

## Polyurethane

### PRODUCT DESCRIPTION

A high build, high performance, two-component chemically-cured aliphatic urethane gloss finish.

### INTENDED USES

For use on properly prepared steel, galvanized, aluminium and properly prepared concrete floors. Ideal for use on exterior or interior structural steel, piping, metal buildings, conveyors, pumps, storage tank exteriors, wind turbine towers, motors, machinery, and transportation vehicles.

Can also be used in the hard service areas of food processing plants, dairies, schools, restaurants, hospitals, correctional facilities, factories, stadiums, arenas, and amusement parks.

### PRACTICAL INFORMATION FOR DEVTHANE 359

<b>Colour</b>	White, Black and custom colours			
<b>Gloss Level</b>	Gloss			
<b>Volume Solids</b>	60%± 2%			
<b>Typical Thickness</b>	100-150 microns (4-6 mils) dry equivalent to 167-250 microns (6.7-10 mils) wet			
<b>Theoretical Coverage</b>	4.80 m <sup>2</sup> /litre at 125 microns d.f.t and stated volume solids 192 sq.ft/US gallon at 5 mils d.f.t and stated volume solids			
<b>Practical Coverage</b>	Allow appropriate loss factors			
<b>Method of Application</b>	Airless Spray, Roller, Air Spray, Brush			
<b>Drying Time</b>	Overcoating interval with self			
<b>Temperature</b>	<b>Touch Dry</b>	<b>Hard Dry</b>	<i>Minimum</i>	<i>Maximum</i>
5°C (41°F)	*1	14 hours	8 hours	2 weeks
15°C (59°F)	*1	9 hours	5 hours	2 weeks
25°C (77°F)	*1	5 hours	3 hours	2 weeks
*1 Not applicable				

### REGULATORY DATA

<b>Flash Point (Typical)</b>	Part A 27°C (81°F); Part B 27°C (81°F); Mixed 27°C (81°F)		
<b>Product Weight</b>	1.24 kg/l (10.3 lb/gal)		
<b>VOC</b>	2.83 lb/gal (340 g/l)	EPA Method 24	
See Product Characteristics section for further details			

## Protective Coatings

## Polyurethane

### SURFACE PREPARATION

Surfaces must be dry, clean, free of oil, grease, form release agents, curing compounds, laitance, other foreign matter and be structurally sound. Remove all loose paint, mortar spatter, mill scale, and rust.

#### New Surfaces

##### Steel:

Abrasive blast to minimum SSPC-SP6 or ISO8501-1:2007 Sa2½ commercial blast. The blast profile should be jagged rather than "peened" and between 38-62 microns (1.5 to 2.5 mils). After blasting, vacuum or blow off all abrasive dust and ensure surface remains clean before painting.

To ensure optimum appearance, any primer or undercoat should be smooth and free of any surface defects such as runs, dry spray or heavy orange peel. Prime using: Bar-Rust 231, Bar-Rust 235 or Bar-Rust 233H.

##### Galvanized Steel and Aluminium

Remove dirt and oils by solvent cleaning or with Devprep 88 Cleaner or other suitable cleaner followed by a thorough water rinsing. Prime using an approved primer. For direct to metal use, brush blast to a standard similar to SSPC-SP-7 or ISO 8501-1:2007 Sa1 to create a surface profile. Prime using: Devran 201H or Devran 203.

##### Concrete Block:

Remove loose aggregate and repair voids. Fill with Devthane 359 or Bar-Rust 235, Bar-Rust 233H epoxies or Tru-Glaze-WB 4015 filler.

##### Concrete Floors, Poured Concrete:

Cure at least 30 days. Acid etch or abrasive blast slick, glazed concrete or concrete with laitance. Prime using: Devran 224HS, Bar-Rust 235, Bar-Rust 233H or Pre-Prime 167

##### Previously Painted Surfaces:

Old coatings should be tested for lifting or bleeding. If they are, they should be removed. Wash to remove contaminants. Rinse thoroughly with water and allow to dry. Dull glossy areas by light sanding. Remove all debris. Prime bare areas with primer specified under New Surfaces.

##### Drywall:

Prime with a premium acrylic latex vapor barrier primer sealer.

##### Fiberglass

Solvent wipe, scuff sand and solvent wipe again. Prime with Devran 201H epoxy.

### APPLICATION

Mixing	Material is supplied in two containers as a unit. Always mix a complete unit in the proportions supplied. Once the unit has been mixed it must be used within the working pot life specified. (1) Agitate Base (Part A) with a power agitator. (2) Combine entire contents of Curing Agent (Part B) with Base (Part A) and mix thoroughly with power agitator.		
Mix Ratio	4 part(s) : 1 part(s) by volume		
Working Pot Life	5°C (41°F)	15°C (59°F)	25°C (77°F)
	10 hours	9 hours	8 hours
Airless Spray	Recommended	Tip Range 0.38-0.48 mm (15-19 thou) Total output fluid pressure at spray tip not less than 211 kg/cm² (3000 p.s.i.) See Product Characteristics section for further details	
Air Spray (Conventional)	Recommended	See Product Characteristics section for further details	
Brush	Suitable		
Roller	Suitable		
Thinner	T-9 Thinner (or T-17 Thinner)	See Product Characteristics section for further details	
Cleaner	T-9 Thinner		
Work Stoppages	Do not allow material to remain in hoses, gun or spray equipment. Thoroughly flush all equipment with T-9 Thinner. Once units of paint have been mixed they should not be resealed and it is advised that after prolonged stoppages work recommences with freshly mixed units.		
Clean Up	Clean all equipment immediately after use with T-9 Thinner. It is good working practice to periodically flush out spray equipment during the course of the working day. Frequency of cleaning will depend upon amount sprayed, temperature and elapsed time, including any delays. All surplus material and empty containers should be disposed of in accordance with appropriate regional regulations/legislation.		

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### PRODUCT CHARACTERISTICS

#### Advantages:

- Excellent gloss and colour retention
- Excellent abrasion and chemical resistance
- Low VOC
- Easily applied by brush, roller or spray
- Wide colour selection
- Excellent resistance to marring, chipping, and scratching
- High build requires less coats
- May be applied direct to metal (refer to surface preparation requirements)

Cure Acceleration: Urethane catalyst 070A000 may be used to accelerate cure at or below 5°C (40°F). The addition of one or two ounces per gallon will decrease the hard dry time by approximately one-third to one-half respectively at 5°C (40°F). The pot life will be reduced one-half to three-fourths.

Thinning is not normally required. However, depending on local VOC and air quality regulations, small amounts (5% or less) of T-9 Thinner may be added. Small amounts (5% or less) of T-17 Thinner may improve roller, brush or spray application. If local VOC and/or air quality regulations are not an issue, and depending on the individual set-up of the spray equipment, additional thinning may be allowed to obtain the desired individual finish.

Tint the appropriate base using industrial colourants.

For airless spray application: Ideally, fluid hoses should not be less than 3/8" ID and not longer than 50 feet to obtain optimum results. Longer hose length may require an increase in pump capacity, pressure, and/or thinning.

For air spray application: Use a professional grade conventional gun with a 1.78mm (0.07") fluid tip or larger. Adjust fluid and air pressure to achieve a good spray pattern. Devthane 359 reacts with atmospheric moisture, and as such when in the can should remain covered at all times. Failure to keep tin covered will result in skinning of paint and loss of pot life.

Care should be taken that proper and uniform film thicknesses are obtained. Brushing and rolling may require multiple coats to achieve correct film thickness and/or hiding.

The maximum operating temperature for Devthane 359 is 120°C (248°F).

Exposure to continuous operating temperatures towards the maximum dry temperature resistance of this product may induce some discolouration, though the film will remain intact.

Note: VOC values are typical and are provided for guidance purpose only. These may be subject to variation depending on factors such as differences in colour and normal manufacturing tolerances.

Low molecular weight reactive additives, which will form part of the film during normal ambient cure conditions, will also affect VOC values determined using EPA Method 24.

### SYSTEMS COMPATIBILITY

The following primers are recommended for Devthane 359:

Bar-Rust 231	Bar-Rust 233H
Bar-Rust 235	Cathacoat 302H
Cathacoat 302HB	Cathacoat 313
Cathacoat 303	Devran 203
Devran 201H	Devran 261QC
Devran 223	Tru-Glaze-WB 4015
Devran 224V	Tru-Glaze-WB 4030

**Polyurethane****ADDITIONAL  
INFORMATION**

Further information regarding industry standards, terms and abbreviations used in this data sheet can be found in the following documents available at [www.international-pc.com](http://www.international-pc.com):

- Definitions & Abbreviations
- Surface Preparation
- Paint Application
- Theoretical & Practical Coverage

Individual copies of these information sections are available upon request.

**SAFETY  
PRECAUTIONS**

This product is intended for use only by professional applicators in industrial situations in accordance with the advice given on this sheet, the Material Safety Data Sheet and the container(s), and should not be used without reference to the Material Safety Data Sheet (MSDS) which International Protective Coatings has provided to its customers.

All work involving the application and use of this product should be performed in compliance with all relevant national, Health, Safety & Environmental standards and regulations.

In the event welding or flame cutting is performed on metal coated with this product, dust and fumes will be emitted which will require the use of appropriate personal protective equipment and adequate local exhaust ventilation.

If in doubt regarding the suitability of use of this product, consult International Protective Coatings for further advice.

PACK SIZE	Unit Size	Part A	Part B
		Vol	Pack
	1 US gal	0.8 US gal	1 US gal
	5 US gal	4 US gal	5 US gal
For availability of other pack sizes, contact International Protective Coatings.			
SHIPPING WEIGHT (TYPICAL)	Unit Size	Part A	Part B
	1 US gal	11.9 lb	1.5 lb
	5 US gal	52.7 lb	13.2 lb
STORAGE	Shelf Life	24 months minimum at 25°C (77°F). Subject to re-inspection thereafter. Store in dry, shaded conditions away from sources of heat and ignition.	

**Important Note**

*The information in this data sheet is not intended to be exhaustive; any person using the product for any purpose other than that specifically recommended in this data sheet without first obtaining written confirmation from us as to the suitability of the product for the intended purpose does so at their own risk. All advice given or statements made about the product (whether in this data sheet or otherwise) is correct to the best of our knowledge but we have no control over the quality or the condition of the substrate or the many factors affecting the use and application of the product. Therefore, unless we specifically agree in writing to do so, we do not accept any liability at all for the performance of the product or for (subject to the maximum extent permitted by law) any loss or damage arising out of the use of the product. We hereby disclaim any warranties or representations, express or implied, by operation of law or otherwise, including, without limitation, any implied warranty of merchantability or fitness for a particular purpose. All products supplied and technical advice given are subject to our Conditions of Sale. You should request a copy of this document and review it carefully. The information contained in this data sheet is liable to modification from time to time in the light of experience and our policy of continuous development. It is the user's responsibility to check with their local representative that this data sheet is current prior to using the product.*

*This Technical Data Sheet is available on our website at [www.international-marine.com](http://www.international-marine.com) or [www.international-pc.com](http://www.international-pc.com), and should be the same as this document. Should there be any discrepancies between this document and the version of the Technical Data Sheet that appears on the website, then the version on the website will take precedence.*

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