



AFT INTERNATIONAL  
ADVANCED FOOT TECHNOLOGY  
Industriezone Ter Straten  
Ter Stratenweg 50  
B-2520 Oelegem  
Tel.: +32 (0)3.475.93.03  
Fax: +32 (0)3.475.93.20  
E-mail: info@aft-international.be

# Safety data sheet

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Safety data sheet according to 91/155/EEC

Date / Revised: 09.10.2006

Version: 2.0

Product:

(30066646/SDS\_GEN\_EU/EN)

Date of print 01.11.2006

## 1. Substance/preparation and company identification

### RESINFORM B

Use: Chemical

#### Company:



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## 2. Composition/information on ingredients

#### Chemical nature

P-MDI (Content (W/W): 100 %)

CAS Number: 9016-87-9

## 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.

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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 odema.

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## 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.

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## 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.

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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.

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## 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: High density polyethylene (HDPE), Low density polyethylene (LDPE), steel

Unsuitable materials for containers: paper, board

Further information on storage conditions: Keep container tightly closed in a cool, well-ventilated place. Protect against moisture. Formation of CO<sub>2</sub> and build up of pressure possible. Danger of bursting when sealed gastight.

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## 8. Exposure controls and personal protection

### Components with workplace control parameters

| 101-68-8: Diphenylmethane-4,4'-diisocyanate (MDI)

### 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

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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: brown  
Odour: earthy, musty

Melting point: < 10 °C  
Boiling range: 330 °C  
(1,013 mbar)

Flash point: > 204 °C  
Ignition temperature: > 600 °C

Vapour pressure: < 0.01 Pa  
(25 °C)

Density: 1.23 g/cm<sup>3</sup>  
(25 °C)

Viscosity, dynamic: 170 - 250 mPa.s (DIN 53018)  
(25 °C)

## 10. Stability and reactivity

Conditions to avoid:

Temperature: &gt; 90 °C

Thermal decomposition: &gt; 230 °C

Substances to avoid:

acids, alcohols, amines, water, Alkalines

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**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.

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**11. Toxicological information****Acute toxicity****Assessment of acute toxicity:**

Virtually nontoxic after a single ingestion. Virtually nontoxic after a single skin contact. Harmful by inhalation.

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

LD50 rabbit (dermal): > 10,000 mg/kg

**Irritation****Assessment of irritating effects:**

Irritating to eyes, respiratory system and skin.

Primary skin irritation: Irritant.

Primary irritations of the mucous membrane: Irritant.

**Sensitization****Assessment of sensitization:**

May cause sensitization by inhalation and skin contact.

**Genetic toxicity****Assessment of mutagenicity:**

The substance was mutagenic in various test systems with microorganisms and cell cultures; however, these results could not be confirmed in tests with mammals.

**Carcinogenicity****Assessment of carcinogenicity:**

Based on the ingredients there is a suspicion of a carcinogenic effect.

**Reproductive toxicity****Assessment of reproduction toxicity:**

Repeated inhalative uptake of the substance did not cause damage to the reproductive organs.

### Developmental toxicity

Assessment of teratogenicity:

Animal studies gave no indication of a developmental toxic effect at doses that were not toxic to the parental animals.

### Other relevant toxicity information

There is no reason to fear a risk of damage to the developing embryo or fetus when the MAK value is adhered to. Indication of possible carcinogenic effect in animal tests.

### Experiences in humans

coughing, dyspnea, tightness in the chest, temporary influenzal symptoms:  
Can severely irritate the eyes and respiratory tract depending upon the concentration.

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## 12. Ecological information

### Ecotoxicity

Assessment of aquatic toxicity:

There is a high probability that the product is not acutely harmful to aquatic organisms. No toxic effects occur within the range of solubility.

### Persistence and degradability

Assessment biodegradation and elimination (H<sub>2</sub>O):

Poorly biodegradable.

Elimination information:

< 10 % BOD of the ThOD (28 d) (OECD Guideline 302 C) (aerobic, activated sludge) Under test conditions no biodegradation observed.

### Bioaccumulation potential

Bioaccumulation potential:

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.

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### 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).

Waste key:

07 02 08<sup>01</sup> other still bottoms and reaction residues

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

Not classified as a dangerous good under transport regulations (ADR RID ADNR IMDG/GGVSee ICAO/IATA)

### 15. Regulatory information

#### Regulations of the European union (Labelling) / National legislation/Regulations

Council Directive 67/548/EEC of 27 June 1967 on the approximation of laws, regulations and administrative provisions relating to the classification, packaging and labelling of dangerous substances:

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.

Hazard determining component(s) for labelling: P-MDI

#### Other regulations

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## 16. Other information

| Recommended use: polyurethane component, industrial chemicals

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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.