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## MATERIAL SAFETY DATA SHEET

MSDS 459

PAGE 1 OF 7

### 1. Product and Company Identification

- 1.1 PRODUCT NAME:** DURACON BfK
- 1.2 USE OF PRODUCT** Base resin for grooves.
- 1.3 SUPPLIER:** Equus Industries Ltd  
Sheffield Street  
Riverlands Industrial Estate  
Blenheim, Marlborough, New Zealand  
Telephone: +64 3 578 0214  
Fax: +64 3 578 0919
- 1.4 PRODUCER:** Alteco Technik GmbH  
Raiffeisenstraße 16  
D-27239 Twistringen, Germany  
Telephone: 0049 (0) 4243-92 95-0  
Fax: 0049 (0) 4243-3322
- 1.5 EMERGENCY CONTACT:** **National Poison Centre**  
**Telephone: 0800 764 766**

Information about Safety Data Sheet: Telephone: +64 3 578 0214 8:00am – 6:00pm Mon - Fri

### 2. Hazards Identification

- 2.1 Classification:**  
Dangerous Goods – classification according to New Zealand Dangerous Goods Code.
- 2.2 Risk & Safety Phrases:**  
R11,37-38,43  
S9,16,24,29,33,37
- 2.3 Special Hazard notes for humans and environment:**  
Vapours with air can cause mixes which can explode. Also see point 7, 8 and 10.

The full text of each R & S phrases is listed in Section 16.



### 3. Composition/Information on Ingredients

**3.1 Chemical Characterization (Preparation):**  
Reactive resin based on methyl methacrylate.

**3.2 Hazardous Ingredients:**

CAS NO.	COMPONENT	CONCENTRATION %	CLASSIFICATION
80-62-6	Methyl methacrylate	25-50%	R11/37/38/43
103-11-7	2-Ethylhexylacrylate	10-25%	R37/38/43

**3.3** Only ingredients, additives and impurities which are classified and contribute to the classification of the product are included in this section.

### 4. First Aid Measures

- 4.1 After Inhalation:**  
Remove person to fresh air. Allow person to rest. If unconscious place in recovery position. If not breathing, give artificial respiration. Seek medical attention.
- 4.2 After Skin Contact:**  
Remove contaminated clothing. Wipe off excess material and wash skin immediately with mild soap and plenty of water. If irritation persists, seek medical attention.
- 4.3 After Eye Contact:**  
Rinse immediately with running water, while holding eyelid open for at least 15 minutes. Seek medical attention.
- 4.4 After Ingestion:**  
Do not induce vomiting. Rinse mouth with water and drink sufficient water in small sips. Allow affected person to rest. Seek medical attention immediately.
- 4.5 Advice to Doctor:**  
Sensitization through skin contact possible, decontamination, symptomatic treatment, no specific antidote known.

### 5. Fire Fighting Measures

- 5.1 Suitable Extinguishing Media:**  
Dry powder, foam, fog or carbon dioxide.
- 5.2 Protective Equipment:**  
Use self contained breathing apparatus when in close proximity to fire, and wear full body protective clothing (heat and chemically resistant).
- 5.3 Specific Hazards:**  
Combustion and decomposition products lead to irritation or infection of the airways. The formation of vapour/air mixtures which can lead to flame or explosion is possible. Residues from fire and contaminated extinguishing agents must be disposed of according to the local regulations.



**5.4 Combustion Products:**

Carbon monoxide, carbon dioxide, fumes and smoke.

**5.5 Precautions in Connection with Fire:**

Do not use a heavy water stream, in order to avoid the fire to extend. Apply water spray or fog to cool nearby equipment. Avoid fire fighting water entering the environment.

<b>6. Accidental Release Measures</b>
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**6.1 Preliminary Action and Precautions:**

**6.1.1** Eliminate every possible source of ignition.

**6.1.2** Evacuate all personnel immediately and ventilate area.

**6.1.3** Avoid breathing vapour and contact with skin, eyes and clothing.

**6.1.4** Wear recommended personal protective equipment and clothing.

**6.1.5** Shut off leaks if possible without risk.

**6.1.6** Dike in the spilled product as much as possible with inert material.

**6.1.7** Prevent entry of product into sewers, soil, storm water drains and open bodies of water.

**6.1.8** Collect the spillage in closable, suitable disposal containers.

**6.1.9** Clean up all spills as soon as possible, using an inert absorbent material (i.e. diatomaceous earth, expanded mica, sawdust etc.) and dispose of as hazardous waste.

<b>7. Handling and Storage</b>
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**7.1 Handling:**

**7.1.1** Always provide adequate ventilation. In closed rooms, install ventilators or suction (explosion protection) and use respirator. Vapours are 4x heavier than air, therefore suction from below.

**7.1.2** Use special care to avoid possibility of dangerous concentrations of vapours in low lying, open rooms.

**7.1.3** Avoid breathing vapour or mist. Wear breathing protection.

**7.1.4** Avoid contact with eyes, skin and clothing. Do not use near heat, welding, sparks or open flames, and do not smoke. Together with air, vapours can form a mixture which can explode.

**7.1.5** Use special care to avoid static electric discharges (i.e. antistatic clothing and shoes, non-sparking tools).

**7.1.6** Use special care when opening containers, they can be under pressure.

**7.1.7** Treat empty containers with the same caution as filled ones.





### 8.2.3 General:

Adhere to normal practices when handling chemical products (do not eat, drink, or smoke when working with them).

## 9. Physical and Chemical Properties

### 9.1 General Information:

#### Appearance:

Form: Fluid, middle viscosity  
Colour: Blue violet, clear to cloudy  
Smell: Strong methyl methacrylate smell

#### Data relating to safety

Information for the component methyl methacrylate:

pH-value	Not applicable	
Melt temperature:	-48 <sup>0</sup> C	BS 523, 1964
Boiling Point:	100.3 <sup>0</sup> C	DIN 51751
Flash point:	11.5 <sup>0</sup> C	DIN 51755
Ignition temperature:	430 <sup>0</sup> C	DIN 51794
Lower explosion limit:	2.1 Vol.%	
Upper explosion limit:	12.5 Vol.%	
Vapour pressure at 20 <sup>0</sup> C:	38.7 mbar	
Solubility in water at 20 <sup>0</sup> C:	15.9 g/l	
Distribution coefficient (n-octanol/water):	1.38 log POW	

Information for the preparation:

Density at 25 <sup>0</sup> C:	0.98 g/cm <sup>3</sup>	DIN 53217
Viscosity at 25 <sup>0</sup> C:	130-170 mPa*s	DIN 53018

## 10. Stability and Reaction

### 10.1 General Information:

The formation of vapour/air mixture which can explode is possible. There is a tendency towards strong exothermal polymerization when warming, and with contact to the materials which are to be avoided. Danger of bursting in closed containers through pressure build up. The product is delivered with sufficient stability, but if there is a suspicion of polymerization due to storage or handling which is not appropriate, this process can be disrupted by mixing with stabilizers (e.g. Duracon 403) and cooling the container.

### 10.2 Conditions to Avoid:

Temperatures of >25<sup>0</sup>C, direct sunlight, low ventilation, sources of ignition in the area.

### 10.3 Material to Avoid:

Radical donators such as peroxides, amines, azoic compositions, heavy metal compositions, strong oxidants and reducing agents.



**10.4 Hazardous Decomposition Products:**

None expected when material properly handled and stored. For thermal decomposition see Section 5.

**11. Toxicological Information**

**11.1** Data from tests with this preparation are not available.

**11.2** Literature gives the following information for the component methyl methacrylate:  
Lethal dose LD<sub>50</sub> (oral, rat) 7872 mg/kg  
Lethal concentration LC<sub>50</sub> (inhalation rat) 3750 ppm

**11.3** For 2-ethylhexylacrylate the following is valid:  
Lethal dose LD<sub>50</sub> (oral, rat) 5660 mg/kg

The product has an irritating effect on the skin, eyes, mucosa and airways. The odour threshold value of methyl methacrylate is 0.05 ppm. The comparatively relatively high OES value of 50 ppm was determined in view of the odour annoyance. Sensitization is possible with contact to the skin. Toxication or permanent damage through processing the product has not been previously known.

**12. Ecological Information**

**12.1 Information on elimination (persistence and biodegradability):**

Biologically readily biodegradable, OECD 301 C, 14 d, 94%

**12.2 Reaction in the environmental compartment:**

Air contamination leads to odour annoyance. Odour threshold value 0.05 ppm.

**12.3 Ecotoxic effects, rating numbers for acute toxicity:**

For methyl methacrylate: Against mammals: 1  
Against fish: 3.5  
Against bacteria: 4.0

For 2-ethylhexylacrylate: Against mammals: 1  
Against fish: 4.6  
Against bacteria: 4.9

**12.4 Further information:**

Ecotoxicological tests for the product are not available. The information given in point 12 refers to the component methyl methacrylate and 2-ethylhexylacrylate.

**13. Disposal Consideration**

**13.1 Material**

Dispose of according to regulations by incineration in a special waste incinerator or landfill at a permitted facility in accordance with local/national regulations. Remains from construction sites or contaminated material can be mixed with Duracon reaction resins and cured with Duracon catalyst. Completely hardened material can be disposed of as domestic waste after permission has been granted by the responsible authorities.



**13.2 Disposal of used packaging and recommended cleaning agent**

Once completely emptied of product, steel packaging, cleaned should be recycled through the local recycler. Ethylacetate and acetone are suitable as cleaning agents.

**14. Transport Information**

**14.1 Land Transport:**

Road: Resin solution (Class: 3, GP II, HAZ CHEM 3W)

Rail: Resin solution (Class: 3, GP II, HAZ CHEM 3W)

**14.2 Sea Transport:** Resin solution (Class: 3.3, GP II, HAZ CHEM 3W) Marine pollutant.

**14.3 Air Transport:** Resin solution (Class: 3, GP II, HAZ CHEM 3W)

**14.4 Postal and Courier Service:** Can not be transported.

**15. Regulatory Information**

This product is hazardous.

**16. Other Information**

**16.1 Full Text of R-Phrases Contained in Section 2:**

**R11** Highly flammable  
**R37/38** Irritating to respiratory system and skin  
**R43** May cause sensitization by skin contact

**16.2 Full Text of S-Phrases Contained in Section 2:**

**S9** Keep container in a well ventilated place  
**S16** Keep away from sources of ignition – No smoking  
**S24** Avoid contact with skin  
**S29** Do not empty into drains  
**S33** Take precautionary measures against static discharges.  
**S37** Wear suitable gloves

**16.3** The information contained in this Data Sheet relates only to the specific material identified. Equus Industries Ltd believes the information to be accurate and reliable as at the date of this Data Sheet. No Warranty, Guarantee or representation is expressed or implied by the Company as to the absolute correctness or completeness of any representation contained in this Data and assumes no legal responsibility in connection therewith. It can not be assumed that all acceptable safety measures are contained in this Data Sheet, or that additional measures may not be required under particular or exceptional circumstances or conditions.