

Material Safety Data Sheet



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SAFETY DATA SHEET

6/ 8/2004

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

DOW CHEMICAL COMPANY LTD
2 HEATHROW BOULEVARD
284 BATH ROAD
WEST DRAYTON
MIDDLESEX
UB7 0DQ

24 HOUR EMERGENCY RESPONSE NUMBER : +44-1553-761-251

For product information: +44-0208-917-5000

Product Name: BETAPRIME(TM) 5500

LV70: 72728

Issue Date: June 04

Ref: AG183

Use of the substance/preparation
Primer. Adhesion promotor.

2. COMPOSITION/INFORMATION ON INGREDIENTS

Dangerous components (see section 16 for complete R-phrases):

			CAS	EC No
Methyl ethyl ketone	<60 %	F, Xi; R11-36-66-67	000078-93-3	201-159-0
Isophorone di-isocyanate	<2 %	T; R23, Xi; R36/37/38, R42/43, N; R51/53	004098-71-9	223-861-6
Carbon black	<10 %		001333-86-4	215-609-9
Diphenylmethane-4,4'-diisocyanate (4,4'-MDI)	<1 %	Xn; R20, Xi; 36/37/38-42/43	000101-68-8	202-966-0

3. HAZARDS IDENTIFICATION

Highly flammable. Irritating to eyes. Repeated exposure may cause skin dryness or cracking. Vapours may cause drowsiness and dizziness. Harmful by inhalation.

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4. FIRST-AID MEASURES

Never give fluids or induce vomiting if patient is unconscious or is having convulsions.

Inhalation

Move person to fresh air; if effects occur, consult a physician.

Skin Contact

Immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing. Seek medical attention if symptoms occur or irritation persists. Wash clothing before reuse.

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.

5. FIRE-FIGHTING MEASURES**Extinguishing Media**

Dry chemical. Water fog or fine spray. Foam.

Protection of Firefighters

Wear protective clothing and use self-contained breathing apparatus.

6. ACCIDENTAL RELEASE MEASURES**Personal Precautions**

Ventilate area of leak or spill. Avoid eye and skin contact. Spills may cause very slippery surfaces.

Environmental Precautions

Contain spilled material to prevent contamination of soil, surface water or ground water.

Methods of Cleaning Up

Absorb with materials such as: Cat litter. If available, use foam to smother or suppress. Dispose of according to applicable regulations, see Section 13, DISPOSAL CONSIDERATIONS.

7. HANDLING AND STORAGE

Handling

No smoking, sparks or open flames when handling this product. Use of non-sparking or explosion proof equipment may be necessary, depending upon type of operation. Containers, even those that have been emptied, can contain vapours. Do not cut, drill, grind, weld or perform similar operations on or near empty containers. Never use air pressure for transferring product. Electrically ground all equipment.

Storage

Store in closed containers. Store in a cool, dry place. Keep away from heat, sparks and flame.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Exposure Guidelines

Diphenylmethane-4,4'-diisocyanate: ACGIH(R) Threshold Limit Value (TLV (R)) is 0.005 ppm TWA-8 hours.

Methyl ethyl ketone: ACGIH Threshold Limit Value (TLV) is 200 ppm TWA-8 hours and Short Term Exposure Limit (STEL) is 300 ppm. The UK Health and Safety Executive has established an Occupational Exposure Standard (OES) of 200ppm 8-hour TWA, 300ppm 15-min STEL (Skin).

Carbon black: ACGIH Threshold Limit Value (TLV) is 3.5 mg/m³ TWA-8 hours, A4. The UK Health and Safety Executive has established an Occupational Exposure Standard(OES) of 3.5mg/m³ 8-hour TWA.

Engineering Controls

Provide general and/or local exhaust ventilation to control airborne levels below the exposure guidelines. Use only with adequate ventilation. Exhaust systems should be designed to move the air away from the source of vapour/aerosol-generation and people working at this point.

Personal Protective Equipment

- 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 vapour 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.

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- Protective Clothing

Use protective clothing chemically resistant to this material. Selection of specific items such as face shield, gloves, boots, apron, or full body-suit will depend on operation. Remove contaminated clothing immediately, wash skin area with soap and water; 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.

- Eye/Face Protection

Use chemical goggles. If vapour exposure causes eye discomfort, use a full-face supplied-air respirator.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	: liquid
Colour	: black
Odour	: characteristic
pH	: not determined
	: 80 deg.C
Melting point/range	: not determined
Flash point	: -10 deg.C
Auto-ignition temp.	: not determined
Explosion limits	: 0.8-11.5 %vol/vol
Vapour pressure	: 200 mbar (20 deg.C)
Rel. density (water=1)	: 0.95 g/cm ³ (20 deg.C)
Rel. vapour density (air=1)	: 2.5
Viscosity	: 14 sec. (23°C/4mm)
Water solubility	: reacts with water

10. STABILITY AND REACTIVITY**Chemical Stability**

Stable under normal storage conditions.

Materials to Avoid

Strong oxidising agents. Acids.

Hazardous Polymerisation

Will not occur.

11. TOXICOLOGICAL INFORMATION**Acute toxicity****- Ingestion**

Low toxicity if swallowed. Single dose oral LD50 has not been determined. Small amounts swallowed incidental to normal handling operations are not likely to cause injury; swallowing amounts larger than that may cause injury.

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- Skin Contact

The dermal LD50 has not been determined. Prolonged skin contact is unlikely to result in absorption of harmful amounts.

- Inhalation

Vapour concentrations are attainable and could be hazardous on single exposure.

Decreased lung function has been associated with overexposure to isocyanates.

Signs and symptoms of excessive exposure may include: Nausea and/or vomiting.

Irritation

- Skin Brief contact is essentially nonirritating to the skin. Prolonged exposure may cause moderate skin irritation.

- Eyes

May cause pain disproportionate to the level of irritation to eye tissues. May cause moderate eye irritation. Vapour or mist may cause eye irritation.

- Inhalation

Excessive exposure to solvent(s) may cause respiratory irritation and central nervous system depression.

Symptoms may include: Headache. Dizziness. Drowsiness. Incoordination. Unconsciousness.

Sensitisation

Skin contact may cause an allergic skin reaction. Animal studies have shown that skin contact with isocyanates may play a role in respiratory sensitisation. May cause allergic respiratory response. MDI concentrations below the exposure guidelines may cause allergic respiratory reactions in individuals already sensitised.

Developmental/Reproductive Effects

Methyl ethyl ketone: Did not cause birth defects in laboratory animals; other fetal effects occurred only at doses toxic to the mother.

Diphenylmethane-4,4'-diisocyanate: In laboratory animals, MDI/polymeric MDI did not cause birth defects; other fetal effects occurred only at high doses which were toxic to the mother.

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Mutagenicity

Mutagenicity data on MDI are inconclusive. MDI was weakly positive in some in vitro studies; other in vitro studies were negative. Animal mutagenicity studies were predominantly negative.

Methyl ethyl ketone: In an NTP (National Toxicology Program, USA) chronic 2-year inhalation study on glutaraldehyde, no carcinogenicity was seen in rats or in mice. Animal genetic toxicity studies were predominantly negative.

Carcinogenicity

Lung tumors have been observed in laboratory animals exposed to 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.

Other Information

Contains component(s), which in animals, has/have been shown to cause effects on: Kidney. Liver. Lung. Heart. Blood.

In animals, has been shown to cause: Irritation to the eyes and upper respiratory tract (nose and throat).

Tissue injury in the upper respiratory tract and lungs has been observed in laboratory animals after repeated excessive exposures to MDI/polymeric MDI aerosols.

12. ECOLOGICAL INFORMATION

Assessments based on data for the individual components of this preparation.

Mobility and Bioaccumulation Potential

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).

Degradation

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

Aquatic Toxicity

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

13. DISPOSAL CONSIDERATIONS

Disposal

Any disposal practice should be in compliance with Council Directive 91/689/EEC and with all local and national laws and regulations.

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14. TRANSPORT INFORMATION

Road & Rail

Proper shipping name: COATING SOLUTION
Truck/Rail ADR/RID : 3 Label : 3
Classification Code : F1
Packing Group : II
Kemler Code : 33 UN Number : 1139
Tremcard Nr. CEFIC : 30GF1-II

Sea

Proper shipping name: COATING SOLUTION
Sea - IMO/IMDG Class: 3 UN Nr : 1139 Label: 3
Packing Group : II EMS : F-ES-E
Marine Pollutant : N (Y/N)

Air

Proper shipping name: COATING SOLUTION
Air-ICAO/IATA Class : 3 UN Nr : 1139 Label: 3
Sub Class :
Packing Group : II Pack Instr. Passenger : 305
Pack Instr. Cargo : 307

Remarks : Sample shipment not allowed by mail.

15. REGULATORY INFORMATION

EC Classification and User Label Information

Classification according to Directive 1999/45/EC (the Dangerous Preparations Directive).

Hazard Symbol : F - Highly Flammable
Xn - Harmful

Risk Phrases : Highly flammable (R11).
Irritating to eyes (R36).
Repeated exposure may cause skin dryness or cracking (R66).
Vapours may cause drowsiness and dizziness (R67).
Harmful by inhalation (R20).

Safety Phrases : Keep away from sources of ignition - NO SMOKING (S16)
.
Do not breathe spray (S23).
This material and its container must be disposed of in a safe way (S35).
Wear suitable protective clothing and gloves (S36/37)
.
Use only in well-ventilated areas (S51).

