Introduction

When mixing and spraying Promat FENDOLITE® MII the quality must be checked. This document describes when and how the quality checks are done and what adjustments can be made if the results are outside the correct range.

Mixing quantities

The product Promat FENDOLITE® MII is a factory controlled premix which only requires the addition of potable water on site to produce a mix of suitable consistency. Promat FENDOLITE® MII requires 15 – 19 litres of water per 20kg bag.

- Ensure that mixing water is of a potable quality.
- Add water first, then steadily add Promat FENDOLITE® MII.
- Mixing time is 3 minutes to ensure correct properties of the mix.
- The wet bulk density of the material in the mixer shall be between 690 and 840 kg/m³.
- The slump of the material in the mixer shall be between 40 and 55 mm.
- The wet bulk density of the sprayed material shall be between 1070 and 1310 kg/m³.

When to check

The mixer density, consistency and sprayed density shall be checked

- at the start of a shift, typically early in the morning and after lunch. It is recommended to perform the checks on the second mix, because the first mix may still be influenced by cleaning water of the machine etc.
- if the environmental conditions (in particular the temperature) changes strongly.
- if there is any indication of changed or wrong properties.

NOTE: It is recommended to have the same person perform the checks, because their result is to a certain extent sensitive to the skill of execution.

Determination of the wet bulk density and consistency in the mixer

- Prepare a plastic (PVC) cylinder with an internal volume of one litre, an internal diameter of 100 - 105 mm and corresponding length (see table 1).
- With a trowel lift material from the mixer into a the cylinder, placed on a smooth and clean panel.
- Place the cylinder outside the influence of vibration of the mixer, or switch of the mixer before doing the test.

- Let the material slide into the cylinder, properly filling without leaving air bubbles but at the same time not vibrating or compressing it.
- Cut the excess material from the top, by cutting from the middle towards the edge, repeated in different directions.
- Carefully lift the cylinder in vertical direction, sliding it off the wet material.
- Place the cylinder next to the wet material. Measure the difference in height (slump of the material), which shall be between 40 and 55 mm.
- Transfer the material to a small plastic bag.
- Weigh the bag. The mass shall be between 690 and 840 g.

Cylinder diameter and length

Internal diameter (mm)	100	101	102	103	104	105
Length (mm)	127	125	122	120	118	115

Adjusting the wet bulk density in the mixer

If the mixer density is not within the prescribed range, the following options exist to adjust it:

- For next mixes, change the amount of added water. Increasing the water will increase the mixer density.
- Adjust the mixing time.
- Adjust the speed of the mixer.

Determination of the wet bulk density after spraying

- Place the cylinder on a smooth panel on the floor next to the person holding the spray gun.
- Fill the cylinder by spraying into it, gradually filling it in circular movements.
- Cut the excess material from the top, by cutting from the middle towards the edge, repeated in different directions.
- Transfer the material to a small plastic bag. With a trowel, clean the interior of the cylinder and place this material also in the bag.
- Weigh the bag. The mass shall be between 1070 and 1310 g.



Figure: spray filling of the tube (left) and weighing of the contents of the tube (right)

Adjusting the wet bulk density of the sprayed material

If the spray density is not within the prescribed range, adjust:

- Air pressure,
- Nozzle size,
- Distance to the substrate,
- Speed of the mixer screw,
- Material lines length and diameter.

The information given in this Application Procedure is based on practical experience, independent and other tests and represents, in Promat's opinion, the best technical advice available. Since the products are applied under circumstances beyond our control, Promat can accept no direct or consequential liability, whether in contract or in tort, for the interpretation of such recommendations and reserves the right to modify the recommendations as necessary. Should it be unclear as to the meaning of any of the instructions given above, or if further information is required, please consult Promat.