

Product Data Sheet

Lucofin® 1412M

1. Product description

Lucofin®1412M is thermally and against UV-radiation stabilized TPO¹ based material and is used mainly for roofing membranes.

Lucofin® 1412 M, light grey, acc. RAL 7035

2. Product properties

Lucofin®1412M displays excellent tear resistance, flexibility, and heat resistance. It exhibits good toughness, sufficient biaxial stretchability, and is flexible even at low temperatures.

3. Product advantages

- Easy processing when used on standard processing equipment
- Easy to weld (hot air / hot air wedge welding)
- Flexibility even at low temperatures
- Good mechanical properties
- Thermal ageing resistance
- Compatible with polyolefines and bitumen acc. to DIN 16726

4. Applications

Colored Lucofin® products are mainly used in construction, for instance, for TPO/FPO roofing, profiles for the construction industry and as well as water barrier. Lucofin® membranes and profiles can be welded safely and durably.

More applications are

- Industrial flat roofs
- Green roofs
- Civil engineering

5. Processing

Lucofin®1412M is suited for standard processing equipment used for thermoplastics, especially twin-screw-extruders. We recommend the following processing temperatures as standard values for extrusion.

Membranes/ flat-sheet composites: approx. 160° - 200 °C

Coatings: approx. 160° - 200 °C

6. Fire prevention

The product was designed with special halogen free fire retardants in order to pass European Standard prEN 1187, test method broof-t1 (MF and EPS without additional glass fleece). It is mandatory for this test to be performed with the membrane. However, it needs to be taken into account that the configuration of the membrane and the roof construction can have a decisive effect on the test results.

7. Chemical resistance

Lucofin®1412M is resistant to water and aqueous solutions, to salt as well as to dilute acids and bases. When exposed to aliphatic, aromatic and halogen-substituted hydro-carbons, Lucofin®1412M may swell or dissolve to a certain extent.

8. UV resistance

The UV test acc. EN 1297 passed 5.000 h exposure test for all Lucofin®M-grades, tested on extruded membranes (class 0).

9. Storage and handling

Granules in 25 kg bags, pallet standard = 1.375 kg or 1000 kg Big Bags.

Lucofin®1412M should be stored under dry conditions at a temperature below 40°C and protected from UV-light.

Otherwise the packaging could be damaged or degradation may occur resulting in odor generation and color changes

We strongly recommend to use the material latest within 6 months after delivery. Storage time in excess of 6 months may have a negative impact on the processability and should be inspected according to quality assurance measures to ensure product's performance.

¹ TPO/FPO – Thermoplastic Polyolefines / Flexible Polyolefines

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Typical properties*	Test Conditions	Standard	Unit	Lucofin®1412 M
Color	-	-	-	light grey, acc. to RAL7035
MVR	190 °C/2,16 kg	ISO 1133	cm ³ /10 min	5
MFR	190 °C/2,16 kg	ISO 1133	g/10 min	4,5
Density	23°C, Compression molded sheet	ISO 1183	g/cm ³	1,05
Melt density	190°C	Acc. to ISO 1133	g/cm ³	0,94
Bulk Density	23°C	ISO 60-2	kg/l	0,55
Ash Content	30 min., 800°C	ISO3451-1	%	18,5
Stress at break	23°C, 50% r.h. Compression molded sheet	ISO 527	MPa	> 7
Elongation at break	23°C, 50% r.h. Compression molded sheet	ISO 527	%	> 500
Exposure to UV radiation	Extruded membrane	EN 1297	hrs	> 5000 h passed (class 0)

* These standard values are typical values measured from a compression molded sheet and should not be regarded as specification. For delivery specification it must be confirmed by individual agreement

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