

Malic Acid in Gypsum Plasters

Bartek Malic Acid is used as a retardant in gypsum plaster. It is especially important in machine applied plaster and in casting plaster, which normally have longer setting times than wallboard plaster.

Produces Stronger Plaster than Citric Acid

As shown in the table, Malic Acid resulted in a **stronger plaster** than Citric Acid with a comparable delay in setting.

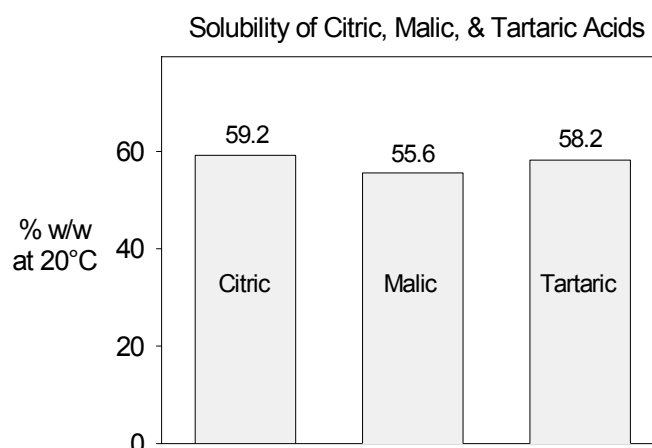
Setting Time & Strength of Gypsum Plaster with 2 Different Retardants		
	0.14% Malic Acid	0.15% Citric Acid
Initial stiffening time (min.)	37	32
End of setting (min.)	135	165
Plaster strength (N/mm ²)		
Flexural Strength	7.0	6.6
Compressive Strength	29.9	26.8

Retards Plaster Set Without Added Calcium Hydroxide

Unlike Tartaric Acid, which in most cases requires additional Calcium Hydroxide in order to function as a retardant, Malic Acid is able to **function alone**.

Dissolves Rapidly

Malic Acid is highly soluble in water, as shown in the graph, and **dissolves rapidly in cold water** when used in gypsum plaster mixes.



RECOMMENDATIONS FOR USE: Use 0.03 – 0.15%, based on the dry weight of the gypsum plaster mix.

BARTEK

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