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## CONVERT™ & CONSOLIDATE™

**Protection technology for Industrial, Mining, Petrochemical, Oil & Gas, Wastewater, Infrastructure, and Corrosive Materials Industry**

**“PROTECTING CONCRETE FROM THE INSIDE...OUT”**

- ✓ 3 Patented Technologies
- ✓ 2 different proprietary technologies; **2-pronged approach to reverse existing effects on substrate and protect against future attack by corrosive materials.**
- ✓ 2-Part System for use on both new and in-service concrete
- ✓ **Convert™** – (1<sup>st</sup> Part ): Reverses the effects of in-situ, acid-damaged concrete
- ✓ **Consolidate™** – (2<sup>nd</sup> Part): Protects substrate against future attack from acids/corrosive materials
- ✓ Used at various industrial and mining facilities

### THE BACKGROUND:

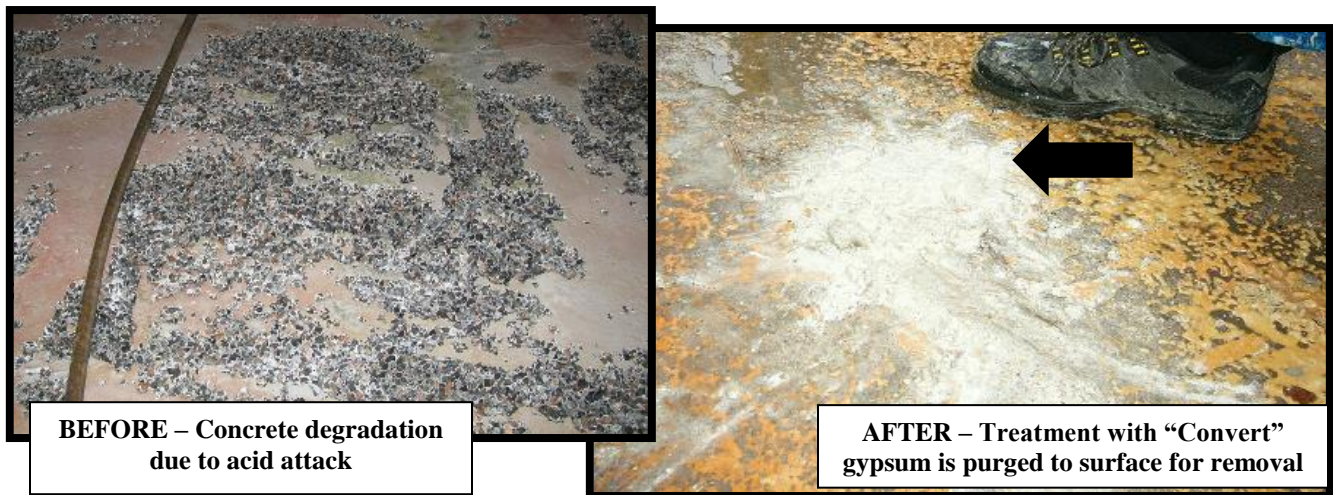
- ✓ Coatings approach the substrate protection problems topically – this neglects key underlying issues contributing to ongoing coating failures
- ✓ The foundation of the Convert & Consolidate Technology (C&C) lies in the identification and resolution of the underlying substrate issues that contribute to substrate deterioration and ultimately coating failure.

### THE RESULT:

- ✓ The success of the C&C Technology lies in solving these key problems with solutions specifically developed to **REVERSE EFFECTS ON IN-SERVICE SUBSTRATES AND PROTECT AGAINST FUTURE ATTACK FROM CORROSIVE MATERIALS**
- ✓ The key premise of C&C Technology is to solve the new and in-service, substrate issues coating companies have ignored.
- ✓ Treatment of new and in-service substrates with C&C Technology eliminates the ongoing “failure and bandage” approach taken by coating companies.

## CONVERT™ & CONSOLIDATE™:

- ✓ Substrate Reactive Protection Technology for Highly Corrosive & Acidic Environments
- ✓ 2-Part System: (each can be standalone product)
  - 1) In-Service, Acid-Inflicted/Damaged Concrete Converter
  - 2) Concrete Consolidator
- ✓ **No other equivalent technology world-wide**
- ✓ **RATING: TRUE TECHNOLOGY INNOVATION**





### THE TECHNOLOGY:

Convert & Consolidate Technology addresses the problem new and in-service of concrete and materials degradation due to acids and other corrosive materials. In 2 steps, C&C Technology is **reactive with the substrate and reverses the existing effects of and protects concrete materials from the future attack of acids and other corrosive materials.**

In general, the 2 parts to the C&C Technology are;

- 1) **Convert™** -
- 2) **Consolidate™**

#### **1 Convert™**

**The Problem:** Acid-affected concrete is very acidic or neutral at best

- ▶ Protective coatings designed adhesion to alkaline surfaces thus are unable to bond
- ▶ Gypsum within the substrate, resulting from acid degradation, creates unstable substrate for coating adhesion.

### **The Solution:**

- ▶ Penetrating technology that dissolves sulfates in the substrate, purges / extracts them to the surface allowing for removal by pressure washing
- ▶ After washing, substrate is free of sulfates & other salts and allows coating penetration thus **superior bonding & adhesion to surface**
- ▶ Substrate is brought back to a natural alkaline pH – perfect compatibility for coating adhesion
- ▶ Preps substrate for ideal surface for coating adhesion
- ▶ **READY FOR TREATMENT WITH CONSOLIDATE™**

## 2 Consolidate™

**The Problem:** Concrete degradation from acid attack, causing total coating failure and inability for any future coating adhesion

**The Solution:** Chemically, convert sulfuric acid on the inside and the outside of concrete (other mineral & organic acids)

- ▶ For maintenance & new construction concrete floors, walls & ceilings
- ▶ Will react with acids (such as sulfuric) to provide an acid resistant barrier
- ▶ ALLOWS FOR PATCH REPAIR OF COATINGS WHEN THERE IS A FAILURE
- ▶ A tool – new thin 1 PAK reactive sealer
- ▶ Reacts with Ca, Al and Mg to generate a new superior Si-Hydrate
- ▶ Reduction of moisture vapor transmission by approx. 50% (10-15 perms)

### APPLICATIONS:

- ✓ Mining
- ✓ Industrial
- ✓ Wastewater
- ✓ Infrastructure
- ✓ Petrochemical
- ✓ Pulp & Paper
- ✓ Oil & Gas
- ✓ Potash