M-FLOW™ 84

Proven Performance Chemical
Sustainable Solutions for Concrete

Product Description

M-FLOW™ 84 is a high-performance aqueous dispersant designed for use in concrete applications. M-Flow is a new generation of polycarboxylate formulated without an additional anti foaming agent due to its unique chemistry.

Defoamer's are typically oil based and tend to rise to the top of the storage tanks in these water based products leading to inconsistent air entrainment, especially in warmer weather. This inconsistency can lead to reduced concrete strength and yield issues. Using M-Flow this variable will not be as much of a factor in the daily concrete production.

It provides fluidity to concrete slurries at substantially reduced water content. Benefits also include increased productivity, lower costs and improved concrete properties typically at equal dosages to the other admixture suppliers.

Typical Analysis

Nature: Aqueous solution of polycarboxylate ether **Appearance (20°C):** Yellow to brownish liquid **Solids content (%):** 36 **pH (20°C):** 4 **Specific gravity (20°C):** 1.07 **Viscosity (mPa.s):** 350 **Chloride content (%):** <0.01 **Alkali content (Na_2Oeq)**: <3.5

Advantages

M-FLOW™ 84 features:
New generation of polycarboxylate ether
High water reduction ability
Versatile dispersant
Improved air stability in the concrete
Slurry stability at high dosage

M-FLOW™ 84 benefits:
Increased productivity
Reduced costs
Confers good pumpability to concrete

M-FLOW™ 84 has been specifically designed for high range water reducing admixtures.

M-FLOW™ 84 is fully compatible with the major chemicals and additives used in concrete admixtures.

Applications

The uniqueness of M-FLOW™ 84 is its versatility.

M-FLOW™ 84 is a high range water reducing agent. Under standard conditions, water reduction of 30% is achieved.

M-FLOW™ 84 performs well in Ready Mix applications, as well as in Self Compacting Concrete, and in Precast applications.

Self Compacting Concrete

The high efficiency of M-FLOW™ 84 at low dosages in SCC and Precast application enables it to combine performance and cost efficiency. **Tables 1** and **2** illustrate the performance of M-FLOW™ 84 versus several high-performing polycarboxylate ethers (PCEs) from the market. The tests conducted show that each of the three PCEs enables the SCC to reach flows of more than 24 inches. This high flow level is obtained for a water/cement ratio of 0.36% for the first two PCEs, while with the test is passed with a ratio of 0.38% with the third PCE. One additional feature of M-FLOW™ 84 is its ability to maintain slump. As illustrated in **Table 2**, M-FLOW™ 84 enables SCC to maintain a slump of 17.5 inches after 30 minutes.

Table 1. SCC Formulation Example

	M FLOW™ 84	PCE 1	PCE 2
Dispersant (oz)	58	58	80
% water/ cement	0.36	0.36	0.38
Slump (inches)	24	25	25
Fail / Pass	Pass	Pass	Pass
Air entrapment (%)	3.3	3.3	3.6
Flow (inches), 30 min	17.5	12	14.5

Component	Quantity lb/cy

	M FLOW™ 84	PCE 1	
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Component	Quantity lb/cy

The high efficiency of M-FLOW™ 84 at low dosages M-FLOW™ 84 should be protected from the effects of in SCC and Precast applications enables it to weathering and stored between 5° and 40°C. combine performance and cost efficiency.

Recommendations

Anti-synergistic effects have been reported when

mixing polycarboxylate ethers and polynaphthalene sulfonates. • Bulk delivery

Standard Packaging

• 265 gallon containers.

Under these conditions, the products should be used within 12 months after delivery.

Storage Health & Environmental Data

M-FLOW™ 84 can present color variations from light yellow to slightly brown. These variations can occur in Please refer to the Material Safety Data Sheet. normal storage conditions. They have no influence on the product performance.