

## Cortec® Standard Test Reference Document

Product	Standard Reference Tests
<b>VpCI® Films</b>	
<b>CorShield® VpCI®-220 E</b>	ASTM D6988 - Film Thickness ASTM D882 - Breaking Factor, Tensile Strength at Break, Elongation at Break, Yield Strength ASTM D1709, Test Method A - Dart Drop Impact Resistance MIL-STD-3010, TM 2065 - Puncture Resistance ASTM D1922 - Tear Strength ASTM D1894 - Coefficient of Friction
<b>CorrLam® LD VpCI® Barrier Laminate</b>	ASTM D-882 – Tensile Strength at Break/Peak ASTM D-882A – % Elongation at Break ASTM F-88 – Heat Seal Strength TAPPI T414 – Elmendorf Tear Strength ASTM D-3420 – Puncture Resistance TAPPI T414 – Film Thickness TAPPI T557 – Water Vapor Transmission Rate ASTM D3985 – Oxygen Transmission Rate
<b>Cor-Pak® VpCI® Stretch Film</b>	ASTM D6988 - Film Thickness ASTM D882 - Breaking Factor, Tensile Strength at Break, Elongation at Break ASTM D-1922 - Tear Strength ASTM D1709-04, Test Method A - Dart Drop Impact Resistance
<b>Eco-Corr®</b>	ASTM F-1249 - Water Vapor Transmission Rate EN 13432 - Requirements of packaging recoverable through composting and biodegradation
<b>Eco-Corr® ESD</b>	NACE TM0208-2018 - Vapor Inhibiting Ability ASTM D-882 - Breaking Factor ASTM D-882 - Tensile Strength ASTM D-882 - Tear Strength ASTM D-1709 - Dart Drop Impact Resistance MIL-PRF-81705D - Surface Resistivity EN 13432 - Compostability Testing



## VpCI® Films

### Eco Film®

ASTM F-1249 - Water Vapor Transmission Rate  
ASTM D-6988 - Film Thickness  
ASTM D-882 - Breaking Factor, Tensile Strength, Elongation at Break, Yield Strength  
ASTM D-1922-06a - Tear Strength  
ASTM D-1709-04, Test Method A - Dart Drop Impact Resistance  
ASTM D-1894 - Coefficient of Friction  
ASTM D-6400-99 - Specifications for Compostable Plastics

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### EcoSonic® VpCI®- 125

ASTM D-6988 - Film Thickness  
ASTM D-882 - Breaking Factor, Tensile Strength, Elongation at Break, Yield Strength  
ASTM D-1922-06a - Tear Strength  
ASTM D-1709 - Dart Drop Impact Resistance  
MIL-PRF-81705 D - Surface Resistivity

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### EcoSonic® VpCI®-125 HP

ASTM D-1894 - Coefficient of Friction  
ASTM D-6988 - Film Thickness  
ASTM D-882 - Breaking Factor, Tensile Strength, Elongation at Break, Yield Strength  
ASTM D-1922-06a - Tear Strength  
ASTM D-1709 - Dart Drop Impact Resistance  
MIL-STD-3010, TM 2065 - Puncture Resistance  
MIL-PRF-81705 D - Surface Resistivity

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### Eco Stretch®

ASTM D-882 - Breaking Factor  
ASTM D-1709 - Dart Drop Impact Resistance  
MIL-STD-3010 - Puncture Resistance  
ASTM D-1922 - Tear Strength  
ASTM D-5458 - Cling Peel  
NACE TM0208 - Vapor Inhibiting Ability  
ASTM D-6400 - Standard for Commercial Composting

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### EcoWeave®

ASTM D-3775 - Unit Weight  
ASTM D-5034 - Tensile Strength  
ASTM D-5034 - Tear Strength

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### Eco Wrap®

ASTM D-1894 - Coefficient of Friction  
ASTM D-5458 - Cling Peel  
ASTM D-6988 - Film Thickness  
ASTM D-882 - Breaking Factor, Tensile Strength, Elongation at Break, Yield Strength  
ASTM D-1922-06a - Tear Strength  
ASTM D-1709 - Dart Drop Impact Resistance  
MIL-STD-3010 - Puncture Resistance  
EN 13432 - Compostability Testing

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### EcoSol®

ASTM D-6988 - Film Thickness  
ASTM D-882 - Breaking Factor, Tensile Strength, Elongation at Break, Yield Strength

ASTM D-1922-06a - Tear Strength  
ASTM D-1709 - Dart Drop Impact Resistance  
MIL-STD-3010B, Test Method 2024, Modified - Seal Strength

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**EcoShrink®**

ASTM D-882 - Breaking Factor  
ASTM D-1709 - Dart Drop Impact Resistance  
MIL-STD-3010 - Puncture Resistance  
ASTM D-1922 - Tear Strength  
ASTM D-2732 - Shrink  
ASTM D-6400 - Standard for Commercial Composting

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**EcoWeave®**

ASTM D-5034 - Elongation  
ASTM D-5034 - Tensile Strength  
ASTM D-5034 - Tearing Strength  
ASTM D-3787 - Burst Strength

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**Eco Works® 45/Eco Works® 10**

EN 13432 - Compostability Testing

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**MilCorr® VpCI® Shrink Film**

ASTM D-882 - Breaking Factor  
ASTM D-882 – Tensile Strength at Break  
ASTM D-882 – Elongation at Break  
ASTM D-882 - Yield Strength  
ASTM D-1709 - Dart Drop Impact Resistance  
ASTM D-1922A – Elmendorf Tear Strength  
ASTM D6988-07 – Film Thickness  
ASTM F3429 – Water Vapor Transmission Rate

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**VpCI®-125**

ASTM B-257 – Surface Resistivity  
ASTM D-882 - Breaking Factor  
ASTM D-882 – Tensile Strength at Break  
ASTM D-882 – Elongation at Break  
ASTM D-882 - Yield Strength  
ASTM D-1709 - Dart Drop Impact Resistance  
ASTM D-1922A – Elmendorf Tear Strength  
ASTM F-3429 – Water Vapor Transmission Rate  
MIL-PRF-81705D – Static Decay

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**VpCI®-126 Blue, VpCI®-126 Shrink, VpCI®-126 HP UV**

ASTM D6988 – Film Thickness  
ASTM D-882 - Breaking Factor, Tensile Strength, Elongation at Break, Yield Strength  
ASTM D-1922-06a - Tear Strength  
MIL-STD-3010, TM 2065 - Puncture Resistance  
ASTM D-1709 - Dart Drop Impact Resistance  
ASTM D-1894 - Coefficient of Friction  
ASTM D2732-30 – Shrink Test (shrink films only)  
MIL-PRF-22019 - Type 1 Performance Requirements  
MIL-PRF-22020 Type 1  
ASTM F-1249 - Water Vapor Transmission Rate

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## VpCI® Papers

### Cor-Pak® VpCI® Reinforced Paper

TAPPI T-410 - Basis weight  
TAPPI T-411 - Caliper  
ASTM D 3420-95B - Impact Puncture  
ASTM D-1922-94A - Tear Test

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### Cor-Pak® VpCI® Linerboard

Basis weight - TAPPI T-410  
TAPPI T-411 - Tear MD/CD, Caliper  
NACE TM0208 - Vapor Inhibiting Ability  
CC-004 - Razor Blade Test  
TAPPI T-538 - Smoothness

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### Cor-Pak® VpCI® Polycoated Paper

ASTM D-689 - Tear test  
ASTM F-1249 - Water Vapor Transmission Rate

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### EcoShield® Barrier Coating

TAPPI T 240 om-12 - Repulpability  
ASTM E-96 - Water Vapor Transmission Rate  
TAPPI T441 - Cobb Water Absorbancy Test  
TAPPI 559 - Grease Barrier

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### EcoShield® Barrier Paper/Linerboard

T-410 - Basis Weight  
T-411 - Caliper Thickness  
ASTM E-96 - Water Vapor Transmission Rate  
TAPPI T 240 om-12 - Repulpability Testing

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### EcoShield® VpCI®-144

TAPPI T-410 – Basis Weight  
TAPPI T-411 – Caliper thickness  
TAPPI T-414 - Tear Strength  
TAPPI T-494 – Dry Tensile/TEA  
TAPPI T-404 – Stretch  
TAPPI T-530 – Ink Resistance  
TAPPI T-538 – Smoothness  
TAPPI T-541 – Internal Bond  
TAPPI T-476 – Abrasion  
ASTM F-1249 - Water Vapor Transmission Rate  
MIL-STD-3010C (modified)  
TAPPI T 240 om-12 - Repulpability Testing

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### EcoShield® Heat Sealable Paper

UWSP OCC Equivalent Method - Repulpability  
TAPPI T-410 – Basis Weight  
TAPPI T-411 – Caliper thickness  
TAPPI T-452 - Brightness  
ASTM F88 - Seal Strength

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### EcoSonic® ESD Paper

FED-STD-101C Method 4046 – Static Decay  
ASTM B257 - Surface Resistivity

TAPPI T-410 – Basis Weight  
TAPPI T-411 – Caliper Thickness, Tear Strength  
TAPPI T-538 – Smoothness  
MIL PRF-81705 D - ESD Properties

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**CorShield® VpCI®-146**

TAPPI T-410 – Basis Weight  
TAPPI T-411 – Caliper thickness  
TAPPI T-414 - Tear Strength  
TAPPI T-494 – Dry Tensile/TEA  
Mullen Test - Burst Strength  
ASTM D-6868 - Compostability  
ASTM F-1249 - Water Vapor Transmission Rate

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**CorShield® VpCI®-147 HP**

TAPPI T-410 – Basis Weight  
TAPPI T-411 – Caliper thickness  
TAPPI T-414 - Tear Strength  
TAPPI T-494 – Dry Tensile  
Mullen Test - Burst Strength

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**VpCI®-148**

TAPPI T-410 - Basis Weight  
TAPPI T-411 - Caliper  
TAPPI T-414 - Tear Strength  
TAPPI T-494 – Dry Tensile  
TAPPI T-454 - Grease Resistance  
TAPPI UM-557 - Grease Resistance  
NACE TM0208 - Vapor Inhibiting Ability  
ASTM D-882 - Breaking Factor, Tensile Strength, Elongation at Break, Yield Strength

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**VpCI® Emitters and Electronics Products**

**BioPad®**

NACE Standard TM0208-2008 – Vapor Inhibiting Ability  
CC-004 Razor Blade

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**ElectriCorr® VpCI®-238, 239, and 248**

ASTM D-1748 Humidity

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**ElectriCorr® VpCI®-286**

ASTM B-117 Salt Spray  
ASTM D-1748 Humidity

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**VpCI®-143 Emitters**

TAPPI T-410 - Basis Weight  
TAPPI T-411 - Caliper Thickness  
TAPPI T-411 -Tear Strength  
TAPPI T-538 - Smoothness

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**Desicorr® VpCI®**

MIL-D-3464E – Activated, Bagged Desiccant

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**CorWipe® 300/500**

ISO 2878 - Antistatic and conductive products - Determination of electrical resistance

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**VpCI® Powders**

**VpCI®-308/308 Pouch**

NACE TM0208-2008 – Vapor Inhibiting Ability

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**VpCI®-309/309 Pouch**

NACE TM0208-2008 – Vapor Inhibiting Ability modified

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**VpCI®-609 / EcoPouch®**

NACE Standard TM0208-2008 – Vapor Inhibiting Ability  
OECD 306, BOD-28 - Marine Closed Bottle Biodegradability Test  
OECD 117 - Partition Coefficient (n-octanol/water)  
MIL-I-22110C – Vapor Inhibiting Ability

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**Removable Rust Preventives and Metalworking Fluids**

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**BioCorr® Rust Preventative/BioCorr® HP**

ASTM D-1748 – Humidity  
ASTM D-1735 – Water Fog  
ASTM D-6866-11 – Determination of Biobased Content

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**CorrLube® Food Grade Penetrant**

ASTM D-97 - Pour point  
ASTM D-1748 - Humidity chamber  
ASTM D-130 - Copper Strip corrosion  
ASTM D-971 - Interfacial tension of oil against water  
ASTM D-445 - Kinematic Viscosity  
ASTM D-2161 - Saybolt viscosity

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**CorShield® VpCI®-368/368 D/368 M**

ASTM D-1735 – Water Fog Cabinet  
ASTM D-1748 – Humidity Cabinet  
ASTM B-117 – Salt Fog Cabinet  
MIL-PRF-16173E, Grade 1 (368 M only)

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**CorShield® VpCI®-369/369 D/369 M**

ASTM D-1735 – Water Fog Cabinet  
ASTM D-1748 – Humidity Cabinet  
ASTM B-117 – Salt Fog Cabinet  
ASTM D3690 – VOC  
ASTM D522 – Flexibility  
MIL-PRF-16173E, Grade 2 (369 M only)

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**EcoAir® Mold Release**

ASTM D-1735 – Water Fog Cabinet

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**EcoLine® Cutting Fluid**

ASTM D-6866 – Determination of Biobased Content  
ASTM D-1748 – Humidity Cabinet  
ASTM D-4627 – Cast Iron Chip Test

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**EcoLine® ELP**

ASTM D 445 - Kinematic Viscosity  
ASTM D 4172 - 4-Ball Wear  
ASTM D2783 - 4-Ball Weld  
ASTM D3233A - Pin & Vee Block Test  
ASTM D97 - Pour Point  
ASTM D665 A/B - Rust Prevention  
ASTM D1748 - Humidity Cabinet

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**EcoLine® CLP**

ASTM D-6866-11 – Determination of Biobased Content  
ASTM D-1748 – Humidity Cabinet  
ASTM D 4172 - 4-Ball Wear  
ASTM D3233A - Pin & Vee Block Test

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**EcoLine® 3220**

ASTM D-6866-11 – Determination of Biobased Content  
ASTM D-1735 – Water Fog  
ASTM D-1748 – Humidity

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**EcoLine® 3690**

ASTM D-6866-11 – Determination of Biobased Content  
ASTM D-1735 – Water Fog  
ASTM D-1748 – Humidity  
ASTM B-117 – Salt Fog

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**VpCI®-316**

ASTM D-1735 – Water Fog Cabinet  
ASTM D-1748 – Humidity Cabinet

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**VpCI®-325**

ASTM D-1735 – Water Fog Cabinet  
ASTM D-1748 – Humidity Cabinet  
MIL-PRF-81309 – Neutral Salt Spray and Corrosivity

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**VpCI®-322**

ASTM D-92 - Flash Point, Fire Point  
ASTM D-6749 - Pour Point  
ASTM D-974 - Total Acid Number  
ASTM D-1401 - Oil Separability  
ASTM D-892 - Foaming Characteristics  
ASTM D-4636 - Oxidation Stability  
ASTM D-445 - Viscosity Index  
ASTM D-130 – Copper strip corrosion test  
ASTM D-665 – Rust Preventing Characteristics

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**VpCI®-323**

ASTM D-97 – Pour point

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**VpCI®-326**

ASTM D-92 - Viscosity, Flash Point, Fire Point  
ASTM D-445 - Viscosity Index  
ASTM D-6749 – Pour point  
ASTM D-974 – Acid/Base number by titration  
ASTM D-1401 – Water separability testing  
ASTM D892 - Foaming Characteristics  
ASTM D1401 - Oil Separability  
ASTM D-1735 – Water Fog Cabinet

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**VpCI®-329**

ASTM D-92 - Viscosity, Flash Point, Fire Point  
ASTM D-445 Viscosity Index  
ASTM D-6749 – Pour point  
ASTM D-974 – Acid/Base number by titration  
ASTM D-1401 – Water separability testing

ASTM D892 - Foaming Characteristics  
ASTM D1401 - Oil Separability  
ASTM D-1735 – Water Fog Cabinet  
ASTM B-117 – Salt Fog

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**VpCI®-330**

ASTM D-1748 - Humidity Cabinet  
ASTM B-117 - Salt Fog  
ASTM D-130 - Copper Strip Test

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**VpCI®-340 CLP**

ASTM D-1748 – Humidity Cabinet  
ASTM B-117 – Salt Fog  
Solvent-free Viscosity Testing, -40°C  
ASTM D-5620A - Thin Film Falex Pin and Vee  
MIL-PRF-63460 4.3.1 – Corrosion Production  
MIL-PRF-63460 4.5.1 – Firing Residue Removal  
MIL-PRF-63460 4.3.2 – Chemical Agent Detector Paper

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**VpCI®-344**

ASTM D-1748 – Humidity Test

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**VpCI®-345**

ASTM D-1748 – Humidity Test

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**VpCI®-347**

ASTM D-1748 – Humidity Test  
ASTM D-4627 – Cast Iron Chip Test  
ASTM D-2783 – 4-Ball E.P. Test  
ASTM D5619 – Tapping Torque Test  
ASTM G-31 – Immersion Corrosion Testing  
ASTM D-2266 4-Ball Wear Test

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**VpCI®-377**

ASTM D1735 – Water Fog Cabinet  
ASTM D-1748 – Humidity Cabinet  
ASTM G-31 – Immersion Corrosion Testing

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**VpCI®-378, VpCI®-379**

ASTM D-1748 – Humidity Cabinet

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**VpCI®-389, 389 D, 391**

ASTM D-1748 Humidity Cabinet  
ASTM B-117 Salt Fog

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**VpCI® Super Penetrant**

ASTM B-117 - Salt Spray  
ASTM D-1748 - Humidity test

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**VpCI® Coolant Antifreeze**

ASTM D-1384 - Standard Test Method for Engine Coolant in Glassware

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**Greases**

**CorrLube® VpCI® Lithium EP Grease**

ASTM D-2265 - Dropping Point  
ASTM D-217 - Cone Penetration  
ASTM D-2596 - Four Ball Weld



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**EcoLine® Biobased Food Machinery Lubricating Grease (1 & 2)**

ASTM D-2265 - Dropping Point  
ASTM D-217 - Cone Penetration  
ASTM D-2266 - Four Ball Wear  
ASTM D-2596 - Four Ball Weld  
ASTM D-1743 - Corrosion Preventive Properties

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**EcoLine® Wire Rope Grease (0 & 1)**

OECD 301 F - Biodegradability  
ASTM D-217 - Cone Penetration  
ASTM D-2265 - Dropping Point  
ASTM D-2596 - Four Ball Weld  
ASTM D-2266 - Four Ball Wear

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**EcoLine® Drilling Rod Grease (1, 2 & 3)**

OECD 301 F - Biodegradability  
ASTM D-217 - Cone Penetration  
ASTM D-2265 - Dropping Point  
ASTM D-2596 - Four Ball Weld  
ASTM D-2266 - Four Ball Wear

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**EcoLine® Heavy Duty Grease**

OECD 301 F - Biodegradability  
ASTM D-217 - Cone Penetration  
ASTM D-2265 - Dropping Point  
ASTM D-2596 - Four Ball Weld  
ASTM D-2266 - Four Ball Wear

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**EcoLine® Biobased Grease powered by Nano-VpCI®**

ASTM D-217 - Cone Penetration  
ASTM D-566 - Dropping Point  
ASTM D-4048 - Copper Strip Test  
ASTM D-5969 - Rust Prevention  
ASTM D-2266 - Four Ball Wear  
ASTM D-2596 - Four Ball Weld

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**EcoLine® 5th Wheel Grease**

ASTM D-6866 Method B - Biobased Content  
ASTM D-217 - Cone Penetration  
ASTM D-2265 - Dropping Point  
ASTM D-2596 - Four Ball Weld  
ASTM D-2266 - Four Ball Wear

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**EcoLine® Rail Curve Grease (Summer & Winter)**

OECD 301 C Modified - Biodegradability  
ASTM D-217 - Cone Penetration  
ASTM D-2265 - Dropping Point  
ASTM D-2596 - Four Ball Weld  
ASTM D-2266 - Four Ball Wear

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**VpCI® High Performance Coatings**

VpCI®-280, -371, -373, -375, -381, -383, -384, -386 (all versions),  
-387, -390, -392, -395, -396, -398, -2026, CorrBarrier™, CorrVerter®

ASTM B-117 Salt Spray  
ASTM D-1748 Humidity  
ASTM D-3359 Adhesion  
ASTM D-522 Flexibility  
ASTM D-532 Gloss  
ASTM D-3960 VOC  
ASTM D-3363 Pencil Hardness

### **VpCI® Surface Preparation Products**

#### **EcoLine® Cleaner Degreaser**

ASTM D-6866-11 – Determination of Biobased Content

#### **VpCI®-411**

ASTM D-6866-11 – Determination of Biobased Content

#### **VpCI®-414**

ASTM G-121 & G-122 - Cleaning Effectiveness

#### **VpCI®-415**

MIL-PRF-87937, Type IV – Cleaning Compound, Aerospace Equipment

ASTM F-483 - Immersion Corrosion for Aircrafts

ASTM F-1110 - Sandwich Corrosion

ASTM F-485 - Effects of Cleaners on Unpainted Aircraft Surfaces

ASTM F-502 - Effects of Cleaners on Painted Aircraft Surfaces

ASTM F-484 - Stress Cracking of Acrylic Plastics

ASTM F-1111 - Corrosion of Low-Embrittling Cadmium Plate

ASTM F-519 Type 1C - Mechanical Hydrogen Embrittlement

ASTM G-121 & G-122 - Cleaning Effectiveness

40 CFR 796.3100 – Aerobic Aquatic Biodegradation

Boeing D6-17487, Revision M – Exterior and General Cleaners and Liquid Waxes, Polishes and Cleaning Compounds

#### **VpCI®-418/418 LM**

ASTM D-4627 - Cast Iron Chip Test

ASTM G-121 & G122 - Cleaning Effectiveness

ASTM D-1748 - Humidity Cabinet

#### **VpCI®-422/423**

ASTM F-519 – Mechanical Hydrogen Embrittlement Evaluation of Plating/Coating Processes and Service Environments

ASTM D-6866-11 – Determination of Biobased Content

OECD Method 301D – Biodegradability

#### **VpCI®-428**

OECD Method 301D – Biodegradability

#### **VpCI®-440**

ASTM D1748 – Humidity

### **VpCI® Water Treatment Products**

#### **Boiler Lizard®**

NACE Standard TM0208-2008 – Vapor Inhibiting Ability

#### **Cooling Loop Gator®**

EPA-821-R-02-012 - LC50 Aquatic Toxicity Testing

#### **EcoLine® AL-Corr™**

ASTM D6866 Method B - Biobased Content

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**EcoLine® VpCI®-642**

ASTM D6866 Method B - Biobased Content

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**M-645**

EPA/600/4-90/027F - NOEC/LOEC Aquatic Toxicity Testing  
ASTM D-1735 - Humidity Testing

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**S-8**

ASTM D6866 Method B - Biobased Content  
OECD 202 - NOEC/LOEC and LC50 Aquatic Toxicity Testing

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**S-10/S-10 F/ S-10 FA**

ASTM D6866 Method B - Biobased Content (S-10 F)  
ASTM G 31-72 - Immersion Corrosion Testing  
ASTM G5 - Tafel Polarization Measurements  
ASTM D 1881 - Foaming Tendencies

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**S-14/S-14 F/S-14 RO/S-14 Bio**

ASTM D6866 Method B - Biobased Content (S-14 Bio)  
NACE TM0374 - Precipitation of Calcium Sulfate and Calcium Carbonate (S-14, S-14 F, S-14 Bio)

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**S-69 Powder**

EPA-821-R-02-012- NOEC/LOEC and LC50 Aquatic Toxicity Testing

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**VpCI®-611**

EPA/600/4-90/027F - NOEC/LOEC Aquatic Toxicity Testing

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**VpCI®-629/629 SC**

NACE ID 182 - Corrosion Wheel Test

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**VpCI®-629 Bio**

NACE TM-01-77 -Protection Coefficient  
ASTM G 170 - Rotating Cylinder Electrode Test  
EPA/600/4-90/027F - NOEC/LOEC and LC50 Aquatic Toxicity Testing

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**VpCI®-637/637 GL**

EPA-821-R-02-012 - NOEC/LOEC and LC50 Aquatic Toxicity Testing  
NACE ID 182 - Corrosion Wheel Test  
ASTM G 170 - Rotating Cylinder Electrode Test  
Methyldiethanolamine Foaming Test  
NACE TM-01-77 - Protection Coefficient (637 only)

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**VpCI®-637 TOL**

ASTM G-170 - Rotating Cylinder Electrode Test

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**VpCI®-639**

NACE TM-01-77 (Protection Coefficient)

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**VpCI®-641**

ASTM D6866 Method B - Biobased Content  
EPA/600/4-90/027F - NOEC/LOEC Aquatic Toxicity Testing

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**VpCI®-645**

ASTM D6866 Method B - Biobased Content  
EPA-821-R-02-012- NOEC/LOEC and LC50 Aquatic Toxicity Testing

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**VpCI®-649**

EPA/600/4-90/027F - NOEC/LOEC Aquatic Toxicity Testing

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**VpCI®-649 BD**

**VpCI® Additives****M-95**

ASTM D4627 – Cast Iron Chip  
 OECD 306 – Biodegradability in Seawater  
 OECD 117 - Partition Coefficient (n-octanol/water)

**M-370**

ASTM D1735 – Water Fog Cabinet  
 ASTM D-1748 – Humidity Cabinet

**M-528/528 L**

ASTM D4627 – Cast Iron Chip  
 ASTM D-1748 – Humidity testing

**M-529**

ASTM D-4172 – 4-ball wear test  
 ASTM D-974 – Acid/Base Number by Titration  
 ASTM D-1401 – Water separability testing  
 ASTM D-1748 – Humidity testing  
 ASTM D-2196 – Brookfield Viscometer  
 ASTM D-892 - Foaming Characteristics

**M-640 L**

ASTM D-1384 – Corrosion Test for Engine Coolants in Glassware

**VpCI®-705**

ASTM D-2274 - Oxidation Stability of Distillate Fuel Oil  
 ASTM D-525 - Oxidation Stability of Gasoline  
 MIL-PRF-25017 4.4.10 - Storage Stability  
 MIL-PRF-25017 4.4.2.1 - Compatibility with other Fuel Additives  
 FED-STD-791 Method 550 - Emulsification Tendency  
 MIL-PRF-25017 4.4.3.1 - Rust Test  
 MIL-PRF-21260 4.3.3.9.3 - Acid Neutralization Test  
 ASTM D-665 – Rust Preventing Characteristics  
 ASTM D-974 – Acid/Base Number by Titration  
 ASTM D-1748 – Humidity testing  
 ASTM D-2196 – Brookfield Viscometer  
 General Motors Part Number 10661800

**VpCI®-706**

ASTM D-5534 - Vapor-Phase Rust-Preventing Characteristics of Hydraulic Fluids

**VpCI®-707**

ASTM D-2274 - Oxidation Stability of Distillate Fuel Oil  
 ASTM D-525 - Oxidation Stability of Gasoline

**Corrologic® Products****CorroLogic® Emitters**

NACE Standard TM0208-2008 – Vapor Inhibiting Ability

**CorroLogic® Powder**

NACE Standard TM0208-2008 – Vapor Inhibiting Ability

**MCI® Products**

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**MCI® Architectural Coating**

ASTM D-7234 – Pull-Off Adhesion Strength of Coatings on Concrete  
ASTM B-117 Salt Spray  
ASTM D-1748 Humidity  
ASTM D-3359 Adhesion by Tape Test  
ASTM D-522 Flexibility  
ASTM D-532 Gloss  
ASTM D-3960 VOC  
ASTM D-3363 Pencil Hardness

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**MCI® CorShield®**

ASTM A944-99 Bond Strength of Steel Reinforcing Bars to Concrete  
ASTM B-117 Salt Spray  
ASTM D-1748 Humidity

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**MCI® CorteCure**

ASTM D6866-11 – Determination of Biobased Content

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**MCI®-309**

Admixture Pull-Out Strand Evaluation

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**MCI® Grenades; Mini Grenades**

ASTM C494 - Specification for Chemical Admixtures for Concrete

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**MCI®-2005**

ASTM D-6866-11 – Determination of Biobased Content  
ASTM C494 - Specification for Chemical Admixtures for Concrete  
ASTM C1582 – Specification for Admixtures to Inhibit Chloride-Induced Corrosion of Reinforcing Steel in Concrete

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**MCI®-2005 NS**

ASTM D-6866-11 – Determination of Biobased Content  
ASTM C494 - Specification for Chemical Admixtures for Concrete  
ASTM C1582 – Specification for Admixtures to Inhibit Chloride-Induced Corrosion of Reinforcing Steel in Concrete

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**MCI®-2005 AL**

ASTM D-6866-11 – Determination of Biobased Content  
ASTM C494 - Specification for Chemical Admixtures for Concrete  
ASTM C1582 – Specification for Admixtures to Inhibit Chloride-Induced Corrosion of Reinforcing Steel in Concrete

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**MCI®-2000/MCI®-2001**

ASTM C494 - Specification for Chemical Admixtures for Concrete

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**MCI®-2006**

ASTM C494 - Specification for Chemical Admixtures for Concrete  
ASTM G-180 in progress after reformulation

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**MCI®-2006 NS**

ASTM D-6866-11 – Determination of Biobased Content  
ASTM C494 - Specification for Chemical Admixtures for Concrete

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**MCI®-2012 IntegRepel**

ASTM C143 - Standard Test Method for Slump of Hydraulic-Cement Concrete  
ASTM C231 - Standard Test Method for Air Content of Freshly Mixed Concrete by the Pressure Method  
ASTM C39 - Standard Test Method for Compressive Strength of Cylindrical Concrete Specimens

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**MCI®-2019, 2019 FD**

ASTM C-672 - Scaling Resistance of Concrete Surfaces Exposed to Deicing Chemicals  
ASTM C-156 - Water Vapor Transmission  
ASTM C-1218 - Chloride Ion Intrusion  
EN 13579 + EN 14630 – Depth of Penetration  
EN 13580:2003 - Water Absorption and Resistance to Alkali for Hydrophobic Impregnation  
UNE-EN 13579:2003 - Drying test for hydrophobic impregnation  
US Bureau of Reclamation M-82 (M0820000.714) – Performance of Corrosion Mitigation Technologies in Concrete Repairs

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**MCI®-2019 W, 2019 WFD**

ASTM C-156 - Water Vapor Transmission  
ASTM C-1218 - Chloride Ion Intrusion  
ASTM C-672 - Scaling Resistance of Concrete Surfaces Exposed to Deicing Chemicals

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**MCI®-2018, 2018 VO**

NCHRP 244 Series IV - Accelerated Weathering Test, Sothern Exposure  
AASHTO T259  
ASTM C642  
Federal Specification SS-W-110C  
ASTM C672 - Scaling Resistance of Concrete Surfaces Exposed to Deicing Chemicals  
US Bureau of Reclamation M-82 (M0820000.714) – Performance of Corrosion Mitigation Technologies in Concrete Repairs  
UNE-EN 13579:2003 - Drying test for hydrophobic impregnation  
Alberta Transportation Specification B388 - Concrete Sealer Testing  
BS EN 13580:2002 - Water Absorption and Resistance to Alkali for Hydrophobic Impregnation  
EN 13579 + EN 14630 – Depth of Penetration

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**MCI®-2020**

US Bureau of Reclamation M-82 (M0820000.714) - Performance of Corrosion Mitigation Techniques in Concrete Repairs.  
ASTM E-96 - Water Vapor Transmission

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**MCI®-2021**

ASTM C-672 –Scaling Resistance of Concrete Surfaces Exposed to De-Icing Chemicals and Freeze/Thaw  
AASHTO T-259 - Resistance of Concrete to Chloride Ion Penetration  
ASTM C-642 - Absorption in Hardened Concrete  
EN 13579:2003 - Drying test for hydrophobic impregnation  
EN 13580:2003 - Water absorption and resistance to alkali for hydrophobic impregnation  
EN 13579+EN 14630 - Depth of Penetration

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**MCI®-2022**

ASTM C-672 –Scaling Resistance of Concrete Surfaces Exposed to De-Icing Chemicals and Freeze/Thaw

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**MCI®-2026 Primer WB**

ASTM D-2697 - Solids Content  
ASTM D-2240 – Hardness  
ASTM D-635 – Flammability  
EPA Method 24 – VOC Content

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**MCI®-2026 Floor Coating**

ASTM D-2240 – Hardness  
ASTM D-2697 - Solids Content  
EPA Method 24 – VOC Content  
ASTM C-413 – Water absorption  
ASTM D-635 – Flammability

## ASTM D-4060 –Abrasion Resistance