

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**
- **Precures 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	60,000 - 110,000	1,000 - 2,000
Density	g/cm ³	1.74	1.01

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	CW 5156-1 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

The resin and hardeners described in this instruction sheet have the shelf lives shown provided they are stored at 6 - 28°C in a dry place and sealed containers, preferably those in which they are supplied.

**WORKING
CONDITIONS**

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

PACKAGING

System	CW 5156-1	HY 5158
Quantity and Weight	25 kg	20 kg
Quantity and Weight	12.5 kg	6 x 1 kg
Quantity and Weight		4 x 1.25 kg
Quantity and Weight		4 x 0.6 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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