

## ICT<sup>®</sup>510-PCR30 VCI Film

### Technical Data Sheet

ZERUST<sup>®</sup>/EXCOR<sup>®</sup> ICT<sup>®</sup>510-PCR30 VCI Film is a proven ZERUST<sup>®</sup> Vapor Corrosion Inhibiting (VCI) film with 30% post-consumer recycled (PCR) polyethylene, providing sustainable and versatile protection against corrosion damage for metals in shipping, storage, and work-in-progress. Post-consumer recycling is a process that revolves around the collection, processing (sorting, washing, grinding, extruding), and reuse of materials and products that have been used by consumers and then discarded. This approach contributes to reducing carbon by minimizing waste, conserving resources, and mitigating the environmental impact of traditional disposal methods like landfills and incineration.

ZERUST<sup>®</sup> ICT<sup>®</sup>510-PCR30 diffuses invisible, odorless, and non-toxic ZERUST<sup>®</sup> VCI molecules that settle onto exposed metal surfaces inside the packaging or enclosure. Upon removal from the packaging, the VCI will dissipate from the metal surface, allowing immediate painting, welding, or further processing. Use ICT<sup>®</sup>510-PCR30 VCI Film to protect metal components and assemblies, machined and cast parts, and more for years<sup>†</sup>. For additional protection in challenging environments, ZERUST<sup>®</sup> VCI Film may be used with ZERUST<sup>®</sup> corrosion inhibitor liquid RPs and VCI diffuser products. ICT<sup>®</sup>510-PCR30 VCI Film can be made into VCI bags, gusset liners, tote covers, and more for the ideal protective packaging solution.

As a leader in corrosion prevention and rust protection solutions, ZERUST<sup>®</sup> recognizes the importance of environmental responsibility and has taken significant steps to implement post-consumer recycling technology across our Vapor Corrosion Inhibitor (VCI) polymer packaging solutions. ZERUST<sup>®</sup> VCI film has proven its performance and safety with thousands of customers worldwide for over 50 years. It is used to protect valuable metal items for manufacturers in industries such as automotive, agricultural, aerospace, and mining. ZERUST<sup>®</sup>/EXCOR<sup>®</sup> offers on-site support and service in more than 70 countries via a network of 21 joint venture partnerships. Check with your ZERUST<sup>®</sup>/EXCOR<sup>®</sup> representative for a comprehensive corrosion management solution that is most effective for your metal assets.

### Typical Properties

**Appearance** Typical colors are yellow, blue, or green. Additional colors are available upon request. Subject to order minimums.  
**Substrates** Ferrous protection formulation (steel, iron, cast iron, and its alloys).

| Property                       | Direction<br>(Machine or<br>Transverse) | LDPE/LLDPE Plain Poly         | ICT <sup>®</sup> 510-PCR30*   | ASTM Test<br>Method |
|--------------------------------|---|-------------------------------|-------------------------------|---------------------|
| Film Thickness                 | -                                       | 4 mil (102 µm)                | 4 mil (102 µm)                | D-6988              |
| Dart Impact Resistance         | -                                       | 200-300 g                     | 165-265 g                     | D-1709              |
| Elmendorf Tear Strength        | MD                                      | 1000-1300 gf                  | 1000-1300 gf                  | D-1922              |
|                                | TD                                      | 500-600 gf                    | 500-600 gf                    |                     |
| Tensile Strength at Break      | MD                                      | 12.0-30.0 MPa (1740-4351 psi) | 12.0-30.0 MPa (1740-4351 psi) | D-882               |
|                                | TD                                      | 12.0-30.0 MPa (1740-4351 psi) | 12.0-30.0 MPa (1740-4351 psi) |                     |
| Elongation at Break            | MD                                      | 500-1,200 %                   | 500-1,200 %                   | D-882               |
|                                | TD                                      | 500-700 %                     | 500-700 %                     |                     |
| Vapor Inhibiting Ability (VIA) | -                                       | Fail                          | Pass                          | NACE TM0208         |

\* Typical values, not meant to be a specification.

***This data sheet provides general guidelines for operation, application, and removal. Please contact your ZERUST<sup>®</sup>/EXCOR<sup>®</sup> account representative for more specific recommendations on your particular operation and conditions.***

### Operating Summary

- Pack only clean and dry parts.
- Always wear clean and dry gloves when handling the metal parts to protect them from corrosion-causing fingerprints.
- When packing, the temperature of the metal parts should be about the same as the room temperature to avoid condensed moisture.
- Tightly close packages with tape, heat seal, zip ties, or fold over.
- Insert additional ZERUST<sup>®</sup> materials (such as ICT<sup>®</sup>420-35 VCI Kraft Paper) as interleave for added protection in larger and tightly packed or layered packages.
- Avoid placing metal surfaces in direct contact with wood or cardboard (sources of moisture and acid).

## Availability

ZERUST®/EXCOR® ICT®510-PCR30 VCI Film is a made-to-order product available upon request with many options, subject to minimum order quantities. Contact your ZERUST®/EXCOR® representative for ordering information.

### Thickness range:

2 - 6 mil.

### Size ranges for 2 - 4 mil (width):

Bags & Perforated Tubing:

4" - 88" (flat)

8" - 136" (gusset)

Tubing (Non-Perforated):

4" - 100" (flat)

Sheeting:

8" - 100" (single wound sheeting)

101" - 22' (must be folded, e.g., centerfold)

### Size ranges for 5 - 6 mil (width):

Bags & Perforated Tubing:

4" - 88" (flat)

8" - 120" (gusset)

Tubing (Non-Perforated):

4" - 100" (flat)

Sheeting:

8" - 100" (single wound sheeting)

101" - 20' (must be folded, e.g., centerfold)

## Protection Info†

Indoor† Protects clean metals for years† when used correctly.

Outdoor† Not recommended

## Carbon Savings

- Replacing 100 metric tons (100,000 kg) of conventional polyethylene plastic VCI packaging with ICT®510-PCR30 results in a remarkable carbon reduction of 26,000 kg (57,320 lbs.). This achievement is equivalent to\*:



95-ton reduction in CO<sub>2</sub> emissions for every 100 metric tons of VCI film.



Reduction in CO<sub>2</sub> emissions equivalent to 21 cars driven for a year for every 100 metric tons of VCI film.



Reduction in CO<sub>2</sub> emissions equivalent to the consumption of 10,727 Liters of gasoline for every 100 metric tons of VCI film.



Reduction in CO<sub>2</sub> emissions equivalent to the carbon sequestered by 1,576 tree seedlings grown for 10 years for every 100 tons of VCI film.

\*WARN MODEL. Source: US EPA Greenhouse Gas Equivalencies Calculator (as of February 2024).

## Storage

- Store in a cool, dry place and away from sunlight in the original packaging for up to 3 years from the date of shipment.

## Disposal

- Check on options for recycling.
- Dispose of in accordance with local, national, and international regulations.
- ZERUST® offers a unique opportunity for select customers to recycle their used ZERUST® VCI products. This initiative enables businesses to further reduce their carbon footprint, potentially achieving a zero-carbon footprint with the use of ZERUST® VCI Film. Contact your ZERUST®/EXCOR® account representative for more information.

## Precautions

- Do not use for outdoor protection.
- Safe for people. This product does not pose a health hazard to users due to its classification as an article according to EU REACH, UN GHS, US OSHA HazCom, CLP, and CA WHMIS regulations.
- Refer to the Safety Data Sheet (SDS) for safety information.

### ‡ DECLARATION

Corrosion protection claims are based on Northern Technologies International Corporation (NTIC) internal laboratory testing performed under controlled parameters on contaminate-free substrates. Real-world application corrosion protection duration on different substrates will vary and depends on factors such as, but not limited to, the application or use, environmental / storage conditions, surface cleanliness, type of substrates, and coating thickness (where applicable). The use of the term "Up to" in reference to time is defined as any time duration from zero up to a specified time frame, but in no event beyond the specified time frame. The use of the term "for years" is based on NTIC's experience with its products but is in no way guaranteed. The use of the term "Up to" in reference to volume is defined as any volume from zero up to a specified volume but in no event beyond the specified volume of protection. It is the customer's / user's obligation to evaluate product performance, corrosion protection duration, safety, and suitability for intended use within the scope advised in the data sheet and to comply with all applicable laws and regulations. **LIMITED WARRANTY/DISCLAIMER** Warranty is limited to the replacement of a product that fails to meet specifications. For full warranty and disclaimer information, visit [www.zerust.com/warranty](http://www.zerust.com/warranty).

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