

Advanced Materials**RenCast[®] CW 5156-1 / Ren[®] HY 5158**

CASTING RESIN
FILLED EPOXY CASTING SYSTEM WITH ENHANCED HEAT RESISTANCE

KEY PROPERTIES

- Low viscosity
- Long pot life
- Precure at room temperature

APPLICATIONS

- Construction of vacuum deep-drawing and foam moulding tools
- Fixtures and injection moulds for thermoplastic resin systems

PRODUCT DATA

| Property | Unit | RenCast [®] CW 5156-1 | Ren [®] HY 5158 |
|----------------------|-------------------|-----------------------------------|-----------------------------|
| Appearance Colour | visual | Liquid Grey | Clear liquid yellow |
| Viscosity at 25°C | mPa s | 75,000 - 135,000** | 800 - 1,600** |
| Density | g/cm ³ | 1.74 | 1.01 |

*** Specified data are on a regular basis analysed. Data which is described in this document as 'typical' is not analysed on a regular basis and is given for information purposes only. Data values are not guaranteed or warranted unless if specifically mentioned.*

TYPICAL SYSTEM DATA**PROCESSING**

| Mix ratio | Parts by weight |
|--------------------------------|-----------------|
| RenCast [®] CW 5156-1 | 100 |
| Ren [®] HY 5158 | 8 |

Mix the two components thoroughly in the ratio indicated.
If fine details are to be reproduced, a thin layer of mixed resin and hardener should be applied to the mould surface using a short bristle brush before casting.
Evacuated material will improve properties. Post-curing will improve final properties.

PROPERTIES

| Resin/Hardener mix: | Volume | Unit | RenCast [®] CW 5156-1 Ren [®] HY 5158 |
|----------------------|---------|-------|--|
| Appearance | | | Grey liquid |
| Viscosity at 25°C | | mPa s | 20,000 - 30,000 |
| Pot life at 25°C | 1000 ml | min | 60 |
| Max. Layer thickness | | mm | 80 |
| Demoulding time | | h | 24 |

After cure: Curing

Pre-cure parts for 48 hours at 25°C, or for 8 hours at 60°C before demoulding, which should be carried out at room temperature. Commence the post cure of the demoulded part at a temperature no higher than that of the pre-cure. Raise the temperature of the oven by no more than 10°C per hour, until the part has reached 120°C. For optimum heat resistance hold the part for 14 hours at 120°C.

| | | | |
|----------------------------------|-----------|----------------------------------|-----------|
| Density | ISO 1183 | g/cm ³ | 1.62 |
| Hardness | ISO 868 | Shore D | 90 |
| Coefficient of thermal expansion | ISO 11359 | 10 ⁻⁶ k ⁻¹ | 46-48 |
| Deflection temperature | ISO 75 | °C | 130 |
| Compressive strength | ISO 604 | MPa | 140 - 145 |
| Compressive modulus | ISO 604 | MPa | 5800 |
| Flexural strength | ISO 178 | MPa | 72 - 77 |
| Linear shrinkage | | mm/m | On test |
| Abrasion resistance | Taber | mg/100u | On test |

STORAGE

Provided that RenCast[®] CW 5156-1 and Ren[®] HY 5158 are stored in a dry place in their original, properly closed containers at the storage temperatures mentioned in the MSDS they will have the shelf lives indicated on the labels. Partly emptied containers should be closed immediately after use.

WORKING CONDITIONS

The product should be used when in the temperature range 18-25°C.

PACKAGING

| System | RenCast [®] CW 5156-1 | Ren [®] HY 5158 |
|---------------------|--------------------------------|--------------------------|
| Quantity and Weight | 12.5 kg | 6 x 1 kg |
| Quantity and Weight | 265 kg | 6.25 kg |

**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.

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