



## HIGH PERFORMANCE VpCI® PACKAGING

# CorShield® VpCI®-146 Reinforced Paper powered by Nano VpCI® - Corrosion Inhibiting Paper



## PRODUCT DESCRIPTION

CorShield® VpCI®-146 Reinforced Paper is the premium corrosion inhibiting reinforced paper in the industry. Our patented Vapor phase Corrosion Inhibiting technology has revolutionized the way metals are protected in an enclosed package. CorShield® VpCI®-146 Reinforced Paper provides superior corrosion protection for both ferrous and non-ferrous metals. CorShield® VpCI®-146 Reinforced Paper eliminates the need to stock a variety of papers for all the different types of metals and alloys you need to protect. Additionally, CorShield® VpCI®-146 Reinforced Paper is non-toxic and doesn't contain any nitrites, phosphates, silicates or other hazardous compounds.

CorShield® VpCI®-146 Reinforced Paper is made from the highest quality neutral natural kraft paper and has excellent tear resistance. There are no chemical concentrations to calculate, no chemical tanks or application system to maintain. Just wrap your products in the paper, and fold edges together. Use adhesive tape as needed to hold paper folds in place. The VpCI® coating on the paper vaporizes, reaching all metal surfaces to provide complete corrosion protection. The unique inhibiting action of the VpCI® forms a very thin and very effective protective layer that does not alter the appearance of products or require removal.

Parts protected with CorShield® VpCI®-146 Reinforced Paper can

be painted, welded, and soldered. The protective layer does not influence physical properties of most sensitive electrical components, including conductivity and resistance.

## TYPICAL APPLICATIONS

CorShield® VpCI®-146 Reinforced Paper can be used to protect products for storage and shipment in a wide variety of ways: wrap for single item packaging or interleaving; end closures for shipping tubes; insert strips for recessed areas in large packages; and as sheet liners or separators between products. CorShield® VpCI®-146 Reinforced Paper is used in packaging of metals with pointed, odd shapes or sharp edges where puncture would be an issue with non-reinforced papers. It's also used in applications where damage to the item caused during shipping is a concern when using non-reinforced papers.

The typical applications are:

- Metals industry: coils, wire reels, plate, bar, etc.
- Metal forging and die casting: raw and machined forgings and castings.
- Metalworking: stamping, sheet metal work, springs, bearings, fasteners, tube, pipe, nails, etc.
- Finished products: engines, machinery, tools, hardware, appliances, instruments, motors, etc.
- Electrical and electronic components, controls, etc.

## FEATURES

- Extremely durable paper allows you to ignore normal handling issues found in non-reinforced packaging papers.
- One product for all ferrous and non-ferrous metals.
- Non-toxic. Contains no nitrites, phosphates, silicones, chromates or other heavy metals.
- Effective against aggressive environments including humidity, SO<sub>2</sub>, H<sub>2</sub>S and galvanic corrosion from dissimilar metals.
- Conforms to military specifications MIL-P-3420E.
- Protective layer does not need to be removed prior to further surface finishing or coating application.



- Protects dry or oiled metals during storage, transit and overseas shipment.
- Natural grade paper eliminates package contamination.
- Combines corrosion protection and packaging into one step.

## METALS PROTECTED

- Carbon Steel
- Stainless Steel
- Galvanized Steel
- Cast Iron
- Aluminum Alloys
- Copper
- Brass ( $\leq 30\%$  Zn)
- Solder

## METHOD OF APPLICATION

Products should be packaged as soon after cleaning as possible, but completely dried of residual water. Keep the VpCl® paper as close to the surface of the product as practical, leaving no barrier between the VpCl® paper and the metal surface to be protected.

Standard Construction: Fiberglass reinforced polycoated neutral natural kraft paper, coated with VpCl® material.

## TYPICAL PROPERTIES

| Property            | TAPPI Method | UNIT  | CorShield® VpCl®-146 Reinforced Paper  |
|---------------------|--------------|---|--|
| Basis Weight lbs    | T-410        | lbs/3000ft <sup>2</sup> (g/m <sup>2</sup> ) | 90 ± 5<br>(146 ± 8 g/m <sup>2</sup> )  |
| Caliper (thickness) | T-411        | Mils (μm)                                   | 9 ± 1 (230 ± 25)                       |
|                     |              |   | 13 ± 2 (325 ± 50) at Reinforcing Fiber |

## STANDARD TEST METHODS

|                 |                                   |
|-----------------|-----------------------------------|
| TAPPI T-410     | Basis Weight                      |
| TAPPI T-411     | Caliper                           |
| ASTM D 3420-95B | Impact Puncture                   |
| ASTM D-1922-94A | Tear Test                         |
| MIL-PRF-3420H   | Commercial Equivalent to Standard |

## TECHNICAL PRODUCT INFORMATION

| Test Name                  | Test Method | Parameter                               | Spec | Value | Unit                  |
|----------------------------|-------------|---|------|-------|-----------------------|
| Composition                | ISO 2286-2  | Kraftliner<br>Fabric<br>HDPE film<br>PE |      | 100   | gr/m <sup>2</sup>     |
|                            |             |   |      | 13    | gr/m <sup>2</sup>     |
|                            |             |   |      | 10    | gr/m <sup>2</sup>     |
|                            |             |   |      | 18    | gr/m <sup>2</sup>     |
| Water Vapor Barrier (WVTR) |             |   |      | 0.47  | g/hour*m <sup>2</sup> |

## TEST CERTIFICATE

| Test Name          | Test Method | Parameter          | Spec | Value | Unit              |
|--------------------|-------------|--------------------|------|-------|-------------------|
| Width              | ISO 2286-1  | Width              |      | 2500  | mm                |
| Tensile Strength   | ISO 1421    | Elongation CD      |      | 6,9   | %                 |
|                    |             | Strength CD        |      | 260   | N/50mm            |
|                    |             | Elongation MD      |      | 3,4   | %                 |
| Tear Strength      | ISO 6383-1  | Strength MD        |      | 642   | N/50mm            |
|                    |             | Tear Strength CD   |      | 14,7  | N/50mm            |
| Mass per unit area | ISO 2286-2  | Tear Strength MD   |      | 9,51  | N/50mm            |
|                    |             | Mass per unit area |      | 145   | gr/m <sup>2</sup> |

## PACKAGING AND STORAGE

Standard roll size: 100" wide by 350 ft. length (2.5 m x 105 m). Roll weight: 106 lbs (48 kg). Pallet size: 5 rolls across by 4 high, 20 rolls per pallet. Custom sizes, constructions and printing available upon request.

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**KEEP CONTAINER TIGHTLY CLOSED**

**NOT FOR INTERNAL CONSUMPTION**

**CONSULT SAFETY DATA SHEET FOR MORE INFORMATION**

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