FYFE Co. LLC

"THE FIBRWRAP® COMPANY"

Tyfo® SW-1S

Underwater Epoxy Coating for the Tyfo® Fibrwrap® System

DESCRIPTION
Tyfo® SW-1S is a two part, 100% solids epoxy formulation specifically designed for underwater applications on steel, concrete and masonry surfaces. Tyfo® SW-1S can be used neat or with an aggregate, as a protective coating or repair mortar to protect against damage and erosion in splash zone areas. Tyfo® SW-1S is a lower viscosity material for better saturation.

USES
Tyfo® SW-1S is designed for use as a saturant in fiber wrap applications. It can also be used to coat or repair concrete and steel materials in underwater and splash zone applications providing protection against corrosion and erosion.

COMPOSITION AND MATERIAL
Tyfo® SW-1S is a 100% solids consisting of epoxy resins, hardeners and inert fillers.

COLORS
The standard color of Tyfo® SW-1S is gray. Special colors are available subject to minimum order quantities.

SURFACE PREPARATION
Surface must be structurally sound, clean, free of loose or deteriorated concrete or coatings, marine growth or any other material which would impair adhesion. Sand blasting or high pressure water blasting are preferred methods of surface preparation. Application of Tyfo® SW-1S should begin promptly after surface preparation to reduce possibility of surface contamination.

MIXING
Tyfo® SW-1S should be conditioned at temperatures above 70ºF for 24 hours prior to mixing. For underwater applications, Tyfo® SW-1S should be mixed above water and then transported below water. Premix Part A (base) and Part B (hardener) individually. Then combine Part A and Part B in equal portions by volume in a clean container. Mix thoroughly with a slow speed motor and "Jiffy" type mixer. Scrape the side of the container at least once during mixing.

MORTAR GROUT
A mortar grout can be made by mixing clean, dry silica sand with an equal volume of Tyfo® SW-1S.

HOW TO USE THE TYFO® SW-1S EPOXY

APPLICATION
Apply Tyfo® SW-1S at water and surface temperatures of 55ºF or higher. Mix the Tyfo® SW-1S above water and transport underwater after mixing. Prime the surface by scrubbing the surface with neat Tyfo® SW-1S. Apply by pressing the Tyfo® SW-1S, neat or mixed with aggregate, onto the surface with gloved hand or trowel. Work the Tyfo® SW-1S firmly into the surface to displace water. Build up the material to the desired thickness. The mortar grout (1:1 by volume) should be used for deep patching and the repair should be made in lifts of no more than 1.0 inch at a time. Allow each lift to achieve initial set prior to applying the next lift.

COVERAGE
Tyfo® SW-1S coverage rates are approximate and will vary with temperature, surface porosity and texture. Following is the approximate coverage on a smooth surface:

Tyfo® SW-1S or mortar	Sq. ft./gal.	Thickness
	50	30 mils (1/32")
	25.5	62 mils (1/16")
	12.8	125 mils (1/8")

One gallon of Tyfo® SW-1S mixed with one gallon of dry aggregate will yield approximately 1.6 gallons of mortar.

CLEAN-UP INSTRUCTIONS
Clean tools and application equipment immediately after use with xylene or a similar solvent. Clean spills and drips while wet with solvent. Dried Tyfo® SW-1S will require mechanical abrasion for removal.

Material properties at 75º F.	
Mixing ratio, by wt.	100:56
Specific Gravity	1.1
Viscosity A & B mixed, cps	9,000-11,000
Gel Time, 65º F, hours	2.5-3.5
ASTM D695, 7 day compressive strength, psi	7,000-8,000
ASTM D695, 7 day compressive strength, mortar, psi (Tyfo® SW-1S:sand – 1:1 by volume)	8,000-9,000
ASTM D2240 Shore D hardness	80-85

Values presented are typical and not necessarily referenced to create specifications.

CAUTION!

Do not thin or dilute Tyfo® SW-1S. Do not mix or apply below 55ºF. Use only clean, oven dry aggregate to produce mortar. Tyfo® SW-1S is not designed to resist hydrostatic pressure from the negative side. Agitation of the product once under water should be minimized. When applying in a splash zone, protection should be provided from wave action under the product has reached initial cure (8-10 hours). Due to the many variables which can exist in underwater applications, a test application under job site conditions is recommended prior to the start of every project to evaluate both application techniques and adhesion properties.

Packaging: 4 gallon pre-measured kits
Storage: 50-90ºF
Shelf life: 2 years in protected storage
Freight Class: Class 60

ENVIRONMENTAL AND SAFETY PRECAUTIONS

Component A contains epoxy resin. Vapors can cause respiratory irritation. Contact may cause skin or eye irritation. Can cause sensitization after prolonged or repeated exposure. Use safety goggles and chemical resistant gloves. Use only with adequate ventilation. **Component B is corrosive** and contains amines. Contact with eyes and skin may cause severe burns. Can cause sensitization after prolonged or repeated use. Use of safety goggles and chemical resistant gloves is highly recommended. Use only with adequate ventilation. **First aid:** In case of skin contact, wash immediately and thoroughly with soap and water. For eye contact, flush immediately with water for 15 minutes and consult a physician. For respiratory problems, remove person immediately to fresh air. **Disposal:** Collect with absorbent material. Dispose of in accordance with current local, state and federal regulations. Read material safety data sheet before using, material is for industrial use only. Keep away from children and animals. Emergency response phone numbers is (800) 424-9300 Chemtrec.

TECHNICAL SERVICE

For application procedures or surface conditions not specified above, please contact:

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