

**Section 1: Identification of the substance/mixture and of the company/undertaking**

**1.1. Product Identifier**

**Product name:** Fast Cast FC 227-B  
**Product code:** FC 227-B

**1.2. Relevant Identified uses of the substance or mixture and uses advised against**

**Use of substance:** Tooling system

**1.3. Details of supplier of the safety data sheet**

**Company Name:** Ru-bix Tooling Board  
Venus Court  
Hardwick Industrial Estate  
King's Lynn  
Norfolk  
PE30 4HY  
United Kingdom  
**Telephone:** 01485 313 020  
**Email:** [ash.colvin@ru-bix.com](mailto:ash.colvin@ru-bix.com)

**1.4 Emergency telephone number**

**Emergency telephone:** 01485 313 020 (office hours only)

**Section 2: Hazards identification**

**2.1 Classification of a substance or mixture**

**Classification under CLP:** Resp. Sens. 1: H334; STOT RE 2: H373; Acute Tox. 4: H332; Eye Irrit. 2: H319; Skin Irrit. 2: H315; Skin Sens. 1: H317; STOT SE 3: H335; Carc. 2: H351; Asp. Tox. 1: H304; Aquatic Chronic 1: H410;

**Most important adverse effects:** Causes skin irritation.  
May cause an allergic skin reaction.  
Causes serious eye irritation.  
Harmful if inhaled.  
May cause allergy or asthma symptoms or breathing difficulties if inhaled.  
May cause respiratory irritation.  
Suspected of causing cancer.  
May cause damage to organs through prolonged or repeated exposure.  
Toxic to aquatic life with long lasting effects.

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## 2.2. Label elements

### Label elements:

**Hazard statements:** H304 May be fatal if swallowed and enters airways.  
H315: Causes skin irritation.  
H317: May cause an allergic skin reaction.  
H319: Causes serious eye irritation.  
H332: Harmful if inhaled.  
H334: May cause allergy or asthma symptoms or breathing difficulties if inhaled.  
H335: May cause respiratory irritation.  
H351: Suspected of causing cancer.  
H373: May cause damage to organs through prolonged or repeated exposure.  
H410: Very toxic to aquatic life with long lasting effects.

**Hazard pictograms:** GHS07: Exclamation mark  
GHS08: Health hazard  
GHS09: Environmental



**Signal words:** Danger

**Precautionary statements:** P260: Do not breathe dust/fumes/gas/mist/vapours/spray.  
P280: Wear protective gloves/protective clothing/eye protection/face protection.  
P284: In case of inadequate ventilation wear respiratory protection.  
P301 + P310: IF SWALLOWED - Immediately call a POISON CENTRE/doctor.  
P304+340+P312: IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTRE/doctor if you feel unwell.  
P308 + P313: IF exposed or concerned: Get medical advice/attention.  
P331: DO NOT induce vomiting.

**Hazardous components which must be listed on the label:** 9016-87-9 Diphenylmethanediisocyanate, isomers and homologues  
254-052-6 bis(isopropyl)naphthalene

**Additional Labelling:** EUH204 - Contains isocyanates. May produce an allergic reaction.

## 2.3. Other hazards

**Other hazards:** This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

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## Section 3: Composition/information on ingredients

### 3.2. Mixtures

#### Hazardous ingredients:

DIPHENYLMETHANE DIISOCYANATE (ISOMERS AND HOMOLOGUES)

EINECS	CAS	PBT/WEL	CPL Classification	Percent
-	9016-87-9	-	Carc. 2: H351; Acute Tox. 4: H332; STOT RE 2: H373; Eye Irrit. 2: H319; STOT SE 3: H335; Skin Irrit. 2: H315; Resp. Sens. 1: H334; Skin Sens. 1: H317	>=25 - <40%

BIS(ISOPROPYL)NAPHTHALENE – REACH registered number(s): 01-2119565150-48-XXXX

EINECS	CAS	PBT/WEL	CPL Classification	Percent
254-052-6	38640-62-9	-	Asp. Tox. 1: H304; Aquatic Chronic 1: H410;	>=25 - <40%

## Section 4: First Aid measures

### 4.1. Description of First Aid measures

- General advice:** Move out of dangerous area.  
Consult a physician.  
Show this safety data sheet to the doctor in attendance.
- Skin contact:** Remove all contaminated clothes and footwear immediately unless stuck to skin.  
Drench the affected skin with running water for 10 minutes or longer if substance is still on skin.  
Consult a doctor.
- Eye Contact:** Bathe the eye with running water for 15 minutes.  
Consult a doctor.
- Ingestion:** Wash out mouth with water.  
Do not induce vomiting.
- Consult a doctor.
- Inhalation:** Remove casualty from exposure ensuring one's own safety whilst doing so.  
Consult a doctor.

### 4.2. Most Important symptoms and effects, both acute and delayed

- Skin contact:** Causes irritation.  
May cause allergic reaction.
- Eye Contact:** Causes serious eye irritation.
- Ingestion:** May be fatal if swallowed and enters airways.  
Suspected of causing cancer.
- Inhalation:** May cause serious damage to the lungs (by aspiration).  
May cause respiratory irritation.  
May cause damage to organs through prolonged or repeated exposure.  
May cause allergy or asthma symptoms or breathing difficulties.  
Suspected of causing cancer.

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## 4.3 Indication of any immediate medical attention and special treatment needed

**Immediate / special treatment:** Treat symptomatically.

## Section 5: Fire-fighting measures

### 5.1. Extinguishing media

**Extinguishing media:** Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

### 5.2. Special hazards arising from the substance or mixture

**Specific hazards:** Do not allow run-off from firefighting to enter drains or water courses.  
**Exposure hazards:** No hazardous combustion products are known.

### 5.3. Advice for fire-fighters

**Advice for fire-fighters:** Wear self-contained breathing apparatus.  
Wear protective clothing to prevent contact with skin and eyes.  
**Further information:** Collect contaminated fire extinguishing water separately. This must not be discharged into drains. Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations.

## Section 6: Accidental release measures

### 6.1. Personal precautions, protective equipment and emergency procedures

**Personal precautions:** Refer to section 8 of SDS for personal protection details. If outside do not approach from downwind.  
Mark out the contaminated area with signs and prevent access to unauthorised personnel.  
Turn leaking containers leak-side up to prevent the escape of liquid.  
If outside keep bystanders upwind and away from danger point.  
Evacuate the area immediately.

### 6.2. Environmental precautions

**Environmental precautions:** Do not discharge into drains or rivers.  
Contain the spillage using bunding.  
Alert the neighbourhood to the presence of fumes or gas.  
If the product contaminates rivers and lakes or drains inform respective authorities.

### 6.3. Methods and material for containment and cleaning up

**Clean-up procedures:** Absorb into dry earth or sand.  
Clean-up should be dealt with only by qualified personnel familiar with the specific substance.

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## 6.4. Reference to the other sections

Refer to the other sections: Refer to section 8 of SDS.

## Section 7: Handling and storage

### 7.1. Precaution for safe handling

**Handling requirements:** Ensure there is sufficient ventilation of the area.  
Do not handle in a confined space.  
Avoid the formation or spread of mists in the air.  
Do not get in eyes, on skin, or on clothing.  
For personal protection see section 8.  
Persons with a history of skin sensitisation problems or asthma, allergies, chronic or recurrent respiratory disease should not be employed in any process in which this mixture is being used.  
Smoking, eating and drinking should be prohibited in the application area.  
Follow standard hygiene measures when handling chemical products

**Advice on protection against fire and explosion:** Normal measures for preventive fire protection.

**Hygiene measures:** Handle in accordance with good industrial hygiene and safety practice.  
When using do not eat or drink. When using do not smoke. Wash hands before breaks and at the end of workday.

### 7.2. Conditions for safe storage, including any incompatibilities

**Storage conditions:** Store in a cool, well ventilated area.  
Keep container tightly closed.  
Containers which are opened must be carefully resealed and kept upright to prevent leakage. Store in accordance with local regulations.

**Storage class (TRGS 510):** 10, Combustible liquids

**Other data:** No decomposition if stored and applied as directed.

### 7.3. Specific end use(s)

**Specific end use(s):** No data available.

## Section 8: Exposure controls/personal protection

### 8.1. Control parameters

**Hazardous ingredients:**

#### DIPHENYLMETHANE DIISOCYANATE (ISOMERS AND HOMOLOGUES)

Workplace exposure limits:			Respirable dust:	
State	8 hour TWA	15 min. STEL	8 hour TWA	15 min. STEL
UK	0.02 mg/m <sup>3</sup>	0.07 mg/m <sup>3</sup>	-	-

### DNEL/PNEC Values

**DNEL/PNEC:** No data available

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## 8.2. Exposure controls

- Engineering measures:** Provide adequate ventilation.  
Personal, workplace environment or biological monitoring may be required to determine the effectiveness of the ventilation or other control measures and/or the necessity to use respiratory protective equipment.  
Use process enclosures, local exhaust ventilation or other engineering controls as the primary means to minimise worker exposure.  
Personal protective equipment should only be used if worker exposure cannot be controlled adequately by the engineering control measures.  
Ensure control measures are regularly inspected and maintained.  
Ensure operatives are trained to minimise exposure.
- Respiratory protection:** Respiratory protection complying with an approved standard should be worn if a risk assessment indicates inhalation of contaminants is possible.  
Ensure all respiratory protective equipment is suitable for its intended use and is 'CE'-marked.  
Check that the respirator fits tightly, and the filter is changed regularly.  
Gas and combination filter cartridges should comply with European Standard EN14387.  
Full face mask respirators with replaceable filter cartridges should comply with European Standard EN136.  
Half mask and quarter mask respirators with replaceable filter cartridges should comply with European Standard EN140.
- Hand protection:** Chemical-resistant, impervious gloves complying with an approved standard should be worn if a risk assessment indicates skin contact is possible.  
The most suitable glove should be chosen in consultation with the glove supplier/manufacture, who can provide information about the breakthrough time of the glove material.  
To protect hands from chemicals, gloves should comply with European Standard EN374.  
Considering the data specified by the glove manufacturer, check during use that the gloves are retaining their protective properties and change them as soon as any deterioration is detected.  
Frequent changes are recommended.
- Eye protection:** Eyewear complying with an approved standard should be worn if a risk assessment indicates eye contact is possible.  
Personal protective equipment for eye and face protection should comply with European Standard EN166.  
Wear tight-fitting, chemical splash goggles or face shield.
- Skin protection:** Appropriate footwear and additional protective clothing complying with EN ISO 20345 should be worn.  
Rubber aprons and protective boots are additionally recommended for mixing and stirring work.
- Hygiene measures:** Provide eyewash station.  
Contaminated work clothing should not be allowed out of the workplace.  
Wash contaminated clothing before reuse.  
Clean equipment and the work area every day.  
Good personal hygiene procedures should be implemented.  
Wash at the end of each work shift and before eating, smoking and using the toilet.  
When using do not eat, drink or smoke.  
Preventive industrial medical examinations should be carried out.  
Warn cleaning personnel of any hazardous properties of the product.
- Environmental exposure controls:** Keep container tightly sealed when not in use.  
Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation.  
If the product contaminates rivers and lakes or drains inform respective authorities.

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## Section 9: Physical and chemical properties

### 9.1. Information on basic and chemical properties

**State:** Liquid  
**Colour:** Brown  
**Odour:** characteristic  
**Evaporation rate:** No data available  
**Solubility in water:** Reacts with water  
**Viscosity, dynamic:** ca.25 mPa.s at 25°C  
**Kinematic viscosity:** > 7 - < 20.5 mm<sup>2</sup>/s at 40°C  
**Vapour pressure:** 0.01 hPa  
**Flash point °C:** >101°C  
**Relative density:** 1.15 g/cm<sup>3</sup> at 20°C

### 9.2. Other Information

**Other information:** No data available.

## Section 10: Stability and reactivity

### 10.1. Reactivity

**Reactivity:** No dangerous reaction known under conditions of normal use.

### 10.2. Chemical stability

**Chemical stability:** The product is chemically stable.

### 10.3. Possibility of hazardous reactions

**Hazardous reactions:** Hazardous reactions will not occur under normal transport or storage conditions.

### 10.4. Conditions to avoid

**Conditions to avoid:** Avoid moisture.

### 10.5. Incompatible materials

**Materials to avoid:** No data available.

### 10.6. Hazardous decomposition products

**Hazardous decomposition products:** No decomposition if stored and applied as directed.

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## Section 11: Toxicological information

### 11.1. Information on toxicological effects

**Acute Toxicity:** Harmful if inhaled.

#### DIPHENYLMETHANE DIISOCYANATE (ISOMERS AND HOMOLOGUES)

<b>Acute Toxicity - oral:</b>	RAT	LD50	>10000	mg/kg
<b>Acute Toxicity - dermal:</b>	RBT	LD50	>9400	mg/kg
<b>Acute Toxicity - inhalation:</b>	Acute toxicity est: Exposure time: Test atmosphere: Method:	1.5mg/l 4h dust/mist Expert judgement		

#### BIS(ISOPROPYL)NAPHTHALENE

<b>Acute Toxicity - oral:</b>	RAT	LD50	>3900	mg/kg
<b>Acute Toxicity - dermal:</b>	RBT	LC50	>4500	mg/kg
<b>Acute Toxicity - inhalation:</b>	RAT Exposure time: Test atmosphere:	LD50 4h dust/mist	>564	mg/l

**Skin corrosion/irritation:** Causes skin irritation.

**Serious eye damage/irritation:** Causes serious eye irritation.

**Respiratory sensitization:** May cause allergy or asthma symptoms or breathing difficulties if inhaled.

**Skin sensitization:** May cause an allergic skin reaction

**Germ cell mutagenicity:** Not classified based on available information.

**Carcinogenicity:** Suspected of causing cancer.

**Reproductive toxicity:** Not classified based on available information.

**STOT - single exposure:** May cause respiratory irritation.

**STOT - repeated exposure:** May cause damage to organs through prolonged or repeated exposure if inhaled.

**Aspiration hazard:** May be fatal if swallowed and enters airways.

## Section 12: Ecological information

### 12.1. Toxicity

**Ecotoxicity values:** No data available.

### 12.2. Persistence and degradability

**Persistence and degradability:** No data available.

### 12.3. Bioaccumulative potential

**Bioaccumulative potential:** No data available.

### 12.4. Mobility in soil

**Mobility:** No data available.



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## 12.5. Results of PBT and vPvB assessment

**PBT identification:** This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

## 12.6. Other adverse effects

**Other adverse effects:** An environmental hazard cannot be excluded in the event of unprofessional handling or disposal.  
Very toxic to aquatic life with long lasting effects.

## Section 13: Disposal considerations

### 13.1. Waste treatment methods

**Disposal operations:** In accordance with the EWC Waste Regulation the classification of waste is to be assigned to the jurisdiction of the origin of waste. Therefore, it is not possible to assign a particular waste identification number.  
Completely emptied packaging may be given for recycling. Empty packaging may still contain hazardous residues. Empty packaging should be removed by a licensed waste contractor.

## Section 14: Transport information – ADR/IATA/IMDG

### 14.1. UN number

**UN number:** 3082

### 14.2. Description of the goods

**Description of the goods:** ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.  
(bis(isopropyl)naphthalene)

### 14.3. Transport hazard class(es)

**Class:** 9

### 14.4. Packing group

**Packing group:** III  
**Classification Code:** M6  
**Labels:** 9  
**Tunnel restriction code:** (-)  
**EMS Number 1:** F-A  
**EMS Number 1:** S-F

### 14.5. Environmental hazards

**Environmentally hazardous:** Yes  
**Marine pollutant:** Yes

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## 14.6. Special precautions for user

General: No data available

## 14.7. Transport in bulk according to Annex II of Marpol and the IBC Code

General: Not applicable

## Section 15: Regulatory information

### 15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture

#### Prohibition/Restriction:

REACH - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, preparations and articles (Annex XVII):	Banned and/or restricted (Diphenylmethane diisocyanate, isomers and homologues)
REACH - Candidate List of Substances of Very High Concern for Authorization (Article 59).	None of the components are listed (=> 0.1 %).
REACH - List of substances subject to authorization (Annex XIV)	Not applicable

### 15.2. Chemical safety assessment

**Chemical safety assessment:** This product contains substances for which Chemical Safety Assessments are still required.

## Section 16: Other information

### 16.1. Other information

**Hazard statements in full:** H304: May be fatal if swallowed and enters airways.  
H315: Causes skin irritation.  
H317: May cause an allergic skin reaction.  
H319: Causes serious eye irritation.  
H332: Harmful if inhaled.  
H334: May cause allergy or asthma symptoms or breathing difficulties if inhaled.  
H335: May cause respiratory irritation.  
H351: Suspected of causing cancer.  
H373: May cause damage to organs through prolonged or repeated exposure.  
H410: Very toxic to aquatic life with long lasting effects.

<b>Other information:</b>	Asp. Tox.	Aspiration hazard
	Eye Irrit.	Eye irritation
	Skin Sens.	Skin sensitization
	ADR	Accord européen relatif au transport international des marchandises Dangereuses par Route
	CAS	Chemical Abstracts Service
	DNEL	Derived no-effect level
	EC50	Half maximal effective concentration
	GHS	Globally Harmonized System
	IATA	International Air Transport Association

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IMDG	International Maritime Code for Dangerous Goods
LD50	Median lethal dose (the amount of a material, given all at once, which causes the death of 50% (one half) of a group of test animals)
LC50	Median lethal concentration (concentrations of the chemical in air that kills 50% of the test animals during the observation period)
MARPOL	International Convention for the Prevention of Pollution from Ships, 1973 as modified by the Protocol of 1978
OEL	Occupational Exposure Limit
PBT	Persistent, bioaccumulative and toxic
PNEC	Predicted no effect concentration
REACH	Regulation (EC) No 1907/2006 of the European Parliament and of the Council of 18 December 2006 concerning the Registration, Evaluation, Authorization and Restriction of Chemicals (REACH), establishing a European Chemicals Agency
SVHC	Substances of Very High Concern
vPvB	Very persistent and very bioaccumulative

**Legal disclaimer:** Recommendations and technical information are provided in good faith, based on current knowledge and experience. However, due to variations in storage conditions, storage period, substrates and site conditions, no warranty in respect of fitness for purpose can be inferred from this information. The user must test the product's suitability for the intended application. Ru-bix Tooling Board is happy to provide free-issue samples for this purpose. All orders are accepted subject to our current terms of sale, a copy of which can be obtained from the Ru-bix office.