

TYPE APPROVAL CERTIFICATE

This is to certify:

That the **Pourable Compound for Foundation Chocking**

with type designation(s)
Polypad Super-Chock

Issued to

Advanced Materials Group Co. Ltd.
Hong Kong, Hong Kong

is found to comply with

DNV class programme DNV-CP-0432 – Type Approval – Pourable compounds for foundation chocking
DNV rules for classification – Ships
DNV rules for classification – High speed and light craft

Application :

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

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

Max. service temperature: 80°C
Max. total surface pressure: 5.0 N/mm²
Max. pressure/weight: 0.7 N/mm²

Issued at **Høvik** on **2022-05-05**

This Certificate is valid until **2027-05-04**.

DNV local station: **Hong Kong**

for **DNV**

Approval Engineer: **Gisle Hersvik**

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Gustav Heiberg
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.

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 300,000 USD.



Product description

Polypad Super-Chock: Two-component epoxy-based chocking compound.

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 (in addition to values stated on first page):

Service temperature [°C]	90	80	70	60	50	40	30	20
Total surface pressure [N/mm ²]	2.2	5.0	5.9	7.0	8.0	8.7	9.4	10.0

Specific load due to weight: 0.7 N/mm².

In exceptional case the specific load by weight is permitted up to 0.9 N/mm² (e.g. low speed two-stroke engines).

Chocking plan with bolt stress-calculation shall be submitted for approval in each case.

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

Height of chocks: min. 12 mm, max. 100 mm (pouring in one layer is permitted).

Exotherm temperature measured at the chock centre: min. 50°C. If not achieved then the chock must be cured by the application of external heat at a minimum, measured temperature of 50°C for not less than 16 hours.

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

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 tightening 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.
- Application (casting and curing) to be carried out under supervision of the cast resin manufacturer or an authorized representative. The representatives, trained and authorized staff performing foundation work, must be stated to the Society in writing including name list of the responsible persons. Evidence for training shall be available on demand of local surveyor to the Society.
- A sample shall be taken on site. Batch number of the used material (resin & hardener) to be recorded.
- A sign plate must 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 & piston area of tensioning device
- For mounting of the components, the latest edition of DNV Class Guideline DNV-CG-0372 *Foundation and mounting of machinery* shall be observed.

The approval is also valid for offshore use with reference to DNV-RU-OU-0101 Rules for Classification - Offshore drilling and support units.

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

Type Approval documentation

Marking of product

The product to be marked with *manufacturer's name* (**Advanced Materials Group Co. Ltd.**) or *trademark* and *type designation* (**Polypad Super-Chock**) or *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.



Job Id: **262.1-037145-1**
Certificate No: **TAM000019N**

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