

**Advanced Materials****RenShape<sup>®</sup> BM 5173**

HIGH-IMPACT, ABRASION RESISTANT BOARD MATERIAL  
EASILY MACHINABLE

**KEY  
PROPERTIES**

- Excellent machinability
- High abrasion resistance
- Excellent edge strength
- High impact strength
- Good heat resistance

**APPLICATIONS**

- Pattern plates
- Core boxes
- Tooling jigs

**PRODUCT DATA**

| Product                       | Colour    | Test method |
|-------------------------------|-----------|-------------|
| RenShape <sup>®</sup> BM 5173 | Dark blue | visual      |

**PROPERTIES**

|                                  |           |                                  |             |
|----------------------------------|-----------|----------------------------------|-------------|
| Density                          | ISO 1183  | g/cm <sup>3</sup>                | 1.25        |
| Hardness                         | ISO 868   | Shore D                          | 80 - 85     |
| Coefficient of thermal expansion | ISO 11359 | 10 <sup>-6</sup> K <sup>-1</sup> | 75          |
| Deflection temperature           | ISO 75    | °C                               | 80 - 85     |
| Compressive strength             | ISO 604   | MPa                              | 85 - 90     |
| Compressive modulus              | ISO 604   | MPa                              | 2900 - 3000 |
| Flexural strength                | ISO 178   | MPa                              | 90 - 95     |

**BONDING**

|                         |                        |                                 |
|-------------------------|------------------------|---------------------------------|
| <b>System</b>           |                        | <b>Araldite® AW 106 HV 953U</b> |
| <b>Appearance</b>       | <b>visual</b>          | Transparent                     |
| <b>Mix ratio</b>        | <b>Parts by weight</b> | 100 : 80                        |
| <b>Pot life at 25°C</b> | <b>min</b>             | 60 - 90                         |
| <b>Clamping time</b>    | <b>h</b>               | 18                              |

**REPAIR**

Repair with bonded inserts.

**MILLING**

Milling parameter available on request.

**STORAGE**

Board material may be stored flat in original cartons at 2° to 40° C in a dry area. Temperature variations should be avoided when transporting and storing board material.

**WORKING  
CONDITION**

The product should be used when in the temperature range 20° to 25° C.

**PACKAGING**

| <b>Dimensions</b> | <b>Volume<br/>(l)</b> | <b>Weight<br/>(kg)</b> | <b>Number of Boards<br/>(per pack)</b> | <b>Number of Boards<br/>(per pallet)</b> |
|-------------------|-----------------------|------------------------|----------------------------------------|------------------------------------------|
| 1000 x 500 x 50   | 25                    | 30 - 31                | 2                                      | 24                                       |
| 1000 x 500 x 100  | 50                    | 61 - 62                | 1                                      | 12                                       |

**HANDLING  
PRECAUTIONS****Caution**

Our products are generally quite harmless to handle provided that certain precautions normally taken when handling chemicals are observed. The uncured materials must not, for instance, be allowed to come into contact with foodstuffs or food utensils, and measures should be taken to prevent the uncured materials from coming in contact with the skin, since people with particularly sensitive skin may be affected. The wearing of impervious rubber or plastic gloves will normally be necessary; likewise the use of eye protection. The skin should be thoroughly cleansed at the end of each working period by washing with soap and warm water. The use of solvents is to be avoided. Disposable paper - not cloth towels - should be used to dry the skin. Adequate ventilation of the working area is recommended. These precautions are described in greater detail in the Material Safety Data sheets for the individual products and should be referred to for fuller information.

**Huntsman Advanced Materials**  
(Switzerland) GmbH  
Klybeckstrasse 200  
4057 Basel  
Switzerland

Tel: +41 (0)61 299 11 11  
Fax: +41 (0)61 299 11 12

[www.huntsman.com/advanced\\_materials](http://www.huntsman.com/advanced_materials)  
Email: [advanced\\_materials@huntsman.com](mailto:advanced_materials@huntsman.com)



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