

Safety data sheet

Page: 1/10

BASF Safety data sheet
Date / Revised: 30.11.2009
Product: **MASTERTOP BC 375 N PART B**

Version: 2.0

(30364448/SDS_GEN_SG/EN)

Date of print 11.04.2010

1. Substance/preparation and company identification

MASTERTOP BC 375 N PART B

Use: Product for construction chemicals

Company:

BASF South East Asia Pte Ltd.
7 Temasek Boulevard,
#35-01 Suntec Tower One, 038987, SINGAPORE
Telephone: +65 6 337-0330
Telefax number: +65 6 334-0330
E-mail address: tommy.chng@basf.com

Emergency information:

International emergency number:
Telephone: +49 180 2273-112

2. Composition/information on ingredients

Chemical nature

Blend based on: isocyanate

Hazardous ingredients

methylenediphenyl diisocyanate

Content (W/W): $\geq 60\%$ - $\leq 80\%$

CAS Number: 26447-40-5

EC-Number: 247-714-0

Hazard symbol(s): Xn

R-phrase(s): 20, 36/37/38, 42/43

BASF Safety data sheet
Date / Revised: 30.11.2009
Product: **MASTERTOP BC 375 N PART B**

Version: 2.0

(30364448/SDS_GEN_SG/EN)

Date of print 11.04.2010

P-MDI

Content (W/W): $\geq 20\%$ - $\leq 40\%$

CAS Number: 9016-87-9

Hazard symbol(s): Xn

R-phrases(s): 20, 36/37/38, 42/43

The wording of the hazard symbols and R-phrases is specified in chapter 16 if dangerous ingredients are mentioned.

3. Hazard identification

Harmful by inhalation.

Irritating to eyes, respiratory system and skin.

May cause sensitization by inhalation and skin contact.

4. First-Aid Measures

General advice:

Immediately remove contaminated clothing.

If inhaled:

Keep patient calm, remove to fresh air, seek medical attention.

On skin contact:

After contact with skin, wash immediately with polyethylene glycol, followed by plenty of water. Consult a doctor if skin irritation persists.

On contact with eyes:

Immediately wash affected eyes for at least 15 minutes under running water with eyelids held open, consult an eye specialist.

On ingestion:

Immediately rinse mouth and then drink plenty of water, do not induce vomiting, seek medical attention.

Note to physician:

Hazards: Symptoms can appear later.

Treatment: Treat according to symptoms (decontamination, vital functions), no known specific antidote, administer corticosteroid dose aerosol to prevent pulmonary edema.

5. Fire-Fighting Measures

Suitable extinguishing media:

dry extinguishing media, carbon dioxide, alcohol-resistant foam, water spray

Specific hazards:

carbon dioxide, carbon monoxide, hydrogen cyanide, nitrogen oxides, isocyanate

The substances/groups of substances mentioned can be released in case of fire.

Special protective equipment:

Wear self-contained breathing apparatus and chemical-protective clothing.

Further information:

Keep containers cool by spraying with water if exposed to fire. Dispose of fire debris and contaminated extinguishing water in accordance with official regulations.

6. Accidental Release Measures

Personal precautions:

Use personal protective clothing. Ensure adequate ventilation. Use breathing apparatus if exposed to vapours/dust/aerosol.

Environmental precautions:

Do not empty into drains. Do not discharge into the subsoil/soil.

Methods for cleaning up or taking up:

For large amounts: Pump off product.

For residues: Pick up with absorbent material (e.g. sand, sawdust, general-purpose binder). Dispose of absorbed material in accordance with regulations.

Neutralize with a solution of 5 - 10 % Sodium carbonate, 0,2 - 2 % detergents and 90 - 95 % water.

7. Handling and Storage

Handling

Provide suitable exhaust ventilation at the processing machines. Ensure thorough ventilation of stores and work areas. Avoid aerosol formation. When handling heated product, vapours of the product should be ventilated, and respiratory protection used. Wear respiratory protection when spraying. Danger of bursting when sealed gastight. Protect against moisture. Products freshly manufactured from isocyanates can contain incompletely reacted isocyanates and other dangerous substances.

Storage

Keep away from water. Segregate from foods and animal feeds. Segregate from acids and bases.

Suitable materials for containers: carbon steel (iron), steel, High density polyethylene (HDPE), Low density polyethylene (LDPE), tin (tinplate)

Further information on storage conditions: Keep container tightly closed in a cool, well-ventilated place. Protect against moisture. Formation of CO₂ and build up of pressure possible. Danger of bursting when sealed gastight.

Storage stability:

Protect against moisture.

If moisture enters isocyanate containers, CO₂ forms and pressure builds up.

8. Exposure controls and personal protection

Components with workplace control parameters

Diphenylmethane-4,4'-diisocyanate (MDI), 101-68-8;
TWA value 0.005 ppm (ACGIHTLV)
TWA value 0.051 mg/m³ ; 0.005 ppm (OEL (SG))

Personal protective equipment

Respiratory protection:

Respiratory protection in case of vapour/aerosol release. Combination filter for gases/vapours of organic, inorganic, acid inorganic and alkaline compounds (e.g. EN 14387 Type ABEK).

Hand protection:

Chemical resistant protective gloves (EN 374)
Suitable materials also with prolonged, direct contact (Recommended: Protective index 6, corresponding > 480 minutes of permeation time according to EN 374):
butyl rubber (butyl) - 0.7 mm coating thickness
nitrile rubber (NBR) - 0.4 mm coating thickness
chloroprene rubber (CR) - 0.5 mm coating thickness
Unsuitable materials
polyvinylchloride (PVC) - 0.7 mm coating thickness
Polyethylene-Laminate (PE laminate) - ca. 0.1 mm coating thickness

Eye protection:

Safety glasses with side-shields (frame goggles) (e.g. EN 166)

Body protection:

safety shoes (e.g. according to EN 20346)

General safety and hygiene measures:

Do not breathe vapour/spray. With products freshly manufactured from isocyanates body protection and chemical resistant protective gloves is recommended. Wearing of closed work clothing is required additionally to the stated personal protection equipment. No eating, drinking, smoking or tobacco use at the place of work. Take off immediately all contaminated clothing. Hands and/or face should be washed before breaks and at the end of the shift. At the end of the shift the skin should be cleaned and skin-care agents applied.

9. Physical and Chemical Properties

Form: liquid
Colour: yellowish to brown
Odour: earthy, musty

pH value: not applicable

Melting point: < 0 °C
(1,013 hPa)

BASF Safety data sheet
Date / Revised: 30.11.2009
Product: **MASTERTOP BC 375 N PART B**

Version: 2.0

(30364448/SDS_GEN_SG/EN)

Date of print 11.04.2010

Boiling range:	> 200 °C (1,013 mbar)	
Flash point:	approx. 220 °C	(DIN 53213-1)
Ignition temperature:	> 530 °C	
Vapour pressure:	< 0.01 Pa (25 °C)	
Density:	1.22 g/cm ³ (25 °C)	
Solubility in water:	Hydrolyzes to form water-insoluble compounds.	
Viscosity, dynamic:	50 - 100 mPa.s (25 °C)	

10. Stability and Reactivity

Conditions to avoid:
Temperature: > 90 °C

Thermal decomposition: > 230 °C

Substances to avoid:
acids, alcohols, amines, water, Alkalines

Hazardous reactions:

On contact with water, gaseous decomposition products are formed, which cause build-up of pressure in tightly closed containers. Risk of bursting. Reacts with substances which contain active hydrogen.

Hazardous decomposition products:

No hazardous decomposition products if stored and handled as prescribed/indicated.

11. Toxicological Information

Acute toxicity

Assessment of acute toxicity:

Of moderate toxicity after short-term inhalation. Virtually nontoxic after a single skin contact. Virtually nontoxic after a single ingestion.

Information on: Diphenylmethane-4,4'-diisocyanate (MDI)

Assessment of acute toxicity:

Of moderate toxicity after short-term inhalation. Virtually nontoxic after a single ingestion. Virtually nontoxic after a single skin contact.

Information on: Diphenylmethane-4,4'-diisocyanate (MDI)

LD50 rat (oral): > 10,000 mg/kg

Literature data.

Information on: Diphenylmethane-4,4'-diisocyanate (MDI)
LD50 rabbit (dermal): > 9,400 mg/kg
Literature data.

Irritation

Information on: Diphenylmethane-4,4'-diisocyanate (MDI)
Assessment of irritating effects:
Irritating to eyes, respiratory system and skin.

Information on: Diphenylmethane-4,4'-diisocyanate (MDI)
Primary skin irritation rabbit: Slightly irritating. (Draize test)
Literature data. The European Union (EU) has classified this substance with 'Irritating to skin' (R38).

Information on: Diphenylmethane-4,4'-diisocyanate (MDI)
Primary irritations of the mucous membrane rabbit: Slightly irritating. (Draize test)
Literature data. The European Union (EU) has classified this substance with 'Irritating to eyes'.(R36).

Assessment other acute effects

Assessment other acute effects:
Causes temporary irritation of the respiratory tract.

Sensitization

Assessment of sensitization:
Sensitization after skin contact possible. The substance may cause sensitization of the respiratory tract.

Information on: Diphenylmethane-4,4'-diisocyanate (MDI)
Assessment of sensitization:
The substance may cause sensitization of the respiratory tract. Sensitization after skin contact possible. Studies in animals suggest that dermal exposure may lead to pulmonary sensitization. However, the relevance of this result for humans is unclear.

Information on: Diphenylmethane-4,4'-diisocyanate (MDI)
Guinea pig maximization test guinea pig: sensitizing
Literature data.

Genetic toxicity

Assessment of mutagenicity:
The chemical structure does not suggest a mutagenic effect.

Carcinogenicity

Assessment of carcinogenicity:

The chemical structure does not suggest a specific alert for such an effect.

Information on: Diphenylmethane-4,4'-diisocyanate (MDI)

Assessment of carcinogenicity:

Indication of possible carcinogenic effect in animal tests. However, the relevance of this result for humans is unclear.

Developmental toxicity

Information on: Diphenylmethane-4,4'-diisocyanate (MDI)

Assessment of teratogenicity:

No indications of a developmental toxic / teratogenic effect were seen in animal studies.

Other relevant toxicity information

The product has not been tested. The statement has been derived from the properties of the individual components.

Information on: Diphenylmethane-4,4'-diisocyanate (MDI)

There is no reason to fear a risk of damage to the developing embryo or fetus when the MAK value is adhered to.

12. Ecological Information

Ecotoxicity

Assessment of aquatic toxicity:

There is a high probability that the product is not acutely harmful to aquatic organisms.

Information on: Diphenylmethane-4,4'-diisocyanate (MDI)

Assessment of aquatic toxicity:

There is a high probability that the product is not acutely harmful to aquatic organisms. The inhibition of the degradation activity of activated sludge is not anticipated when introduced to biological treatment plants in appropriate low concentrations. The product may hydrolyse. The test result maybe partially due to degradation products.

Information on: Diphenylmethane-4,4'-diisocyanate (MDI)

Toxicity to fish:

LC0 (96 h) > 1,000 mg/l, Brachydanio rerio (OECD Guideline 203, static)

Information on: Diphenylmethane-4,4'-diisocyanate (MDI)

Aquatic invertebrates:

EC50 (24 h) > 1,000 mg/l, Daphnia magna (OECD Guideline 202, part 1, static)

Information on: Diphenylmethane-4,4'-diisocyanate (MDI)

Aquatic plants:

EC0 (72 h) 1,640 mg/l (growth rate), Scenedesmus subspicatus (OECD Guideline 201, static)

Information on: Diphenylmethane-4,4'-diisocyanate (MDI)

Microorganisms/Effect on activated sludge:

EC50 (3 h) > 100 mg/l, activated sludge, domestic, aerobic (OECD Guideline 209, aquatic)

Persistence and degradability

Assessment biodegradation and elimination (H₂O):

Hydrolyzes to form water-insoluble compounds. Experience shows this product to be inert and non-degradable.

Information on: Diphenylmethane-4,4'-diisocyanate (MDI)

Assessment biodegradation and elimination (H₂O):

Poorly biodegradable. The product is unstable in water. The elimination data also refer to products of hydrolysis.

Information on: Diphenylmethane-4,4'-diisocyanate (MDI)

Elimination information:

0 % BOD of the ThOD (28 d) (OECD Guideline 302 C) (aerobic, activated sludge) Poorly biodegradable.

Information on: Diphenylmethane-4,4'-diisocyanate (MDI)

Information on Stability in Water (Hydrolysis):

t_{1/2} 143 h

In contact with water the substance will hydrolyse slowly.

Bioaccumulation potential

Information on: Diphenylmethane-4,4'-diisocyanate (MDI)

Bioaccumulation potential:

Bioconcentration factor: (112 d), Oncorhynchus mykiss (measured)

Accumulation in organisms is not to be expected.

Other adverse effects

Adsorbable organically-bound halogen (AOX):

This product contains no organically-bound halogen.

Additional information

Other ecotoxicological advice:

Do not release untreated into natural waters. Do not allow to enter soil, waterways or waste water channels. The product has not been tested. The statement has been derived from the properties of the individual components.

13. Disposal Considerations

Incinerate in suitable incineration plant, observing local authority regulations.
Dispose of isocyanate waste in dry containers and never mix together with other wastes (reaction, dangerous pressure build up).

Contaminated packaging:
Contaminated packaging should be emptied as far as possible; then it can be passed on for recycling after being thoroughly cleaned.

14. Transport Information

Domestic transport:

Not classified as a dangerous good under transport regulations

Sea transport
IMDG

Not classified as a dangerous good under transport regulations

Air transport
IATA/ICAO

Not classified as a dangerous good under transport regulations

15. Regulatory Information

Regulations of the European union (Labelling)**Directive 1999/45/EC ('Preparation Directive'):**

Hazard symbol(s)

Xn Harmful.

R-phrase(s)

R20 Harmful by inhalation.
R36/37/38 Irritating to eyes, respiratory system and skin.
R42/43 May cause sensitization by inhalation and skin contact.

S-phrase(s)

S23.3 Do not breathe vapour/spray.
S36/37 Wear suitable protective clothing and gloves.
S45 In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).

Contains isocyanates. Observe manufacturer's instructions.

BASF Safety data sheet
Date / Revised: 30.11.2009
Product: **MASTERTOP BC 375 N PART B**

Version: 2.0

(30364448/SDS_GEN_SG/EN)

Date of print 11.04.2010

Hazard determining component(s) for labelling: METHYLENEDIPHENYLDIISOCYANATE

Other regulations

16. Other Information

Recommended use: polyurethane component, industrial chemicals

Full text of hazard symbols and R-phrases if mentioned as hazardous components in chapter 2:

Xn	Harmful.
20	Harmful by inhalation.
36/37/38	Irritating to eyes, respiratory system and skin.
42/43	May cause sensitization by inhalation and skin contact.

Vertical lines in the left hand margin indicate an amendment from the previous version.

The data contained in this safety data sheet are based on our current knowledge and experience and describe the product only with regard to safety requirements. The data do not describe the product's properties (product specification). Neither should any agreed property nor the suitability of the product for any specific purpose be deduced from the data contained in the safety data sheet. It is the responsibility of the recipient of the product to ensure any proprietary rights and existing laws and legislation are observed.