PERFORMANCE SPECIFICATION FOR CONCRETE PLACING USING THE **ARMOURTECH PRO FLOAT** SYSTEM –

This specification is provided as a service and is intended to be used as a guideline for preparing the appropriate project specific specification sections.

**Product Description**
**Armourtech PRO Float** Troweling Aid, Densifier and Curing Agent is a **Colloidal Silica**-based topical additive that reacts with the cement matrix as it is forming.

**Equipment**
Apply **Armourtech PRO Float** using a low-pressure pump sprayer. Automatic low-pressure sprayers can also be used for larger projects.

**Pre-Application**
Any adjacent areas, surfaces, or objects not intended to be treated with **Armourtech PRO Float** should be protected from over- spray or drift with plastic sheeting or other proven protective material.
Mix an appropriate quantity of **Armourtech PRO Float** for job-size, per instructions.

**Project Testing**
FINISHING AID: Since every batch of concrete is unique, and its behavior varies depending on surrounding conditions, testing is only relevant on the actual batch being finished. At the beginning of floating, and again at the beginning of troweling, test **Armourtech PRO Float** on a small sample section to verify needed application rate and technique.

**Application Guidelines**
1- Agitate **Armourtech PRO Float** RTU mixture before use. When mixing concentrate follow dilution instructions.

2- Automatic low-pressure sprayers can be used for larger projects. Keep the sprayer at optimized levels, allowing even distribution when applying to concrete surface.

3- Spray apply **Armourtech PRO Float** to concrete surface immediately after the concrete has been **leveled** or as soon as possible in the floating or troweling stage. Hold spray tip *(30-60cm)* above surface and moving in a circular motion to achieve even distribution.
Apply **Armourtech PRO Float** to sufficiently “wet” the surface while not allowing puddling. **Armourtech PRO Float** is not a topical curing compound it must be worked into the concrete for optimal results.
When immediate application is not possible, apply within three hours of initial concrete placement for optimum concrete performance.

*****A second application may be required if adverse conditions such as hot sun and wind and a very fast drying surface and should be mist applied ahead of the power trowel.
Finisher should determine when additional **Armourtech PRO Float** is needed to improve workability. **Armourtech PRO Float** must be worked into the surface of the concrete and or the dry-shake-hardener/ color hardener.

4- Apply so as to maintain a wet edge.

5- Do not apply water to the surface.

6- Multiple applications can be made as needed, as long as the combined total of all colloidal silica applications is no greater than (3.7 m2/L) RTU mixture.

**Armourtech PRO Float** results are optimized when supported by good concrete placement techniques.

**Armourtech PRO Float** can be applied as required to improve the workability of the concrete surface. It is recommended to apply **Armourtech PRO Float** throughout the entire project for most consistent results. **Armourtech PRO Float** can be applied both before and after the application of dry-shake-hardeners/color hardeners and may be especially useful when there is a limited amount of bleed- water to wet-out the powdered hardeners.

**Armourtech PRO Float** performance and third-party testing are based on typical concrete mix designs. **Armourtech PRO Float** reacts with calcium hydroxide (Ca(OH)2, that is present in concrete as a byproduct of Portland cement hydration. High performance concretes often include alternative (non-Portland) cements that have different chemical characteristics; additional jobsite samples should be carried out for performance review.

- Proven to meet the water-retention requirements of ASTM C156
- Independent laboratory testing confirms that PRO Float exceeds ASTM C156
- Meets the moisture retention requirements of ASTMC309 or AS3799 standards
- Reduces Water Vapor Transmission as Per ASTM F1869 - *(MVER)*
- Mitigates Volume of Water Vapors as Per ASTM D 4263
- Closes concrete pores so effectively that the surface becomes water repellant
- Third-party tested to mitigate potential for ASR pop-outs
- Eliminates dusting
- Strengthens (hardens) surface increases compressive strength by **20% - 30%**
- Helps strengthen bond between concrete's surface layer and inner slab
- Ties up excess calcium hydroxide
- Prevents salts from accessing lime and damaging concrete surface
- ***No need for any other treatments such as Densifiers***
- Decreases alkali silica reaction - *(ASR)* Reduces potential for slab curling
- Reduces efflorescence on both colored & standard concrete
- Colloidal silica chemical reaction reduces Ca(OH)2 migration
- **Eliminates** the need for added water- hence reducing cement water ratio

**Armourtech PRO Float can be used in conjunction with:**

**Armourtech Densifier**.....(colloidal silica Densifier)
**Armourtech Protector**…… (colloidal silica Protector)