UNIZELL PU FOAM HR-AT

POLYURETHANE FOAM

:: CHARACTERISTIC

HR-AT is a closed cell, 2 component hard foam based on polyurethane with a cup density of approx. 50 kg/m³. Due to its relative long reaction time, this foam can be processed by hand.

:: AREA OF APPLICATION

Hard, closed cell foam components and cavity filling for e.g thermal insulation, deep freeze insulation, buoyancy chambers in boats, filling of small buoys and life belts (unsinkable), sandwich cores, providing stiffness, insulation to reduce sound.

:: PRODUCT DATA

Material data of the liquid product

	Component A	**Component B**
Colour	yellowish	brownish
Density at 20 °C	approx. 1.07 g/cm³	approx. 1.22 g/cm³
Viscosity at 20 °C	approx. 1100 mPa.s	approx. 300 mPa.s

Material data of the mixture at 20°C

Mixing ratio A : B	100 : 145 pbw (parts by weight)
	100 : 127 pbv (parts by volume)
Start time	approx. 37 seconds
Setting time	approx. 110 seconds
Rise time	approx. 210 seconds

Material data of the cured product

Density	approx. 50 kg/m³ (free-rise foamed)
Expansion	approx. 1 : 20
Compressive strength (DIN 53421)	0.27 N/mm²
Compression set (DIN 53421)	6.0%
Water absorption (24h, DIN 53428)	2.4% (by volume)
Closed cell (ISO 4590)	91%
Thermal conductivity	32 mW/m*K accord. EN 253
Storage (at room temperature and dry)	minimum 6 month in the closed original container

:: INSTRUCTION FOR USE

The volume of the cavity which is to be filled has to be approximately calculated. In order to ensure a continuous, high foam quality, it is necessary to maintain the following conditions:

1) Stir the A-component thoroughly before use.
2) Ensure that both components are kept at a minimum constant temperature of 18°C.

Weigh out both components using the stated mixing ratio and mix both thoroughly. When mixing large amounts use a mixing propeller on a drill with a speed of 1500 rpm to ensure thorough and rapid mixing. The foam is then poured into the cavity. When more than the calculated amount of foam is poured into the mould or cavity the pressure on the walls increases as does the specific gravity. This must be taken into account.

Long moulds must not be placed horizontally but at an angle of 10° to 15°. Inject the foam at the lowest point of the mould, making sure there is provision for air vents at the top of the mould. The surface temperature of the cavity or mould should be between 15°C and 25°C. Two component foams can also be applied by machine.

:: SAFETY ISSUES

The before mentioned technical data and information, especially the recommendations for applying and using our products, are based on our current knowledge and experience when applied under normal conditions. In practice, the materials, surfaces or site conditions are so different that no warranty regarding the working results or liability, arising out of any relationship, can be inferred neither from this information nor from a verbal consultation, except we are charged with intent or gross negligence. In this case the user is obliged to prove that he has informed us about all points required for a proper and promising judgement in writing, in time and completely. Patent rights of any third party are to be observed. Furthermore, our general sales and delivery Terms and Conditions and the latest Technical Data Sheet, which should be demanded, apply.

Directions for handling and waste disposal are in our Security Safety Data Sheet and the specifications of the Employers Liability Insurance Association for the chemical industry .

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