

## **SECTION 6**

### **Evaporation Retardants**

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## TECHNICAL DATA SHEET

**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:

AquaFilm<sup>®</sup> Concentrate J74 \_\_ concentrate

AquaFilm<sup>®</sup> J74RTU \_\_ ready to use

## TECHNICAL DATA SHEET

### DESCRIPTION

AquaFilm® Concentrate J74 is a proprietary emulsion of unique organic compounds designed to minimize moisture loss from fresh concrete. AquaFilm® Concentrate J74 is economical as a concentrate and is diluted with potable water at a 9 to 1 ratio. As a water based polymer, AquaFilm® Concentrate J74 is V.O.C. compliant and contains a blue fugitive dye for ease of visual inspection during application.

### USE

AquaFilm® Concentrate J74 helps to produce dense, high quality concrete flatwork by greatly reducing the rate of evaporation of moisture from the concrete surface during the finishing process. This reduction of moisture loss allows time for proper finishing, while reducing plastic shrinkage cracking. AquaFilm® Concentrate J74 is outstanding in reducing loss of surface moisture during rapid drying conditions such as:

- Hot temperatures
- Low humidity
- High winds
- Direct sunlight
- Inside applications heated in winter
- Low water-cement ratio concrete applications
- Shake-on floor hardener or toppings applications
- Concrete mixes requiring super plasticizers or silica fume
- AquaFilm® Concentrate J74 will not adversely affect concrete strength or durability.

### FEATURES

- Greatly improves concrete workability during hot, dry or windy conditions.
- Reduces plastic shrinkage cracking.
- Water based, no odor.
- Reduces or eliminates concrete crusting during hot, windy conditions.
- Ideal for tough situations - when concrete is starting to set before the finisher can get to it.
- Increases productivity - concrete finishers can handle larger areas.
- Compatible with concrete sealers or toppings.
- Provides more time for finishing shake-on floor hardener projects.

### VOC

< 5g/L. Compliant with all US VOC regulations for including Federal EPA, OTC, LADCO, SCAQMD & CARB.

### ESTIMATING GUIDE

After dilution - 200 to 400 sq. ft./gal. (4.9 to 9.8 sq m/L).  
One gallon (3.8 L) of AquaFilm® Concentrate J74 will provide ten gallons (37.8 L) of finished product after dilution.

### PACKAGING

ITEM #	PACKAGE	SIZE	
		Gallons	Liters
69730	Unit	1	3.79
69731	Pail	5	18.93
69732	Drum	55	208.20

### STORAGE

KEEP FROM FREEZING.. Shelf life is 12 months from date of manufacture in original unopened containers.

### APPLICATION

Mixing: Agitate AquaFilm® Concentrate J74 prior to diluting with clean, potable water.

Add nine parts water to one part AquaFilm® in a clean container and mix.

**Placement:** Apply to concrete immediately after screeding. Apply with a low pressure sprayer using constant pressure. Apply uniformly and cover the surface with a fine mist. AquaFilm® Concentrate J74 contains a blue fugitive dye that aids in visual inspection. The blue color will fade away quickly and does not discolor the concrete. When drying conditions are severe, AquaFilm® Concentrate J74 may be reapplied between finishing operations.

On shake-on floor hardener projects, apply after the hardener has been floated into the surface, but prior to initial set. Do not use AquaFilm® Concentrate J74 in place of bleed water on shake-on floor hardener projects.

## Evaporation Retardant

### CLEAN UP

For tools and spray equipment, use clean water.

### LIMITATIONS

#### FOR PROFESSIONAL USE ONLY

AquaFilm® Concentrate J74 is not a curing compound. Concrete treated with this product must still be cured.

AquaFilm® Concentrate J74 spilled on hardened concrete must be cleaned immediately by wiping up and then rinsing with water.

AquaFilm® Concentrate J74 is not a surface retarder.

Do not apply during the final troweling operations, discoloration may occur.

### PRECAUTIONS

#### READ MSDS PRIOR TO USING PRODUCT

- Use with adequate ventilation
- Wear protective clothing, gloves and eye protection (Goggles, Safety Glasses and/or Face Shield)
- Keep out of the reach of children
- Do not take internally
- In case of ingestion, seek medical help immediately
- May cause skin irritation upon contact, especially prolonged or repeated. If skin contact occurs, wash immediately with soap and water and seek medical help as needed
- If eye contact occurs, flush immediately with clean water and seek medical help as needed
- Dispose of waste material in accordance with federal, state and local requirements

### MANUFACTURER

Dayton Superior Corporation  
1125 Byers Road  
Miamisburg, OH 45342  
Customer Service: 888-977-9600  
Technical Services: 866-329-8724  
Website: [www.daytonsuperior.com](http://www.daytonsuperior.com)

### WARRANTY

Dayton Superior Corporation ("Dayton") warrants for 12 months from the date of manufacture or for the duration of the published product shelf life, whichever is less, that at the time of shipment by Dayton, the product is free of manufacturing defects and conforms to Dayton's product properties in force on the date of acceptance by Dayton of the order. Dayton shall only be liable under this warranty if the product has been applied, used, and stored in accordance with Dayton's instructions, especially surface preparation and installation, in force on the date of acceptance by Dayton of the order. The purchaser must examine the product when received and promptly notify Dayton in writing of any non-conformity before the product is used and no later than 30 days after such non-conformity is first discovered. If Dayton, in its sole discretion, determines that the product breached the above warranty, it will, in its sole discretion, replace the non-conforming product, refund the purchase price or issue a credit in the amount of the purchase price. This is the sole and exclusive remedy for breach of this warranty. Only a Dayton officer is authorized to modify this warranty. The information in this data sheet supersedes all other sales information received by the customer during the sales process. THE FOREGOING WARRANTY SHALL BE EXCLUSIVE AND IN LIEU OF ANY OTHER WARRANTIES, EXPRESS OR IMPLIED, INCLUDING WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE, AND ALL OTHER WARRANTIES OTHERWISE ARISING BY OPERATION OF LAW, COURSE OF DEALING, CUSTOM, TRADE OR OTHERWISE.

Dayton shall not be liable in contract or in tort (including, without limitation, negligence, strict liability or otherwise) for loss of sales, revenues or profits; cost of capital or funds; business interruption or cost of downtime, loss of use, damage to or loss of use of other property (real or personal); failure to realize expected savings; frustration of economic or business expectations; claims by third parties (other than for bodily injury), or economic losses of any kind; or for any special, incidental, indirect, consequential, punitive or exemplary damages arising in any way out of the performance of, or failure to perform, its obligations under any contract for sale of product, even if Dayton could foresee or has been advised of the possibility of such damages. The Parties expressly agree that these limitations on damages are allocations of risk constituting, in part, the consideration for this contract, and also that such limitations shall survive the determination of any court of competent jurisdiction that any remedy provided in these terms or available at law fails of its essential purpose.

## TECHNICAL DATA SHEET

### DESCRIPTION

AquaFilm® J74RTU is a ready to use proprietary emulsion of unique organic compounds designed to minimize moisture loss from fresh concrete. As a water based polymer, AquaFilm® J74RTU is V.O.C. compliant and contains a yellow fugitive dye for ease of visual inspection during application.

### USE

AquaFilm® J74RTU helps to produce dense, high quality concrete flatwork by greatly reducing the rate of evaporation of moisture from the concrete surface during the finishing process. This reduction of moisture loss allows time for proper finishing, while reducing plastic shrinkage cracking. AquaFilm® J74RTU is outstanding in reducing loss of surface moisture during rapid drying conditions such as:

- Hot temperatures
  - Low humidity
  - High winds
  - Direct sunlight
  - Inside applications heated in winter
  - Low water-cement ratio concrete applications
  - Shake-on floor hardener or toppings applications
  - Concrete mixes requiring super plasticizers or silica fume
- AquaFilm® J74RTU will not adversely affect concrete strength or durability.

### FEATURES

- Greatly improves concrete workability during hot, dry or windy conditions.
- Reduces plastic shrinkage cracking.
- Water based, no odor.
- Reduces or eliminates concrete crusting during hot, windy conditions.
- Ideal for tough situations - when concrete is starting to set before the finisher can get to it.
- Increases productivity - concrete finishers can handle larger areas.
- Compatible with concrete sealers or toppings.
- Provides more time for finishing shake-on floor hardener projects.

### VOC

5g/L. Compliant with all US VOC regulations for including Federal EPA, OTC, LADCO, SCAQMD & CARB.

### ESTIMATING GUIDE

200 to 400 sq. ft./gal. (4.9 to 9.8 sq m/L).

### PACKAGING

ITEM #	PACKAGE	SIZE	
		Gallons	Liters
309347	Pail	5	18.93
309348	Drum	55	208.20

### STORAGE

KEEP FROM FREEZING.. Shelf life is 12 months from date of manufacture in original unopened containers.

### APPLICATION

**Mixing:** Mix thoroughly prior to each use.

**Placement:** Apply to concrete immediately after screeding. Using a low pressure sprayer apply uniformly and cover the surface with a fine mist. AquaFilm® J74RTU contains a yellow fugitive dye that aids in visual inspection. The color will fade away quickly and does not discolor the concrete. When drying conditions are severe, AquaFilm® J74RTU may be reapplied between finishing operations.

On shake-on floor hardener projects, apply after the hardener has been floated into the surface, but prior to initial set. Do not use AquaFilm® J74RTU in place of bleed water on shake-on floor hardener projects.

### CLEAN UP

For tools and spray equipment, use clean water.

### LIMITATIONS FOR PROFESSIONAL USE ONLY

AquaFilm® J74RTU is not a curing compound. Concrete treated with this product must still be cured.

AquaFilm® J74RTU spilled on hardened concrete must be cleaned immediately by wiping up and then rinsing with water.

AquaFilm® J74RTU is not a surface retarder.

Do not apply during the final troweling operations, discoloration may occur.

### PRECAUTIONS

#### READ MSDS PRIOR TO USING PRODUCT

- Use with adequate ventilation
- Wear protective clothing, gloves and eye protection (Goggles, Safety Glasses and/or Face Shield)
- Keep out of the reach of children
- Do not take internally
- In case of ingestion, seek medical help immediately
- May cause skin irritation upon contact, especially prolonged or repeated. If skin contact occurs, wash immediately with soap and water and seek medical help as needed
- If eye contact occurs, flush immediately with clean water and seek medical help as needed
- Dispose of waste material in accordance with federal, state and local requirements

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Website: [www.daytonsuperior.com](http://www.daytonsuperior.com)

### WARRANTY

Dayton Superior Corporation ("Dayton") warrants for 12 months from the date of manufacture or for the duration of the published product shelf life, whichever is less, that at the time of shipment by Dayton, the product is free of manufacturing defects and conforms to Dayton's product properties in force on the date of acceptance by Dayton of the order. Dayton shall only be liable under this warranty if the product has been applied, used, and stored in accordance with Dayton's instructions, especially surface preparation and installation, in force on the date of acceptance by Dayton of the order. The purchaser must examine the product when received and promptly notify Dayton in writing of any non-conformity before the product is used and no later than 30 days after such non-conformity is first discovered. If Dayton, in its sole discretion, determines that the product breached the above warranty, it will, in its sole discretion, replace the non-conforming product, refund the purchase price or issue a credit in the amount of the purchase price. This is the sole and exclusive remedy for breach of this warranty. Only a Dayton officer is authorized to modify this warranty. The information in this data sheet supersedes all other sales information received by the customer during the sales process. THE FOREGOING WARRANTY SHALL BE EXCLUSIVE AND IN LIEU OF ANY OTHER WARRANTIES, EXPRESS OR IMPLIED, INCLUDING WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE, AND ALL OTHER WARRANTIES OTHERWISE ARISING BY OPERATION OF LAW, COURSE OF DEALING, CUSTOM, TRADE OR OTHERWISE.

Dayton shall not be liable in contract or in tort (including, without limitation, negligence, strict liability or otherwise) for loss of sales, revenues or profits; cost of capital or funds; business interruption or cost of downtime, loss of use, damage to or loss of use of other property (real or personal); failure to realize expected savings; frustration of economic or business expectations; claims by third parties (other than for bodily injury), or economic losses of any kind; or for any special, incidental, indirect, consequential, punitive or exemplary damages arising in any way out of the performance of, or failure to perform, its obligations under any contract for sale of product, even if Dayton could foresee or has been advised of the possibility of such damages. The Parties expressly agree that these limitations on damages are allocations of risk constituting, in part, the consideration for this contract, and also that such limitations shall survive the determination of any court of competent jurisdiction that any remedy provided in these terms or available at law fails of its essential purpose.