

# HOLDTIGHT

Blast and wash-down water additive for the preparation of iron, steel and concrete surfaces prior to protective coating applications

## The Most Cost-effective Cleaning Method to Remove Soluble Salt Contaminants and Prevent Flash Rusting



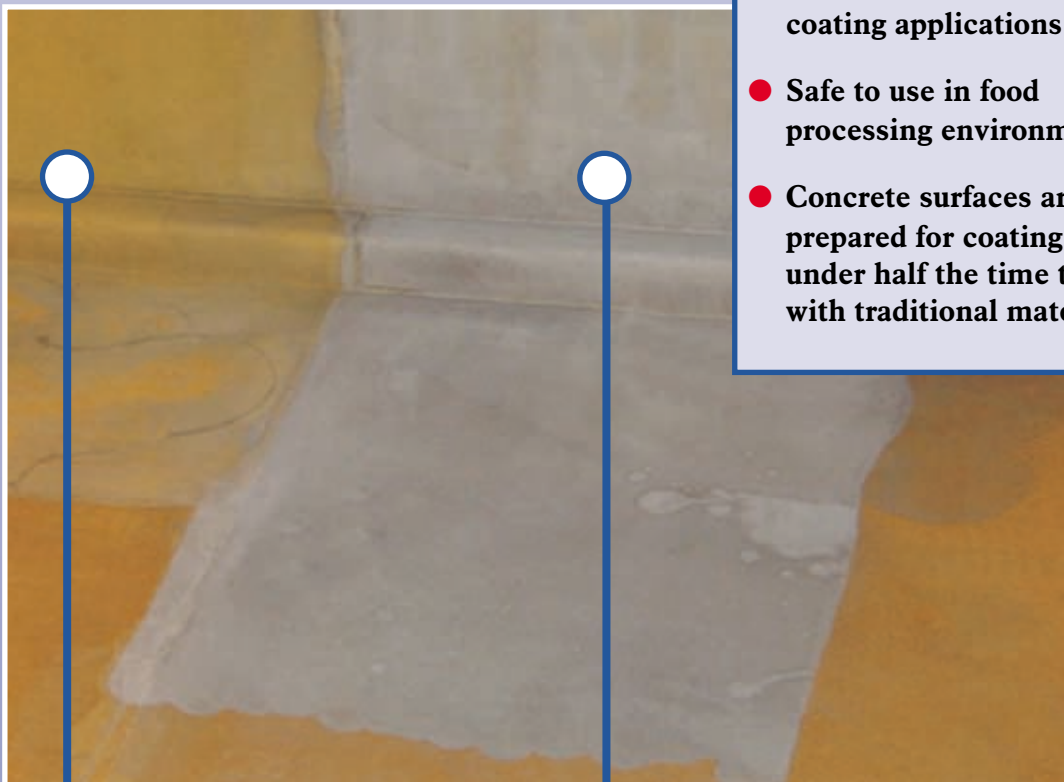
- Removes All Salts
- Prevents Flash Rust
- Degreases Surfaces



**Typical application:** Holdtight used to prepare surfaces prior to coating the inside of a 5 million gallon petrol tank.

#### Other Benefits:

- Non hazardous
- Phosphate and acid free
- Non flammable
- Leaves surfaces completely clean and residue free for coating applications
- Safe to use in food processing environments
- Concrete surfaces are prepared for coating in under half the time taken with traditional materials



Flash rust on freshly prepared steel surface (HoldTight not used)

HoldTight cleaned area, completely free of flash rust and chloride contamination

## Description and uses:

### Iron and steel

When preparing iron or steel for a coating application, using wet abrasion, water blasting, or pressurised wash-down after dry abrasion, the freshly cleaned surfaces are prone to rapid flash rusting. As coating applications cannot always be applied immediately after cleaning, the coating applicator can be faced with yet another operation to remove the flash rust. This can become an expensive and frustrating cycle. Holdtight offers a simple solution to the problem. Just add it to the blast or wash-down water during the cleaning process and the flash rust reaction is prevented by removing all contaminants from the substrate such as salts, oil, grease, and blast residues. It also raises the pH of the water to help compensate for any acidic sand that may have been used in blasting. As it does not leave any surface residue, Holdtight cleaned iron and steel will remain rust free for about 48 hours or longer (as long as there is no rain during this period).

## Concrete

Holdtight is also ideal for preparing concrete surfaces for coating applications. Unlike traditional decontamination alternatives such as acids, emulsifiers etc, Holdtight combines cleaning and rinsing in one operation and leaves the surface residue free with a normal pH. This greatly reduces the time and number of operations needed to achieve the desired, 'coating ready' surface.

Recommended for use before the application of Denso products such as Steelcoat Systems or Archco-Rigidon linings, the product is safe to use in all environments including the food and pharmaceutical processes.

### Basic data

Mass density: approximately 62.43 lb/cu.ft. (1g/cm<sup>3</sup>)

Shelf life: 3 years stored in a cool and dry place.

Do not store below 24°F to avoid freezing.

### Safety precautions

Wear eye protection when handling this or similar products. If Holdtight gets into eyes, flush with water for 5-10 minutes. See a doctor if irritation persists. Inhalation of vapour of undiluted Holdtight may be harmful to some individuals.

## Instructions for use - Iron or steel substrates:

### Wet abrasion, water blasting and pressurised wash-down

Holdtight is typically used with both blast water and wash-down water (See note on water overleaf). It should be diluted with water somewhere between 50:1 (water:DH) to 250:1, depending on the application, humidity and level of surface contamination. It is rarely necessary to dilute it to less than 50:1 and 100:1 is the most common dilution ratio (See separate sheet FAQ:mix ratios). In some cases it may be used only during the wash-down, e.g. after ultra high pressure (UHP) water blasting or after dry blasting. UHP users should always consult their equipment manufacturer concerning the use of Holdtight or any other additive with their product. In high humidity environments with highly contaminated substrates (e.g. steel plate used in a marine situation or exposed to contaminated air), 50:1 dilution may be necessary for both blast and wash-down cycles. With low humidity and a relatively clean surface, 100:1 dilution on both cycles should be satisfactory. Until the job actually begins, assume an average of 100:1 for all the water you plan to use. If testing various dilutions of Holdtight is not practical or if contamination and humidity is high, 50:1 is the fail safe dilution for both cycles.

### Wash-downs

Always use Holdtight. Never dilute more than 100:1 and use Holdtight treated water at 1-3 gallons per metre (3.8 to 11.4 litres per metre), at no less than 500 p.s.i. (34 bar). For degreasing applications a 50:1 dilution is generally recommended but higher concentrations (e.g. 25:1) may be necessary in some cases.

### Hand/power tools and hand washing:

This application is only advised if pressure washing is physically or economically impractical. It will be used most frequently when spot removal of loose coating, rust, visible contaminants etc usually followed by spot priming is acceptable to the coating vendor.

1. Remove all loose coating, visible contaminants, road salts and other surface matter with power tools or hand held abrasives.

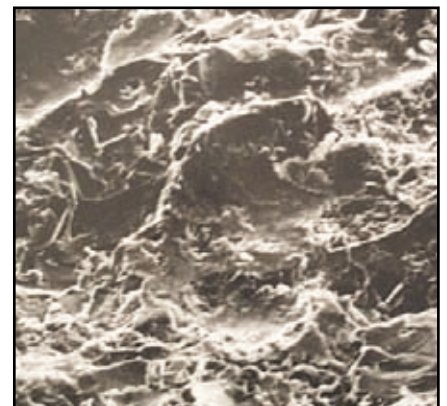
*Continued overleaf...*



● **No HoldTight used:**  
500x magnification of dry blasted steel plate showing shattered abrasive particles imbedded into the metal profile.



● **After HoldTight Application:**  
15x magnification of dry blasted steel plate showing no contaminants.



● **After HoldTight Application:**  
500x magnification of dry blasted steel plate showing no contaminants.

2. Dilute Holdtight 25:1 (water:DH) to 50:1 or add 6 to 3 oz of Holdtight to each gallon of water. Higher contaminant levels require more concentrated solutions.
3. Scrub the surface vigorously with this solution and a stiff bristled brush, preferably nylon or teflon.
4. Rinse and flush the scrubbed area with the same solution making sure that all visible contaminants are removed. Use as much of the solution as is practical. If rinsing is not possible wipe the surface to remove all visible contaminants. In any case there is no need to rinse with fresh water as Holdtight leaves no residue and the water may re-contaminate the surface.
5. Dry the surface. If evaporation is too slow, use clean, dry compressed air to blow the surface dry. CAUTION - do not use compressed air if it is not clean and dry as any contamination or wetness re-deposited on the surface may cause rust to form and you will have to start over again.
6. If specification calls for salt removal, test the surface by any of the following procedures described in SSPC-TU 4, Field Methods in Retrieval and Analysis of soluble salts on Substrates: Bresle patch, Kitigawa tube, qualitative ferrous ion, or Quantab strip. That document describes several other tests but we recommend these four based on our lab and field experience. Call our Technical Services Department for assistance.
7. If the tested contamination level is unacceptable then repeat steps 3 through 7. If possible, scrub and rinse the surface more vigorously. Review compressed air quality, if used. Holdtight concentration levels may also be increased but drying time will also increase and the surface must be dry before applying primer.

#### **‘Time Window’ for iron and steel coating applications:**

Priming should be done as soon as possible before flash rust appears and after the surface is dry. Some primers (consult manufacturers instructions) can be applied while the surface is still damp, provided it is free from visible droplets or running water, but a dry substrate is always preferred. Typical time window for coating after cleaning is 48 hours or longer with favourable weather conditions, e.g. no rain and temperature above 40°F.

#### **Note about water:**

*Water that contains a high concentration of salts, carbonates and/or bicarbonates (ie hard water), or other contaminants may interfere with the performance of Holdtight. Hard water may also be a problem for some equipment. Consult the manufacturer. In most localities, water treatment on site is accessible and inexpensive. Industrial or plant water is often a problem, so should be avoided. In a few areas, even potable (drinking) water may also be a problem. In most cases ‘bad’ water can be corrected easily and inexpensively. Call our technical service staff if you have any concerns or questions about water. If you have been following these instructions and Holdtight is not working properly it is highly probable that you have a water problem.*

### **Instructions for use - Concrete substrates:**

Dilute Holdtight with potable water between 50:1 (Water:DH) and 100:1 depending upon the level of contamination (the higher the contamination the lower the water ratio) and wash the surface with this solution using a pressure washer at 500 psi or more. Once diluted, Holdtight remains in solution indefinitely so any left over can be saved and used for the next application.

**Holdtight is supplied by:**



Winn & Coales (Denso) Ltd

Denso House, Chapel Road, London SE27 OTR

Tel: 020 8670 7511 ● Fax: 020 8761 2456

Email: mail@denso.net ● Website: www.denso.net

A MEMBER OF WINN & COALES INTERNATIONAL



Certificate No. FM 01548  
BS EN ISO 9001:2000