SURTREAT TPS II

MULTI PHASE Ddensifier AND CORROSION INHIBITOR

MAXIMIZE STRENGTH, MINIMIZE CORROSION

Product Description

TPS II is multi-phase, inorganic treatment designed to strengthen concrete, reduce porosity, and inhibit corrosion in reinforced structures. It penetrates the substrate and chemically reacts with free lime to form calcium silicate hydrate (C-S-H) gel, increasing durability and resistance to moisture ingress.

Where to Apply

Ideal for aging or deteriorated concrete, high-moisture environments, and areas exposed to chlorides, sulfates, or carbonation that accelerate corrosion. Use in bridges, parking structures, marine environments, industrial facilities, and any reinforced concrete subject to harsh conditions where long-term durability is critical.

Benefits

- Strengthens concrete by forming C-S-H gel.
- Reduces porosity and moisture intrusion.
- Inhibits corrosion of embedded reinforcement.
- Improves structural integrity and durability.
- Inhibits chloride migration
- Breathable
- Minimizes damage from freeze-thaw cycles.
- Extends the service life of concrete structures.
- Cannot be peeled or scratched off.
- Compatible with common repair materials like mortars, paints, coats, etc.
- Easy spray application for deep penetration.
- Environmentally friendly.

Physical Properties

Packaging	5 gal pail, 55 gal. drums, 275 gal IBC totes.
Appearance/Color	Clear amber liquid
Flashpoint	212 F
Shelf Life	24 months in unopened factory container
Storage Conditions	Protect from freezing

SURTREAT
437 Grant Street, Frick Building #1210
Pittsburgh PA 15219

PHONE: 412 281 1202
www.surtreat.com

FAX: 412 281 1282
info@surtreat.com

Technical Information

Corrosion Inhibition

Half Cell Potential (ASTM C876)

Standard Test Method for Corrosion Potentials of Uncoated Reinforcing Steel in Concrete

Results

Test Location	Before	After	% Change
NASA KSC Launchpad 39a	350 mA	200mA	43%
Windjammer Condominiums Florida	350 mA	50 mA	86%
Shipps Landing Florida	250 mA	75 mA	70%

Corrosion Current (ASTM G109)

Standard Test Methods for Determining Effects of Chemical Admixtures on Corrosion of Embedded Steel Reinforcement in Concrete Exposed to Chloride Environments

Results

Test Location	Before	After	% Change
NASA KSC Launchpad 39a	-90 mA	+30 mA	133%

SURTREAT
437 Grant Street, Frick Building #1210
Pittsburgh PA 15219

PHONE: 412 281 1202
www.surtreat.com

FAX: 412 281 1282
info@surtreat.com

Water Permeability

German GWT -Flux Rate

Measures concrete permeability as mm/sec x 10-3 at 0.5 to 3.0 BAR of pressure

Results

Test Location	BAR	Before	After	% Change
KOPCO Materials Laboratory	1.0	3.9	.05	-87%
Alcosan Sewage Plant	2.5	.48	.12	-75%
Canadian Pacific RR Bridge	3.0	.24	.022	-91%

Concrete Strength

CAPO Pull Out Force (ASTM C-900)

IStandard Test Method for Pullout Strength of Hardened Concrete

Force in kN required to pull a 2 x 2 inch, concrete plug from the surface.

Results

Test Location	Before	After	% Change
NJ Turnpike (NJTAR R 1358)	20 kN	39 kN	95%
Boeing Testing Facility	31 kN	49 kN	58%
Canadian Pacific RR Bridge	15 kN	24 kN	60%

SURTREAT
437 Grant Street, Frick Building #1210
Pittsburgh PA 15219

PHONE: 412 281 1202
www.surtreat.com

FAX: 412 281 1282
info@surtreat.com

Application Procedure

Surface preparation: Prior to applying TPS II the surface must be clean and free of coatings, paints or any other contaminant that would inhibit penetration of the product.

If coatings or paints are present, surface grinding, abrasive blasting or acid etching are acceptable methods to remove them.

If surface is severely contaminated it must be washed thoroughly with SurCoClean and the residue cleaned by power washing or any other appropriate applicable method.

Surface can be dry or slightly damp with no pooling liquid remaining.

Application: TPS II is applied by roller, brush or sprayed onto the concrete surface. When spraying, use conventional airless spray system or hand-pressure equipment. A minimum of two applications is usually required. Apply liberally until substrate is saturated. Spread with squeegee, brush or roller until adsorbed. Waiting time between applications, will vary depending on environmental conditions and absorbency of substrate, is typically one hour. Prior to installation of a repair mortar, concrete overlay, coating, FRP or membrane, remove any TPS II residue, if present, before the overlay is applied. After application, allow substrate to dry before applying overlay.

Distribution rate: 100 sf/gal. It can be adjusted depending on project requirements.

Limitations

- Minimum ambient temperature and substrate temperature of 35 F.
- Avoid contact with glass, aluminum and painted surfaces - may cause permanent spotting.
- TPS II will not penetrate coatings, sealers, membranes or paints.

Caution and First Aid

Inhalation: If breathing is difficult due to inhalation of vapor or mist, move person to fresh air and administer oxygen. If breathing has stopped give artificial respiration. Keep person warm, quiet, and get medical attention. Eye **Contact:** Rinse eyes with cool water for 15 minutes. Hold eyelids open during flushing with water. Get medical attention.

Ingestion: If swallowed, immediately drink two glasses of water and induce vomiting. Get medical attention immediately. Do not give anything to an unconscious or convulsing person. For additional information on personal protective equipment, first aid, and emergency procedures, refer to the product Material Safety Data Sheet (MSDS) on the job site or contact the company at the address or phone number given below.

Disposal of container: Triple rinse inside of container, seal opening and dispose of properly.

SURTREAT
437 Grant Street, Frick Building #1210
Pittsburgh PA 15219

PHONE: 412 281 1202
www.surtreat.com

FAX: 412 281 1282
info@surtreat.com

Handling: Surtreat product is to be applied by professional contractors only. All applicators should wear OSHA and NIOSH recommended protective equipment. Do not use or dilute the product in closed areas without adequate ventilation. Immediately close the container after removal of the solution. Avoid contact with skin, eyes and clothing. Do not smoke, eat or drink during application. Wash thoroughly after handling. Keep out of reach of children. Do not inhale or ingest or modify the solution. Refer to MSDS.

Clean Up: In case of spills or leaks, wear suitable protective equipment. Contain spill and collect with absorbent material or process and transfer to a suitable container, ventilate area. Avoid contact. Dispose of in accordance with current, applicable local, state and federal regulations. **Precautions:** KEEP OUT OF REACH OF CHILDREN. DO NOT SWALLOW. Use with adequate ventilation. Avoid mist and direct contact with eyes, skin and clothing. Wear suitable protective goggles, gloves, and clothing. In case of insufficient ventilation, wear suitable respiratory equipment. If you feel ill, seek medical advice. Wash clothing prior to re-use.

Limited Warranty

Every reasonable effort is made to apply Surtreat® exacting standards both in the manufacture of our products and in the information that we issue concerning these products and their use. We warrant our products to be of good quality and will replace any products proved defective. Satisfactory results depend not only upon quality products, but also upon many factors beyond our control. Therefore, except for such replacement, SURTREAT® MAKES NO WARRANTY OR GUARANTEE, EXPRESS OR IMPLIED, INCLUDING WARRANTIES OF FITNESS FOR A PARTICULAR PURPOSE OR MERCHANT ABILITY, RESPECTING ITS PRODUCTS, and SURTREAT® shall have no other liability with respect thereto.

Any claim regarding product defect must be received in writing within one (1) year from the date of shipment. No claim will be considered without such written notice or after the specified time interval. User shall determine the suitability of the products for the intended use and assume all risks and liability in connection therewith. Any authorized change in the printed recommendations concerning the use of our products must bear the signature of the SURTREAT® Technical Manager. SurCo, TPS and SURTREAT are trademarks of SURTREAT®. For professional use only. Not for sale to or use by the general public.

SURTREAT
437 Grant Street, Frick Building #1210
Pittsburgh PA 15219

PHONE: 412 281 1202
www.surtreat.com

FAX: 412 281 1282
info@surtreat.com