Crystal-Cast™ R131
Rigid Polyurethane

Introduction

Crystal-Cast™ R131 has been formulated for use in casting applications where moderate sections (5-20mm) and a high degree of strength, crystal clarity and low colour are required, together with rapid demould times.

PLEASE NOTE: This product can become very warm during cure. If in doubt please contact Atlas Polymers.

Typical Properties

	Property		Typical Value	Units
Components	Colour	Part A	Water-Clear	-
		Part B	Water-Clear	-
		Mixed	Water-Clear	-
	S.G.	Part A	1.06	-
		Part B	1.07	-
		Mixed	1.06-1.10	-
Mixed Product	Gel Time (100g 20°C)		40	Minutes
	Demould Time (100g 20°C)		100	Minutes
	Full Cure (100g 60°C)		4	Hours
Cured Product	Hardness at full cure		84	Shore D
	Other properties are under test and will be published in due course.			

Preparation and Use

The components should be measured to an accuracy of 2% or better. Care should be taking when measuring by volume, as this is an inherently inaccurate method unless specific volumetric measuring equipment is used.

Material: Part A – Thorough mixing prior to use, temperature 20-25°C
Part B – Check product is clear and free from sediment prior to use, temperature 20°C.

Mould: Temperature: 20-30°C (Cold temperatures will result in longer cure and demould times).

Postcure: If required to improve physical properties - 60°C for 4-6 hours (in mould).

Key Data

Mix Ratios
1.00 A
to
1.00 B
by weight
1.03 A to **1.00 B**
by volume

Viscosities
A: 600 mPa.s
B: 35 mPa.s

Temperatures
Materials
20-25 ºC
Mould
20-30 ºC

Gel Time
(100g @ 20ºC)
40 Mins

Demould Time
(100g @ 20ºC)
100 Mins

Full Cure
(100g @ 60ºC)
4 hours

Hardness
(Shore D)
84 ±2

Handling and Storage

Part A: Read the Safety Data Sheet before using this material. Good housekeeping is important with this material as with all chemicals. Spillages should be wiped up immediately and containers wiped clean after use. Exposure to atmosphere should be minimised and containers sealed as soon as possible after use. Store in the original container in a dry place at 5-25°C. Shelf-Life - 12 months from the date of manufacture when stored correctly in unopened containers.

Part B: Isocyanate spillages can be especially hazardous and the Safety Data Sheet should be consulted for the correct cleaning up procedure. Exposure to atmosphere should be minimised and containers sealed as soon as possible after use. Store in the original container in a dry place at 20-25°C. Shelf-Life - 12 months from the date of manufacture when stored correctly in unopened containers.

Health and Safety

Part A: Not classified according to the requirements of the CHIP regulations. However care should be taken to avoid direct contact and gloves, goggles and impervious overalls should be worn.

Part B: TOXIC by inhalation. In addition it may cause sensitisation by inhalation and skin contact and is classified as IRRITANT to eyes, respiratory system and skin. At room temperature the vapour hazard is low but significant and care should be taken not to allow vapours to accumulate. This is especially likely if the product is heated. Avoid direct contact with skin and eyes by means of gloves, goggles and impervious overalls.

Availability

2kg (1kg A + 1kg B), 10kg (5kg A + 5kg B), 40kg (20kg A + 20kg B), 400kg (200kg A + 200kg B)

Suitability for Use

The information in this datasheet is given to the best of our knowledge and belief but without warranty or liability. The user must establish the suitability of the material for the intended application by carrying out any appropriate tests. Finished products produced from any batch of our materials must be subjected to comprehensive standards of quality control by the user. No liability will be accepted for direct or consequential losses arising from the use of this material. However any comments or suggestions relating to improving the processing or characteristics of this material will be very welcome.