



Casting Resin

RenCast CW 2418-1 / Ren[®] HY 5160 or HY 5161 or HY 5162 or HY 5118

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

- Metalforming 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 5610	Ren HY 5161	Ren HY 5162	Ren HY 5118
Appearance Colour	visual	Paste Pale beige	Clear liquid Pale yellow	Clear liquid Pale yellow	Clear liquid Pale yellow	Clear liquid Light brown
Viscosity at 25°C	mPas	80,000- 140,000	30 - 40	30 - 70	30 - 70	1,120 - 1,735
Density	g/cm ³	1.7	1.0	1.0	1.0	0.95

Processing

Mix ratio	Parts by weight			
RenCast CW 2418-1	100	100	100	100
Ren HY 5160	15	-	-	-
Ren HY 5161	-	15	-	-
Ren HY 5162	-	-	15	-
Ren HY 5118	-	-	-	20

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	CW 2418-1 HY 5118
Appearance			Black	Black	Black	Black
Viscosity at 25°C		m Pa s	4,000	5,000	5,000	15,000
Pot life at 25°C	1000 ml	min	120	60	30	80
Max. Layer thickness		mm	80	20	10	40
Demoulding time		h	16	12	10	16

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

Density	ISO 1183	g/cm ³	2.3	2.3	2.3	2.2
Hardness	ISO 868	Shore D	85-90	85-90	85-90	85-90
Coefficient of thermal expansion	ISO 11359	10 ⁻⁶ K ⁻¹	40-45	40-45	40-45	40-45
Deflection temperature	ISO 75	°C	50-55	55-60	60-65	60-65
Compressive strength	ISO 604	MPa	80-90	80-90	80-90	80-90
Compressive modulus	ISO 604	MPa	4,500-5,500	4,500-5,500	4,500-5,500	4,000-5,500
Flexural strength	ISO 178	MPa	80-90	80-85	80-85	80-85
Linear shrinkage		mm/m	0.1	0.8	1	1.4
Abrasion resistance	Taber	mm ³ / 100U	45-50	45-50	45-50	45-50

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 2418-1	HY 5160	HY 5161	HY 5162	HY 5118
Quantity and Weight	1 x 13.5kg	4 x 2kg	4 x 2kg	4 x 2kg	4 x 2.7kg
Quantity and Weight	6 x 1kg	6 x 150gr	6 x 150gr	6 x 150gr	6 x 200gr

Handling precautions

Caution

Vantico 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 Vantico publication No. 24264/3/e Hygienic precautions for handling plastics products of Vantico and in the Vantico Material Safety Data sheets for the individual products. These publications are available on request and should be referred to for fuller information.

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