# Reciemul P-90 AT (C60BP4)

#### **EMULSIONS RECYCLED MIXES WITH EMULSION**

#### **DEFINITION:**

Slow breaking bituminous emulsion in which the original binder is made of a bitumen modified with Elaster polymers, designed to manufacture recycled asphalt mixes, in a hot aggregate plant using a warm technique and high milling rates (>80%).

It meets the specifications included in standard UNE-EN 13808 for a type C60BP4 emulsion.

The properties of the residual binder will be adapted to the characteristics and degree of ageing of the material to be recycled as well as what percentage to use in the manufacturing of the recycled mix.

#### **SPECIFICATIONS:**

Characteristics	Unit	Standard	Min.	Max.
Original Emulsion				
Particle polarity	-	UNE EN 1430	Positive	
Breaking value (Forshammer filler)	-	UNE EN 13075-1	110	195
Binder content per water content	%	UNE EN 1428	58	62
Efflux time (2 mm, 40 °C)	S	UNE EN 12846	15	70
Settling tendency (7 days storage)	%	UNE EN 12847	-	10
Residue on sieving (0.5 mm)	%	UNE EN 1429	_	0.1
Water effect on binder adhesion	%	UNE EN 13614	90	-
Binder after distillation (UNE EN 1431)				
Penetration (25º; 100 g; 5 s C)	0.1mm	UNE EN 1426	-	100
Softening point	°C	UNE EN 1427	50	-
Cohesion (Strength-ductility 5ºC)	J/cm <sup>2</sup>	UNE EN 13589	0.5	Ī
Elastic recovery (25ºC)	%	UNE EN 13398	DV	
Evaporation residue (UNE EN 13074-1)				
Penetration (25ºC; 100 g; 5 s)	0.1mm	UNE EN 1426	-	100
Softening point	°C	UNE EN 1427	50	-
Cohesion (Strength-ductility 5ºC)	J/cm <sup>2</sup>	UNE EN 13589	0.5	-
Elastic recovery at 25ºC	%	UNE EN 13398	DV	
Stabilizing residue(UNE EN 13074-2)				
Penetration (25ºC; 100 g; 5 s)	0.1mm	UNE EN 1426	-	100
Softening point	°C	UNE EN 1427	50	-
Cohesion (Strength-ductility 5ºC)	J/cm <sup>2</sup>	UNE EN 13589	0.5	-
Elastic recovery (25ºC)	%	UNE EN 13398	DV	





## **APPLICATIONS:**

→ High performance warm recycled bituminous mixes and/or for intense traffic. High milling rates (>80%).

### **GUIDING WORKING TEMPERATURES:**

→ Application temperature (°C): 20-60. Within this range, it is not necessary to heat the emulsion to apply it, but if this is done, special care should be taken not to exceed the limit of 60°C. For this, it is advisable to heat the emulsion by means that ensure control over the temperature and an even temperature across the emulsion, avoiding spot overheating that could deteriorate it.

# **GUIDING AMOUNTS:**

- → These depend on the type of treatment, the characteristics of the pavement milling and aggregates, final mix, the position of the layer on the base surface and the category of traffic.
- $\rightarrow$  Approximately 3 to 6 % of the emulsion on the milled mass plus aggregate.

#### **RECOMMENDATIONS:**

- → Given its composition, this kind of emulsion should be transported in full cisterns, or at least filled up to 90% of their capacity, and always at temperatures lower than 60 °C, to avoid any partial breakages during transport.
- → If these emulsions are to be stored for more than 7 days, it is recommended that they be homogenized prior to their use (see recommendation PG3).
- → The appropriate machinery must be used for the right dosage of the emulsion and the rest of the components of the warm recycled mix.

