# Safety data sheet
## TF100 GRAY 300X300



## 1. Substance/preparation and company identification

Company
BASF CANADA
100 Milverton Drive
Mississauga, ON L5R 4H1

24 Hour Emergency Response Information
CANUTEC (reverse charges): (613) 996-6666
BASF HOTLINE (800) 454-COPE (2673)

## 2. Hazardous ingredients

| CAS Number | Content (W/W) | Hazardous ingredients |
|---|---|---|
| 26447-40-5 | >= 7.0 - <= 13.0 % | Methylenediphenyl diisocyanate |

## 3. Hazard identification

**Emergency overview**

Toxic by inhalation.
May cause sensitization by inhalation.
Irritating to eyes, respiratory system and skin.

**Potential health effects**

**Acute toxicity:**
Harmful if swallowed.
*Information on: TDI*
*Of very high toxicity after short-term inhalation.*
*Of low toxicity after single ingestion.*
*Virtually nontoxic after a single skin contact.*

**Irritation:**
Irritating to eyes, respiratory system and skin.
*Information on: TDI*
*Irritating to eyes, respiratory system and skin.*
**Sensitization:**
Sensitization after skin contact possible. The substance may cause sensitization of the respiratory tract.
*Information on: TDI*
*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.*

**Repeated dose toxicity:**

*Information on: TDI*

*The substance may cause damage to the lung even after repeated inhalation of low doses, as shown in animal studies.*

**Potential environmental effects**

**Aquatic toxicity:**
Acutely harmful for aquatic organisms.
May cause long-term adverse effects in the aquatic environment.

## 4. First-Aid Measures

**General advice:**
Remove contaminated clothing.

**If inhaled:**
Remove the affected individual into fresh air and keep the person calm. Assist in breathing if necessary. Immediate medical attention required.

**If on skin:**
Wash affected areas thoroughly with soap and water. Immediate medical attention required.

**If in eyes:**
In case of contact with the eyes, rinse immediately for at least 15 minutes with plenty of water. Immediate medical attention required.

**If swallowed:**
Rinse mouth and then drink plenty of water. Do not induce vomiting. Immediate medical attention required.

**Note to physician**

| | |
|---|---|
| Antidote: | Specific antidotes or neutralizers to isocyanates do not exist. |
| Treatment: | Treatment should be supportive and based on the judgement of the physician in response to the reaction of the patient. |

## 5. Fire-Fighting Measures

| | | |
|---|---|---|
| Flash point: | 148.89 °C | (ASTM D93) |
| Autoignition: | | No data available. |
| Lower explosion limit: | 4.7 %(V) | |
| Upper explosion limit: | 21.0 %(V) | |
| Self-ignition temperature: | | not self-igniting |

**Suitable extinguishing media:**
carbon dioxide, dry extinguishing media, foam, water fog

**Hazards during fire-fighting:**

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

**Protective equipment for fire-fighting:**
Firefighters should be equipped with self-contained breathing apparatus and turn-out gear.

## 6. Accidental release measures

**Personal precautions:**
Clear area. Ensure adequate ventilation. Wear suitable personal protective clothing and equipment.

**Environmental precautions:**
Do not discharge into drains/surface waters/groundwater.

**Cleanup:**
Dike spillage.

For small amounts: Pick up with suitable absorbent material. Shovel into open container. Do not make container pressure tight. Move container to a well-ventilated area (outside). Spill area can be decontaminated with the following recommended decontamination solution: Mixture of 90 % water, 8 % concentrated ammonia, 2 % detergent. Add at a 10 to 1 ratio. Allow to stand for at least 48 hours to allow escape of evolved carbon dioxide.
For large amounts: If temporary control of isocyanate vapor is required, a blanket of protein foam or other suitable foam (available from most fire departments) may be placed over the spill. Transfer as much liquid as possible via pump or vacuum device into closed but not sealed containers for disposal.
For residues: The following measures should be taken for final cleanup: Wash down spill area with decontamination solution. Allow solution to stand for at least 10 minutes.

## 7. Handling and Storage

**Handling**

**General advice:**
Mix thoroughly before use. If bulging of drum occurs, transfer to well ventilated area, puncture to relieve pressure, open vent and let stand for 48 hours before resealing.

**Protection against fire and explosion:**
No explosion proofing necessary.

**Storage**

**General advice:**
Formation of CO2 and build up of pressure possible. Protect against contamination. Keep container tightly closed and in a well-ventilated place. Outage of containers should be filled with dry inert gas at atmospheric pressure to avoid reaction with moisture.

**Storage incompatibility:**
General: Segregate from bases.

**Storage stability:**
Storage temperature: 18 - 24 °C
Protect against moisture. Store at indicated temperature to prevent freezing and isomer separation or discolourization and dimerization. Thaw solidified substance/product at temperature < 95 °F to prevent discolourization.

## 8. Exposure controls and personal protection

**Advice on system design:**
Provide local exhaust ventilation to control vapours/mists.

**Personal protective equipment**

**Respiratory protection:**
For situations where the airborne concentrations may exceed the level for which an air purifying respirator is effective, or where the levels are unknown or Immediately Dangerous to Life or Health (IDLH), use NIOSH-certified full facepiece pressure demand self-contained breathing apparatus (SCBA) or a full facepiece pressure demand supplied-air respirator (SAR) with escape provisions. When atmospheric levels may exceed the occupational exposure limit (PEL or TLV) NIOSH-certified air-purifying respirators equipped with an organic vapor sorbent and particulate filter can be used as long as appropriate precautions and change out schedules are in place.

**Hand protection:**
Chemical resistant protective gloves, Suitable materials, chloroprene rubber (Neoprene), chlorinated polyethylene, polyvinylchloride (Pylox), butyl rubber, fluoroelastomer (Viton), nitrile rubber (Buna N)

**Eye protection:**
Tightly fitting safety goggles (chemical goggles). Wear face shield if splashing hazard exists.

**Body protection:**
Suitable materials, saran-coated material

**General safety and hygiene measures:**
Wear protective clothing as necessary to prevent contact. Eye wash fountains and safety showers must be easily accessible. Observe the appropriate PEL value. Wash soiled clothing immediately. Contaminated equipment or clothing should be cleaned after each use or disposed of.

## 9. Physical and Chemical Properties

| | | |
|---|---|---|
| Form: | liquid | |
| Odour: | slight odour | |
| Odour threshold: | No data available. | |
| Colour: | light brown | |
| pH value: | | No data available. |
| Boiling point: | 200 °C | |
| Vapour pressure: | | No data available. |
| Relative density: | 1.12 | |
| Vapour density: | | Heavier than air. |
| Partitioning coefficient n-octanol/water (log Pow): | | No data available. |
| Viscosity, dynamic: | | No data available. |

## 10. Stability and Reactivity

**Conditions to avoid:**
> 40 degrees Celsius
Avoid moisture.

**Substances to avoid:**
strong bases, water, amines, alcohols

**Hazardous reactions:**
The product is chemically stable.
Reacts with water, with formation of carbon dioxide. Risk of bursting. Reacts with alcohols. Reacts with acids. Reacts with alkalies. Reacts with amines. Risk of exothermic reaction. Risk of violent reaction. Risk of polymerization. Contact with certain rubbers and plastics can cause brittleness of the substance/product with subsequent loss in strength.

**Decomposition products:**
gases/vapours, carbon oxides, Traces of the substances/groups of substances mentioned can be released at elevated temperatures., nitrogen oxides

## 11. Toxicological information

**Acute toxicity**

**Oral:**
LD50/rat: 5,800 mg/kg
Slightly toxic.

**Inhalation:**
LC50/rat: <= 0.78 mg/l / 1 h
Moderately toxic.
LC50/rat: 0.1 mg/l / 4 h
Moderately toxic.

**Dermal:**
LD50/rabbit: > 9,400 mg/kg
Practically nontoxic.

**Skin irritation:**
rabbit: (FHSA Guideline)

**Chronic toxicity**

**Genetic toxicity:**
The chemical structure does not suggest a mutagenic effect.

*Information on: TDI*
*The substance was mutagenic in various test systems with bacterias and cell cultures; however, these results could not be confirmed in tests with mammals.*
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**Carcinogenicity:**
Indication of possible carcinogenic effect in animal tests.

*Information on: TDI*
*A clear indication of an increased risk of cancer in humans has so far not been shown.*
*In long-term studies, a carcinogenic effect was observed when the substance was given orally to laboratory animals(gavage).*
*Not carcinogenic in laboratory animals after long-term inhalation exposures.*
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**Reproductive toxicity:**
No reproductive effects.

*Information on: TDI*
*The results of animal studies gave no indication of a fertility impairing effect.*
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**Developmental toxicity/teratogenicity:**
*Information on: TDI*
*No indications of a developmental toxic / teratogenic effect were seen in animal studies.*
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## 12. Ecological Information

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

**Acute and prolonged toxicity to fish:**
static
zebra fish/LC50 (24 h): > 500 mg/l
Practically nontoxic.

**Acute toxicity to aquatic invertebrates:**
static
Grass shrimp/LC50 (96 h): approx. 508 mg/l
Practically nontoxic.
static
Pond snail/LC50 (24 h): > 500 mg/l
Practically nontoxic.

**Chronic toxicity to aquatic invertebrates:**
Daphnia magna EC50 (24 h) approx. 750 mg/l
Practically nontoxic.
Daphnia magna EC50 (24 h) > 500 mg/l
Practically nontoxic.

**Other terrestrial non-mammals:**
OECD Guideline 205 redwinged blackbird/LD50: 100 mg/kg = 100
OECD Guideline 205 European Starling/LD50: > 100 mg/kg = > 100

## 13. Disposal considerations

**Waste disposal of substance:**
Incinerate or dispose of in a licensed facility.
Dispose of isocyanate waste in dry containers and never mix together with other wastes (reaction, dangerous pressure build up).
Observe all local regulations.

## 14. Transport Information

**Land transport**
TDG

| | |
|---|---|
| Hazard class: | 8 |
| Packing group: | II |
| ID number: | UN 1760 |
| Hazard label: | 8 |
| Proper shipping name: | CORROSIVE LIQUID, N.O.S. (contains POLYOXYPROPYLENEDIAMINE) |

**Sea transport**
IMDG

| | |
|---|---|
| Hazard class: | 8 |
| Packing group: | II |
| ID number: | UN 1760 |
| Hazard label: | 8 |
| Marine pollutant: | NO |
| Proper shipping name: | CORROSIVE LIQUID, N.O.S. (contains POLYOXYPROPYLENEDIAMINE) |

**Air transport**
IATA/ICAO

| | |
|---|---|
| Hazard class: | 8 |
| Packing group: | II |
| ID number: | UN 1760 |
| Hazard label: | 8 |
| Proper shipping name: | CORROSIVE LIQUID, N.O.S. (contains POLYOXYPROPYLENEDIAMINE) |

## 15. Regulatory Information

**Federal Regulations**

**Registration status:**
DSL, CA released / listed

**WHMIS classification:**

D1A: Materials Causing Immediate and Serious Toxic Effects - Very toxic material

D2B: Materials Causing Other Toxic Effects - Toxic material

E: Corrosive material

D2A: Materials Causing Other Toxic Effects - Very toxic material

**THIS PRODUCT HAS BEEN CLASSIFIED IN ACCORDANCE WITH THE HAZARD CRITERIA OF THE CPR AND THE MSDS CONTAINS ALL THE INFORMATION REQUIRED BY THE CPR.**

## 16. Other Information

**Local Contact Information**
BASF Construction Chemicals
bcc_prps@basf.com

END OF DATA SHEET