GTF Freese
Schiffsdecksbeläge

Application Instruction

TEFROLITH® M - A 60 (English Version)

Standard application instruction for inside A-60 decks as floating magnesite screed

Remarks

This application instruction serves as information for the applicator and does not claim to be complete. The actual conditions on the object have to be determined and considered during application. The instructions given in this document do not justify any liability claims against the author or manufacturer of the mentioned products. For handling and application of the described materials latest safety data sheets have to be observed.

Scope of use / limitations

Insulating ship floor for type A-60 divisions as floating magnesite screed for subsequent application of carpet and elastic floor coverings with special requirements on fire protection and sound insulation. Not suitable for outside decks.

System products

TEFROLITH® M Binder - magnesium oxide (25 kg/bag)
TEFROLITH® M flakes for lye - magnesium chloride (25 kg/bag)
TEFROLITH® M filler (11,5 kg/bag)

ROCKWOOL® SeaRox SL 436 mineral wool slabs (60 x 100 cm)
ROCKWOOL® dividing strips

Storage

TEFROLITH® M Binder is a hydraulic binder which has to be protected from humidity (rain, condensation, high humidity). The pallets should be stored shrunken in foil as supplied. Opened pallets and bags should be used quickly. TEFROLITH® M Binder, TEFROLITH® M Filler and TEFROLITH® M Flakes for the lye can be stored for 6 months in a dry and frost-free place. ROCKWOOL SeaRox SL 436 can be used for 9 months when properly stored.

Preparation of Substructure

All deck areas have to be pretreated by the shipyard, free from lose separating matters or dirt and have to be protected with a suitable corrosion protection system.

Application Information

Dividing Strips:

ROCKWOOL® dividing strips have to exceed the complete construction height by 2 - 3 cm. After completion of the floor exceeding dividing strips are cut off.

Insulation slabs:

The insulation slabs are placed on the deck tightly closed to each other in staggered checker board pattern. When placing double layer insulation slabs please observe to cover the joints of the 1st layer by the 2nd layer insulation slabs.

Preparation of the magesium chloride lye:

Approx. 80 liters of clean water and 2 bags TEFROLITH® M flakes are filled into a 120 liters plastic vat (results in approx. 115 liters). Dissolve the magnesium chloride flakes while stirring. The salt concentration of the liquid should be 19 - 20° Bé and is measured using a spindle (aerometer to Beaumé). The value shown at the spindle has to be read at eye level. If necessary optimize concentration by adding water or magnesium chloride flakes. All flakes have to be completely dissolved before measuring and use.

Preparation of the magnesia mortar

TEFROLITH M Binder	TEFROLITH M lye	TEFROLITH M Filler
8,5 kg (11,5 l)	13 litres	2 bags at 11,5 kg (23 kg)

Mixing in a compulsory mixer (type ZYKLOS):
The necessary quantity of binder and TEFROLITH® M lye is filled into the compulsory mixer and mixed lump-free. Afterwards the corresponing quantity of TEFROLITH® M Filler is added and homogeneously mixed until a plastic mortar consistency is reached.
ATTENTION! Is the desired plastic consistency not reached and the mortar is too liquid add some additional TEFROLITH® M Filler. Should the mortar be too stiff the consistency may only be adjusted by adding a mix of TEFROLITH® M lye and binder. Do under no circumstances add water as it reduces the strength and increases the swelling behavior of the hardened screed!

Mixing by using a manual mixing tool (type BEBA):
Fill in corresponding quantity of binder and TEFROLITH ® M lye into a 90-liters mixing vessel. Blend shortly using a slowly turning mixing device (>500 W and max. 650 rounds/min.). Thereafter 2 bags TEFROLITH® M Filler are added and mixed until a homogenous plastic consistency is reached. In order to compensate fill level fluctuations of the bags and to ensure a plastic consistency the addition of only maximum 250 ml TEFROLITH® M lye-binder-mix is allowed.
The mortar is installed on top of the insulation slabs in the desired thickness, distributed using a levelling board, rubbed off with a float and levelled with a smoothing trowel. TEFROLITH® M needs minimum temperatures of + 8 °C for hardening.

ATTENTION! In case the mixing equipment is used for usual cement-bound mortars later very good cleaning is indispensable!

Working time: approx. 30 minutes (at 20 °C). Lower temperatures extend, higher temperatures reduce the working time. High relative humidity (> 75% rel humidity) lead to disturbances of the drying process.

Coverage / Consumption

Consumption per squaremeter per cm:
TEFROLITH® M-Filler: ca. 7,3 kg
TEFROLITH® M-Binder: ca. 2,7 kg
TEFROLITH® M-Flakes: ca. 1,8 kg

Ready for foot traffic/coverage

Ready for foot traffic: after curing overnight (at 20 °C)

Ready to be covered: Measuring by CM method necessary! Ready to be covered with diffusion-tight coverings at 6 mass% (CM). This value is reached at the earliest after 28 days at + 20°C, 65 % rel. humidity.

Safety instructions

Protective measures and rules

Avoid producing dust! Avoid splashing of the ready mixed TEFROLITH M lye! Avoid contact with eyes and skin! Carefully clean your hands before every break and at the end of work! Use skin care products! Change heavily soiled clothing! Change clothing at the end of work! Use protective cream before work and every break.

Protective measures

Eye protection: Goggles
Hand protection: Nitrile soaked cotton gloves
Respiratory protection: At increased dust exposure use particle filter P2
Skin protection: Use fatty protective cream for all uncovered parts of the body.

First Aid

Valid for every first aid measure: Pay attention to self-protection and call for the doctor immediately.
After contact with eyes: Rinse for 10 minutes under running water with the eyelids held apart or use the eyewash solution! Always consult eye specialist!
After skin contact: Take off strongly soiled clothing. For cleaning use plenty of water and soap.
After inhalation: Remove persons from the dust exposed area.