



B-TUFF® AID

Finishing Aid & Evaporative Retarder

1.01 DESCRIPTION

B-Tuff® Aid is designed to be used as a finishing aid and evaporation retarder on new concrete surfaces of all types. When sprayed over fresh concrete, **B-Tuff® Aid** forms a thin, continuous film which greatly assists the finishing and tooling processes while preventing rapid moisture loss from the concrete surface. It is easy to use requiring only the addition of water before spray application. **B-Tuff® Aid** is especially effective when concreting operations must be performed in direct sun, high wind and temperatures or low relative humidity. Please use the correct product grade that complies with VOC regulations as per federal, state, county and city regulations/codes at the place of installation of product.

1.02 FEATURES

- Allows Lower Slump/Water Content
- Eliminates Need To Sprinkle or Add Extra Mixing Water
- Eliminates or Reduces Crusting & Drag
- Extends Finishing Time by 15-45 Minutes
- Reduces Moisture Loss in Sunlight By 40%
- Reduces Plastic Shrinkage Cracking
- Reduces Wind Surface Moisture Evaporation By 80%
- Safeguards Against the Ill Effects Of Evaporation
- Supplements Practices for Hot Weather Concreting

1.03 TYPICAL USES

- Concrete Floors
- Concrete Pavement
- Finishing Patches and Spalls
- Hot or Windy Concrete Finishing
- Non-Modified Concrete Toppings
- Parking Decks and Ramps
- Silica Fume Concrete
- Vertical/Overhead Repair Finishing

1.04 TECHNICAL DATA

A detailed technical discussion about the action of mono-molecular films, typified by **B-Tuff® Aid** finishing aid and evaporation retarder, is contained in the Journal of the American Concrete Institute, Volume 62, pp. 977-985. The use of a mono-molecular film to prevent the 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 308R, "Guide to Curing Concrete"; and ACI 345R, "Guide for Concrete Highway Bridge Deck Construction". **B-Tuff® Aid** is a water-based polymer concentrate that is readily diluted with water.

1.05 COLOR

Yellow

1.06 PACKAGING

5 gallon (18.9 liters) pail
55 gallon (207.9 liters) drum
275 gallon (1039.5 liters) tote

1.07 COVERAGE

B-Tuff® Aid provides 2000-4000 sqft/gallon (186-372 sqm/liter) in concentrate form. The coverage rate is 1 gallon/250-400 sqft (0.17-0.1 liter/sqm) or 250-400 sqft/gal when diluted with 9 gallons (34.02 liters) of water and 1 gallon (3.78 liters) of **B-Tuff® Aid**. Evaporation rate is a function of relative humidity, concrete temperature, air temperature and wind.

1.08 PREPARATION

B-Tuff® Aid is applied directly to the surface of fresh concrete. No surface preparation is necessary.

1.09 MIXING

B-Tuff® Aid is supplied as a concentrate and must be diluted with clean potable water at a 9:1 (Water:**B-Tuff® Aid**) ratio. Determine capacity of sprayer and divide by 10. Add this amount of **B-Tuff® Aid** to the sprayer followed by 9 times that amount of water. For example, if 1 quart (0.95 liters) of **B-Tuff® Aid** is added, dilute with 9 quarts (8.5 liters) of water. Mix or shake until thoroughly blended.

1.10 APPLICATION

Apply using a hand pump, tank-type sprayer capable of spraying in a fine mist. Use a slotted tip for the best spray. Spray **B-Tuff® Aid** over the fresh concrete surface as soon as possible after floating. A gold translucent sheen will appear as the surface is being treated. On extremely dry conditions, additional applications may be applied as needed. When used on floors with dry shake hardener applications, **B-Tuff® Aid** may be used on the fresh concrete as well as between each shake application. The application color will dissipate.

1.11 CURING/DRY TIME

Proper curing procedures are important to ensure the durability and quality of concrete. To prevent surface cracking, cure flatwork with high solids curing compounds, such as **B-Tuff Cure® SS**.

1.12 STORAGE AND SHELF LIFE

Store in closed containers between 40-95°F (5-35°C) away from direct sunlight and sources of heat. Shelf life of properly stored material is 12 months from date of manufacture.

1.13 CLEAN UP

Tools and Equipment: Clean with soap & water or PSI's **EnviroClean™**.

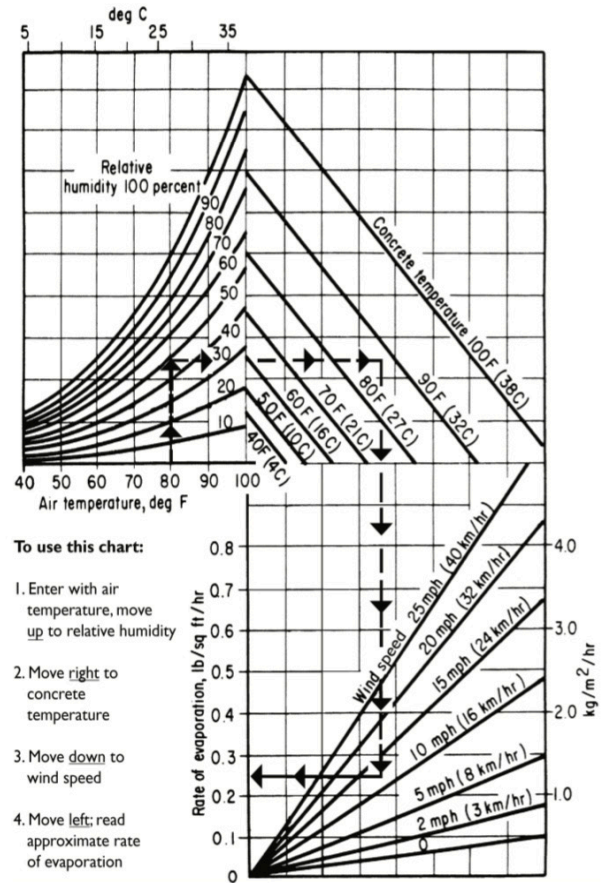
1.14 LIMITATIONS

Always use with proper dilution rate. Do not use as a curing compound.

Apply only as a fine spray. Do not allow to freeze. In all cases, consult the Safety Data Sheet (SDS) before use.

READ SDS PRIOR TO USING PRODUCT. FOR PROFESSIONAL USE ONLY. KEEP OUT OF REACH OF CHILDREN. MADE IN THE USA.

ON THE BASIS OF MENZEL FORMULA



Effect of concrete and air temperatures, relative humidity, and wind speed on the rate of evaporation of surface moisture from concrete. This chart provides a graphic method of estimating the loss of surface moisture for various weather conditions. To use this chart, follow the four steps outlined above. If the rate of evaporation approaches 1 kg/m²/h (0.2 lb/ft²/h), precautions against plastic-shrinkage cracking are necessary (Lerch 1957). Wind speed is the average horizontal air or wind speed in km/h (mph) and should be measured at a level approximately 510 mm (20 in.) higher than the evaporating surface. Air temperature and relative humidity should be measured at a level approximately 1.2 to 1.8 m (4 to 6 ft) higher than the evaporating surface on its windward side shielded from the sun's rays (PCA Journal 1957).

Please read all information in the General & Safety Guidelines, Technical Data Sheets, Guide Specifications and Safety Data Sheets (SDS) before applying material. PSI Products are for "Professional Use Only" and preferably applied by professionals who have prior experience with PSI Products or have undergone training in application of PSI Products. Published technical data and instructions are subject to change without notice. Contact your local PSI representative or visit our website for current technical data, instructions, and project specific recommendations.

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All guidelines, recommendations, statements, and technical data contained herein are based on information and tests we believe to be reliable and correct, but accuracy and completeness of said tests are not guaranteed and are not to be construed as a warranty, either expressed or implied. It is the user's responsibility to satisfy himself, by his own information and test, to determine suitability of the product for his own intended use, application and job situation and user assumes all risk and liability resulting from his use of the product. We do not suggest or guarantee that any hazard listed herein are the only ones which may exist. Neither seller nor manufacturer shall be liable to the buyer or any third person for any injury, loss or damage directly or indirectly resulting from use of, or inability to use, the product. Recommendations or statements, whether in writing or oral, other than those contained herein shall not be binding upon the manufacturer, unless in writing and signed by a corporate officer of the manufacturer. Technical and application information is provided for the purpose of establishing a general profile of the material and proper application procedures. Test performance results were obtained in a controlled environment and PSI makes no claim that these tests or any other tests, accurately represent all environments.