



DET NORSKE VERITAS TYPE APPROVAL CERTIFICATE

CERTIFICATE NO. M-9085
This Certificate consists of 2 pages

This is to certify that the
Pourable Compound for Foundation Chocking

with type designation
Chockfast Black

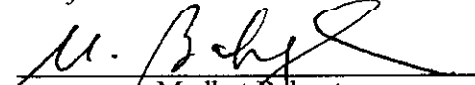
Manufactured by
Philadelphia Resins Corporation
Montgomeryville, Pennsylvania 18936, U.S.A.

is found to comply with
Det Norske Veritas' Rules for Classification of Ships and Mobile Offshore Units
Det Norske Veritas' Rules for Classification of 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.

Max service temp.: 80 deg. C
Max tot. surf. press 3.5 N/mm²
Max press./weight: 0.9 N/mm²

Place and date
Høvik, 2000-01-21
for DET NORSKE VERITAS AS


Medhat Bahgat
Head of Section



Local Office
DNV New Jersey

This Certificate is valid until
2004-06-30


Egil Skåring
Surveyor

Notice: This Certificate is subject to terms and conditions overleaf. Any significant change in design or construction may render this Certificate invalid.

If any person suffers loss or damage which is proved to have been caused by any negligent act or omission of Det Norske Veritas, then Det Norske Veritas shall pay compensation to such person for his proved direct loss or damage. However, the compensation shall not exceed an amount equal to ten times the fee charged for the service in question, provided that the maximum compensation shall never exceed USD 2 million. In this provision "Det Norske Veritas" shall mean the Foundation Det Norske Veritas as well as all its subsidiaries, directors, officers, employees, agents and any other acting on behalf of Det Norske Veritas.



Cert. No.: M-9085
File No.: 702.72

Product description

Epoxy based Resin.

Application/Limitation

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

| | |
|--|-----|
| Max. service temp. (deg. C): | 80 |
| Max.tot.surf.press.(N/mm ²): | 3.5 |
| Max. specific load due to weight (N/mm ²): | 0.9 |

Type Approval documentation

Chockfast Black Technical Data Manual d. December 1999 with Instructions for Use, Technical Bulletin 666F, Chockfast Black and supplementary test reports included in fax NEW-2428-99 d. 1999-10-07.

Marking of product

The product to be marked with manufacturer's name or trademark and type number identification.

Certificate retention survey

For retention of the Type Approval, a DNV surveyor shall perform survey every second year and before expiry date of this certificate to verify that the conditions of the type approval is complied with.

Other conditions

Chocking plan with boltstress-calculation to be submitted for approval in each particular 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 is to be followed.

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 24.

END OF CERTIFICATE