High-End Modified Bitumen PMB 45/80-75 F

Special binders

The PMB 45/80-75 F bitumen is a technologically innovative binder obtained through a process of chemical reticulation with a high polymer content, which has a microscopically homogeneous structure and is completely stable in storage.

The binder is very highly modified, with a high softening and internal cohesion point, as well as greater viscosity.

With this binder we achieve properties in the mix that far exceed those obtained with traditional modified bitumens, giving our mixes greater cohesion, which allows for more critical grain structures and greater resistance to plastic deformation.

The PMB 45/80-75 F properties conferred to the mix make this binder especially suitable for use in high-end mixes in wearing courses, minimising the risk of ruts, possible creep and exudations, improving its ageing and fatigue resistance. Thanks to this we achieve greater durability and better maintenance of the road surface.

The magnificent and varied benefits that this product confers to the mixes allows the creation of specific formulas depending on the application and/or characteristics desired. Thanks to the specific manufacturing process and the additives employed we have achieved excellent handleability for the product

Its properties characterise it as a binder that is also eco-friendly when applied in mixes with high void content, allowing for a reduction in noise pollution, as well as delaying the silting of the draining mixes.

/ APPLICATIONS

The main applications PMB 45/80-75 F are:

- Discontinuous mixtures for thin wearing courses subject to heavy traffic and significant stress
- Mixes for high-end wearing courses. This new binder allows the manufacture of mixes with open/discontinuous granulometrics with 5.5-6.5 % of bitumen and strong fatigue resistance.
- Draining mixes with a high percentage of holes in the mix. One example of this type of mix is the Twin Layer system.

/ PRODUCT CHARACTERISTICS

The following table shows the characteristics of the PMB 45/80-75 F bitumen:

CHARACTERISTICS		UNE EN	UNIT	PMB 45/80-75 F
Tests on original bitumen				
Penetration at 25ºC		1426	0,1 mm	45-80
Softening point		1427	ºC	≥ 75
Cohesion. Strength-ductility		13589 13703	J/cm²	≥ 3 a 5ºC
Fraass breaking point		12593	ºC	≤ -15
Elastic recovery at 25ºC		13398	%	≥ 80
Stability in storage	Difference in softening point	13399 1427	ºC	≤ 5
	Difference in penetration point	13399 1426	0,1 mm	≤ 13
Flash point in open cup		ISO 2592	ºC	≥ 235
Durability-Resistance to ageing EN 12607-1				
Change of mass		12607-1	%	≤ 1,0
Retained penetration		1426	%	≥ 60
Increase in softening point		1427	ºC	≤ 10
Decrease in softening point		1427	ºC	≤ 5

/ RECOMMENDATIONS FOR USE

RECOMMENDED TEMPERATURE RANGES FOR ITS APPLICATION	MIXING	170 - 180ºC
	SPREADING AND COMPACTING	165 - 175ºC

Indicative data, not contractual and not subject to specifications. Temperatures depend on the specific viscosity curves of each product.

/ PRODUCT BEHAVIOUR IN THE MIX

The PMB **45/80-75 F binder** gives the asphalt mix the following advantages

- Characteristics reinforced in elasticity.
- Very good resistance to fatigue and ageing, which increases the durability of the surface.
- Greater resistance to plastic deformations.
- Excellent flexibility at low temperatures.