Certificate no.:
TAM00001F2

TYPE APPROVAL CERTIFICATE

This is to certify:

that the Pourable Compound for Foundation Chocking

with type designation(s)
TYEA-0301-A/B

issued to
Tsingyan Technology (Foshan) Co., LTD.
Foshan, Guangdong Province, **China**

is found to comply with
DNV class programme DNV-CP-0432 – Type Approval – Pourable compounds for foundation chocking
DNV rules for classification – Ships

Application:

Moulding of supports made of laminated densified wood for LPG/LEG/LNG gas tanks.

Product(s) approved by this certificate is/are accepted for installation on all vessels classed by DNV.

Issued at **Hamburg** on **2025-10-24**
This Certificate is valid until **2030-10-23**.
DNV local unit: **China South NB**

for **DNV**

Approval Engineer: **Gisle Hersvik**

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.

LEGAL DISCLAIMER: Unless otherwise stated in the applicable contract with the holder of this document, or following from mandatory law, the liability of DNV AS, its parent companies and their subsidiaries as well as their officers, directors and employees ("DNV") arising from or in connection with the services rendered for the purpose of the issuance of this document or reliance thereon, whether in contract or in tort (including negligence), shall be limited to direct losses and under any circumstance be limited to USD 300 000.

Product description

TYEA-0301-A/B: High-Hardness Low-Temperature Adhesive

Viscosity: Component A: 800 000 – 1 200 000 cps
Component B: 350 000 – 500 000 cps
Barcol Hardness: ≥30 HBa [ASTM D2583]

The following properties have been established by the manufacturer:

Compressive strength	ASTM D695		
20°C -50°C -110°C -196°C		≥120 ≥200 ≥210 ≥220	MPa
Compressive modulus	ASTM D695		
20°C -50°C -110°C -196°C		≥7 000 ≥8 000 ≥7 500 ≥9 000	MPa
Shear strength	ASTM D1002		
-50°C -165°C		≥5 ≥3	MPa

Curing Time: 7 days at 25°C

Low Flame-Spread characteristics in accordance with IMO 2010 FTP Code Part 5.
Smoke and Toxicity in accordance with IMO 2010 FTP Code Part 2.

Other properties may need to be documented for specific installations.

Place of manufacture

Tsingyan Technology (Foshan) Co., Ltd., No.31-3 Xingtang Road, Datang Industrial Park, Datang Town, Sanshui District, Foshan City, Guangdong Province, P.R. China

Application/Limitation

Moulding of supports made of laminated densified wood for LPG / LEG / LNG tanks.

This approval is solely connected to the strength properties of the chocking compound. The approval does not include any evaluation of toxicity, contamination, pollution, or fire technical properties.

Installation only in accordance with DNV rules and manufacturer's work instructions.

Any significant changes in design and/or quality of the material will render the approval invalid.

Type Approval documentation

Tests carried out

Type Testing carried out in accordance with **Type Approval documentation**.

Marking of product

Product/package shall be marked with *manufacturer's name* or *trademark* and *type number identification*.

The marking is to be carried out in such a way that it is visible, legible and indelible. The marking of product is to enable traceability to the DNV Type Approval Certificate.

Periodical assessment

The scope of the Periodical Assessment is to verify that the conditions stipulated for the Type Approval is complied with and that no alterations are made to the product design or choice of materials.

Periodical assessments (for Certificate Retention / Certificate Renewal) shall be performed according to DNV-CP-0338.

This certificate is only valid if required Periodical assessments are carried out with satisfactory results. To check the validity of this certificate, please look it up in https://approvalfinder.dnv.com.

END OF CERTIFICATE