

**Advanced Materials****RenCast® CW 2418-1 / Ren® HY 5160-1 or HY 5161-1  
or HY 5162-1**CASTING RESIN  
METAL FILLED, EPOXY RESIN SYSTEMS**DATASHEET****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 5160-1	Ren® HY 5161-1	Ren® HY 5162-1
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 <sup>3</sup>	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 5160-1	15	-	-
Ren® HY 5161-1	-	15	-
Ren® HY 5162-1	-	-	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 5160-1	CW 2418-1 HY 5161-1	CW 2418-1 HY 5162-1
Appearance			Black	Black	Black
Viscosity at 25°C		m Pa s	5000	5000	5000
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 <sup>3</sup>	2.3	2.3	2.3
Hardness	ISO 868	Shore D	85 - 90	85 - 90	85 - 90
Coefficient of thermal expansion	ISO 11359	10 <sup>-6</sup> k <sup>-1</sup>	40 - 45	40 - 45	40 - 45
Deflection temperature	ISO 75	°C	50 - 55	50 - 55	55 - 60
Compressive strength	ISO 604	MPa	85 - 90	85 - 90	85 - 90
Compressive modulus	ISO 604	MPa	6000 - 7000	6000 - 7000	6000 - 7000
Flexural strength	ISO 178	MPa	85 - 90	85 - 90	85 - 90
Linear shrinkage		mm/m	0.1	0.8	1
Abrasion resistance	Taber	mm <sup>3</sup> / 100U	45 - 50	45 - 50	45 - 50

**STORAGE**

Provided that RenCast® CW 2418-1 and Ren® HY 5160-1 / HY 5161-1 / HY 5162-1 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.

**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)



Huntsman Advanced Materials warrants only that its products meet the specifications agreed with the user. Specified data are analysed on a regular basis. Data which is described in this document as 'typical' or 'guideline' 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.

The manufacture of materials is the subject of granted patents and patent applications; freedom to operate patented processes is not implied by this publication. While all the information and recommendations in this publication are, to the best of Huntsman Advanced Material's knowledge, information and belief, accurate at the date of publication, nothing herein is to be construed as a warranty, whether express or implied, including but without limitation, as to merchantability or fitness for a particular purpose. In all cases, it is the responsibility of the user to determine the applicability of such information and recommendations and the suitability of any product for its own particular purpose.

The behaviour of the products referred to in this publication in manufacturing processes and their suitability in any given end-use environment are dependent upon various conditions such as chemical compatibility, temperature, and other variables, which are not known to Huntsman Advanced Materials. It is the responsibility of the user to evaluate the manufacturing circumstances and the final product under actual end-use requirements and to adequately advise and warn purchasers and users thereof.

Products may be toxic and require special precautions in handling. The user should obtain Safety Data Sheets from Huntsman Advanced Materials containing detailed information on toxicity, together with proper shipping, handling and storage procedures, and should comply with all applicable safety and environmental standards.

Hazards, toxicity and behaviour of the products may differ when used with other materials and are dependent on manufacturing circumstances or other processes. Such hazards, toxicity and behaviour should be determined by the user and made known to handlers, processors and end users.

Except where explicitly agreed otherwise, the sale of products referred to in this publication is subject to the general terms and conditions of sale of Huntsman Advanced Materials LLC or of its affiliated companies including without limitation, Huntsman Advanced Materials (Europe) BVBA, Huntsman Advanced Materials Americas Inc., Huntsman Advanced Materials (UAE) FZE, Huntsman Advanced Materials (Guangdong) Company Limited, and Huntsman Advanced Materials (Hong Kong) Ltd.

Huntsman Advanced Materials is an international business unit of Huntsman Corporation. Huntsman Advanced Materials trades through Huntsman affiliated companies in different countries including but not limited to Huntsman Advanced Materials LLC in the USA and Huntsman Advanced Materials (Europe) BVBA in Europe.

All trademarks mentioned are either property of or licensed to Huntsman Corporation or an affiliate thereof in one or more, but not all, countries.

Copyright©2023 Huntsman Corporation or an affiliate thereof. All rights reserved.