Weber Marine VEM PU-1

- Total Solid according to GISCODE (test method "Deutsche Bauchemie")
- Good levelling properties
- Viscoelastic
- Insulating sound and vibration
- Good adhesion on prepared steel

About this product

weber marine VEM PU1 is a 2-component polyurethane levelling compound for producing viscoelastic sandwich structures. The product is used between two steel plates or one steel plate and a selflevelling screed. In this way, the room and impact sound between decks can be reduced.

Ships or offshore facilities place special requirements on the fire behaviour of surface coatings. weber marine VEM PU1 has been tested as sandwich construction in combination with steel plates or with weberfloor 4660N Marine Elastic in terms of low flammability according to the International Maritime Organization (IMO) Fire Test Procedures (FTP) CODE.

weber marine VEM PU1 is a polyurethane coating to significantly lower room and impact sound. This reduces the noise level in rooms or lower decks to a considerable amount. In addition, weber marine VEM PU1 has vibration dampening properties that cut down vibrations from steel decks.

weber marine VEM PU1 is easy-to-use and levels itself after application. It shows excellent adhesion on prepared steel, so a temporary primer is not necessary.

Area of use

As intermediate layer in sandwich structures between steel deck and steel plates or between steel deck and mineral levelling compound on ships and offshore facilitates or other maritime applications.

Substrate

The substrate to be coated must be even, dry, free of dust, sufficiently resistant to tension and compression as well as be free from weakly-bonded components or surfaces. Materials impairing adhesion such as grease, oil and paint residues should be removed with suitable measures.

Prepare steel appropriately, e.g. by grinding or blasting. In the case of corrosion-protected substrates, check the adhesion to the anti-corrosion coating.

To know before applying

To remove fresh contamination and to clean tools, use thinners VR 28 or VR 33 mmediately. Hardened material can only be removed mechanically.

Product specification	
Material consumption	1.3 - 5.4 kg/m²
Recommended layer thickness	Approx. 1 - 4 mm
Mixing ratio A:B	Parts by weight: 100 : 18. Parts by volume: 100 : 27
Application temperature	Minimum 10 °C / 50 °F (floor and air temperature)
Pot life (Operating time)	30 - 40 min. at 10 °C / 50 °F. 20 - 30 min. at 20 °C / 68 °F. 15 - 20 min. at 30 °C / 86 °F.
Waiting time between operations	After curing, but not longer than 48 hours at 20 °C / 68 °F
Curing time	24 - 36 hrs. at 10 °C / 50 °F. 14 - 18 hrs. at 20 °C / 68 °F. 10 - 14 hrs. at 30 °C / 86 °F
Curing time for light traffic load	48 - 72 hrs. for mechanical load at 20 °C / 68 °F
Surface hardness	Shore-hardness: Approx. 83 according to DIN 53505 (after 7 days)
Density	Components A + B: Approx. 1.34 kg/l DIN EN ISO 2811-2 (20 °C / 68 °F)
Viscosity	Components A + B: Approx. 1800 mPas DIN EN ISO 3219 (23 °C / 73.4 °F)
Color	Grey
Storage conditions	12 months (originally sealed). Store in dry and frost-free conditions. Ideal storage temperature is between 10 - 20 °C / 50 - 68 °F. Bring to a suitable processing temperature before application. Tightly re-seal opened packages and use up the content as soon as possible.
Package	Hobbock 26 kg (combi packaging)

Mixing

weber marine VEM PU1 is available in specified quantities as combi-bundles. Combo-packaging will be supplied in the correctly measured mixing ratio. The package of component A has sufficient volume to contain the entire packaging unit. Empty all of the hardener compound B into the resin. Blend with a slow speed mixer (200 - 400 r/pm) for at least 2 - 3 minutes until a homogeneous, streak-free compound forms. To prevent mixing errors, empty („repot") the resin/hardener mixture into a clean container and mix it once again briefly.

Work instructions

Built-up of coats

Sandwich floor made of weber marine VEM PU1 and steel plate on top (1 mm)

- Apply the weber marine VEM PU1 coating with a notched trowel (Pajarito 48), consumption approx. 2.6 - 2.8 kg/m² onto the prepared steel surface.
- Prepare outer steel plates for further processing.
- Insert the steel plates into the fresh coating after approx. 25 - 35 minutes (at 20 °C / 68 °F).

Sandwich floor made of weberfloor 4660N Marine Elastic

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and weber marine VEM PU1
- Apply the weber marine VEM PU1 coating with a notched trowel (Toothed blade RS4 or Pajarito 48), consumption approx. 2.6 - 2.8 kg/m² onto the prepared steel surface.
- After 25 - 45 minutes, scatter the fresh coating loosely with natural quartz sand, like 2 - 3,5 mm or similar, consumption approx. 1.5 kg/m².
- After curing, remove the excess quartz sand and apply the coating weberfloor 4660N Marine Elastic according to manufacturer indications.

Important note: in surfacing structures, products can be applied in practically used systems. These can consist of several IMO-tested combinations. It is possible to install several systems tested as „bottom deck layer" on top of each other. The top layer always corresponds to a tested floor covering.

Processing
Process the material immediately after mixing and spread it over the prepared substrate with a coating knife or toothed trowel (e.g. Pajarito 48 for approx. 2 mm thickness) in a uniform layer. The product is adjusted for optimum deaeration, however, rolling with a spiked roller is recommended to improve the wetting of the substrate, to optimise levelling and to remove remaining air bubbles. This should be carried out time-delayed after 5 - 10 minutes. To work seamlessly, always work "fresh-in-fresh" and define work areas before starting.

For reasons of deaeration, do not scatter too early when reworking with weberfloor 4660N Marine Elastic; the optimum time is at 20 °C / 68 °F after 10 - 20 minutes. Scatterings must be done openly; if the optimum time is not respected, the surface may not look even and become slippery later on.

Floor and air temperature must not fall below 10 °C / 50 °F and humidity should not exceed 75 %. The difference in floor and room temperature must remain less than 3 °C / 3 K / 5.4 °F so as not to impede the curing process. If a dew-point situation arises, regular curing will not be possible with hardening problems and spotting to occur. Exposure to water should be avoided during the first 7 days. The specified curing times apply for 20 °C / 68 °F; temperatures below this require longer processing and curing times, while higher temperatures require shorter times.

If working conditions are not complied with, the technical properties of the end product may deviate from those specified.

Please observe
The product is regulated by the German Ordinance on Hazardous Substances (GefStoffV), the German Ordinance on Industrial Safety and Health (BetrSichV), and transport regulations for hazardous goods. The necessary information is contained in the DIN Safety Data Sheet. Observe all identification information on the container label!

GISCODE: PU 40

Disclaimer
As there are different conditions at every opportunity, Weber can not be held responsible for anything other than the information provided under the heading "Product Specification". Examples of information and circumstances, which are outside Saint-Gobain (whether specifically stated or not) include storage, construction, processing, interoperability with other products, workmanship and local conditions.

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