

### **TECHNICAL SYSTEM DESCRIPTION**

### A-Pox 900 & B-Cure 32 Series





**Rapollo A-Pox 900 & B-Cure 32 Series** epoxy is based on epoxy resin of Diglycidyl ether of Bisphenol-A + Diglycidyl ether of Bisphenol-F. **Rapollo A-Pox 900** is modified with multifunctional reactive diluent in order to give low viscosity resin with improved adhesion to difficult surfaces.

**A-Pox 900 & B-Cure 32 Series** epoxy system has good mechanical strength and chemical resistance.

**A-Pox 900 & B-Cure 32 Series** offers good resistance against crystallisation, and both components can be stored at ambient temperature at least 12 months.

**Rapollo B-Cure 32 Series** Curing agent is a blend containing polyamines and cycloaliphatic type slightly modified thus achieving better Tg with lower temperature cure. To be stored at  $+15~^{\circ}\text{C}$ 

#### **Typical applications:**

Developed specially for vacuum infusion of composite parts in Carbon and Glass.

### Mixed System & Mechanical Properties: \*24h RT + 40 °C 16hours (RINA certificate)

B CURE CO. II.				
Parameters	APOX 900	B-CURE 32 FAST	B-CURE 32 Medium ( RINA )	B-CURE 32 Slow ( RINA)
Mix Ratio ( Weight )	100	32	32	32
Tg Onset (°C)*		66-71	65-68	59-65
Equivalent Weight (g/eq)	170-180	AHEW 55-59	AHEW 55-59	AHEW 55-59
Viscosity mPas @ 25 °C	875-1100	350 - 450 (Mixed Value)	260 - 350 (Mixed Value)	270 - 410 (Mixed Value)
Density (g/cm³) @ 25 °C	1,15-1,16	1,14 -1,16 (Mixed Value)	1,14 -1,16 (Mixed Value)	1,14 -1,16 (Mixed Value)
Pot life @ 23 °C 200G sample		25-40 Min	110-140 Min	230-300 Min
Tensile Modulus mPs *		2800-3100	3000 - 3400	3100 - 3500
Tensile strength (MPa)		70-75	65-78	63-75
Elongation at break (%)		3,4 - 3,9%	3,0 - 3,5 %	3,3 - 3,6 %
3 Point bending - mPa		82-89	100-120	100-110
3 Point bending Modulus -mPa		2900 -3400	3100 - 3600	3000 - 3500



#### **Technical data Sheet**

### A-Pox 900

**Rapollo A Pox 900** epoxy is based on epoxy resin of Diglycidyl ether of Bisphenol-A + Diglycidyl ether of Bisphenol-F. **Rapollo A Pox 900** is modified with a multifunctional reactive diluent in order to give low viscosity resin with improved adhesion to difficult surfaces. **Rapollo A Pox 900** epoxy has good mechanical strength and chemical resistance. Good resistance against crystallisation, and it can be stored at ambient temperature at least 12 months.

#### **Typical applications:**

Developed specially for vacuum infusion of composite parts.

**Rapollo A Pox 900** can be cured with curing agent **Rapollo B-Cure 32 series** mixed with 100:32 pbw which gives mixed viscosity of 270-410 mPas at 25°C having very good wettingand process properties. (See system description )

Typically to be used with Rapollo B-Cure 32 series or Rapollo B-Cure 24

 Viscosity
 875-1100 Mpas (mPas /23 °C )

 Density
 1,15-1,16 g/cm³

 EEW:
 170 to 180g/eq

 Colour:
 <2 Gartner</td>

All data are approximate values.

**Storage** Must be stored at ambient temperatures excluded

from direct sunlight. In airtight packaging

Rapollo A Pox 900 can be stored for a

minimum of 24 months in sealed airtight steel container.

Rapollo A Pox 900 does not crystallise.

**Supply** Rapollo A Pox 900 is a standard product, that is

supplied in different packaging of 20 kg, 200 kg and

1000 kg.

Orders are normally shipped within 24 hours.

#### Notes:

This information and data is believed to be accurate and reliable. Although the information and recommendations set forth herein are presented in good faith and believed to be correct as of this date, Rapollo makes no representations as to the completeness or accuracy hereof. We reserve the right to modify characteristics with the aim of improving the product and adapting it to the requirements of the market.



### **Technical data Sheet**

### **B CURE 32 FAST**

**Rapollo B Cure 32 Fast** Epoxy Curing agent is a blend containing polyamines and cycloaliphatic type slightly modified thus achieving better Tg with lower temperature cure. To be stored at  $+15~^{\circ}\text{C}$ 

### **Typical applications:**

Developed specially for vacuum infusion of composite parts where a **25-40 min minute pot** life can be expected.

Rapollo B Cure 32 Fast is developed to work with Rapollo A pox 900 & Rapollo A Pox 1200 both having very good wetting- and process properties. ( See system Description )

**Viscosity** 30-70 Mpas (mPas /23 °C ) **Density** 1,14-1,16 g/cm<sup>3</sup>

**EEW:** 55-59g/eq **Colour:** <4 Gartner

**Pot-life:** 25-40 min ( 200G 23 °C ) All data are approximate values.

**Storage** Must be stored at ambient temperatures excluded

from direct sunlight. In airtight packaging

Rapollo B Cure 32 Fast can be stored for a

minimum of 24 months in sealed airtight steel container.

Rapollo B Cure 32 Fast does not crystallise.

**Supply** Rapollo B Cure 32 Fast is a standard product, that is

supplied in different packaging of 20 kg, 200 kg and

1000 kg.

Orders are normally shipped within 24 hours.

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#### **Technical data Sheet**

### B-Pox 32 Medium (RINA Acknowledged)

**B-Pox 32 Medium** Curing agent is a blend containing polyamines and cycloaliphatic type slightly modified thus achieving better Tg with lower temperature cure. To be stored at +15 °C

### **Typical applications:**

**B-Pox 32 Medium** is developed specially for vacuum infusion of composite parts where a **110-140 minute pot** life can be expected.

Typically to be used with **Rapollo A Pox 900** or **Rapollo A POX 1200** both having very good wetting and process properties ( See System Description )

 Viscosity
 30-80 Mpas (mPas / 25 °C)

 Density
 1,14 - 1,16 g/cm³

 EEW:
 55-59 g/eq

 Colour:
 <4 Gartner</td>

**Pot-life: 110-140 min** – 200gr specimen

All data are approximate values.

**Storage** Must be stored at ambient temperatures excluded

from direct sunlight. In airtight packaging

B-Pox 32 Medium can be stored for a

minimum of 24 months in sealed airtight steel container.

**B-Pox 32 Medium** does not crystallise.

**Supply** B-Pox 32 Medium is a standard product, that is

supplied in different packaging of 20 kg, 200 kg and

1000 kg.

Orders are normally shipped within 24 hours.

#### Notes:

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### **Technical data Sheet**

### B CURE 32 Slow (RINA Acknowledged)

Rapollo B Cure 32 slow Epoxy Curing agent is a blend containing polyamines and cycloaliphatic type slightly modified thus achieving better Tg with lower temperature cure. To be stored at +15 °C

### **Typical applications:**

Developed specially for vacuum infusion of composite parts where a 230 - 300 minute pot life can be expected.

Rapollo B Cure 32 slow is developed to work with Rapollo A pox 900 & Rapollo A Pox **1200** both having very good wetting- and process properties. ( See system Description )

> **Viscosity** 20-80 Mpas (mPas /23 °C) **Density**

1,14 - 1.16 g/cm<sup>3</sup>

EEW: 55-59g/eq Colour: <4 Gartner

Pot-life: **230 - 300 minute** ( 200G 23 °C )

All data are approximate values.

Must be stored at ambient temperatures excluded **Storage** 

from direct sunlight. In airtight packaging

Rapollo B Cure 32 Slow can be stored for a

minimum of 24 months in sealed airtight steel container.

Rapollo B Cure 32 Slow does not crystallise.

Rapollo B Cure 32 Slow is a standard product, that is Supply

supplied in different packaging of 20 kg, 200 kg and

1000 kg.

Orders are normally shipped within 24 hours.

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### **About Us**

Rapollo Resins Aps of Danmark was established in 2003 by Axel Liebman.

**Rapollo resins Aps** has specialist know how in Formulation and manufacturing of custom specific epoxy resins, and other Polymer type resin systems.

With core focus at continuous development of our resins designs we are always at the forefront of emerging technology demands for epoxy and have a strong reputation with out clients of know how in the sectors we service.

**Rapollo resins Aps** with over 50 years combined experience in Vacuum infusion process from some of the leading wind turbine and shipyard worldwide.

**Rapollo resins Aps** facilitates professional technical engineering of both Process resins and Process technology related to the composite markets worldwide .

**Rapollo resins Aps** is rich in practical working know-how and together with over 16 years of designing and manufacturing Epoxy resins systems for :

- Wind Energy
- Marine
- Surface coatings
- Construction
- Cure in Place pipe rehabilitation
- Corrosion protection

**Rapollo resins Aps** offer best in class solutions from our laboratories that are populated with experienced engineers with practical working know how and testing technology to provide the right levels of accuracy to our clients.

**Balsa wood** from equator is part of our range of products , being widely used as a strong and cost-effective core material in composites is yet a part of our business

**Vacuum infusion of composites and supply of consumables** completes the third area of the company.



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