# DATA SHEET

In the late 1800s, Ernest Ransome twisted square metal stock it into the original rebar. It was revolutionary high performance reinforcement and countless structures were built with it until the mid 1900s. Smart Rebar pieces mimic the shape of the original Ransome bars, but are much smaller and stronger. When Smart Rebar is mixed throughout fresh concrete, it dramatically increases the shear and tensile strength of cured concrete, thereby increasing its toughness and durability through the prevention or delay of crack coalescence.

## Purpose

Smart Rebar is added to ordinary or high performance concrete:

a. to increase the flexural strength of concrete
b. to reduce shrinkage and temperature cracking
c. to replace rebar in structural concrete

**Original concrete designs should be carried out by a registered design professional.**

## Physical Properties

| | |
|---|---|
| Material: | High carbon steel |
| Diameter: | 0.50mm (0.02") |
| Length: | 25mm (1") |
| Deformation: | Twisted on axis |
| Tensile Strength: | 262ksi |
| Quantity: | Min 11,500 pcs/lb |
| Coating: | Non-Reactive corrosion protection |
| Appearance: | Gold |

## Applications

- Slabs on Ground
- Footings
- Poured walls
- Jointless or extended joint slabs
- Slab on metal deck
- Tanks and other precast elements

## Pre-load Mixing procedure

1. Add required Smart Rebar directly to the truck.
2. Mix with min 80% mix water for 30-60 seconds.
3. Add all other materials and mix as per normal.

Note: Slump loss must be considered for dosages over 17lb/yd3

## Typical Dosages for Applications

| | |
|---|---|
| Shrinkage & Temperature - | 9-16lb/yd3 |
| Supported Structural - | 9-42lb/yd3 |
| Unsupported Structural - | 30-67lb/yd3 |

(805) 457-9019 www.synergybuildingtech.com info@synergybuildingtech.com