

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

**1.1. Product Identifier**

**Product name:** Adhesive A45  
**Product code:** A45

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

**Use of substance:** No specific uses advised against are identified.

**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:** EC1272/2008  
**Physical hazards:** Not Classified  
**Health hazards:** Acute Tox. 4 – H332, Skin Irrit. 2 – H315, Eye Irrit. 2 – H319, Sens 1 – H334, Skin Sens. 1 – H317, Carc.2 – H351, STOT SE 3 – H335, STOT RE 2 – H373  
**Environmental hazards:** Not Classified

**2.2. Label elements**

**Hazard statements:** H315 Causes skin irritation.  
H317 May cause an allergic skin reaction.  
H319 Causes serious eye irritation.  
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.

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Hazard pictograms:



**Signal words:** Danger

**Precautionary statements:** UH204 Contains isocyanates. May produce an allergic reaction.  
P260 Do not breathe dust/fume/ gas/ mist/ vapours/ spray.  
P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.  
P281 Use personal protective equipment as required.  
P308+P313 IF exposed or concerned: Get medical advice/ attention.  
P314 Get medical advice/ attention if you feel unwell.  
P342+P311 If experiencing respiratory symptoms: Call a POISON CENTRE/ doctor.

**Contains:** DIPHENYLMETHANE -4, 4'- DI-ISOCYANATE

**Supp precautionary statements:** P201 Obtain special instructions before use.  
P202 Do not handle until all safety precautions have been read and understood.  
P261 Avoid breathing dust/ fume/ gas/ mist/ vapours/ spray.  
P264 Wash ... thoroughly after handling.  
P270 Do not eat, drink or smoke when using this product.  
P271 Use only outdoors or in a well-ventilated area.  
P272 Contaminated work clothing should not be allowed out of the workplace.  
P284 [In case of inadequate ventilation] wear respiratory protection.  
P301+P312 IF SWALLOWED: Call a POISON CENTRE/doctor if you feel unwell.  
P302+P352 IF ON SKIN: Wash with plenty of water.  
P304+P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.  
P304+P341 IF INHALED: If breathing is difficult, remove victim to fresh air and keep at rest in a position comfortable for breathing.  
P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.  
P312 Call a POISON CENTRE/doctor if you feel unwell.  
P313 Get medical advice/ attention.  
P330 Rinse mouth.  
P332+P313 If skin irritation occurs: Get medical advice/ attention.  
P333+P313 If skin irritation or rash occurs: Get medical advice/ attention.  
P337 If eye irritation persists:  
P362 Take off contaminated clothing.  
P363 Wash contaminated clothing before reuse.  
P403+P233 Store in a well-ventilated place. Keep container tightly closed.  
P405 Store locked up.

### 2.3. Other hazards

**PBT:** This product is not identified as a PBT/vPvB substance.

## Section 3: Composition/information on ingredients

### 3.2. Mixtures

**Hazardous ingredients:** DIPHENYLMETHANE -4,4'- DI-ISOCYANATE. 10-30%  
CAS number: 101-68-8  
EC number: 202-966-0

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**Classification:** H332 - Acute Tox. 4  
H315 - Skin Irrit. 2  
H319 - Eye Irrit. 2  
H334 - Resp. Sens. 1  
H317 - Skin Sens. 1  
H351 - Carc. 2  
H335 - STOT SE 3  
H373 - STOT RE 2

### Section 4: First Aid measures

#### 4.1. Description of First Aid measures

**General Information:** Get medical attention immediately.

Show this Safety Data Sheet to the medical personnel.

**Skin contact:** It is important to remove the substance from the skin immediately.

In the event of any sensitisation symptoms developing, ensure further exposure is avoided.

Remove contamination with soap and water or recognised skin cleansing agent.

Get medical attention if symptoms are severe or persist after washing.

**Eye Contact:** Rinse immediately with plenty of water.

Remove any contact lenses and open eyelids wide apart.

Continue to rinse for at least 10 minutes.

**Ingestion:** Rinse mouth thoroughly with water.

Remove any dentures.

Give a few small glasses of water or milk to drink.

Stop if the affected person feels sick as vomiting may be dangerous.

Do not induce vomiting unless under the direction of medical personnel.

If vomiting occurs, the head should be kept low so that vomit does not enter the lungs.

Never give anything by mouth to an unconscious person.

Move affected person to fresh air and keep warm and at rest in a position comfortable for breathing.

Place unconscious person on their side in the recovery position and ensure breathing can take place.

Maintain an open airway.

Loosen tight clothing such as collar, tie or belt.

**Inhalation:** Remove affected person from source of contamination.

Move affected person to fresh air and keep warm and at rest in a position comfortable for breathing.

Maintain an open airway.

Loosen tight clothing such as collar, tie or belt.

When breathing is difficult, properly trained personnel may assist affected person by administering oxygen.

Place unconscious person on their side in the recovery position and ensure breathing can take place.

In the event of any sensitisation symptoms developing, ensure further exposure is avoided.

**Protection of first aiders:** First aid personnel should wear appropriate protective equipment during any rescue.

If it is suspected that volatile contaminants are still present around the affected person, first aid personnel should wear an appropriate respirator or self-contained breathing apparatus.

Wash contaminated clothing thoroughly with water before removing it from the affected person, or wear gloves.

It may be dangerous for first aid personnel to carry out mouth-to-mouth resuscitation.

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

- General information:** See Section 11 for additional information on health hazards.  
The severity of the symptoms described will vary dependent on the concentration and the length of exposure.
- Skin contact:** May cause skin sensitization or allergic reactions in sensitive individuals.  
Redness. Irritating to skin.  
Prolonged or repeated exposure may cause the following adverse effects: suspected of causing cancer.
- Eye Contact:** Irritating to eyes.
- Ingestion:** May cause sensitisation or allergic reactions in sensitive individuals.  
May cause irritation.  
Prolonged or repeated exposure may cause the following adverse effects: suspected of causing cancer.
- Inhalation:** May cause sensitisation or allergic reactions in sensitive individuals.  
A single exposure may cause the following adverse effects: headache, exhaustion and weakness.  
Prolonged or repeated exposure may cause the following adverse effects: suspected of causing cancer.

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

- Notes for the doctor:** Treat symptomatically.  
May cause sensitization or allergic reactions in sensitive individuals.

## Section 5: Fire-fighting measures

### 5.1. Extinguishing media

- Suitable extinguishing media:** The product is not flammable. Extinguish with alcohol-resistant foam, carbon dioxide, dry powder or water fog.  
Use fire-extinguishing media suitable for the surrounding fire.
- Unsuitable extinguishing media:** Do not use waterjet as an extinguisher, as this will spread the fire.

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

- Specific hazards:** Containers can burst violently or explode when heated, due to excessive pressure build-up.  
This product is toxic.
- Hazardous combustion Products:** Thermal decomposition or combustion products may include the following substances: toxic gases or vapours.

### 5.3. Advice for fire-fighters

- Advice for fire-fighters:** Avoid breathing fire gases or vapours.  
Evacuate area.  
Keep upwind to avoid inhalation of gases, vapours, fumes and smoke.  
Ventilate closed spaces before entering them.  
Cool containers exposed to heat with water spray and remove them from the fire area if it can be done without risk.  
Cool containers exposed to flames with water until well after the fire is out.  
If a leak or spill has not ignited, use water spray to disperse vapours and protect men stopping the leak.  
Control run-off water by containing and keeping it out of sewers and watercourses.  
If risk of water pollution occurs, notify appropriate authorities.

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**Protective Equipment for firefighters:** Wear positive-pressure self-contained breathing apparatus (SCBA) and appropriate protective clothing. Firefighter's clothing conforming to European standard EN469 (including helmets, protective boots and gloves) will provide a basic level of protection for chemical incidents.

### Section 6: Accidental release measures

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

**Personal precautions:** No action shall be taken without appropriate training or involving any personal risk.  
Keep unnecessary and unprotected personnel away from the spillage.  
Wear protective clothing as described in Section 8 of this safety data sheet.  
Follow precautions for safe handling described in this safety data sheet.  
Wash thoroughly after dealing with a spillage.  
Ensure procedures and training for emergency decontamination and disposal are in place.  
Do not touch or walk into spilled material. Avoid inhalation of dust and vapours.  
Use suitable respiratory protection if ventilation is inadequate.  
Avoid contact with skin and eyes.

#### 6.2. Environmental precautions

**Environmental precautions:** Avoid discharge into drains or watercourses or onto the ground.  
Avoid discharge to the aquatic environment.  
Large Spillages: Inform the relevant authorities if environmental pollution occurs (sewers, waterways, soil or air).

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

**Clean-up procedures:** Wear protective clothing as described in Section 8 of this safety data sheet.  
Clear up spills immediately and dispose of waste safely.  
Provide adequate ventilation.  
Approach the spillage from upwind.  
Small Spillages: If the product is soluble in water, dilute the spillage with water and mop it up.  
Alternatively, or if it is not water-soluble, absorb the spillage with an inert, dry material and place it in a suitable waste disposal container.  
Large Spillages: If leakage cannot be stopped, evacuate area.  
Flush spilled material into an effluent treatment plant or proceed as follows.  
Contain and absorb spillage with sand, earth or other non-combustible material.  
Place waste in labelled, sealed containers.  
Clean contaminated objects and areas thoroughly, observing environmental regulations.  
The contaminated absorbent may pose the same hazard as the spilled material.  
Flush contaminated area with plenty of water.  
Wash thoroughly after dealing with a spillage.  
Dispose of waste to licensed waste disposal site in accordance with the requirements of the local Waste Disposal Authority.

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### 6.4. Reference to the other sections

**Reference to the other sections:** For personal protection, see Section 8. See Section 11 for additional information on health hazards.  
See Section 12 for additional information on ecological hazards.  
For waste disposal, see Section 13.

## Section 7: Handling and storage

### 7.1. Precaution for safe handling

**Handling requirements:** Read and follow manufacturer's recommendations. Wear protective clothing as described in Section 8 of this safety data sheet.  
Keep away from food, drink and animal feeding stuffs.  
Handle all packages and containers carefully to minimise spills.  
Keep container tightly sealed when not in use.  
Avoid the formation of mists.  
Suspected of causing cancer.  
Do not handle until all safety precautions have been read and understood.  
Do not handle broken packages without protective equipment.  
Do not reuse empty containers.

**Advice on general occupational hygiene:** Wash promptly if skin becomes contaminated. Take off contaminated clothing. Wash contaminated clothing before reuse.  
Do not eat, drink or smoke when using this product.  
Wash at the end of each work shift and before eating, smoking and using the toilet.  
Change work clothing daily before leaving workplace.

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

**Storage conditions:** Store in accordance with local regulations.  
Keep only in the original container.  
Keep container tightly closed, in a cool, well ventilated place.  
Keep containers upright.  
Protect containers from damage.  
Bund storage facilities to prevent soil and water pollution in the event of spillage.  
The storage area floor should be leak-tight, jointless and not absorbent.

**Storage class:** Unspecified storage.

### 7.3. Specific end use(s)

**Specific end use(s):** The identified uses for this product are detailed in Section 1.2.

## Section 8: Exposure controls/personal protection

### 8.1. Control parameters

**Workplace exposure limits:** DIPHENYLMETHANE -4, 4'- DI-ISOCYANATE  
Long-term exposure limit (8-hourTWA): WEL 0,01 mg/m<sup>3</sup>  
Short-term exposure limit (15-minute): WEL 0,07 mg/m<sup>3</sup> as NCO  
WEL= Workplace Exposure Limit  
Sen = Capable of causing occupational asthma.

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### 8.2. Exposure controls

- Protective equipment:** Respirator, gloves, safety glasses/goggles
- 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.  
If inhalation hazards exist, a full-face respirator may be required instead.
- Skin protection:** Appropriate footwear and additional protective clothing complying with an approved standard should be worn if a risk assessment indicates skin contamination is possible.
- Hygiene measures:** Provide eyewash station and safety shower.  
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.

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**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. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

### Section 9: Physical and chemical properties

#### 9.1. Information on basic and chemical properties

**State:** Liquid  
**Colour:** Brown  
**Viscosity:** 2500-4500mPa.s @23°C

#### 9.2. Other Information

**Other information:** No data available.

### Section 10: Stability and reactivity

#### 10.1. Reactivity

**Reactivity:** There are no known reactivity hazards associated with this product.

#### 10.2. Chemical stability

**Chemical stability:** Stable at normal ambient temperatures and when used as recommended. Stable under the prescribed storage conditions.

#### 10.3. Possibility of hazardous reactions

**Hazardous reactions:** No potentially hazardous reactions known.

#### 10.4. Conditions to avoid

**Conditions to avoid:** There are no known conditions that are likely to result in a hazardous situation.

#### 10.5. Incompatible materials

**Materials to avoid:** No specific material or group of materials is likely to react with the product to produce a hazardous situation.

#### 10.6. Hazardous decomposition products

**Hazardous decomposition products:** Does not decompose when used and stored as recommended. Thermal decomposition or combustion products may include the following substances: toxic gases or vapours.



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### Section 11: Toxicological information

#### 11.1. Information on toxicological effects

<b>Acute toxicity - oral:</b>	oral LD <sub>50</sub>	Based on available data the classification criteria are not met.
<b>Acute toxicity – dermal:</b>	dermal LD <sub>50</sub>	Based on available data the classification criteria are not met.
<b>Acute toxicity – inhalation:</b>	Inhalation LD <sub>50</sub>	Acute Tox. 4 - H332 Harmful if inhaled.

<b>ATE Inhalation (gases ppm):</b>	24,379.73
<b>ATE inhalation (vapours mg/l):</b>	59.59
<b>ATE inhalation (dusts/mists mg/l):</b>	2.5
<b>Skin corrosion/irritation:</b>	Animal data: Irritating.
<b>Serious eye damage/irritation:</b>	Causes serious eye irritation.
<b>Respiratory sensitization:</b>	There is evidence that the product can cause respiratory hypersensitivity.
<b>Skin sensitization:</b>	May cause skin sensitization or allergic reactions in sensitive individuals.
<b>Germ cell mutagenicity:</b>	Genotoxicity - in vitro: Based on available data the classification criteria are not met.
<b>Carcinogenicity:</b>	Suspected of causing cancer.
<b>IARC carcinogenicity:</b>	None of the ingredients are listed or exempt.
<b>Reproductive toxicity - fertility:</b>	Based on available data the classification criteria are not met.
<b>Reproductive toxicity – development:</b>	Based on available data the classification criteria are not met.
<b>STOT - single exposure:</b>	STOT SE 3 - H335 May cause respiratory irritation.
<b>Target organs:</b>	Respiratory system, lungs
<b>STOT - repeated exposure:</b>	STOT RE 2 - H373
	May cause damage to organs through prolonged or repeated exposure.
<b>Aspiration hazard:</b>	Based on available data the classification criteria are not met.

#### 11.2. Symptoms/routes of exposure

<b>General information:</b>	May cause cancer after repeated exposure. Risk of cancer depends on duration and level of exposure. The severity of the symptoms described will vary dependent on the concentration and the length of exposure.
<b>Skin contact:</b>	May cause skin sensitization or allergic reactions in sensitive individuals. Redness. Irritating to skin.
<b>Eye Contact:</b>	Irritating to eyes.
<b>Ingestion:</b>	May cause sensitization or allergic reactions in sensitive individuals. May cause irritation
<b>Inhalation:</b>	May cause sensitisation or allergic reactions in sensitive individuals. A single exposure may cause the following adverse effects: headache, exhaustion and weakness.
<b>Route of exposure:</b>	Ingestion, inhalation, skin and/or eye contact.
<b>Target organs:</b>	Respiratory system, lungs.
<b>Medical considerations:</b>	Skin disorders and allergies.

### Section 12: Ecological information

#### 12.1. Toxicity

<b>Ecotoxicity:</b>	Not regarded as dangerous for the environment. However, large or frequent spills may have hazardous effects on the environment.
<b>Toxicity:</b>	Based on available data the classification criteria are not met.

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### 12.2. Persistence and degradability

**Persistence and degradability:** The degradability of the product is not known.

### 12.3. Bioaccumulative potential

**Bioaccumulative potential:** No data available on bioaccumulation.

### 12.4. Mobility in soil

**Mobility:** No data available.

### 12.5. Results of PBT and vPvB assessment

**Results of PBT - vPvB assessment:** No data available.

### 12.6. Other adverse effects

**Other adverse effects:** None known

## Section 13: Disposal considerations

### 13.1. Waste treatment methods

**General information:** The generation of waste should be minimized or avoided wherever possible. Reuse or recycle products wherever possible. This material and its container must be disposed of in a safe way. Disposal of this product, process solutions, residues and by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any local authority requirements. When handling waste, the safety precautions applying to handling of the product should be considered. Care should be taken when handling emptied containers that have not been thoroughly cleaned or rinsed out. Empty containers or liners may retain some product residues and hence be potentially hazardous.

**Disposal operations:** Dispose of surplus products and those that cannot be recycled via a licensed waste disposal contractor. Waste, residues, empty containers, discarded work clothes and contaminated cleaning materials should be collected in designated containers, labelled with their contents. Incineration or landfill should only be considered when recycling is not feasible.

## Section 14: Transport information

### 14.1. Transport class

**General:** The product is not covered by international regulations on the transport of dangerous goods (IMDG, IATA, ADR/RID).  
**Transport labels:** No transport warning sign required.

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Environmentally hazardous substance/marine pollutant: No

### Section 15: Regulatory information

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

**National regulations:** Health and Safety at Work etc. Act 1974 (as amended).  
The Chemicals (Hazard Information and Packaging for Supply) Regulations 2009 (SI 2009 No. 716).  
The Carriage of Dangerous Goods and Use of Transportable Pressure Equipment Regulations 2009 (SI 2009 No. 1348) (as amended) ["CDG 2009"].  
EH40/2005 Workplace exposure limits.

**EU legislation:** Regulation (EC) No 1907/2006 of the European Parliament and of the Council of 18 December 2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH) (as amended).  
Commission Regulation (EU) No 453/2010 of 20 May 2010.  
Regulation (EC) No 1272/2008 of the European Parliament and of the Council of 16 December 2008 on classification, labelling and packaging of substances and mixtures (as amended).  
Dangerous Preparations Directive 1999/45/EC.  
Dangerous Substances Directive 67/548/EEC.

#### 15.2. Chemical safety assessment

**Chemical safety assessment:** No chemical safety assessment has been carried out.

#### 15.3 Inventories

**EU - EINECS/ELINCS:** None of the ingredients are listed or exempt.  
**US-TSCA:** None of the ingredients are listed or exempt.  
**US - TSCA 12(b) Export Notification:** None of the ingredients are listed or exempt.

### Section 16: Other information

#### 16.1. Other information

**Classification procedures according to Regulation (EC) 1272/2008:** Acute Tox. 4 - H332: STOT RE 2 - H373: STOT SE 3 - H335: Skin Irrit. 2 - H315: Eye Irrit. 2 - H319: Resp. Sens. 1 - H334: Skin Sens. 1 - H317: Carc. 2 - H351: Calculation method.

**Training advice:** Read and follow manufacturer's recommendations. Only trained personnel should use this material.

**Hazard statements In full:** 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.

**Other information:** STOT SE - Specific target organ toxicity – single exposure  
STOT RE - Specific target organ toxicity – repeated exposure  
WEL – Workplace exposure limit  
Sen – capable of causing occupational asthma

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**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.