

Advanced Materials**RenCast[®] CW 2418-1 / Ren[®] HY 5160 or HY 5161
or HY 5162**

CASTING RESIN
METAL FILLED, EPOXY RESIN SYSTEMS

**KEY
PROPERTIES**

- **Hard, abrasion resistant surfaces**
- **Readily machinable**
- **Cures at room temperature**
- **Layers up to 80mm thick can be cast in a single operation**
- **Cure rate determined by choice of hardener**

APPLICATIONS

- Metal forming tools
- Casting of dowel bushes
- Full and Face casting
- Foundry patterns and copy-milling models
- Mould making in general

PRODUCT DATA

Property	Unit	RenCast [®] CW 2418-1	Ren [®] HY 5160	Ren [®] HY 5161	Ren [®] HY 5162
Appearance Colour	visual	Paste Black	Clear liquid Pale yellow	Clear liquid Pale yellow	Clear liquid Pale yellow
Viscosity at 25°C	mPa s	100,000 - 280,000**	30 - 50**	35 - 55**	30 - 70**
Density	g/cm ³	2.8	1.0	1.0	1.0

*** 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 2418-1	100	100	100
Ren [®] HY 5160	15	-	-
Ren [®] HY 5161	-	15	-
Ren [®] HY 5162	-	-	15

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 2418-1 HY 5160	CW 2418-1 HY 5161	CW 2418-1 HY 5162
Appearance			Black	Black	Black
Viscosity at 25°C		m Pa s	4,000	5,000	5,000
Pot life at 25°C	1000 ml	min	120	60	30
Max. Layer thickness		mm	80	20	10
Demoulding time		h	16	12	10

After cure: 7 days at RT or 14 hours at 40 °C

Density	ISO 1183	g/cm ³	2.3	2.3	2.3
Hardness	ISO 868	Shore D	85-90	85-90	85-90
Coefficient of thermal expansion	ISO 11359	10 ⁻⁶ K ⁻¹	40-45	40-45	40-45
Deflection temperature	ISO 75	°C	50-55	55-60	60-65
Compressive strength	ISO 604	MPa	80-90	80-90	80-90
Compressive modulus	ISO 604	MPa	4,500-5,500	4,500-5,500	4,500-5,500
Flexural strength	ISO 178	MPa	80-90	80-85	80-85
Linear shrinkage		mm/m	0.1	0.8	1
Abrasion resistance	Taber	mm ³ / 100U	45-50	45-50	45-50

STORAGE

Provided that RenCast® CW 2418-1 and Ren® HY 5160 / 5161 / 5162 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	CW 2418-1	HY 5160	HY 5161	HY 5162
Quantity and Weight	1 x 13.5 kg	20 kg	20 kg	20 kg
Quantity and Weight	6 x 1 kg	4 x 2 kg	4 x 2 kg	4 x 2 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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