

# High Modulus Bitumen



Asphalt bitumens



Based on a careful selection of crude oils, Repsol offers its customers a **high modulus bitumen** [15/25] that allows a modulus rigidity of more than twice the amount of a conventional mix.

This high modulus bitumen enables a reduction in density and a saving on the cost of the road surface.

## / APPLICATIONS

- Base layers in new surfaces.
- Airfield Surfaces.
- Reinforcement or partial reconstruction of surfac.
- In intermediate anti-rut layers; when a reduced thickness wearing course is used.

## / PRODUCT CHARACTERISTICS

The following table shows the characteristics of the high modulus bitumen:

CHARACTERISTICS		UNE EN	UNIT	15/25
Penetration at 25°C		1426	0,1 mm	15-25
Softening point		1427	°C	61-71
Resistance to ageing UNE EN 12607-1	Change of mass	12607-1	%	≤ 0,5
	Retained penetration	1426	%	≥ 55
	Increase in softening point	1427	°C	≤ 10
Penetration ratio		12591 13924 Anexo A	-	De -1,5 a +0,7
Fraass breaking point		12593	°C	≤ 0
Flash point in open cup		ISO 2592	°C	≥ 245
Solubility		12592	%	≥ 99,0

## / RECOMMENDATIONS FOR USE

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

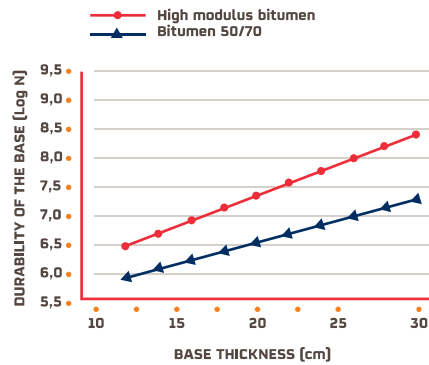
Indicative data, not contractual and not subject to specifications. Temperatures depend on the specific viscosity curves of each product.

## / PRODUCT BEHAVIOUR IN THE MIX

### • Structural capacity.

The high modulus obtained with this bitumen offers the following advantages when designing bituminous-based surface structures.

- Achieve higher structural performance and reach much higher life expectancy values than normal [see equivalent axes in figure 1].
- Design thinner surface packages for a single structural capacity.



**Figure 1**  
Structural behaviour.  
Indicative data, not contractual and not subject to specifications.

### • Plastic deformations

High modulus bitumen gives the mix it is used for an extraordinary performance against plastic deformation.

