

EMULSIONS - HALF-WARM MIXES - OPEN-GRADED HALF-WARM MIXES

## ECOEMUL P MBA (C67BPF3 MBA)

### **DEFINITION:**

Modified cationic bituminous emulsion special for manufacturing open-graded half-warm mixes in which the original binder is made of a polymer modified bitumen type Elaster. Compliant with the specifications contained in standard EN 13808:2013 for a C67BPF3 type emulsion.

## SPECIFICATIONS:

| Characteristics                    | Units             | Standard       | Min.     | Max. |
|------------------------------------|-------------------|----------------|----------|------|
| Original emulsion                  |                   |                |          |      |
| Particle polarity                  | -                 | EN 1430        | Positive |      |
| Breaking value (Forshammer filler) | -                 | EN 13075-1     | 70       | 155  |
| Binder content (per wáter content) | %                 | EN 1428        | 65       | 69   |
| Oil distillate content             | %                 | EN 1431        | -        | 10   |
| Efflux time (4 mm, 40°C)           | S                 | EN 12846-1     | 5        | 70   |
| Settling tendency (7 days)         | %                 | EN 12847       |          | 5    |
| Residue on sieving (0,5 mm)        | %                 | EN 1429        | -        | 0,10 |
| Water effect on binder adhesion    | %                 | EN 13614       | 90       | -    |
| Residual binder                    |                   | EN 1431        |          |      |
| Penetration (25 °C)                | 0,1 mm            | EN 1426        | -        | 220  |
| Softening point                    | °C                | EN 1427        | 39       | -    |
| Cohesion (Vialit pendulum)         | J/cm <sup>2</sup> | EN 13588       | 0.5      | -    |
| or cohesion (force-ductility 5°C)  | J/cm <sup>2</sup> | EN 13589/13703 | 0.5      | -    |
| Elastic recovery (25ºC)            | %                 | EN 13398       | DV       | -    |
| Recovered binder                   |                   | EN 13074-1     | -        |      |
| Penetration (25 °C) (*)            | 0,1 mm            | EN 1426        | -        | 330  |
| Softening point (*)                | °C                | EN 1427        | 35       | -    |
| Cohesion (Vialit pendulum)         | J/cm <sup>2</sup> | EN 13588       | 0.5      | -    |



For further information visit www.cepsa.com

Revision nº1 - Approved: 01/02/2023 - Next revision: 01/02/2028

N.B: The recommendations in these technical specifications are purely for guidance and for general situations and Cepsa takes no responsibility whatsoever for misuse. For individual cases, contact Cepsa' Technical Department.

# ≠⊨ CEPSA

#### EMULSIONS - HALF-WARM MIXES - OPEN-GRADED HALF-WARM MIXES

| or cohesion (force-ductility 5°C) | J/cm <sup>2</sup> | EN 13589/13703 | 0.5 | -   |  |
|-----------------------------------|-------------------|----------------|-----|-----|--|
| Elastic recovery (25ºC)           | %                 | EN 13398       | DV  | -   |  |
| Stabilised binder                 | EN 13704-2        |                |     |     |  |
| Penetration (25 °C)               | 0,1 mm            | EN 1426        | -   | 220 |  |
| Softening point                   | °C                | EN 1427        | 39  | -   |  |
| Cohesion (Vialit pendulum)        | J/cm <sup>2</sup> | EN 13588       | 0.5 | -   |  |
| or cohesion (force-ductility 5°C) | J/cm <sup>2</sup> | EN 13589/13703 | 0.5 | -   |  |
| Elastic recovery (25°C)           | %                 | EN 13398       | DV  | -   |  |

(\*) If penetration is > 330 (0.1 mm), penetration test will be carried out at 15°C and will be declared as DV. In these cases, softening point < 35°C is allowed.

ASPHALTS

DV = declared value

## **APPLICATIONS:**

→ High performance open-graded half- warm bituminous mixtures.

## **RECOMMENDED WORKING TEMPERATURES:**

→ Application temperature (°C): 20-60. Normally the emulsion will be used at supply temperature, and the emulsion will not require warming for aggregate coating, but if it is warmed, special care will be taken to not exceed the limit of 60°C. In this case, it is recommended to heat the emulsion by means that ensure control over the temperature and an even temperature throughout the emulsion, avoiding spot overheating that could damage it.

## **RECOMMENDED DOSAGE:**

→ Approximately 5.0 to 7.0 % of emulsion over the weight of the aggregate depending on the aggregate mix and type, which means 3.2 to 4.8 % of residual binder in the mix.

## **GENERAL RECOMMENDATIONS:**

For further information visit www.cepsa.com

- → Calibrate the dosage devices of the mixture manufacturing plant.
- → Adapt the dosage of the materials based on the work formula.
- → Adjust the dosage in the test section to achieve the optimal percentage of coating and avoid segregations of coarse aggregate in the storing and emulsion runoffs.

