

COLTECH R 310

TECHNICAL DATA SHEET
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Semi-Rigid Polyurethane Insulating Resin

Product description

COLTECH R 310 is a two component, solvent free, semi-rigid, polyurethane electro-insulating resin. It provides excellent durability, chemical resistance properties with minimum shrinkage.

Cures by reaction (cross linking) of the two components at room temperature.

Advantages

- Solvent free
- Shore A 90
- Variable pot life depending on requirement
- Cold curing
- Good adhesion to metal and different plastics
- Excellent hydrolytic stability
- Low exothermic reaction temperature
- Minimum shrinkage
- High impact strength
- Chemical and hydrocarbon resistant
- Over 10 years of positive feedback worldwide.

Uses

The COLTECH R 310 is a specialized semi-rigid Polyurethane electro-insulating resin for:

- production of low and medium voltage transformers
- production of low and medium voltage capacitors
- filling of low and medium voltage electrical cable joints & connections
- Covering of electronic circuits for copyright protection

Also used for filling and casting applications.

Consumption

1,4 kg / liter

Colors

The COLTECH R 310 is supplied in black.
Other colors may be supplied on demand.

Technical Data *

PROPERTY	RESULTS	TEST METHOD
Composition	Polyurethane Resin + Hardener. Solvent free.	
Mixing Ratio	A : B = 100 : 20 by weight	
Hardness (Shore A Scale)	90 + 5	ASTM D 2240
Solids Content	100 %	CALCULATED
Temperature strength	80°C (Fully cured)	IN HOUSE LAB
Low Temperature Brittleness	-40° C (Fully cured)	IN HOUSE LAB
Pot Life *	2-45 minutes	Conditions:20°C,50%RH
Tack Free Time *	1-3 hours	
Initial Curing Time	24 hours	
Final Curing time	7 days	

* Pot Life and Tack free times can be adjusted according production requirements with the addition of Catalyst (accelerator).

Chemical Properties

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

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Application

Cast Housing Preparation

Before casting / filling, check that housings or moulds are free of moisture (Maximum surface moisture content should not exceed 4%).

Mixing

Stir COLTECH R 310 Component A well before using. Stir COLTECH R 310 Component B well before using.

COLTECH R 310 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 3 min if applied manually. Both parts (Component A and Component B) have to be mixed at a temperature higher than 18°C.

ATTENTION: The mixing of the components has to be effected very thoroughly, especially on the walls and bottom of the pail until the mixture becomes fully homogeneous.

Casting / Filling

Pour COLTECH R 310 resin into the object/mould.

RECOMMENDATION: Use suitable vacuum apparatus to remove entrapped air bubbles.

ATTENTION: Please ensure consumption within the Pot Life.
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Acceleration

If the Pot life of the resin is to be adjusted to production needs, add the recommended quantity of the COLTECH C 299 catalyst / accelerator (from 0,05 to 1%) into the COLTECH R 310 Component A and mix well, for about 3 min, by low speed mechanical stirrer. Allow mixture to rest for 5-10 minutes. Following to that add the COLTECH R 310 Component B as described above, and use.

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^o-30^oC. Products should remain in their original, unopened containers, bearing the manufacturers name, product designation, batch number and application precaution labels.

Safety measures

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

Our technical advice for use, whether verbal, written or in tests, is given in good faith and reflect the current level of knowledge and experience with our products. When using our products, a detailed object-related and qualified inspection is required in each individual case in order to determine whether the product and /or application technology in question meets the specific requirements and purposes. We are liable only for our products being free from faults; correct application of our products therefore falls entirely within your scope of liability and responsibility. We will, of course, provide products of consistent quality within the scope of our General Conditions of Sale and Delivery. Users are responsible for complying with local legislation and for obtaining any required approvals or authorizations. Values in this technical data sheet are given as examples and may not be regarded as specifications. For product specifications contact our R+D department. The new edition of the technical data sheet supersedes the previous technical information and renders it invalid. It is therefore necessary that you always have to hand the current code of practice.