



## ▶ Zerust® Outdoor Preservation Shrink

Use Zerust®/Excor® ICT®510-OPS VCI Shrink Film for long-term outdoor storage and mothballing of parts and equipment. Zerust outdoor preservation film provides superior corrosion and UVI protection for up to 3 years even in extreme conditions.

Zerust/Excor Outdoor Preservation VCI Shrink Film provides advanced protection to metals with Zerust Vapor Corrosion Inhibitor (VCI) technology. It is a premium 8-mil, high-strength shrink film with UV stabilizers for 3-year outdoor protection. The film shrinks and conforms to objects when heated to repel moisture and contaminants. Zerust VCI saturates the interior of the packaging to protect hard-to-reach spaces and voids from corrosion.

This specially designed VCI shrink film is ideal for lay-up and mothballing of equipment, vehicles and outdoor storage of components. Multiple sheets can be shrunk together for any size application such as structures and machinery. Zerust Outdoor Preservation Film protects valuable metal assets and makes them ready to use whenever and wherever they are needed. Check with your Zerust/Excor representative for a corrosion management solution most effective for your metal assets.

### Application Example

Valuable assets are protected from corrosion when stored outdoors. Zerust film enables items to be stored near the project site and be operationally ready.



### ▶ Benefits

- High strength and performance
- 3-year outdoor protection
- Proven corrosion and UV protection
- Excellent shrink properties
- Superior handling and drape
- Safe for electronics

### Application Type

- Storage
- Shipping
- Works with Zerust VCI diffusers



## Specifications

<b>Product Information</b>	Zerust®/Excor® ICT®510-OPS Film is a heat responsive durable film that shrinks and forms a durable package.
<b>Appearance</b>	Typical colors are opaque gray and clear.
<b>Protected Metal Types</b>	Ferrous metal protection. Multimetal and non-ferrous protection are available upon request.
<b>Protection Duration</b>	Outdoor UV protection for up to 3-years. Under shelter, VCI protects clean metals for years when used correctly and utilized within three years from receipt.
<b>Storage</b>	Store in original packaging away from direct sunlight in conditions below 85°F (30°C) and 50% RH until ready for use.

## Availability

Custom options and printing available upon request. Minimum order quantities apply.

### Stock Offerings:

PN 100-F-00070  
8 mil 20' x 100' Opaque Gray  
PN 100-F-00077  
8 mil 40" x 425' Clear

### Accessories:

PN 250-X-00002 (12 rolls/case)  
6 mil 4" x 180' gray preservation tape  
PN 250-X-00003 (8 rolls/case)  
6 mil 6" x 180' gray preservation tape

## Product Comparison Chart

Property	Direction (Machine or Transverse)	Zerust High-Strength Shrink Film*	Competitor Shrink Film	ASTM Test Method
Film Thickness	-	8.0 mil (203 µm)	10.5 mil (267 µm)	D-6988
Dart Impact Resistance	-	900 g	715 g	D-1709
Tear Strength	MD	15250 mN	18850 mN	D-1938
	TD	17280 mN	21800 mN	
Tensile Strength at Break	MD	3466 psi (23.9 MPa)	2756 psi (19.0 MPa)	D-882
	TD	3263 psi (22.5 MPa)	2900 psi (20.0 MPa)	
Elongation at Break	MD	930%	816%	D-882
	TD	895%	873%	
Water Vapor Transmission Rate 100°F (38°C), 100% RH	-	0.108 g/(100 in <sup>2</sup> /day) 1.64 g/(m <sup>2</sup> /day)	0.0924 g/(100 in <sup>2</sup> /day) 1.43 g/(m <sup>2</sup> /day)	F-1249
Vapor Inhibiting Ability (VIA)	-	Pass	-	NACE TM0208-2013

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

Warranty and Disclaimer Information: We guarantee our products conform to documented quality specifications. All statement, technical information and recommendations contained herein are based on testing and experiences NTIC believes to be reliable, but the accuracy or completeness thereof is not guaranteed. Product information subject to change without notice. We make no warranty of any kind expressed or implied as to the effects of use (including, but not limited to, damage or injury). For full warranty and disclaimer information visit, [www.zerust.com/warranty](http://www.zerust.com/warranty).

©2013-2017 Northern Technologies International Corporation (NTIC). All Rights Reserved. NTIC is the owner of the following trademarks: ActivPak®, Cor-Tab®, EXCOR®, Flange Saver®, ICT®, NTI®, Plastabs®, Z-CIS®, Zerion®, ZERUST®, The ZERUST People®, and the Color "Yellow". ABRIGO®, UNICO®, and VALENO® are registered trademarks of EXCOR GmbH, a Joint Venture Partner of NTIC.

## Contact Us

**ZERUST® EXCOR®**

A product of:  
Northern Technologies  
International Corp  
4201 Woodland Road,  
Circle Pines, MN 55014  
USA

Phone. +1 763.225.6600  
Fax. +1 763.225.6645  
[sales@zerust.com](mailto:sales@zerust.com)  
[www.zerust.com](http://www.zerust.com)



Rev F

## Recyclable

Dispose of in accordance with local, national and international regulations. Check on options for recycling and incineration.

## Safety

- 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 and CA WHMIS regulations.
- Zerust VCI chemistry is safe for sensitive electronics. No galvanic effects, residues or changes in the properties of metals. The protective molecules dissipate upon opening of package.