

PU-D20 Concrete System *Visco Elastic Deck Covering System*

Product description

PU-D20 Concrete System is a method of noise control in ships, which acts by preventing vibration of the steel structure. The energy thus absorbed is therefore not available to be radiated as sound in the treated area or in other parts of the ship.

Minimum 1 mm PU-D20 Visco Elastic Damping Layer forms the filling of a sandwich construction between the steel of the deck and minimum 10 mm DMS Concrete Mix, BH 3000, BS 3010 or BL 2000. As the deck flexes under vibration transmitted to it from engines or propellers, the visco elastic layer is placed in shear. The special property of a visco elastic material is that it does not recover at the same rate as which it is distorted, and energy from the vibration is therefore absorbed, leaving less to be radiated as noise.

The bond between the visco elastic layer and the deck, and the bond between the visco elastic layer and the constraining layer is therefore of utmost importance.

Surface preparation

Before application of the PU-D20 ensure that the deck is clean and free from dust, grit, rust, grease or any other dirt. The deck surface must be ground free from weld spots and other lumps and a normal shop primer must be applied.

Aluminum has to be primed with a wash primer.

Application of PU-D20 Damping Layer

Before use, the PU-D20 component A and B must be thoroughly mixed together by using an electric mixer. Component B shall be poured into the component A can and then mixed. Measure up the deck area to be treated in smaller sections and trowel out the damping layer PU-D20 in the specified thickness.

After drying 1-2 hours the surface must be strewn with a thin layer of coarse sand particle size, like 0.4-0.8 mm, this to provide a good grip between the visco and the constraining layer. Allow the PU-D20 Damping Layer to dry over night, approx. 8 hours. The drying process may be assisted by a hot air fan to provide a comfortable well ventilated working climate of about 15-20°C. (Minimum temperature is +5°C). Apply constraining layer.

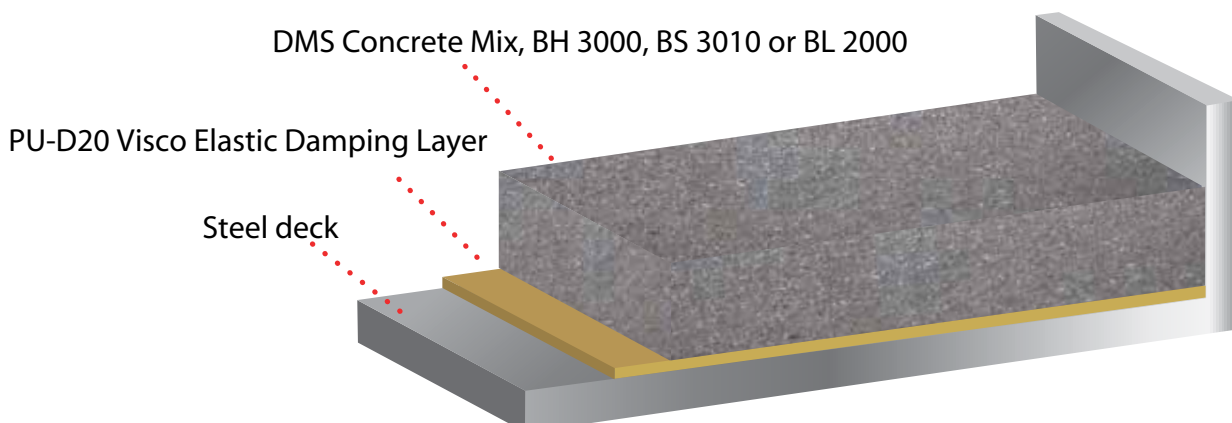
Application of constraining layer

DMS Concrete Mix: Mix 2,5 kg of DMS Concrete Mix with 0,5 litres of DMS Latex and 0,5 litres of clean, cold water to a bonding slurry (primer). Apply the bonding slurry (primer) in a smooth layer at the areas to be covered. Please note that the DMS Concrete Mix compound has to be applied in the wet bonding slurry. (Wet in wet). Mix one bag of DMS Concrete Mix (25 kg) with 1 litre of DMS Latex and a maximum of 2,2 litres of clean, cold water and stir vigorously to a smooth mortar. After mixing the compound is ready for use and to be applied in the required thickness directly into the wet bonding slurry (primer).

BH 3000: Mix one bag of BH 3000 (25 kg) with approx. 4,5-5 litres of clean, cold water and stir vigorously to a smooth, easy flowing mortar. The compound is ready for use and to be applied in the required thickness.

BS 3010: Mix one bag of BS 3010 (25 kg) with a maximum of 4,2 litres of clean, cold water and stir vigorously to a smooth compound. The compound is ready for use and to be applied in the required thickness.

BL 2000: Mix one bag of BL 2000 (18 kg) with approx. 7,4-7,5 litres of clean, cold water and stir vigorously to a smooth, easy flowing mortar. The compound is ready for use and to be applied in the required thickness.



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Technical description - PU-D20 Visco Elastic Damping Layer

Density	Approx. 1,35 kg/mm/m ²
Solid content	100%
Solvent	Solvent free
Colour	Brownish
Operating temperature	-20°C to approx. + 80°C
Application temperature	Minimum + 5°C
Pot life	Approx. 30 minutes at 20°C
Curing time	Approx. 8 hours. Maximum acoustical performance after 5 days
Flammability	Not flammable

Technical description - Constraining layer

Density	DMS Concrete Mix approx. 1,8 kg/mm/m ² BH 3000 / BS 3010 approx. 1,6 kg/mm/m ² BL 2000 approx. 0,9 kg/mm/m ²
Pot life	DMS Concrete Mix approx. 30 minutes at 20°C and 65% RH BH 3000 / BS 3010 approx. 15-20 minutes at 20°C and 65% RH BL 2000 approx. 30 minutes at 20°C and 65% RH
Curing time	DMS Concrete Mix approx. 16-24 hours at 20°C (Depending on thickness) BH 3000 approx. 18-24 hours at 20°C (Depending on thickness) BS 3010 approx. 24-36 hours at 20°C (Depending on thickness) BL 2000 approx. 24-36 hours at 20°C (Depending on thickness)

Packaging

- 7,7 kg set or 18,4 kg set - PU-D20 Visco Elastic Damping Layer
- 25 kg bag - DMS Concrete Mix
- 10 ltr can - DMS Latex for Concrete Mix
- 25 kg bag - BH 3000 Self-levelling Compound
- 25 kg bag - BS 3010 Screed Compound
- 18 kg bag - BL 2000 Self-levelling Compound
- 25 kg bag - Sprinkle Sand 0.4-0.8 mm (Can be purchased locally)

Shelf-life

Minimum 12 months in unopened packaging for PU-D20 Visco Elastic Damping Layer, DMS Concrete Mix, BH 3000, BS 3010 and BL 2000. No limit for Sprinkle Sand 0.4-0.8 mm.

Storage

In dry conditions, do not expose to moisture and freezing temperature.

For additional technical information, please contact our technical department.

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