# Weber.floor 4660 Marine Elastic

## Product description

Weber Floor 4660 Marine Elastic is a cement based pumpable, fibre reinforced levelling material for primarily steel, galvanized steel and aluminium decks. It is supplied as a preblended dry powder, water is added on site of construction. The screed can be applied by hand or by pump, and requires only light mechanical handling with a steel spatula or spiked roller to achieve adequate evenness for a floor covering. The material quickly attains a high surface strength and is walkable after 1-3 hours. Final covering can be done after 1-3 days. Note that the curing time depends on the ambient and substrate temperatures and the relative humidity.
Floor 4660 meets all fire technical requirements as a subfloor for floor covering in passenger/merchant vessels and offshore installations according to IMO Res. A.687 (17).
For special applications not covered in this datasheet, please contact Weber. Also refer to existing national regulations.

## Field of application

Floor 4660 is designed to be used in marine applications in light traffic areas and finished with a floor covering such as PVC, vinyl, linoleum, ceramic tiles, carpets etc. It can be used as either a bonding or floating screed and as an underlayment screed for use on steel, galvanized steel or aluminium. It can also be applied on existing concrete substrates for ship repair purposes. Floor 4660 is designed for application at thicknesses between 2 and 30 mm if hand applied or between 4 and 30 mm if pumped. When used as a floating screed the minimum layer thickness is 25 mm. If low weight or a thicker layer is required expanded clay pellets (LWA) of grain size 2-10 mm can be added to the mix. This mixture can be applied in thicknesses between 10 and 100 mm and must be covered with a 6 to 10 mm layer of Floor 4660.

## Properties

- Low alkalinity, acts as an alkaline barrier
- Recyclable raw materials
- Low natural emissions
- Casein free

## Package

- 25 kg bags on plastic wrapped pallet (40 bags per pallet)
- 1000 kg big bags
- Bulk material

## Substrate

The substrate must be dry, clean, free from dust, grease and other impurities that might reduce adhesion. Laitence of old coatings and contaminants should be removed mechanically (by shot blasting, scarification or flame gunning). The surface strength of the substrate should exceed 1.0 MPa. Prime the substrate properly. Floor drains etc. must be protected with lids and separated with stop ends.

## Preparation and Priming

Steel decks must be primed with Weber Floor 4716 Primer. Galvanized steel and aluminium decks must be primed with sand sprinkled Weber Floor 4710N Epoxy Primer prior to application of the 4716 Primer. If another epoxy primer is being used, check for compatibility with Floor 4660. For details on the primers see separate datasheets. The function of the primers is to improve adhesion to the substrate, to prevent air bubbles and de-watering of the screed before hardening.

## Pre-treatment

The dry mix material should be kept in a heated area before use. Strongly cooled material conveys a risk that some additives will not be able to dissolve during admixture. Too high temperature will change the fluidity of the compound, eg. lead to premature gelling. The dry mix and work area temperature should be 10-30°C.

## Mixing

The material is mixed with 17% water, which corresponds to 4.3 litres per 25 kg bag. Excess water will reduce strength, increase shrinkage and encourage segregation. Conversely, reduced water content increases viscosity. A flow ring test should be performed to ensure that the correct amount of water has been used. Also ensure that the mixture is homogenized and free from separation. The temperature of the mix should ideally be 10-30°C. The water temperature must not exceed 35°C. The open time is 15-20 minutes after mixing with water. Mixing by hand: Pour water in a suitable mixing vessel before adding the dry material. Limit the amount of dry material to 3-4 bags per batch, giving a total volume of 60-80 liters. Use a powerful drill with paddle and mix thoroughly for minimum 2 minutes. Mixing by pump: Floor 4660 should ideally be mixed using a Weber mixing pump. For more information on Weber mixing pumps see separate datasheets. Mixing with LWA: Approximately 50 litres of LWA (grain size 2-10 mm) is mixed with one 25 kg bag Floor 4660 and water. Pour water in a suitable mixing vessel before adding the dry material. Recommended water volume is 4.3 litres, but can vary slightly depending on the moisture content of the LWA. Use a powerful drill with paddle and mix thoroughly for minimum 2 minutes. The consistency of the mixture should be like moist soil.

Must be topped by minimum 6mm Floor 4660 Marine Elastic.
Minimum material consumption Floor 4660 is 1,7 kg/mm/m2.

## Application

Hand application:
Start in the farther end of the work area and distribute the screed in parallell with an end wall. The application should always finish by an exit/opening. If possible, use two mixing vessels to make sure there is always fresh screed available during the application. A wide spatula or steel trowel must be used to assist the self-levelling process.

Pump application:
The maximum width of the pumpable area varies from 6-8 metres depending on the pump capacity and application thickness. Wider areas should be temporarily divided with stop-ends. Pumping is carried out in sections; a new section is pumped as quickly as possible slightly on top of the adjoining section. A wide spatula or steel trowel must be used to assist the self-levelling process. The pump hose must be between 40 and 100 metres long.

Floor 4660 should be applied within 24 hours after the

primer has dried to ensure proper adhesion.

## Observe

Light ventilation in the work area is necessary, but windows and openings must be closed sufficiently to avoid draughts during and after application. The ambient and substrate temperatures must exceed 10°C during application and one week after that. Dehumidifiers should not be used for the first two days after application. Slow drying due to low temperature and/or poor film formation due to high humidity may result in pinholes in the levelling layer.

## Storage

Storage time in dry conditions and closed packaging is 6 months. Longer storage times may have an adverse impact on the levelling properties.

## Drying time

Foot traffic 1-3 hours
Final covering 1-3 days
High humidity and poor drying conditions prolong the curing time. For moisture sensitive coverings, eg. wooden floors, the manufacturer's instructions should be followed.

## Overlay

Floor 4660 must be covered with a floor covering such as PVC, vinyl, linoleum, ceramic tiles, carpets etc. The underlayment must not be used without final floor finish. Cover within 7 days.

## Safety instruction

Hazardous – contains cement, which is alkaline when wet and can cause skin irritation. Use eye protection, gloves and barrier cream and avoid prolonged skin contact. Avoid inhalation of dust. Wash skin contamination away with warm, soapy water. Remove splashes to the eyes by prolonged irrigation and consult a doctor. Do not ingest. Refer to Health and Safety Data Sheet.

## Product Specification

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|---|---|
| **Material consumption** | 1 mm/m2 = 1.7 kg (LWA mix 0.6 kg)<br>5 mm/m2 = 8.5 kg (LWA mix 3.0 kg)<br>10 mm/m2 = 17.0 kg (LWA mix 6.0 kg) |
| **Application temperature** | 10 - 30 ºC |
| **Open time** | 15-20 minutes (after adding water) |
| **Hardening time** | |
| **before foot traffic** | 1-3 hours<br>at 20°C and 50% RH |
| **Hardening time** | 1-3 days (one day per 10 mm layer) |
| **Minimum thickness** | 2 mm (10 mm when mixed with LWA) |

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## Product Specification

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|---|---|
| **Maximum thickness** | 30 mm (100 mm when mixed with LWA) |
| **Water demand** | 4.3 litres per 25 kg bag (17%) |
| **Compressive strength** | |
| **Compressive strength class** | C20<br>EN 13813 |
| **28 day** | Mean value 27 MPa<br>EN 13892-2 |
| **Flexural strength** | |
| **Flexural strength class** | F7<br>EN 13813 |
| **28 day** | Mean value 8.5 MPa<br>EN 13892-2 |
| **Adhesion strength** | |
| **Adhesion strength of the substrate** | >1.0 MPa |
| **Shrinkage** | |
| **28 days** | <0.5 mm/m<br>EN 13454-2 |
| **Flow rate according to** | |
| **maxit standard** | 205-220 mm<br>maxit standard method 99:03 (ring 68x35 mm) |
| **Flow ring 50 x 22 mm** | 135-145 mm<br>Old SS 923519 (ring 50x22 mm) |
| **Physical requirements** | |
| **Reaction to fire** | A2fl -s1<br>A.1/3.1 Primary deck covering, MED<br>EN 13501-1, IMO FTPC Part 6 and IMO FTPC Annex 2, section 2.2 |
| **Density** | |
| **Loose bulk density** | 1700 kg/m³ |
| **Chemical properties** | |
| **pH** | 11 (approximately) |

## Documents

ce_deklaration_floor_4660 Marine Elastic_weber -eng.pdf