL	STEL as NCO	0.07 mg/m3 SEN
Ethyl acetate	Ireland OELV	TWA	1,400 mg/m3 400 ppm
	ACGIH	TWA	400 ppm
	UK WEL	TWA	200 ppm
	UK WEL	STEL	400 ppm
3-Isocyanatomethyl-3,5,5-trimethylcyclohexyl isocyanate; isophorone di-isocyanate	Ireland OELV	TWA as NCO	0.02 mg/m3 SEN
	Ireland OELV	STEL as NCO	0.07 mg/m3 SEN
	ACGIH	TWA	0.005 ppm
	UK WEL	TWA as NCO	0.02 mg/m3 SEN
	UK WEL	STEL as NCO	0.07 mg/m3 SEN

Although some of the fillers used in this product may have exposure guidelines, no exposure would be expected under normal handling conditions because of the physical state of the material.
A BEI notation following the exposure guideline refers to a guidance value for assessing biological monitoring results as an indicator of the uptake of a substance from all routes of exposures.
A "SEN" notation following the exposure guideline refers to the potential to produce sensitization, as confirmed by human or animal data.
A "skin" notation following the 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.

Personal Protection

Eye/Face Protection: Use chemical goggles. If exposure causes eye discomfort, use a full-face respirator. Chemical goggles should be consistent with EN 166 or equivalent. Eye wash fountain should be located in immediate work area.
Skin 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. Remove contaminated clothing immediately, wash skin area with soap and water, and launder clothing before reuse or dispose of properly. Items which cannot be decontaminated, such as shoes, belts and watchbands, should be removed and disposed of properly.

Hand protection: Use chemical resistant gloves classified under Standard EN374: Protective gloves against chemicals and micro-organisms. Examples of preferred glove barrier materials include: Butyl rubber. Polyethylene. Ethyl vinyl alcohol laminate ("EVAL"). Examples of acceptable glove barrier materials include: Chlorinated polyethylene. Natural rubber ("latex"). Neoprene. Nitrile/butadiene rubber ("nitrile" or "NBR"). Polyvinyl chloride ("PVC" or "vinyl"). Viton. 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 atmospheric levels may exceed the exposure guideline, use an approved air-purifying respirator equipped with an organic vapor sorbent and a particle filter. For situations where the atmospheric levels may exceed the level for which an air-purifying respirator is effective, use a positive-pressure air-supplying respirator (air line or self-contained breathing apparatus). For emergency response or for situations where the atmospheric level is unknown, use an approved positive-pressure 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 with a particulate pre-filter, type AP2.
Ingestion: Use good personal hygiene. Do not consume or store food in the work area. Wash hands before smoking or eating.

Engineering Controls

Ventilation: Use only with adequate ventilation. Local exhaust ventilation may be necessary for some operations. Provide general and/or local exhaust ventilation to control airborne levels below the exposure guidelines. Exhaust systems should be designed to move the air away from the source of vapor/aerosol generation and people working at this point. The odor and irritancy of this material are inadequate to warn of excessive exposure.

9. Physical and Chemical Properties

Physical State	Liquid
Color	Black
Odor	Solvent
Flash Point - Closed Cup	-10 °C *Supplier*
Flammable Limits In Air	**Lower**: No test data available **Upper**: No test data available
Autoignition Temperature	No test data available
Vapor Pressure	No test data available
Boiling Point (760 mmHg)	Not applicable.
Vapor Density (air = 1)	No test data available
Specific Gravity (H2O = 1)	0.939 *Supplier*
Freezing Point	No test data available
Melting Point	Not applicable
Solubility in Water (by weight)	No test data available
pH	Not applicable

Dynamic Viscosity	No test data available
Kinematic Viscosity	No test data available

10. Stability and Reactivity

Stability/Instability
Stable under recommended storage conditions. See Storage, Section 7.
Conditions to Avoid: Avoid temperatures above 40°C (104°F) Exposure to elevated temperatures can cause product to decompose. Generation of gas during decomposition can cause pressure in closed systems. Avoid static discharge. Avoid moisture.

Incompatible Materials: Avoid contact with: Acids. Alcohols. Amines. Ammonia. Bases. Metal compounds. Moist air. Strong oxidizers. Products based on diisocyanates like TDI and MDI react with many materials to release heat. The reaction rate increases with temperature as well as with increased contact; these reactions can become violent. Contact is increased by stirring or if the other material acts as a solvent. Products based on diisocyanates such as TDI and MDI are not soluble in water and will sink to the bottom, but react slowly at the interface. The reaction forms carbon dioxide gas and a layer of solid polyurea. Avoid contact with absorbent materials such as: Moist organic absorbents.

Hazardous Polymerization
Can occur. Polymerization can be catalyzed by: Strong bases. Water.

Thermal Decomposition
Decomposition products depend upon temperature, air supply and the presence of other materials. Gases are released during decomposition.

11. Toxicological Information

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.
Based on information for component(s): LD50, Rat > 2,000 mg/kg
Eye Contact
May cause moderate eye irritation. May cause moderate corneal injury. Vapor may cause eye irritation experienced as mild discomfort and redness.
Skin Contact
Prolonged contact may cause moderate skin irritation with local redness. May cause drying and flaking of the skin.
Skin Absorption
Prolonged skin contact is unlikely to result in absorption of harmful amounts.
The LD50 has not been determined.
Inhalation
Vapor concentrations are attainable which could be hazardous on single exposure. May cause respiratory irritation and central nervous system depression. Symptoms may include headache, dizziness and drowsiness, progressing to incoordination and unconsciousness. May cause nausea and vomiting. For the minor component(s): Excessive exposure may cause irritation to upper respiratory tract (nose and throat) and lungs. May cause pulmonary edema (fluid in the lungs.) Effects may be delayed. Decreased lung function has been associated with overexposure to isocyanates. This material contains mineral and/or inorganic fillers. There is essentially no potential for inhalation exposure to these fillers incidental to industrial handling due to the physical state.
Sensitization
Skin
A component in this mixture has been shown to be a skin sensitizer. Once an individual is sensitized, reexposure to very small amounts of vapor, mist or liquid isophorone diisocyanate may cause an

allergic skin reaction. Animal studies have shown that skin contact with isocyanates may play a role in respiratory sensitization.

Respiratory

A component in this mixture may cause an allergic respiratory response. Reexposure to extremely low isocyanate concentrations may cause allergic respiratory reactions in individuals already sensitized. Asthma-like symptoms may include coughing, difficult breathing and a feeling of tightness in the chest. Occasionally, breathing difficulties may be life threatening.

Repeated Dose Toxicity

Contains component(s) which have been reported to cause effects on the following organs in animals: Liver. Respiratory tract. Tissue injury in the upper respiratory tract and lungs has been observed in laboratory animals after repeated excessive exposures to MDI/polymeric MDI aerosols. Methyl ethyl ketone has caused liver effects in laboratory animals exposed by inhalation to high concentrations. Methyl ethyl ketone is probably not neurotoxic in itself but it potentiates the neurotoxicity of methyl-n-butyl ketone and n-hexane.

Chronic Toxicity and Carcinogenicity

Lung tumors have been observed in laboratory animals exposed to respirable aerosol droplets of MDI/Polymeric MDI (6 mg/m3) for their lifetime. Tumors occurred concurrently with respiratory irritation and lung injury. Current exposure guidelines are expected to protect against these effects reported for MDI.

Developmental Toxicity

Contains component(s) which did not cause birth defects in animals; other fetal effects occurred only at doses toxic to the mother.

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.

12. Ecological Information

CHEMICAL FATE

Data for Component: **Butanone; ethyl methyl ketone**

Movement & Partitioning

Bioconcentration potential is low (BCF less than 100 or log Pow less than 3). Potential for mobility in soil is very high (Koc between 0 and 50).
Henry's Law Constant (H): 2.44E-5 atm*m3/mole; 25 °C Measured
Partition coefficient, n-octanol/water (log Pow): 0.29 Measured
Partition coefficient, soil organic carbon/water (Koc): 3.8 Estimated

Persistence and Degradability

Material is expected to be readily biodegradable.

Data for Component: **4,4'-Methylenediphenyl diisocyanate; diphenylmethane-4,4'-diisocyanate (MDI)**

Movement & Partitioning

In the aquatic and terrestrial environment, movement is expected to be limited by its reaction with water forming predominantly insoluble polyureas.

Persistence and Degradability

In the aquatic and terrestrial environment, material reacts with water forming predominantly insoluble polyureas which appear to be stable. In the atmospheric environment, material is expected to have a short tropospheric half-life, based on calculations and by analogy with related diisocyanates.

Data for Component: **Ethyl acetate**

Movement & Partitioning

Bioconcentration potential is low (BCF less than 100 or log Pow less than 3). Potential for mobility in soil is very high (Koc between 0 and 50).
Henry's Law Constant (H): 1.2E-4 atm*m3/mole; 25 °C Measured

Partition coefficient, n-octanol/water (log Pow): 0.73 Measured
Partition coefficient, soil organic carbon/water (Koc): 3 Estimated
Bioconcentration Factor (BCF): 30; fish; Measured

Persistence and Degradability

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

Biodegradation	Exposure Time	Method
100 %	28 d	OECD 301D Test

Data for Component: **3-Isocyanatomethyl-3,5,5-trimethylcyclohexyl isocyanate; isophorone di-isocyanate**

Movement & Partitioning

For this family of materials: In the aquatic and terrestrial environment, movement is expected to be limited by its reaction with water forming predominantly insoluble polyureas.
Henry's Law Constant (H): 6.57E-05 atm*m3/mole; 25 °C Estimated
Partition coefficient, n-octanol/water (log Pow): 4.75 Estimated
Partition coefficient, soil organic carbon/water (Koc): 36,000 Estimated

Persistence and Degradability

Based on stringent OECD test guidelines, this material cannot be considered as readily biodegradable; however, these results do not necessarily mean that the material is not biodegradable under environmental conditions. For this family of materials: In the aquatic and terrestrial environment, material reacts with water forming predominantly insoluble polyureas which appear to be stable. In the atmospheric environment, material is expected to have a short tropospheric half-life, based on calculations and by analogy with related diisocyanates.
OECD Biodegradation Tests:

Biodegradation	Exposure Time	Method
62 %	28 d	OECD 301E Test

Data for Component: **Silicone modified urethane adduct**

Movement & Partitioning

Bioconcentration potential is high (BCF > 3000 or Log Pow between 5 and 7).

Persistence and Degradability

Based on stringent OECD test guidelines, this material cannot be considered as readily biodegradable; however, these results do not necessarily mean that the material is not biodegradable under environmental conditions.
OECD Biodegradation Tests:

Biodegradation	Exposure Time	Method
23 %	28 d	OECD 301B Test

ECOTOXICITY

Data for Component: **Butanone; ethyl methyl ketone**

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

Fish Acute & Prolonged Toxicity
LC50, bluegill (Lepomis macrochirus): 1,690 mg/l
Aquatic Invertebrate Acute Toxicity
EC50, water flea Daphnia magna, immobilization: 5,091 mg/l
Aquatic Plant Toxicity
EC50, alga Scenedesmus sp., biomass growth inhibition: 4,300 mg/l

Data for Component: **4,4'-Methylenediphenyl diisocyanate; diphenylmethane-4,4'-diisocyanate (MDI)**

The measured ecotoxicity is that of the hydrolyzed product, generally under conditions maximizing production of soluble species. Material is not classified as dangerous to aquatic organisms (LC50/EC50/IC50 greater than 100 mg/L in most sensitive species).

Toxicity to Soil Dwelling Organisms
LC50, Earthworm Eisenia foetida, adult, 14 d: > 1,000 mg/kg

Data for Component: **Ethyl acetate**

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

Fish Acute & Prolonged Toxicity
LC50, fathead minnow (Pimephales promelas): 230 - 290 mg/l
LC50, guppy (Poecilia reticulata): 210 mg/l
Aquatic Invertebrate Acute Toxicity
EC50, water flea Daphnia pulex, immobilization: 262 mg/l
Aquatic Plant Toxicity
EC50, green alga Selenastrum capricornutum, biomass growth inhibition: > 2,000 mg/l

Data for Component: **3-Isocyanatomethyl-3,5,5-trimethylcyclohexyl isocyanate; isophorone di-isocyanate**

Material is toxic to aquatic organisms (LC50/EC50/IC50 between 1 and 10 mg/L in most sensitive species). For this family of materials: The measured ecotoxicity is that of the hydrolyzed product, generally under conditions maximizing production of soluble species.

Fish Acute & Prolonged Toxicity
LC50, golden orfe (Leuciscus idus), static, 48 h: 1.8 mg/l
Aquatic Invertebrate Acute Toxicity
EC50, water flea Daphnia magna, 24 h, immobilization: 84 mg/l
Aquatic Plant Toxicity
EC50, alga Scenedesmus sp., biomass growth inhibition, 72 h: 119 mg/l
Toxicity to Micro-organisms
EC10; bacteria, respiration inhibition, 6 h: 554 mg/l

Data for Component: **Silicone modified urethane adduct**

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

Aquatic Invertebrate Acute Toxicity
EC50, water flea Daphnia magna, 48 h, immobilization: > 100 mg/l

13. Disposal Considerations

All disposal methods must be in compliance with the EU framework Directives 91/156/EEC, 91/689/EEC and their subsequent adaptations, as implemented in National Laws and Regulations, as well as EU Directives dealing with priority waste streams. Transboundary shipment of wastes must be in compliance with EU Regulation 259/93 and subsequent modifications.
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.

14. Transport Information

ROAD & RAIL
Proper Shipping Name: COATING SOLUTION
Hazard Class: 3 **ID Number:** UN1139 **Packing Group:** PG II

Classification: F1
Kemler Code: 33

Tremcard Number: 30GF1-I+II
Special Provisions: Special provision 640D

AIR
Proper Shipping Name: COATING SOLUTION
Hazard Class: 3 **ID Number:** UN1139 **Packing Group:** PG II
Cargo Packing Instruction: 307
Passenger Packing Instruction: 305

INLAND WATERWAYS
Proper Shipping Name: COATING SOLUTION
Hazard Class: 3 **ID Number:** UN1139 **Packing Group:** PG II
Classification: F1
Kemler Code: 33
Tremcard Number: 30GF1-I+II
Special Provisions: Special provision 640D

15. Regulatory Information

European Inventory of Existing Commercial Chemical Substances (EINECS)
Contains a newly notified substance. For export from the EC notification requirements may apply.

EC Classification and User Label Information
Hazard Symbol :
Xn - Harmful.
F - Highly flammable.
Risk Phrases :
R11 **-** Highly flammable.
R20 **-** Harmful by inhalation.
R36/37/38 **-** Irritating to eyes, respiratory system and skin.
R42/43 **-** May cause sensitization by inhalation and skin contact.

Safety Phrases :
S23 **-** Do not breathe vapour.
S24 **-** Avoid contact with skin.
S37 **-** Wear suitable gloves.
S45 **-** In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).
S60 **-** This material and its container must be disposed of as hazardous waste.
Contains: 3-Isocyanatomethyl-3,5,5-trimethylcyclohexyl isocyanate; isophorone di-isocyanate
4,4'-Methylenediphenyl diisocyanate; diphenylmethane-4,4'-diisocyanate (MDI)
Silicone modified urethane adduct

Contains isocyanates. See information supplied by the manufacturer.
Warning - this preparation contains a substance not yet tested completely.

16. Other Information

Risk-phrases in the Composition section
R11 Highly flammable.

R20	Harmful by inhalation.
R23	Toxic by inhalation.
R36	Irritating to eyes.
R36/37/38	Irritating to eyes, respiratory system and skin.
R42/43	May cause sensitization by inhalation and skin contact.
R43	May cause sensitization by skin contact.
R51/53	Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
R53	May cause long-term adverse effects in the aquatic environment.
R66	Repeated exposure may cause skin dryness or cracking.
R67	Vapours may cause drowsiness and dizziness.

Revision

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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.