

COLOR SYSTEMS

by MASTER HALCO

COMMERCIAL/INDUSTRIAL COLOR CHAIN-LINK FENCE SYSTEMS



Fencing Without Boundaries™

For more than 40 years Master Halco has been the industry leader in the development of chain-link fence systems. Today, Master Halco is the largest manufacturer and distributor of complete lines of fence systems and fence accessories.

Contemporary color fence systems can be artistically blended into the environment to dramatically enhance any chain-link fence system. These aesthetically enhanced coatings provide further value to the end-user with the additional benefit of protecting the base materials from corrosion. Master Halco provides the latest generation of protective coatings for chain-link fence systems by combining the corrosion protection of zinc with the added protection of long-lasting color coatings.

Whether the application is residential, commercial, recreational, industrial, or high-security, a color chain-link fence system adds that creative flair and aesthetic touch that reflects a well-designed and well-planned project. Master Halco's color systems feature coatings that are tough and durable and that resist the most severe weather conditions to maintain the attractive appearance of any fence installation year after year.

Master Halco offers some of the newest generations of color chain-link fence systems:

- Permafused® II Chain-Link Color Systems featuring polyolefin coated fabric and framework
- Spectra® Chain-Link Color Systems featuring polyester coated framework and extruded polyvinyl chloride fabric

COLOR SYSTEMS

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Use the chart below to determine which chain-link fence system is right for your application:

Systems

DESIGN SELECTIONS	PERMAFUSED II	SPECTRA
Colors	5 Choices	3 Choices
Available Heights	3' - 20'	3' - 20'
Mesh	8 Choices	8 Choices
Type 1 Standard Weight Pipe (Sch. 40)	Yes	No
Type 2 High Yield/Tensile Strength Pipe (DQ 40)	Yes	Yes
DURABILITY	PERMAFUSED II	SPECTRA
Corrosion Resistance	Best	Better
Fade Resistance	Best	Better
Peel Resistance	Best	Better
Weathering Resistance	Best	Better
Abrasion Resistance	Best	Better
Chemical Resistance	Best	Better
Low Temperatures	Best	Better
COATING	PERMAFUSED II	SPECTRA
	Polyolefin	Polyester/ Polyvinyl
WARRANTY	PERMAFUSED II	SPECTRA
	15 years	12 years

PERMAFUSED® II

by MASTER HALCO

Permafused® II offers the best solution for industrial, commercial, and residential applications. Permafused II features an environmentally friendly polyolefin coating and a 15-year warranty.

Usage

All Applications



Tennis Courts



Perimeter Fence



Government Facilities



High-Security Facilities

Warranty



15-YEAR LIMITED WARRANTY provides confidence and assurance that you've selected one of the best color chain-link fence systems available.

Colors



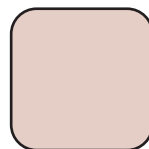
FOREST GREEN



OLIVE GREEN



MIDNIGHT BLACK



TAN



SIERRA BROWN

Note: Due to manufacturing variances and limitations in the production process, colors may vary from this brochure. Contact Master Halco for actual color samples.

Master Halco is committed to continuous product improvement. Permafused, one of the oldest names associated with chain-link color systems, now features the most innovative color coating available with the new Permafused II System. This new polyolefin coating offers lasting protection with the added benefit of providing superior adhesion between the galvanized steel substrate and the exterior coating without the need of a solvent based primer, making the product extremely environmentally friendly.

Specify Permafused II for applications where security, protection from corrosion, and the durability that you would expect from a quality chain-link color system are important.

Permafused II features an extensive pre-treatment and coating system along with many other immediate and long-term product benefits:

- Excellent long-term adhesion without use of a primer makes Permafused II one of the most environmentally friendly color systems available on the market.
- Outstanding performance in highly corrosive environments provides years of protection.
- High-impact resistance reduces the chance of damage during product handling and installation.
- Exceptional resistance to ultra violet light prevents premature fading.
- Extreme flexibility reduces susceptibility to cracking and chipping, even in changing weather conditions.

PERMAFUSED® II

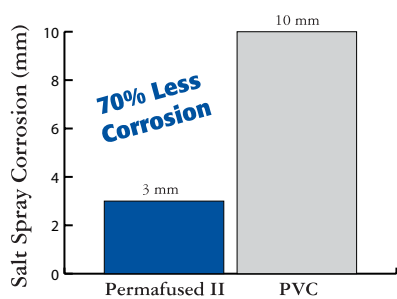
by MASTER HALCO

Permafused® II offers superior performance over ordinary systems which use a PVC coating on the fittings, framework, and fabric:

Compare Permafused II to PVC

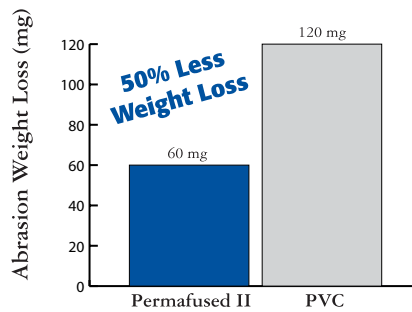
	PERMAFUSED II	PVC
Corrosion Resistance	Excellent	Good
Peeling Resistance	Excellent	Good
Abrasion Resistance	Excellent chip resistance, slight marring	Good chip resistance; marring
Chemical Resistance	Good	Fair
Low Temperature Resistance	Excellent	Good
Weathering Resistance	Excellent resistance to UV weathering crack and peel	Good resistance to UV weathering crack and peel

Salt Spray Resistance



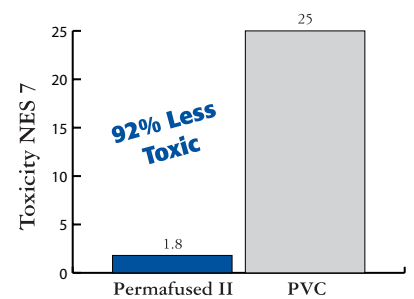
Level of corrosion under color coating after 1,000 hours of exposure to salt spray of scribed sample. Test conducted in compliance with ASTM B 117.

Abrasion Resistance



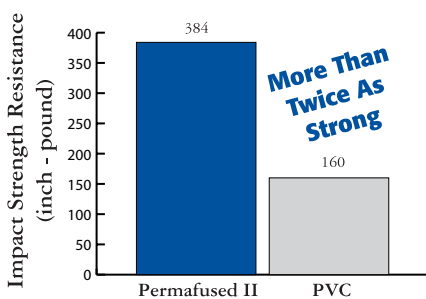
Level of coating weight loss when tested in accordance with test methods and definitions of ASTM D 4060.

Toxicity Index



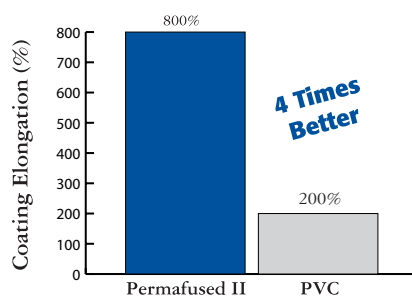
Level of toxic components by mass. Permafused II contains no chlorine components or plasticizers such as phthalates.

Impact Resistance



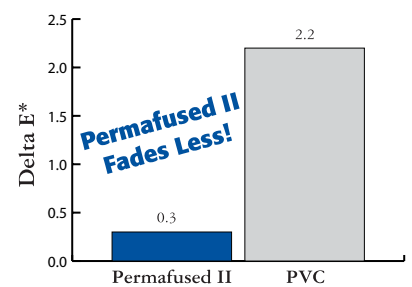
Point at which coating will fail upon rapid deformation impact. Test conducted in compliance with ASTM D 2794.

Elongation Resistance



Point at which product coating will break when it is elongated or stretched.

Fade Resistance



Based on 268 days of testing of black color samples in the Arizona sun.








*Delta E is a mathematical calculation that measures change in color based upon electronic readings of the LAB scale before and after submission to ultraviolet radiant exposure of 891,000 langley.

INDUSTRIAL /COMMERCIAL





Framework Coating Steps

Eleven Stage Permafused® II In-Line Coating Process

Seven Stage Chemical Pre-Treatment System

-  Acid Rinse to eliminate oxides
-  Clear water rinse to remove acid
-  Alkaline rinse to remove dirt and oil
-  Clear water rinse to remove alkaline
-  Zinc phosphate to etch and provide crystal for coating
-  Clear water rinse to remove excess phosphate
-  Seal rinse to prevent spotting during drying stage

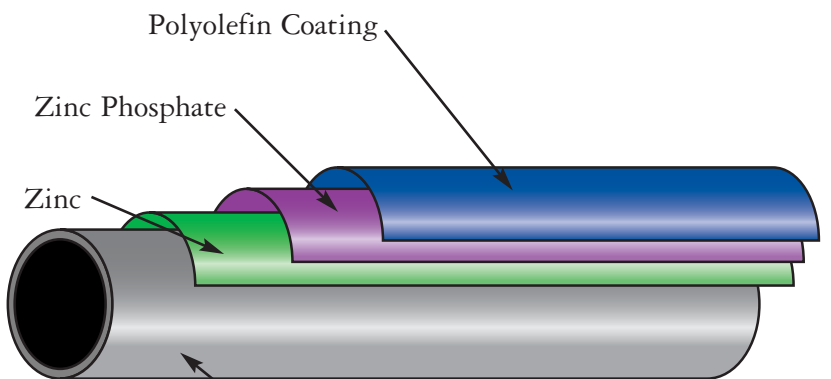
Four Stage Color Coating System

-  Drying oven in preparation of coating
-  Polyolefin electrostatically applied
-  Final flow of polyolefin in curing oven
-  Cooled down at ambient temperature

FACTORY APPLIED

State-of-the-art in-line coating system ensures excellent adhesion and long service life

Coatings



Steel

Type 1 - Standard Weight Pipe (Sch. 40)

or

Type 2 - High Yield/Tensile Strength Pipe (DO 40)

Material Selection

Chain-Link Fabric

Type:	Permafused II Polyolefin fused and adhered to zinc-coated steel wire per ASTM F 668 Class 2b
Gauge:	6, 9, 11, 12 and 14 gauge galvanized core wire
Mesh:	3/8", 1/2", 5/8", 1", 1-1/4", 1-3/4", 2" and 2-1/4"
Height:	3', 42", 4', 5', 6', 7', 8', 10', 12', 16' and 20'
Selvage:	Knuckled top and bottom up to 5' high, twisted and knuckled 6' to 20' high, except 1-1/4" mesh and smaller knuckled top and bottom

NOTE: Not all meshes are available in all gauges

Framework

- Type 1: Permafused II Polyolefin, 10 mils minimum, over galvanized steel ASTM F 1043, Group 1A, standard weight pipe, schedule 40. Hot-dipped galvanized with a minimum average 1.8 ounces per square foot of zinc-coated surface area.
- Type 2: Permafused II Polyolefin, 10 mils minimum, over galvanized steel ASTM F 1043, Group 1C, with minimum yield strength of 50,000 PSI. Protective coating per ASTM F 1043, external coating Type B, zinc with organic overcoat, 0.9 ounces per square foot minimum zinc coating with chromate conversion coating and verifiable polymer film.

● Top Rail

Type 1: 1-5/8" O.D. Permafused II Standard Weight Pipe (0.140" Wall Thickness, 2.27 lb./ft.)

Type 2: 1-5/8" O.D. Permafused II DQ 40 Pipe (0.111" Wall Thickness, 1.83 lb./ft.)

● Line Posts

Type 1: 2-3/8" O.D. Permafused II Standard Weight Pipe (0.154" Wall Thickness, 3.65 lb./ft.)

Type 2: 2-3/8" O.D. Permafused II DQ 40 Pipe (0.130" Wall Thickness, 3.12 lb./ft.)

● Terminal Posts

Type 1: 2-7/8" O.D. Permafused II Standard Weight Pipe (0.203" Wall Thickness, 5.79 lb./ft.)

Type 2: 2-7/8" O.D. Permafused II DQ 40 Pipe (0.160" Wall Thickness, 4.64 lb./ft.)

Swing Gates

Fabric:	Same mesh and gauge as chain-link selected
Framework:	1-5/8" O.D. for gates 6' high or less 1-7/8" O.D. for gates over 6' high
or	2" Sq. steel tubular (2.60 lb./ft.) or 2" Sq. aluminum tubular (0.94 lb./ft.)

Fittings

Tension and Brace Bands:	Permafused II coating, 6 mils minimum, over hot-dipped galvanized pressed steel
Caps, Eye Tops, Rail Ends:	Permafused II coating, 6 mils minimum, over hot-dipped galvanized pressed steel
Sleeves:	Permafused II coating, 6 mils minimum, over hot-dipped galvanized steel
Tie Wires:	Permafused II coating, 6 mils minimum, over zinc-coated steel wire



Download specifications, drawings and details for Master Halco products from our web site at www.FenceOnline.com

Spectra®, the latest generation of Master Halco's chain-link color fence systems, offers the corrosion protection of zinc in addition to the durability and attractive appearance of polyester framework and extruded polyvinyl chloride fabric.

Spectra is the perfect choice for property owners who need the strength and protection of a chain-link fence system plus an appearance that blends in beautifully with the environment.

Spectra defines property lines, as well as protecting and adding value to property.

Spectra provides the most cost-effective quality solution for most residential, commercial, and industrial applications by offering these features and benefits:

- Zinc-coated steel framework that is thoroughly cleaned during the pre-treatment process, then color coated with a 3 mil minimum polyester layer for dual protection from corrosion.
- All galvanized wire has a 15 mil minimum extruded polyvinyl chloride coating for dual protection from corrosion and the elements.
- Fittings are made of galvanized steel with 6 mil minimum of polymer coating for added protection.
- Treating components with both zinc and an electrostatically applied color coating helps them provide years of protection and security.

SPECTRA®

by MASTER HALCO

Spectra provides the most cost-effective quality solution for most residential, commercial, and industrial applications. Spectra features polyester coated framework and extruded polyvinyl chloride fabric, along with a 12-year warranty.

Usage

All Applications



Property Lines



Recreational Areas



Parks



Golf Courses

Warranty



12-YEAR LIMITED WARRANTY provides confidence and assurance that you've selected one of the best color chain-link fence systems available.

Colors



FOREST GREEN



MIDNIGHT BLACK



SIERRA BROWN







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INDUSTRIAL /COMMERCIAL




Framework Coating Steps

Nine Stage Spectra® In-Line Coating Process

Six Stage Chemical Pre-Treatment System

-  Alkaline wash
-  Fixidine rinse
-  Phosphate applied
-  Clear water rinse
-  Seal rinse
-  Clear water rinse

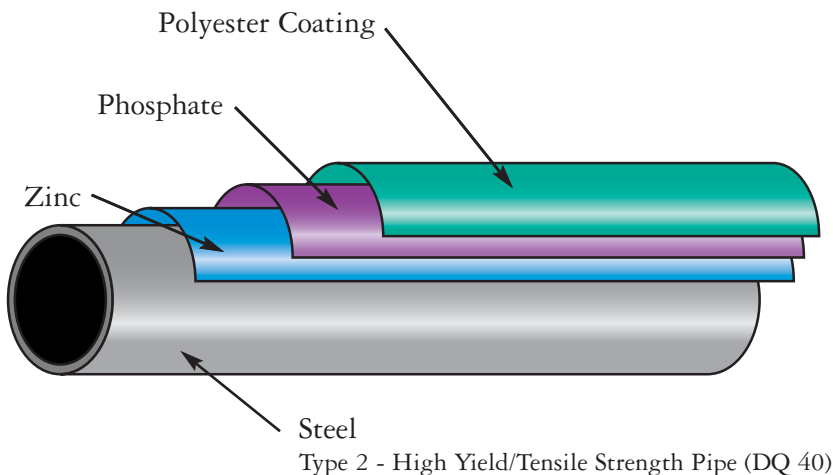
Three Stage Color Coating System

-  Drying oven
-  Polyester Coating Applied
-  Finish curing oven

FACTORY APPLIED

State-of-the-art in-line coating system ensures excellent adhesion and long service life

Coatings



Material Selection

Chain-Link Fabric

- Type: Spectra polyvinyl chloride extruded over zinc coated steel wire per ASTM F 668 Class 1 or Spectra polyvinyl chloride extruded and adhered to zinc coated steel wire per ASTM F 668 Class 2a
- Gauge: 6, 9, 11, 12, and 14 gauge galvanized core wire
- Mesh: 3/8", 1/2", 5/8", 1", 1-1/4", 1-3/4", 2" and 2-1/4"
- Height: 3', 42", 4', 5', 6', 7', 8', 10', 12', 16' and 20'
- Selvage: Knuckled top and bottom up to 5' high, twisted and knuckled 6' to 20' high, except 1-1/4" mesh and smaller knuckled top and bottom

NOTE: Not all meshes are available in all gauges

Framework

- Type 2: Spectra polyester resin, 3 mils minimum, over galvanized steel ASTM F 1043, Group 1C, with minimum yield strength of 50,000 PSI. Protective coating per ASTM F 1043, external coating Type B, zinc with organic overcoat, 0.9 ounces per square foot minimum zinc coating with chromate conversion coating and verifiable polymer film.

- **Top Rail**

Type 2: 1-5/8" O.D. Spectra DQ 40 Pipe
(0.111" Wall Thickness, 1.83 lb./ft.)

- **Line Posts**

Type 2: 2-3/8" O.D. Spectra DQ 40 Pipe
(0.130" Wall Thickness, 3.12 lb./ft.)

- **Terminal Posts**

Type 2: 2-7/8" O.D. Spectra DQ 40 Pipe
(0.160" Wall Thickness, 4.64 lb./ft.)

Swing Gates

- Fabric: Same mesh and gauge as chain-link selected
- Framework: 1-5/8" O.D. for gates 6' high or less
1-7/8" O.D. for gates over 6' high

Fittings

- Tension and Brace Bands: Polymer coating, 6 mils minimum, over hot-dipped galvanized pressed steel
- Caps, Eye Tops, Rail Ends: Polymer coating, 6 mils minimum, over hot-dipped galvanized pressed steel
- Sleeves: Polymer coating, 6 mils minimum, over hot-dipped galvanized steel
- Tie Wires: Polymer coating, 6 mils minimum, over zinc-coated steel wire



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Other Applications



Barb-Wire



Cantilever Slide Gates



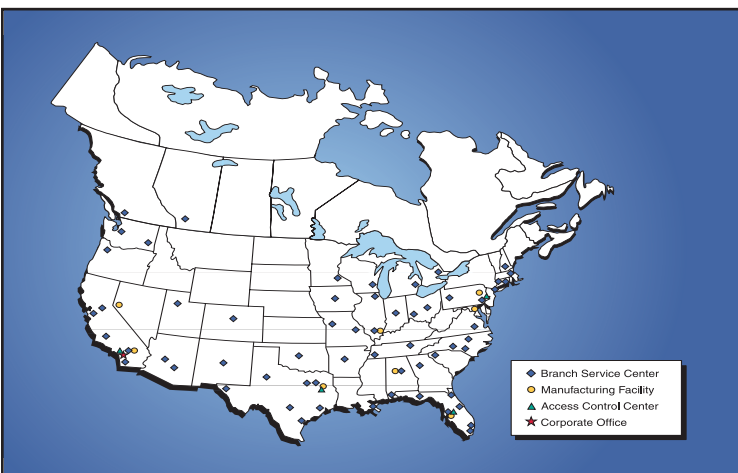
Vertical Lift Gates



Double Swing Gates

Permafused® II and Spectra® color chain-link fence systems offer a variety of solutions for residential, commercial, recreational, industrial, or high-security applications. These durable and attractive fence systems can be used to define property lines, provide security, and add value to any property. For more privacy, consider adding decorative polyethylene fence slats to create a beautiful custom look. Access control systems can easily be added to any type of gate to fit the specific needs of almost any facility.

With these innovative products, Master Halco is committed to continuous improvement in the fencing industry.



Master Halco is one of the largest distributors and manufacturers of fencing materials in the world. Dedicated solely to the fence industry for over 40 years, we offer a complete line of chain-link, ornamental iron, vinyl and wood fence systems, access controls, and fence accessories. With our total commitment to the fence industry and local representation, your professional fence contractor has the necessary support to assure your complete satisfaction.

Please visit our web site at www.FenceOnline.com for more information about Master Halco and our products.

Permafused® II & Spectra® are available from:



For more information, contact our Customer Service Department:
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