EPOXY RESIN ED-20  
(ANALOGUES: RESINS LAPOX B-13, 0164, CYD 128, EPOXY-520, LE-828)

FEATURES
Two-component uncured diane-epoxy resin of general purpose for normal temperature curing (cold curing) using a wide range of hardeners.

APPLICATIONS
Epoxy resins provide the highest quality of adhesive joint and strength
The resin has very little shrinkage
The resin is well absorbed and permanently forms a composite whole with a variety of different materials
Epoxy coating has very low water absorption (less than 0.5%)
Epoxy resin has a low viscosity and controlled cure time
Epoxy resin provides high strength of products
Epoxy resin provides excellent adhesive characteristics
Flavourless
No emission of toxic evaporations
Characterized by corrosion resistance
Heat conducting
Epoxy resin can be used as a chemically resistant barrier layer
Epoxy resin provides long-term protection to metal, steel and concrete products operating in highly corrosive environments and submerged in liquid

PHYSICAL AND CHEMICAL PROPERTIES

<table>
<thead>
<tr>
<th>NAME OF PARAMETER AND UNIT OF MEASURE</th>
<th>STANDARD</th>
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</thead>
<tbody>
<tr>
<td>Premium grade</td>
<td>First grade</td>
</tr>
<tr>
<td>Appearance High-viscosity clear without visible mechanical impurities and water</td>
<td></td>
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<tr>
<td>Color, iron-cobalt scale, not more than</td>
<td>4</td>
</tr>
<tr>
<td>Content of epoxy groups, %</td>
<td>19,9-22,0</td>
</tr>
<tr>
<td>Content of chloride ion, % not more than</td>
<td>0,003</td>
</tr>
<tr>
<td>Content of saponifiable chloride, %, not more than</td>
<td>0,5</td>
</tr>
<tr>
<td>Content of hydroxyl groups, %, not more than</td>
<td>1,7</td>
</tr>
<tr>
<td>Content of volatiles, %, not more than</td>
<td>0,5</td>
</tr>
<tr>
<td>Dynamic viscosity at +50°C, P* s</td>
<td>2,18</td>
</tr>
<tr>
<td>Gelling time with hardener, h, not less than</td>
<td>5,0</td>
</tr>
</tbody>
</table>
MAINTENANCE
The resin and hardener should be bonded at a temperature of at least +20°C. Gelling time is about 1.5 hours, and the time of full curing is 24 hours.

Forbids to mix a large amount of resin with a hardener immediately, without using special mixing machines to avoid an effervescence.

When fiberglass-made products manufacturing, it is recommended to make a test sample for each batch of resin and hardener.

Heating considerably accelerates the curing process. As self-curing occurs with the calorification, when preparing large dose of resin with a hardener, self-heating of the mixture is possible, accompanied by foaming and rapid solidification.

TRAITS
Epoxy resins are thermoplastic, but under the influence of various hardeners they are converted into non-meltable polymers. The resins curing process can occur at normal room temperature +20°C.

There are two ways to the resin temporarily viscosity decreasing: one is the heating of the mixture, and the second is the addition of a solvent. The resin with low viscosity is easier to apply with a brush or roller, it quickly impregnates fiberglass and penetrates deeper into porous surfaces like rot damaged wood.

The hardener is added at a rate of 10% by weight of the resin. The non-cured diane epoxy resin ED-20 can be converted into a non-meltable and insoluble condition by the action of various type curing agents - aliphatic and aromatic di- and polyamines, low-molecular polyamides, di- and polycarboxylic acids and their anhydrides, phenol-formaldehyde resins and other compounds. Depending on the hardener used, the properties of the cured epoxy resin ED-20 can vary within the widest range. The most commonly used hardener is PEPA (polyethylenepolyamine).

SAFETY INFORMATION
People who working with epoxy resin ED-20 must be provided with workwear and individual security measures. All activities while working with epoxy resins must be realized in the premises, equipped with flowing-exhaust ventilation.

GUARANTEED SHELF LIFE 18 MONTHS
Epoxy-diane resin ED-20 is stored in tightly closed tare in closed warehouses at temperature not higher than +40°C.

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