

Advanced Materials

RenGel[®] SW 5200 Ren[®] HY 5211 Slow or HY 5212 Fast

GELCOAT RESIN
EPOXY HIGH TEMPERATURE, SPEED CONTROLLED, GEL COAT SYSTEM

KEY PROPERTIES	<ul style="list-style-type: none"> • Exceptionally high temperature resistance. • Variable speed of cure control. • Very easy to apply and does not drain off vertical surfaces. • Partial cure at room temperature completed with indicated post cure. • Excellent inter layer adhesion.
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APPLICATIONS	<ul style="list-style-type: none"> • Extremely large tools can be produced due to very long pot life. • Tools requiring heat resistance up to 200° C. • Fast, medium and slow hardeners allow full control over reaction. • Pre-preg lay-up tools.
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PRODUCT DATA

Property	Unit	RenGel [®] SW 5200	Ren [®] HY 5211	Ren [®] HY 5212
Appearance Colour	visual	Paste Black	Liquid Clear, pale yellow	Liquid Clear, pale yellow
Viscosity at 25°C (ISO 2555)	mPa s	Thixotropic	580 - 720**	250 - 500**
Density	g/cm ³	1.65	1.01	1.01
Epoxy equivalent	Eq/kg	4.30 - 4.60**		

** 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 purpose only. Data values are not guaranteed or warranted unless if specifically mentioned.

TYPICAL SYSTEM DATA

PROCESSING

Mix ratio	Parts by weight	
RenGel [®] SW 5200	100	100
Ren [®] HY 5211	20	
Ren [®] HY 5212		20

Mix the two components thoroughly in the ratio indicated, then impregnate each layer of cloth as it is laid up to construct the laminate.

Apply in thin layer with a brush or spatula, wait until gel coat has gelled to the tacky stage before applying backing structure.

Post-curing is essential to benefit the final properties.

PROPERTIES

Resin/Hardener mix:	Volume	Unit	SW 5200 HY 5211 Slow	SW 5200 HY 5212 Fast
Appearance			Black	Black
Pot life at 25°C	500 ml	hours	18 hours	10 hours
Gel time thin layer			24 hours	15 hours
Time to tack thin layer			48 hours	24 hours
Length of tack time			48 hours	24 hours

After cure:

**24hours room temperature+ 12hours @40 °C + 2hours @80 °C
+ 2hours @100 °C + 2hours @120 °C + 2hours @140 °C + 2hours @160 °C
+ 2 hours @180 °C + 12hours @200 °C and slowly cooled down to room
temperature.**

Density	ISO 1183	g/cm ³	1.6	1.5
Hardness	ISO 868	Shore	90 D	90 D
Flexural strength	ISO 178	MPa	86	88
Flexural modulus	ISO 178	MPa	5500	6500
Deflection temperature	ISO 75	°C	195	198
T.g.	DSC	°C	200	200
Impact strength	Charpy	KJ / m ²	3.9	5.2
Abrasion	Taber	mm ³ /100u	45 - 50	45 - 50

STORAGE

Provided that RenGel[®] SW 5200, Ren[®] HY 5211 and Ren[®] HY 5212 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	SW 5200	HY 5211	HY 5212
Quantity and Weight	2 x 5 kg	20 kg	20 kg
Quantity and Weight	1 x 200 kg		165 kg

**HANDLING
PRECAUTIONS****Caution**

Huntsman Advanced Materials 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. These should be referred to for fuller information.

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