

# TYPE APPROVAL CERTIFICATE

**This is to certify:**

**That the Epoxy Systems**

with type designation(s)  
**Sinone E501A - Series**

Issued to

**Guangzhou Pochely New Materials Technology Co., Ltd.**  
**Guangzhou, China**

is found to comply with  
**DNV GL class programme DNVGL-CP-0089 – Type approval – Epoxy resin systems**

**Application :**

**Laminating resin for construction of laminates made of fibre reinforced plastics.**

Issued at **Hamburg** on **2017-10-06**

for **DNV GL**

This Certificate is valid until **2022-10-05**.

DNV GL local station: **Hamburg Materials & Welding**

Approval Engineer: **Guido Michalek**

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**Thorsten Lohmann**  
**Head of Section**

This Certificate is subject to terms and conditions overleaf. Any significant change in design or construction may render this Certificate invalid. The validity date relates to the Type Approval Certificate and not to the approval of equipment/systems installed.



Job Id: **262.1-026926-1**  
Certificate No: **TAK0000022**

## Product description

Two component epoxy resin system.

## Approved variants

Epoxy resin Sinone E501A with following hardener  
- L503B  
- L505B

## Type Approval documentation

- Technical Data Sheet
- Material Safety Data Sheet
- Test Report No. 20110610 issued by the DNV GL approved testing laboratory of Shanghai FRP (Approval No. GL-LZ 1208 HH, dated on 2011-09-09).
- Workshop Inspection Report issued by DNVGL Shanghai, dated on 2017-01-20.
- Quality assurance/control documentation

## Material Properties

Properties	Test Method	Sinone E501A	Sinone L503B	Sinone L505B	Unit
Density	ISO 2811-3	1.10 – 1.20	0.90 – 1.00	0.90 – 1.00	g/cm <sup>3</sup>
Epoxy value	ISO 3001	0.51 – 0.56	N/A	N/A	eq/100g
Amine Value	ISO 9702	N/A	450 – 550	400 – 500	mg KOH/g
Viscosity at 25°C	ISO 2555	1800 – 2500	70 – 90	50 – 80	mPa·s

## Limitation

The resin complies with the applicable requirements of DNV GL and is compatible to the fibres, adhesives and core materials. Any significant changes in design and / or quality of the material will render the approval invalid.

## Assessed production site

No. 12, Xiantang Road, Yonghe Economic District  
Economic and Technological Development Zone  
Guangzhou, Guangdong, 511356  
P.R. China

## Periodical assessment

A production site with a valid Approval of Manufacturer (AoM) certificate for material in question is exempted from the obligation concerning retention and renewal assessments.  
For manufacturer without a valid AoM a periodical assessment after 2.5 years and at renewal after 5 years is required.

## Remarks

This certificate supersedes the type approval WP 1220016 HH.

END OF CERTIFICATE