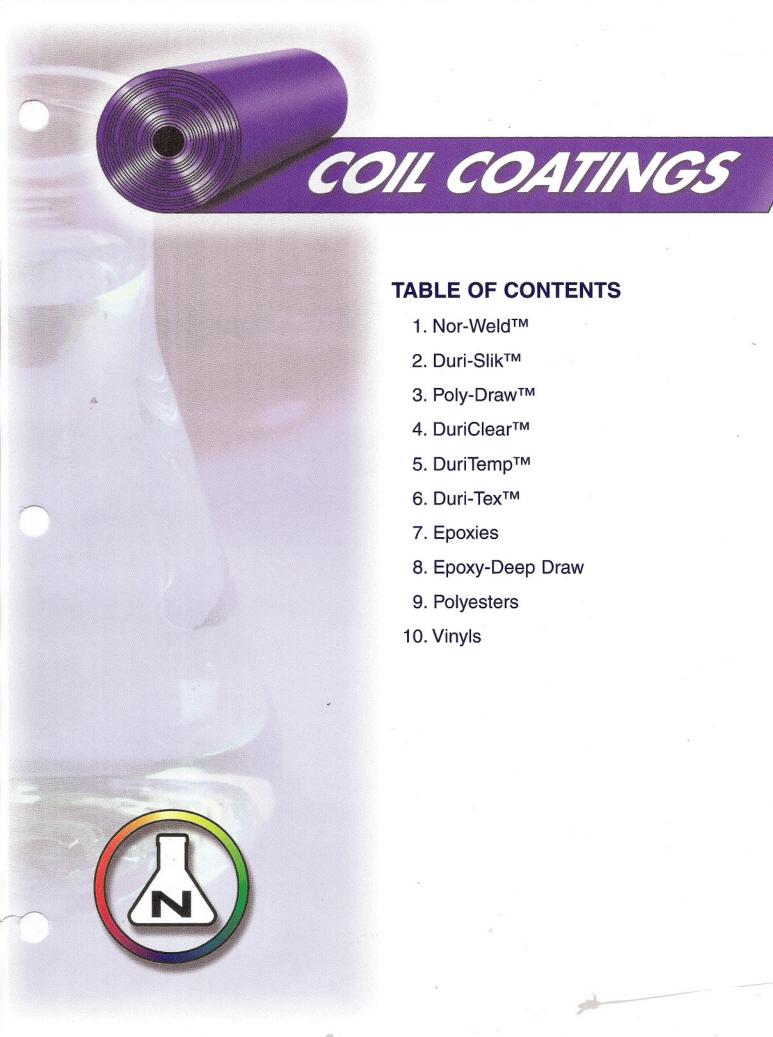


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### Nor-Weld™

### Weldable Coil Coating

Nor-Weld™ is a thermoset baking epoxy designed to be used as a protective and yet weldable coating, initially designed for gas tank applications. It has since found its way into other markets such as conduit, air filters, case goods, and office partitions. This unique product is very durable yet flexible enough to take a deep draw. It exhibits excellent chemical

resistance and good corrosion resistance. This coating was formulated to be a stand alone coating but also works well as a primer and may be topcoated with polyesters, acrylics, and alkyds. Carbide Black is the standard color but may be custom mixed in other colors.



Performance Characteristics	
Weldability	4000 Spot Welds
	<ul> <li>Projection Weld</li> <li>Consistent 5mm Weld Size</li> <li>1300 amps and 90% Attenuation</li> <li>Electrode Force – 450 lbs.</li> </ul>
Hardness (ASTM D3363)	3 – 4H Pencil Hardness
Flexibility (ASTM D4145)	1T – no Tape Off
Impact Resistance (ASTM D2794) (reverse and direct impact)	160 in. lbs.
Salt Spray, 5% Salt Fog (ASTM B117)	120 Hours, Less than 3/16-inch creepage from scribe -1000 hours with topcoat
Solvent Resistance	40 MEK double rubs

Typical Product Characteris	stics
Viscosity (#4 Ford Cup)	100 - 110 Seconds
. Weight per Gallon	9.0 – 11.0 lbs/gal
Gloss	Less than 20%
Weight Solids	45.0 – 50.0%
Volume Solids	
Recommended Dry Film	
Baking Schedule	

**Limitations:** There may be strong odors when welding so adequate ventilation is recommended. High dry film thicknesses will interfere with weldability. Lubricants must be used during the forming process to reduce die abrasion.

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# NORTHERN

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### **Manufacturing High Quality Industrial Coatings Since 1971**

### Duri-Slik™

### Duri-Slik™ Coil Coating

Duri-Slik™ is a one-coat themoset baking enamel designed for coil coat application. This coating was formulated to be a low cost alternative to the "name brand" competition. Lower costs in the application process is also a major benefit since Duri-Slik™ can be cured at a much lower temperature than its counterparts. This drawable and flexible coating adheres to many different substrates including

tin-free steel. **Duri-Slik™**, while offering an easy-to-clean and stain resistant surface, exhibits excellent food oil resistance and superior release properties. It is especially suited for the bake ware industry, but may also be used in many other applications where a non-stick surface is needed. It has good chemical resistance and color stability at elevated operating temperatures.



### Performance Characteristics

Flexibility (ASTM D4145) .....2T - no tape off

Impact Resistance (ASTM D2794) .....160 in. lbs.

(reverse and direct impact)

Solvent Resistance ......50+ MEK double rubs

### Typical Product Characteristics

Gloss ......10 – 20 %

Weight Solids ......34.0%

Volume Solids ......24.0 %

Color ......Silver (other limited colors available)

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### Poly-Draw™

### Poly-Draw™ Coil Coating

Poly-Draw<sup>™</sup> is a cross-linked polyester urethane designed for roll coat application. It was developed for interior or exterior use with end products whose manufacturing processes require deep drawability. It is usually applied in one coat but can be applied in a two coat system where higher build is required. It will withstand a five (5) inch deep draw while maintaining its outstanding physical characteristics.

Poly-Draw<sup>™</sup> has found its way into such markets as electrical box covers and blower covers for small engines. This unique product is very durable yet flexible and can be applied to a variety of substrates. It exhibits excellent chemical and fuel resistance as well as good corrosion resistance. It can be custom formulated in any color and gloss.



Performance Characteristics	
Hardness (ASTM D3363)	F – H Pencil Hardness
Flexibility (ASTM D4145)	OT – 1T bend – no tape off
Impact Resistance (ASTM D2794) (reverse and direct impact)	
Salt Spray, 5% salt fog (ASTM B117)	
Solvent Resistance	50 MEK double rubs

iscosity (#4 Ford Cup)	
/eight per Gallon	
loss	
eight Solids	
olume Solids	
ecommended Dry Film	
aking Schedule	450 – 465 F PMT



# NORTHERN Coatings & Chemical Co., Inc.

## **Manufacturing High Quality Industrial Coatings Since 1971**



### DuriClear™

### DuriClear™ Coil Coating

DuriClear<sup>™</sup> is a thermoset polyester coil coating blended for a wide variety of end products. It is formulated for interior or exterior use and can be applied as a one coat application or used as a basecoat or topcoat with screen printing inks where durability and corrosion protection are needed. This extremely flexible coating

exhibits good flexibility while maintaining excellent adhesion over many different substrates. **DuriClear™** is specifically suited for aluminum which proves difficult to adhere. It is available in a wide range of glosses. It can also be custom tinted with special dyes if desired. Uses range from make-up accessories to home canning lids.



Performance Characteristics	
Hardness (ASTM D3363)	F - H Pencil Hardness
Flexibility (ASTM D4145)	0 - T bend - no tape off
Impact Resistance (ASTM D2794) (reverse and direct impact)	160 in. lbs.
Solvent Resistance	100 MEK double rubs
Cross Hatch Adhesion (ASTM D3359)	No loss of adhesion.

Typical Product Characteristics
Viscosity (#4 Ford Cup)70 – 80 Seconds
Weight per Gallon8.5 lbs/gal
Gloss5 – 80+
Weight Solids
Volume Solids47.0%
Recommended Dry Film
Baking Schedule420 – 435 F PMT
Coverage



# NORTHERN Coatings & Chemical Co., Inc.

### **Manufacturing High Quality Industrial Coatings Since 1971**



### Duri-Tex™

### Duri-Tex™ Coil Coating

Duri-Tex™ with its unique polymer system is a one-coat highly abrasion resistant coating, which displays a built-in textured surface. This extremely flexible coating has excellent forming characteristics

while maintaining very good adhesion over all kinds of substrates. It is available in a wide range of glosses and colors. Uses can range from computer housings to DVD and stereo boxes.



### **Performance Characteristics**

Flexibility (ASTM D4145) .....0 - 2T bend - no tape off

Impact Resistance (ASTM D2794) . . . . . . . . 160 in. lbs.

(reverse and direct impact)

Cross Hatch Adhesion (ASTM D3359) .... No loss of adhesion.

### **Typical Product Characteristics**

Viscosity (#4 Ford Cup) ......80 – 90 Seconds

Weight Solids ......53.0 - 58.0%

Baking Schedule ......435 – 450 F PMT

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## DuriTemp™

### DuriTemp™ Coil Coating

DuriTemp<sup>™</sup> is a themoset baking enamel designed for roll coat application. This unique product is a cross-linked polyester, which exhibits excellent high temperature resistance while maintaining good

physical properties. It is specially suited for the stovepipe industry but may be used in many other applications such as boilers, wood burning stoves, mufflers, heaters, fireplaces and industrial ovens.



Performance Characteristics /	Heat Resistance
24 hrs. at 600 F	.Slight change in color and gloss
1 hr. at 1000 F	.Moderate change in color and gloss
Cycle test	.10 cycles of 15 min. at 850 F with 15 min. cool down between cycles.
Hardness (ASTM D3363)	.F+ Pencil Hardness
Flexibility (ASTM D4145)	.1T bend – no tape off
Impact Resistance (ASTM D2794) (reverse and direct impact)	.160 in. lbs.
Salt Spray, 5 % salt fog (ASTM B117)	.200 hours, less than 3/16-inch creepage from scribe
Solvent Resistance	.50 MEK double rubs
Stain Resistance (30 min. @ 250 F)	.Mustard, catsup, egg, milk, lemon, orange, tea, beef and vinegar – less than 5% color and gloss change.
Chemical Resistance (30 min. @ 250 F)	.Glass cleaner, ammonia, bleach, isopropyl alcohol, black polish and lipstick – Less than 5 % loss of gloss and color.
	Easy-Off oven cleaner (2 hrs. @ 100 F) Less than 5% loss of gloss and color.

### **Typical Product Characteristics**

Viscosity (#4 Ford Cup)	.80 - 90 Seconds
Weight per Gallon	.10.0 lbs/gal
Gloss	.less than 20 %
Weight Solids	.65.0%
Volume Solids	.54.0 %
Recommended Dry Film	.0.6 – 0.7 mil for best performance but 0.2 – 0.3 mil may also be used and still maintain good results.

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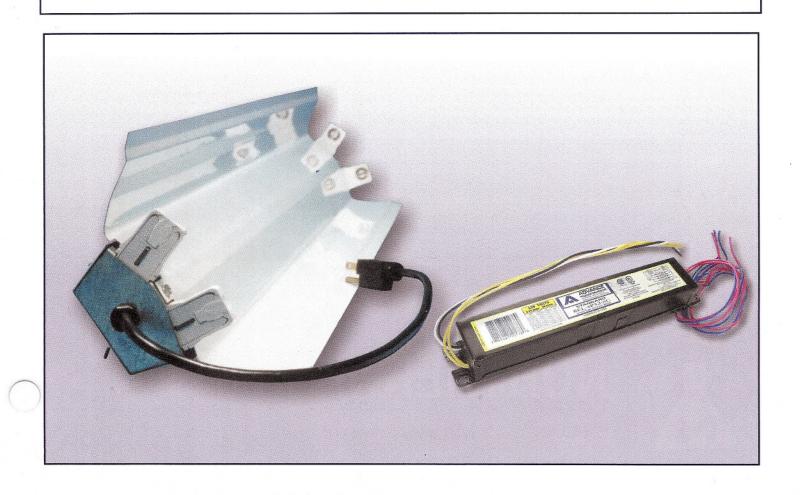
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### **Manufacturing High Quality Industrial Coatings Since 1971**

### **Epoxy**

### **Epoxy Coil Coating**

Northern Epoxy Enamel is designed to be a one or two coat coil coating application where durability and corrosion protection is needed. Usually applied at thinner films, this coating works well as a primer and can be used as a topcoat for interior applications. Our epoxy enamels have a high resistance to chemicals and other petroleum products as well as being flexible enough to be used on expanded metal for rain gutter guards. It has also found its way into such markets as filter guards to fluorescent ballast boxes. Our epoxy coating can be applied over a variety of substrates and is available in any color.



Performance Characteristics	
Hardness (ASTM D3363)	3H – 5H Pencil Hardness
Flexibility (ASTM D4145)	1 – 2T bend – no tape off
Impact Resistance (ASTM D2794) (reverse and direct impact)	
Solvent Resistance	

Viscosity (#4 Ford Cup)	50 – 80 Seconds
Weight per Gallon	8.0 – 11.0 lbs/gal
Gloss	5 – 80+
Weight Solids	
Volume Solids	
Recommended Dry Film	
Baking Schedule	435 – 500 F PMT
Coverage	
Color	



# NORTHERN Coatings & Chemical Co., Inc.

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## Deep Draw Epoxy

### Deep Draw Epoxy Coil Coating

P055-B is a thermoset baking epoxy designed for roll coating, developed for use with end products whose manufacturing processes require deep drawability. It can be used as a protective coating by itself or may be used as a primer, and can accept many different types of coating in a post-paint operation. It will withstand a five (5) inch deep draw while maintaining its outstanding physical characteristics.

P055-B has found its way into such markets as filter cans and small engine fuel tanks. This unique product is very durable yet flexible and can be applied to coat a variety of substrates. It exhibits excellent chemical and fuel resistance as well as good corrosion resistance. A transparent olive drab color is standard with a limited amount of other colors available.



Performance Characteristics	
Hardness (ASTM D3363)	3 – 4H Pencil Hardness
Flexibility (ASTM D4145)	1T – no tape off
Impact Resistance (ASTM D2794) (reverse and direct impact)	160 in. lbs.
Salt Spray, 5% salt fog (ASTM B117)	creepage from scribe
Solvent Resistance	35 MEK double rubs

Viscosity (#4 Ford Cup)	100 – 110 seconds
Weight per Gallon	7.8 – 8.0 lbs/gal
Gloss	
Weight Solids	31.0%
Volume Solids	
Recommended Dry Film	
Baking Schedule	490 – 500 F PMT



# NORTHERN Coatings & Chemical Co., Inc.

### **Manufacturing High Quality Industrial Coatings Since 1971**



### Polyester

### Flexible Coil Coating

Northern's family of polyester coil coatings are blended for a wide variety of end products. They are formulated for interior or exterior use and can be applied in one or two coat applications where durability and corrosion protection is needed. High solids and fast line-speed capabilities make this economical coating the paint system of choice. These extremely flexible coat-

ings have excellent draw characteristics while maintaining excellent adhesion over all kinds of substrates. It is available in a wide range of glosses and colors. Applications range from High Reflectance white used for fluorescent light fixtures to wood grain systems used for small appliance housings.



Performance Characteristics	
Hardness (ASTM D3363)	H – 2H Pencil Hardness
Flexibility (ASTM D4145)	$\dots$ 0 – 2T bend – no tape off
Impact Resistance (ASTM D2794) (reverse and direct impact)	160 in. lbs.
Solvent Resistance	100 MEK double rubs
Cross Hatch Adhesion (ASTM D3359)	No loss of adhesion.

Typical Product Characteristics	
Viscosity (#4 Ford Cup)	50 – 80 Seconds
Weight per Gallon	8.0 – 11.0 lbs/gal
Gloss	5 – 80+
Weight Solids	58.0 – 70.0%
Volume Solids	50.0 – 58.0%
Recommended Dry Film	
Baking Schedule	
Coverage	800 – 928 sq. ft/gal @ 1 mil dry
Color	Unlimited



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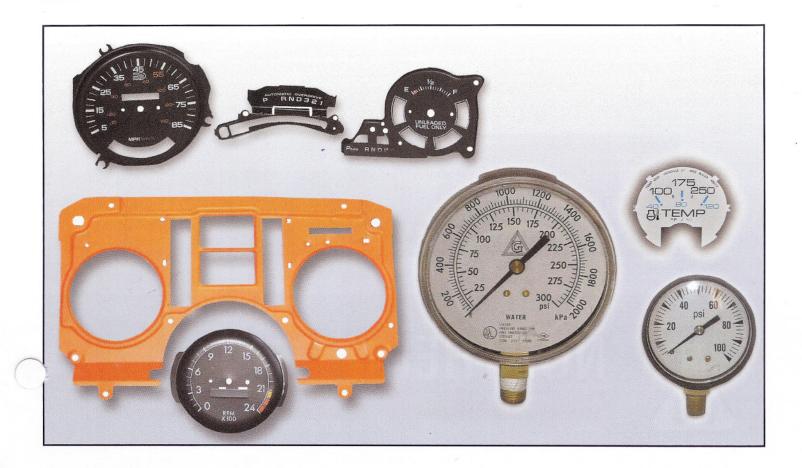
## **Manufacturing High Quality Industrial Coatings Since 1971**

## Vinyl

### Vinyl Coil Coating

Northern's family of vinyl coatings are blended for a variety of end products. They are formulated for interior uses and can be applied in one or two coat applications. Northern offers two types of solution vinyl: Thermo-plastic vinyl which has good acceptance of heat transferring labels used for dash board and meter dial

markets; and Thermo-set vinyl which exhibits good chemical resistance, designed for film cartridges. These extremely flexible coatings have excellent hardness and draw characteristics while maintaining excellent adhesion over many kinds of substrates. It is available in a wide range of glosses and colors.



### 

Cross Hatch Adhesion (ASTM D3359) ..........No loss of adhesion

Typical Product Characteris	tics
Viscosity (#4 Ford Cup)	,
Weight per Gallon	7.8 – 8.0 lbs/gal
Gloss	5 – 80%
Weight Solids	
Volume Solids	19.0 – 25.0%
Recommended Dry Film	
Baking Schedule	390 – 420 F PMT
Coverage	
Color	Unlimited

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### NORTHERN COATINGS & CHEMICAL CO.

### As A Team We Are Committed To The Following:

#### **CUSTOMERS**

Can depend on quality, technical expertise, superior service, motivated highly trained employees, integrity, responsiveness and value.

#### **EMPLOYEES**

Can depend on livable wages, safe working conditions, security, educational programs, career enhancement and individual consideration.

#### **SUPPLIERS**

Can depend on prompt payment, clear specifications, integrity and reasonable quantities.

#### COMMUNITY

Can depend on good corporate citizenship, support of community interests and environmental compliance.

Our company is a group of people working together for the common purpose of serving our customers.