

SIKAMENT® 90 MF

High-performance multifunction superplasticiser



Complies with standard NF 085

Description

SIKAMENT 90 MF is a multifunction admixture sold as a ready-for-use brown liquid.

It has been specially formulated to simultaneously act as

- a water-reducing plasticiser
- a superplasticiser,

which avoids using two different products.

General characteristics

SIKAMENT 90 MF promotes the hydration of cement grains and the rheology of fresh concrete owing to its highly dispersing action.

Used as a water-reducing admixture, it allows high mechanical strengths to be obtained while maintaining a good cohesion of concrete.

In greater proportions, it acts as a superplasticiser. It much increases the workability of concrete and the maintenance of rheology in time, which is essential for ready-mixed concretes with a low W/C ratio.

Applications

SIKAMENT 90 MF is particularly recommended:

- with RMC where it can replace a plasticiser and a superplasticiser by making its content vary. It much reduces the water content while providing good mechanical strengths and maintaining the workability for over an hour.
- At the site, to maintain the workability in time: long-distance pumping, concreting in hot weather,.

Ph and Ch (and mechanical) characteristics

- Density: 1,21 +/- 0,03
- Dry extract: 40,5 +/- 1 %
- pH: 8 +/- 1
- Chloride ion content: < 0,1 %
- Na₂O content equiv.: ≤ 6 %
- Crystal point: - 4,5°C

Packaging

250-kg drum – In container - In bulk

Storage and shelf-life

SIKAMENT 90 MF can freeze. In case of long, intense freezing, its qualities will be restored after it has been slowly thawed and re-homogenised under agitation.

It has a three-year life time.

Consumption

Recommended utilisation range

From 0,3 to 2,0 % of the weight of cement..

- Use as a water-reducing plasticiser: 0,3 to 0,6 %
- Use as a superplasticiser: 0,7 to 2 %

Directions for use

- As a water-reducing plasticiser: add SIKAMENT 90 MF to the mixing water before pouring into the mixer.
- As a superplasticiser: SIKAMENT 90 MF will be particularly efficient if it is placed in the mixer on wetted concrete.

It could also be later placed in the truck mixer immediately before concrete is used. In this case, proceed to a high-speed mixing for at least one minute / m³ of concrete.

In-lab tests

Normalised indications

End-of-setting time in compliance with EN 480.2

	CPA-CEM I 52,5 PM ES CP2 LE TEIL		CPA-CEM I 52,5 PM MONTALIEU	
	20°C	5°C	20°C	5°C
Mix specimen	8 h 30	10 h 45	9 h 00	15 h 00
SIKAMENT 90 MF / 0,35 %	9 h 30	14 h 30	8 h 15	17 h 15
SIKAMENT 90 MF / 0,55 %	14 h 00	17 h 00	10 h 30	19 h 30

Test on concrete

245-kg CPA-CEM I 52,5 concrete from CORMEILLES + 105 kg of fly ash

Test made on a cube (15 cm)

Admixture	Content %	W/B	Slump (cm)			Compressive strength (MPa)		
			T ₀	T ₀ + 30	T ₀ + 60	1 j	7 j	28 j
Mix specimen	-	0,66	18			8	20	33
SIKAMENT 90 MF	0,35	0,60	18	14	12	11	29	42

Important considerations

Non hazardous handling.

Consult data sheet on Minitel 3613, code SIKASECUR or on Internet <http://www.sika.fr> (free service).

Reminder:

To avoid any risk of segregation of fluidised concrete, a minimum fines content must be observed. As a general rule, it is admitted that a proportion of 450 kg/m³ of elements < 315 µ is necessary.

This english version is a translation of the reference french data sheet

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«The product described in this data sheet is covered under the manufacturer's product liability policy».



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