

CONFILM®

Evaporation reducer

DESCRIPTION:

CONFILM evaporation reducer helps produce high quality, concrete flatwork and reduces surface moisture evaporation.

Because CONFILM retards evaporation, it is especially effective in combating rapid drying conditions (high concrete and/or ambient temperatures, low humidity, high winds, direct sunlight, work in heated interiors during cold weather, etc.).

RECOMMENDED FOR:

- Concrete surfaces where the evaporation rate exceeds the rate of bleeding of the concrete
- Air-entrained and non-air-entrained concrete
- Silica fume concrete
- Concrete containing fly ash
- All Master Builders cementitious products except MASTERPLATE® DPS safety floor hardener

FEATURES/BENEFITS:

- Reduces surface moisture evaporation about 80% in wind and about 40% in sunlight. It has no effect on the cement hydration process. Concrete strength (early and ultimate), abrasion resistance and durability are not altered, except for the improvement in overall quality resulting from the control of rapid evaporation. When applying Master Builders surface hardeners under hot and/or windy conditions, the use of CONFILM is strongly recommended after screeding.
- Eliminates or reduces crusting, stickiness and underlying sponginess which often cause unevenness and poor surface texture.
- Reduces and, in many instances, eliminates plastic shrinkage cracking and wind crusting of flatwork surfaces. Also supplements the recommended practices for hot weather concreting¹. Under some conditions, properly diluted CONFILM alone will provide the necessary safeguard against the ill effects of evaporation.
- Allows lower slump and lower unit water content in concrete used for flatwork, since CONFILM virtually eliminates the need to add extra mixing water to compensate for rapid evaporation during finishing.
- Facilitates the use of air-entrained concrete, required for durability and workability, in situations where air-entrainment might be avoided for fear that it would increase concrete's susceptibility to crusting and stickiness under drying conditions.
- Increases the amount of surface handled per finisher – even under rapid drying conditions – because the surface remains plastic and finishable for a longer time. Thus work can proceed, whereas without CONFILM, it might be postponed to avoid finishing problems.
- Timing of the various finishing operations is less critical, thus reducing overall cost.

A detailed technical discussion about the action of monomolecular films, typified by CONFILM, is contained in the Journal of the American Concrete Institute, Volume 62, pp. 977-985.

The use of a monomolecular film to prevent rapid drying of fresh concrete is recommended in the following ACI documents: ACI 302.1R, "Guide for Concrete Floor and Slab Construction"; ACI 305R, "Hot Weather Concreting"; ACI 308, "Standard Practice for Curing Concrete"; and ACI 345R, "Guide for Concrete Highway Bridge Deck Construction".

PACKAGING/ESTIMATING:

CONFILM evaporation reducer is supplied in 1, 5 and 55 U.S. gallon (3.8, 18.9 and 208 liter) containers.

One U.S. gallon (3.8 liters) of CONFILM mixed with nine U.S. gallons (34.1 liters) of water yields 10 U.S. gallons (37.9 liters) of sprayable solution. This diluted amount of CONFILM (1:9) should cover 2,000 to 4,000 ft² (186 to 372 m²) of fresh concrete.

If more than one application of CONFILM is made, as under adverse drying conditions, the quantity required will be increased accordingly.

APPLICATION:

Depending on the application, CONFILM can be mixed at a ratio of up to one part CONFILM concentrate to nine parts of water. Agitate CONFILM before mixing with water. Re-agitate mixed materials before applying.

Apply with a constant pressure or industrial-type sprayer.

CONFILM forms a monomolecular film when sprayed onto the concrete surface immediately after screeding and/or between finishing operations (as needed). The protective shield of CONFILM usually lasts as long as the concrete remains plastic, despite succeeding floating and troweling operations. When applying Master Builders surface hardeners, CONFILM can be used after screeding and after the floating first floating operation, if necessary.

Treated surfaces are easily distinguished from untreated surfaces because of the greenish-yellow color of the film in the presence of surface moisture and ultraviolet rays (sunlight or artificial lighting). The fluorescent color tint of the film disappears completely upon drying. The residue remaining on the surface of hardened concrete does not impair bonding or alter color.

PRECAUTIONS:

NOTE: Do not use CONFILM as a finishing aid to facilitate finishing of:

- Cementitious dry-shake surface hardeners or toppings.
- Air-entrained and non-air-entrained concrete, silica fume concrete or fly ash concrete.
- CONFILM is not to be applied during final flatwork steel troweling operations.
- CONFILM evaporation reducer is not a curing agent. Concrete treated with this product must still be cured.
- Master Builders is not responsible for compatibility or results when CONFILM evaporation reducer is used with other manufacturers' products.
- CONFILM reduces evaporation only while concrete is in its plastic state. It is not a substitute for early curing of hardened concrete nor does it alter the effectiveness of membrane-type curing compounds.

- CONFILM IS NOT TO BE APPLIED during any finishing operation nor should it be worked into the concrete surface.
- CONFILM must be protected from freezing. Extreme cold may cause segregation after which the product cannot be reconstituted.
- Any residue remaining from spillage or spraying of CONFILM concentrate on the surface of hardened concrete should not be allowed to dry. Wipe it up immediately, then rinse the surface with water. If the CONFILM concentrate residue is allowed to dry on hardened concrete, a reddish-brown stain may appear. To remove the stain, place a cloth saturated in a household-type, chlorinated bleach onto the stain, then cover it with plastic to retard evaporation. After approximately one hour, the stain should disappear completely. Rinse the area with water.

RELATED BULLETINS:

Material Safety Data Sheet – CONFILM.

Master Builders, Inc. United States

23700 Chagrin Boulevard
Cleveland, Ohio 44122-5554
(800) MBT-9990
Fax (216) 831-6910

Canada

3637 Weston Road
Toronto, Ontario M9L 1W1
(800) 387-5862
Fax (416) 741-7925

Mexico

Bldv. M. Avila Camacho 80, 3er Piso
53390 Naucalpan, México
011-525-557-5544
Fax: 011-525-395-7903