

GUIDE TO EVAPORATION RETARDANTS

Evaporation Retardant* - "A long chain organic material such as cetyl alcohol which, when spread on a water film on the surface of concrete, retards the evaporation of bleed water."

Monomolecular* - "composed of single molecules; specifically, films that are one molecule thick; denotes a thickness equal to one molecule, for example, certain chemical compounds develop a "monomolecular film" over bleeding water at the surface of freshly placed concrete or mortar as a means of reducing the rate of evaporation."

*ACI Cement & Concrete terminology [CCT]

What Evaporation Retardants are **not**:

- Concrete surface retarders
- To be used in the final finishing operations
- "...not to be used for the purpose of making it easier to finish concrete surfaces (materials designed for such purpose are often referred to as finishing aids)..."

ACI 308 2.3.2

When to use an evaporation retardant:

- When it is windy or breezy
- When the humidity is low
- When in direct sunlight
- When using a low w/cm concrete
- When placing dry-shake hardeners
- When placing concrete with silica fume/micro silica

ASTM Standards:

Currently there are not any, however, an ASTM committee is working on one

ACI Recommendations:

ACI 308 Guide to Curing Concrete:

Chapter 1.4.2.2.3 Initial curing

Chapter 1.4.2.2.5 Intermediate curing

ACI 302 Guide for Concrete Floor and Slab

Construction:

Chapter 5.10

DAYTON SUPERIOR EVAPORATION RETARDANTS:

Sure-Film (J-74) - Concentrate

Sure Film RTU (J-74 RTU) - Ready to use