polytan
COMPETENCE CENTER

Installation Manual

Melos EPDM Mulch

Competence Center

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WE MAKE SPORT.

System overview

Synthetic fall protection surfaces according to DIN EN 1176 and 1177 from Melos are composed of high-quality components Made in Germany and guarantee excellent damping properties with a very long durability.

Fall protection systems with Melos EPDM mulch can be installed as a one or two layer system (depending on local standards & installation conditions). The thickness can vary and depends on the critical fall height (CFH) of the playground equipment.

- High cushion effect
- Abrasion resistant
- High UV resistant
- High water permeability
- Slip resistant

Two layer EPDM mulch (acc. EN 14877 type B)

	LAYER	PRODUCT	KG/M²	APPLICATION
1	Primer	PC 11-010	0,10	Spraying
2	Baselayer per 10 mm	PC 31-020/-050/-055	0,65	Manual installation
		SBR 2-6 mm	6,5	
3	Toplayer	PC 31-020/-050/-055	2,0	
		Melos EPDM Mulch	10	

One layer EPDM mulch (acc. EN 14877 type C)

40mm system

	LAYER	PRODUCT	KG/M²	APPLICATION
1	Primer	PC 11-010	0,10	Spraying
2	Toplayer	PC 31-020/-050/-055	3,84	Manual installation
		Melos EPDM Mulch	19,2	

[1] The quantities used depend on the local structural conditions and may vary depending on the substrate and climatic conditions.

Installation Conditions

The air and floor temperature must be at least 10°C and no more than 40°C. Low temperatures can lead to a significant extension of the curing process, whereas high temperatures shorten the processing and curing time. Dry weather conditions are a basic requirement for the installation of PU bound EPDM systems. In the event of precipitation, work must be stopped immediately and the materials must be protected from moisture by covering them.

Substructure

For synthetic fall protection surfaces in a minimum thickness of 30 mm, a sufficiently compacted, stable and shear-resistant gravel base layer of frost-resistant material 0/32 or 0/22 mm in a minimum layer thickness of 200 mm is recommended.
The material must fully comply with DIN 18035-6 in terms of grading curve and thus in terms of water permeability, compaction and stability.
Installation on an asphalt or concrete base layer is also possible. The basic requirement before installation is that the surface must be cleaned of dust, oil and loose spots. The asphalt/concrete base layer must be free of cracks and cavities. Required adhesive tensile strength must be on average > 1.5 N/mm². For asphalt substructures, a water-permeable construction method according to DIN 18035-6 is recommended. To ensure sufficient adhesion of the synthetic fall protection surfacing, the application of PC11-010 Adhesion Primer is recommended. The application quantity is approx. 0.15 kg/ m². The primer can be applied with an airless sprayer (e.g. Graco) or with a paint roller. The evenness of the substructure should not deviate by more than max. 10 mm under the four-meter straight edge.
Edging of the synthetic fall protection surfacing is recommended. This can be done using concrete edge stones, slabs or soft edge stones.

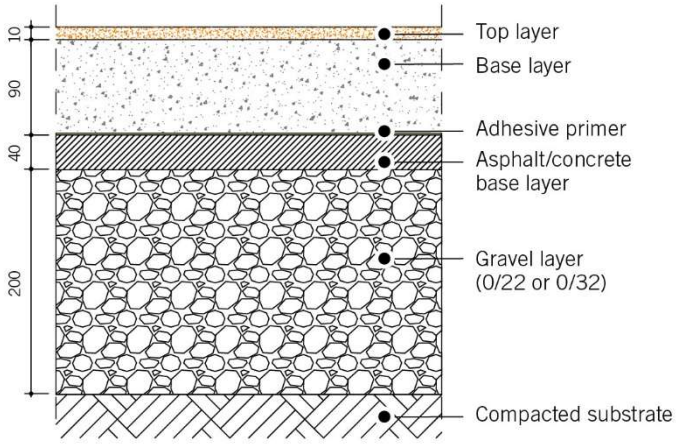
The following parameters of the asphalt base layer should be observed and checked before construction begins:

- One or two-layer water-permeable construction method
- Layer thickness of 40mm
- evenness:
    - 1m < 4mm
    - 4m < 10mm
- A degree of compaction of at least 90% (dpr)
- A water permeability of >360 mm/h

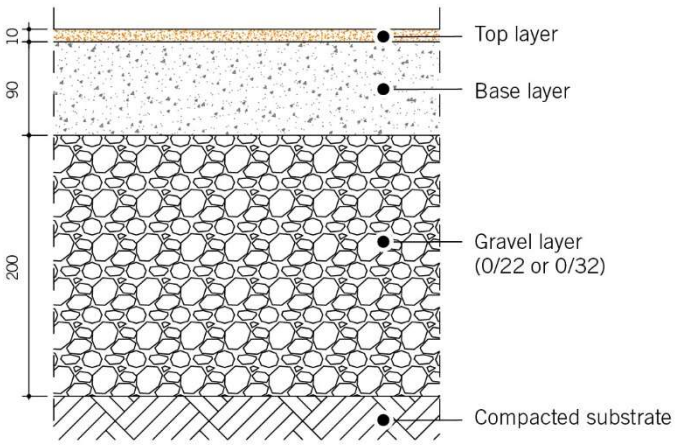
The following conditions should also be met:

- The curing time of the bound base course should be >28 days
- The base course must be free of dirt and other residues as well as oils and other substances that inhibit adhesion.
- The residual moisture content of cementitious substrates (concrete) must be less than 4%

Asphalt/concrete base layer



Gravel base layer



Application

1. Primer

It is recommended to apply the one-component adhesive primer (PC 11-010) using an airless sprayer. The application quantity for asphalt is 0.15 kg/m² and for concrete 0.25 kg/m² due to its absorbency. For small areas, the primer can also be applied with a short-pile paint roller. Puddle formation should be avoided. The curing time is between 4-6 hours depending on temperature and humidity. The time between priming and recoating should not exceed 24 hours.

Levelling of the Melos EPDM mulch

2. Base Layer (optional)

The technical granules (recommended grading curve 2-6 mm) are homogeneously mixed with the single-component binder PC 31-010/-050/-055 using a compulsory mixer for at least 2 minutes (observe mixing ratio!). The mixed material is poured onto the substrate pre-treated with primer and installed by hand in accordance with professional and standard requirements. After levelling of the mixture, the base layer must be compacted and smoothed by a trowel or metal roller.
The curing time of the PU-bonded elastic layer can vary depending on temperature and humidity.

Smoothing of the surface

3. Top Layer

The Melos EPDM mulch is homogeneously mixed with the one-component binder PC 31-020/-050/-055 using a compulsory mixer for at least 2 minutes (observe mixing ratio!). The mixed material is poured onto the fully cured elastic layer/susbtructure and installed by hand in accordance with professional and standard requirements. Use for levelling of the material a rake, straight edge with distancers. For smoothing of the surface a metal roller or trowel is highly recommended.
The curing time of the PU-bonded top layer can vary depending on temperature and humidity.

Safety instructions

All safety data sheets must be taken into account before starting work. (personal protective equipment).

All safety instructions for the use of the machines and the operating personnel must be observed during the entire operation.

Avoid eating, drinking and smoking during the immediate work

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