Product Information

Offshore

Resin EP 900

FEATURES

- High compressive strength
- High temperature resistance

COMPOSITION

- Part A: epoxy resin EP900A
- Part B: hardener EP900B

EP 900 is a high performance, two part potting compound with high compression strength and outstanding heat resistance. The ceramic microspheres filled system is easy to handle and can be machined after cure. EP 900 A/B will cure at room temperature but a post cure is required to achieve its optimal thermal and mechanical properties.

APPLICATIONS

- Designed for deep offshore oil pipelines, outstanding compressive and temperature resistance.

TYPICAL PROPERTIES

Specifications writers: These values are not intended for use in preparing specifications. Please contact your local sales representative prior to writing specifications on this product.

Property	Unit	Value
Colour (Resin A/Hardener B)	visual	Dark grey / Yellow
Density at 23°C (Resin A/Hardener B)	g/cm^3	1.53 / 1.00
Viscosity at 23°C (Resin A/Hardener B)	mPa.s	120000 / 2600
Colour (Mixture)	visual	Dark grey
Density at 23°C (Mixture)	g/cm^3	1.46
Mixing ratio	pbw	100 : 15
Mixing ratio	pbv	100 : 23
Gel time at 23°C (150g)	minutes	540
Onset (DSC)	°C	95
Peak (DSC)	°C	131
Demoulding time at 23°C	days	3 - 4
Demoulding time at 60°C	hours	14
Max layer thickness	mm	100
Hardness	Shore D	90
Tensile strength	MPa	16.7
Deformation at break	%	2.4
Flexural modulus	MPa	6580
Flexural strength	MPa	48.1
Compressive strength	MPa	152
Compressive modulus	MPa	4570
Glass transition (DSC)	°C	174
Linear shrinkage	%	<0.1

SETTINGS

EP900 contains fillers, which tend to settle over time. We recommend to use extreme care in re-homogenize the product in the container before use. Weight the two components and stir thoroughly until mixing is complete.

Epoxy resins can crystallize at low temperature. To bring them back to their original condition heating at 40°C-50°C avoiding local overheating, then cool to room temperature.

MIXING

The two components should be thoroughly mixed at least 5 minutes using a ratio of 100:15 by weight or 100:23 by volume, until a homogeneous mixture.

Warning! This product may yield a highly exothermic reaction, uncontrolled, with decomposition above 250°C. It may be necessary to pour in multiple stages for improved control over exothermic heat. Each stage must cool to room temperature before the next stage is poured to eliminate undesired exothermic heat.

POTLIFE AND GELTIME

When the two components are thoroughly mixed in the right mixing ratio the reaction starts. The pot life, or usable time of the mixture, is normally the time required for an increase equal to twice the initial viscosity. Both Pot-life and Gel-time are depending on the mass and temperature: higher the mass faster the reaction. Higher the temperature faster the reaction.

CURING

The system requires the following post-curing cycle:

24 hours at RT +
4 hours at 80°C +
4 hours at 120°C +
4 hours at 180°C +
2 hours at 200°C +
2 hours at 220°C +

Temperature ramp:

up: from 25°C to 180°C = 1°K/min
down: 1°K/min.

HANDLING PRECAUTIONS

Work in a well ventilated areas using gloves, eye protection and clothing protection. Avoid contact to the skin and eyes. Avoid clothing contamination. Wash thoroughly after handling. These products may cause skin and respiratory allergic reactions. The information for a correct and safe handling of the products are contained in the safety data sheet. Consult the safety data sheets before use for complete information on the risks for health and environment and for suitable protective devices to be adopted. Share the safety data sheets with all the staff involved in the use of the products.

PACKAGING

Resin is supplied in 24kg containers, hardener in 3,6kg containers.

USABLE LIFE - STORAGE

Resin and hardener must be stored in the original unopened containers at a temperature between +10°C and +35°C. Be sure to close the containers after use. Resin and hardener, if stored under certain conditions, have a shelf life of 12 months from the date of manufacture.

LIMITATIONS

This product is neither tested nor represented as suitable for food contact, skin contact or medical uses.

LIMITED WARRANTY

The information contained in this document is offered in good faith based on Chemix research and is believed to be accurate. However, as the conditions and methods of use of our products are beyond our control, this information should not be used as a substitute for the tests that customers must first perform to ensure that Chemix products are fully satisfactory for their specific applications. The warranty is only applicable to the values indicated in the Product Sales Specifications. The sole and exclusive compensation for products with values that are out of specification is limited to the replacement of the product or the refund of the purchase price.

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