COLTECH C 2500

TECHNICAL DATA SHEET
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Transparent Rigid Polyurethane Casting Resin, Low Viscosity

Product description

COLTECH C2500 is a transparent, two component, low viscosity, solvent -free, rigid, aliphatic polyurethane resin, with an easy 1-to-1 by volume mixing ratio.

COLTECH C2500 provides excellent durability, chemical & temperature resistance properties with minimum shrinkage.

Cures by reaction (cross linking) of the two components even at very low temperatures.

Advantages

- Solvent free
- Shore D 30-50
- Easy 1-to-1 by volume mixing ratio
- Transparent even in high volume castings
- Non yellowing, UV stable
- Cold curing
- Minimum shrinkage
- High impact strength
- Chemical resistant
- Over 10 years of positive feedback worldwide.

Uses

The COLTECH C2500 is a specialized low viscosity, transparent rigid Polyurethane casting resin for:

- production of small and large transparent objects.
- filling and casting applications

Consumption

1,4 kg / liter

Colors

The COLTECH C2500 is supplied in yellowish transparent. Other colors may be supplied on demand.

Technical Data *

PROPERTY	RESULTS	TEST METHOD
Composition	Polyurethane Resin + Hardener. Solvent free.	
Mixing Ratio	A : B = 1 : 1 by volume A : B = 100 : 110 by weight	
Hardness (Shore D Scale)	30 – 40	ASTM D 2240
Shrinkage	<0.5%	
Weathering	Non-yellowing (1000h exposure)	QUV accelerated aging
Solids Content	100 %	CALCULATED
Temperature strength	55 °C (Fully cured)	IN HOUSE LAB
Low Temperature Brittleness	-10 °C(Fully cured)	IN HOUSE LAB
Pot-Life	10-15 minutes	Conditions:20°C,50%RH
Tack Free Time	1-2 hours	
Demolding Time	2-5 hours	
Final Curing time	7 days	

Chemical Properties

Water	+	Hydrochloric acid 5%	+
Potassium hydroxide 5%	+	Styrene	±
Sodium hydroxide 5%	+	Sulfuric acid 5%	+
Salt water 20%	+	Xylene	+
Domestic Detergents	+	DMSO	-
Diesel oil	+	N-Methyl pyrrolidone	-
{+ stable, - unstable, □ stable for a short period.}			

Application

Mold Preparation
Before casting, check that parts or molds are free of any trace of moisture (Maximum surface moisture content should not exceed 4%).
Before the application of the COLTECH C 2500, the prepared object has to be coated with a suitable liquid-applied mold release agent as the COLTECH E 499 to avoid bonding with the mold.

Stir COLTECH C 2500 Component A well before using. Stir COLTECH C 2500 Component B well before using.

COLTECH C 2500 Component A and Component B should be mixed by low speed mechanical stirrer, according to the indicated mixing ratio in this technical data sheet, for about 1-3 min if applied manually. When mixing, care must be taken to avoid the introduction of excessive amounts of air. After mixing of the Components A+B, transfer the mixture in a second clean container and mix again for 15-20 sec. Following to that we recommend to use a Vacuum Chamber (@-1bar for 60-120 sec) to remove any air bubbles from the mixture prior to use.

ATTENTION: The mixing of the components has to be performed very thoroughly, especially on the walls and bottom of the pail until the mixture becomes fully homogeneous and streak free. Please ensure consumption within the Pot Life. Use at a temperature higher than 15°C. Containers of Part A (Resin) and Part B (Hardener) should be kept hermetically sealed at all times when not in use to prevent the ingress of moisture. Never use if the viscosity of the adhesive/resin is starting to rise as this is a sign that the end of the Pot Life is reached and the resin should not be used any more.

WARNING: Incomplete mixing or use of the wrong mix ratio will result in erratic or partial curing. Containers of Part A (Resin) and Part B (Hardener) should be kept sealed at all times when not in use to prevent the ingress of moisture. If moisture ingress, the resin mixture will create foam while curing. Containers of Part A (Resin) and Part B (Hardener) should be kept stored at a Temperature between 10-30^{o}C.

Pour the mixed COLTECH C 2500 resin slowly into the mold from one and if possible the lowest side, so that the resin pushes air bubbles when flowing.

RECOMMENDATION: Before use or change in surface to be adhered make an adhesion test to make sure that adhesion is optional.
RECOMMENDATION: Use Post curing in a heating apparatus (@50-60^{o}C for 2-24h) to accelerate curing and lower final curing time.

Packaging

Pails should be stored in dry and cool rooms for up to 9 months. Protect the material against moisture and direct sunlight. Storage temperature: 5^{0}-30^{0}C. Products should remain in their original, unopened containers, bearing the manufacturers name, product designation, batch number and application precaution labels.

Safety measures

Contains Isocyanates. Please study the Material Safety Data Sheet. **PROFESSIONAL USE ONLY**