

Advanced Materials**RenCast[®] FC 51 Isocyanate / FC 51 Polyol**

CASTING RESIN
QUICK SETTING POLYURETHANE SYSTEM

KEY PROPERTIES

- Light grey coloured two-part system
- Designed for quick accurate castings
- 1 : 1 mix ratio by weight or volume
- Can be cast in layer thickness up to 30 mm

APPLICATIONS

- Moulds
- Holding fixtures
- Foundry patterns
- Replicas and Prototypes

PRODUCT DATA

Property	Unit	RenCast [®] FC 51 Isocyanate	RenCast [®] FC51 Polyol
Appearance Colour	visual	Liquid Beige	Liquid Grey
Viscosity at 25°C	mPa s	1400 - 1900**	2000 - 4000**
Density	g/cm ³	1.70	1.60

** 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 DATAS**PROCESSING**

Mix ratio	Parts by weight
RenCast [®] FC 51 Isocyanate	100
RenCast [®] FC 51 Polyol	100

Mix the two components thoroughly in the ratio indicated.
Degassed material will improve properties. Post-curing will improve final properties.

PROPERTIES

Resin/Hardener mix:	Volume	Unit	FC 51 Isocyanate FC 51 Polyol
Appearance		visual	Grey filled
Viscosity at 25°C		mPa s	2000
Pot life at 25°C	(1000 ml)	min	5 - 7
Max. Layer thickness		mm	30 mm
Demoulding time		min	20 - 40

After cure: 7 days at RT or 14 hours at 80 °C

Density	ISO 1183	g/cm ³	1.6
Hardness	ISO 868	Shore D	80
Deflection temperature	ISO 75	°C	80
Compressive strength	ISO 604	MPa	63
Compressive modulus	ISO 604	MPa	3000
Flexural strength	ISO 178	MPa	31
Linear shrinkage @ 5mm		mm/m	0.6
Linear shrinkage @ 10mm		mm/m	1
Linear shrinkage @ 20mm		mm/m	1.5

STORAGE

Provided that RenCast[®] FC 51 Isocyanate and RenCast[®] FC 51 Polyol 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 within the temperature range 18-25°C. Shake the unfilled and stir the filled system.

PACKAGING

System	RenCast [®] FC 51 Isocyanate	RenCast [®] FC 51 Polyol
Quantity and Weight	3 x 0.75 kg	3 x 0.75 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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