Certificate no.:
TAM00001DZ

TYPE APPROVAL CERTIFICATE

This is to certify:

that the Pourable Compound for Foundation Chocking

with type designation(s)
KINGSTONE® KS7365

issued to
Dongguan Tongcheng Marine Technology Development Co., Ltd.
Dongguan City, Guangdong Province, China

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

Application:

Foundation chocking of diesel engines, reduction gears, thrust bearings, rudder actuators, and other auxiliary machinery.

Max. service temperature:	**80°C**
Max. total surface pressure:	**4.5 N/mm²**
Max. pressure/weight:	**0.9 N/mm²**

Issued at **Hamburg** on **2025-02-18**
This Certificate is valid until **2030-02-17**.
DNV local unit: **China South NB**

for **DNV**

Approval Engineer: **Joachim Rehbein**

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.

Product description
KINGSTONE® KS7365: Pourable two-component epoxy resin

Application/Limitation
The approval is valid for foundation chocking of diesel engines, reduction gears, thrust bearings, rudder actuators, stern tubes and other auxiliary machinery.

The permitted chock stress in accordance with Manufacturer's recommendations, which include the following pressure/temperature relations:

Max. Service Temperature [°C]	80	70	60	50	40	30	20
Max. Total Surface Pressure [N/mm²]	4.5	5.9	7.0	8.0	8.7	9.4	10.0

Surface pressure exerted on cast resin chocks caused by dead weight of machinery: max. 0.7 N/mm².

In exceptional cases a surface pressure caused by dead weight of machinery is permitted up to 0.9 N/mm² (e.g. low-speed Two-Stroke-Engines)

Chocking plan with bolt-stress calculations to be submitted for approval in each case.

The tightening-up of engine and reduction gear holding-down bolts, controlled at installation, is to be checked after trial trip when cooled down. Information about this is to be given at the delivery of the compound.

The manufacturer's instructions to casting and curing of the compound are to be followed.

After hardening of the chocks and prior to tightening of the holding-down bolts a Barcol hardness test must be performed with a result of at least 35.

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

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/trademark, place of production* and *type designation/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.

Assessed production site
Guangdong Tonwin New Materials Co., Ltd.
Room 101, Building 8, No.6 Fangji Road,
Zhongtang Town,
Dongguan City,
Guangdong Province,
China.

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

Other conditions

Seating of propulsion plants on cast resin chocks with the primary components as diesel engines, turbines, generators for propulsion, gear boxes, power-take-off drives, thrust bearings, shaft bearings, shaft generators, stern tubes, steering gears and windlasses is subject to approval by the Society in any case.

The manufacturer's instructions to casting and curing of the compound are to be followed.
Application has to be carried out under supervision of the cast resin manufacturer or an authorized representative.
The representatives, trained and authorized staff performing foundation work, have to be stated to the Society in writing including the list of the responsible persons. Evidence for training shall be available on demand of local surveyor to the Society.

After hardening of the chocks and prior to tightening of the holding-down bolts a Barcol hardness test has to be performed.

A sample shall be taken on site. Batch number of the used material (resin and hardener) has to be recorded.

A sign plate has to be fitted near the chocks, indicating the name of the cast resin type, name of the responsible company, date of pouring, and holding-down bolts' tightening torque respectively hydraulic pressure and piston area of tensioning device.

For mounting of the components, the latest edition of CLASS GUIDELINE DNV-CG-0372 "Foundation and mounting of machinery" shall be observed.

END OF CERTIFICATE