

7 | 07 18 11  
Traffic  
Coatings



# Qualideck® Traffic Bearing Membrane

High-solids, 2-component polyurethane waterproofing,  
traffic bearing systems for vehicular and pedestrian areas

#### PACKAGING

- Q152 Primer: 3 gal kit
- Q252 Membrane: 5 gal kit
- Q372 Aromatic Topcoat: 4.5 gal kit
- Q461 Aromatic Topcoat: 5 gal
- Q552E Aromatic Intermediate: 5 gal kit
- Q582 Aliphatic Topcoat: 5 gal kit

#### YIELD

Please consult Qualideck  
consumption guide

#### COLORS

Light Grey, Dark Grey, Charcoal  
Grey, Black

#### STORAGE

Store unopened containers in cool,  
clean, dry area

#### SHELF LIFE

1 year when properly stored

#### DESCRIPTION

Qualideck TBM is a fluid-applied polyurethane waterproofing system. Qualideck TBM is a high solids, fast curing, low VOC, 2-component system for vehicular & pedestrian applications.

Qualideck TBM is composed of:

- **Q152**—a two-component polyurethane-based **primer**.
- **Q252**—a two-component, fast-curing, polyurethane **base coat (membrane)** with superior elongation properties.
- **Q372**—a two-component, fast-curing, **aromatic** polyurethane **top coat** that is low VOC and has superior performance characteristics (abrasion, tear and tensile strength).
- **Q461**—a one-component, fast-curing, **aliphatic** polyurethane **top coat** for UV exposure and has superior performance characteristics (abrasion, tear and tensile strength).
- **Q552E**—a two-component, fast-curing, **aromatic** epoxy **intermediate** that is low VOC and has superior performance characteristics (abrasion, tear and tensile strength).
- **Q582** (UV applications)—a two-component, fast-curing **aliphatic** polyurethane **top coat** for UV exposure that has excellent tensile strength, tear resistance and aggregate retention for a long service life.

#### PRODUCT HIGHLIGHTS

- Faster curing systems = faster turnover
- Low odor, high solids, non-flammable, solvent free
- Longest membrane elongation in the industry provides superior crack bridging, waterproofing and durability.
- Superior chloride and chemical resistance protecting structures from damage against chlorides, oil, gas and other contaminants typically found in areas where traffic coatings are specified and used.
- Superior durability and abrasion resistant. Skid resistant for increased safety

#### VOC CONTENT

- Q152: 7.1 g/L
- Q252: 7.7 g/L
- Q372: 20.5 g/L
- Q461: 166 g/L
- Q522E: 85 g/L
- Q582: 20 g/L

**NOTE:** APT also offers additional products (172 MVB)

– SEE YOUR APT REP FOR TECH DATA SHEETS

AND MORE DETAILS OR VISIT

[WWW.QUALIDECK.COM](http://WWW.QUALIDECK.COM)

## Technical Data

Qualideck TBM is a two-component polyurethane membrane.

### Typical Properties

PROPERTY	VALUE
<b>Solids content, %</b>	
Qualideck Q152 Primer	100
Qualideck Q 252 Base Coat	100
Qualideck Q 372 Aromatic TC	100
Qualideck Q 461 Aliphatic TC	83
Qualideck Q 522E Intermediate	100
Qualideck Q 582 Aliphatic TC	98
<b>Viscosity, cps*</b>	
Qualideck Q 152 Primer	600
Qualideck Q 252 Base Coat	1,700
Qualideck Q 372 Aromatic TC	1,600
Qualideck Q 461 Aliphatic TC	3,000
Qualideck Q 522E Intermediate	1,400
Qualideck Q 582 Aliphatic TC	2,000
<b>Working Time, min*</b>	
Qualideck Q 152 Primer	40-60 min
Qualideck Q 252 Base Coat	20-30 min
Qualideck Q 372 Aromatic TC	35-55 min
Qualideck Q 461 Aliphatic TC	Will vary (1K)
Qualideck Q 522E Intermediate	40-60 min
Qualideck Q 582 Aliphatic TC	30-50 min
<b>Initial cure, hrs</b>	
Qualideck Q 152 Primer	3-4
Qualideck Q 252 Base Coat	3-4
Qualideck Q 372 Aromatic TC	3-4
Qualideck Q 461 Aliphatic TC	5-10
Qualideck Q 522E Intermediate	4-6
Qualideck Q 582 Aliphatic TC	3-5

\*Tested at 68° F and 50% relative humidity. Warm temperatures may shorten pot life. Cold temperatures may increase viscosity. Proper planning required.

## Test Data

PROPERTY	RESULTS	SPECIFICATIONS	TEST METHOD
<b>Crack bridging, Qualideck Q252</b>	Passes	No cracking	ASTM C 957
<b>Adhesion peel, pli, Primer and Base Coat</b>			
Concrete	100% substrate failure		ASTM D7234
<b>Adhesion (Pull-off), psi</b>	>400	—	ASTM D 4541
Qualideck Q152 / Q252			
<b>Tensile strength, psi (MPa),</b>			
Base Coat Q252 base coat / membrane	1,890.2* PSI	Control	ASTM D 412
Qualideck Q372 aromatic top coat	4,200 PSI	Control	
Qualideck Q461 aliphatic top coat	1,111 PSI	Control	
Qualideck Q522E aromatic intermediate	11,920 psi	Control	
Qualideck Q582 aliphatic top coat	1,500 PSI	Control	
<b>Elongation, %,</b>			
Base Coat Q252 base coat / membrane	1102.3%*	Control	ASTM D 412
Qualideck Q372 aromatic top coat	42.9%	Control	
Qualideck Q461 aliphatic top coat	264%	Control	
Qualideck Q522E aromatic intermediate	8%	Control	
Qualideck Q582 aliphatic top coat	81%	Control	
<b>Hardness, Shore A</b>			
Qualideck Q461	84		ASTM D 2240
<b>Hardness, Shore D</b>			
Qualideck Q372 aromatic top coat	69	—	ASTM D 2240
Qualideck Q522E aromatic intermediate	75	—	
Qualideck Q582 aliphatic top coat	45	—	
<b>Taber abrasion resistance, mgms;</b>			
CS-17 Wheel, 1,000 g load, 1,000 cycles, Qualideck Q 152 / Q 252 / Q 372	~100	—	ASTM D 4060
<b>Taber abrasion resistance, mgms;</b>			
CS-17 Wheel, 1,000 g load, 1,000 cycles, Qualideck Q 152 / Q 252 / Q 372	24.9	—	ASTM D 4060
<b>Taber abrasion resistance, mgms;</b>			
CS-17 Wheel, 1,000 g load, 1,000 cycles, Qualideck Q 152 / Q 252 / Q 522E	46.2	—	ASTM D 4060
<b>Taber abrasion resistance, mgms;</b>			
CS-17 Wheel, 1,000 g load, 1,000 cycles, Qualideck Q 152 / Q 252 / Q 582	50	—	ASTM D 4060

Test results are averages obtained under laboratory conditions. Variations can be expected.

**\*MAXIMUM MACHINE LEVEL WITHOUT BREAKING**

Qualideck® Traffic Bearing Membrane				
System	Medium Duty	Heavy Duty	Extra Heavy Duty	Extreme Duty
Primer Q 152	4 mils	4 mils	4 mils	4 mils
Membrane Q 252	25 mils	25 mils	25 mils	25 mils
Intermediate/Topcoat Q 372 (Aromatic) or Intermediate Q 522E (Aromatic)	*15 mils	15 mils/15 mils	25 mils/15 mils	30 mils/20 mils
UV Topcoat Q461 (Aliphatic)	*15 mils	15 mils	15 mils	20 mils
UV Topcoat Q582 (Aliphatic)	*15 mils	15 mils	15 mils	20 mils
Sand Aggregate	10-15lbs /100SF/Coat	10-15lbs /100SF/Coat	10-15lbs /100SF/Coat	10-15lbs /100SF/Coat

\*NOTE: Use UV Q582 or Q461 for full exposure or Q 372 or Q 522E for non sun exposure

## APPLICATION GUIDE

Advanced Polymer Technology Corporation (APT) has prepared this application guide to assist applicators in the use of Qualipur Products for Qualideck® Systems. Any references to consumptions (coverage rate, etc.) are approximate values and will vary with concrete surface, texture, waste, etc. Before commencing any work, the applicator must become familiar with all product installation procedures.

### MIXING OF MATERIALS

Qualipur products come pre-proportioned. All color components must be premixed for color distribution. Pour the jug component into the center of the pail component and mix thoroughly for approximately two (2) minutes. Then scrape down the sides of the pail and continue mixing for one (1) additional minute. Materials should be mixed with a jiffy paddle at a low speed (400-600 rpm). After mixing, material should be consistent in color.

### POT LIFE

The pot life of Qualipur products is normally set at a temperature of 68°F. Pot life will vary with temperature and humidity change.

- Qualipur 152 40–60 min
- Qualipur 252 20–30 min
- Qualipur 372 35–55 min
- Qualipur 461 will vary (1K Solvent)
- Qualipur 522E 40–60 min
- Qualipur 582 30-50 min

### POURING MATERIALS

When pouring materials out of the pail, use only the material which flows naturally. Do not scrape the side or bottom of the pail. Also, do not invert pails on substrate and allow to fully drain as the residual material is often incompletely mixed and may result in incomplete cure.

### CONCRETE SLAB RESTORATION

All cracks shall be identified, filled with a polyurethane sealant, and receive a detailed membrane coat of Qualipur 252 at a minimum of 20 mils dry film thickness, 6 in. wide, centered over the crack.

All spalls, delamination, potholes, scaling, pop-outs, and other defects shall be identified and repaired, using proven methods and materials to achieve a level substrate. Please note that any surface irregularities that may still remain could reflect through the cured topcoat.

### SURFACE PREPARATION

All concrete surfaces shall be air dried and checked for moisture (no more than 3 lbs., per 1,000sf, during 24 hour period) before installing Qualideck® traffic coating. Test for moisture using Mat Test, ASTM D4263.

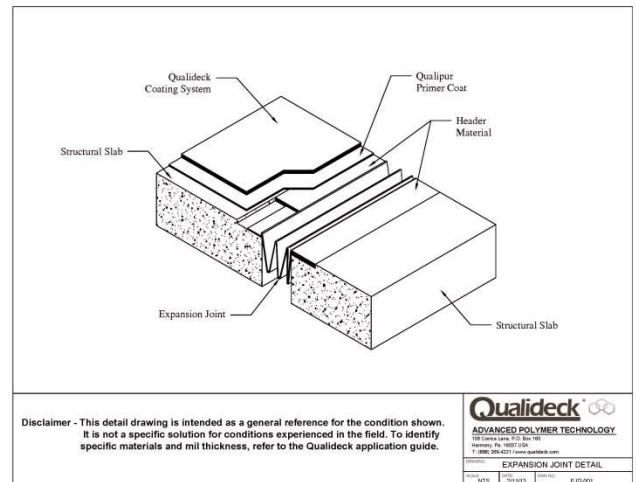
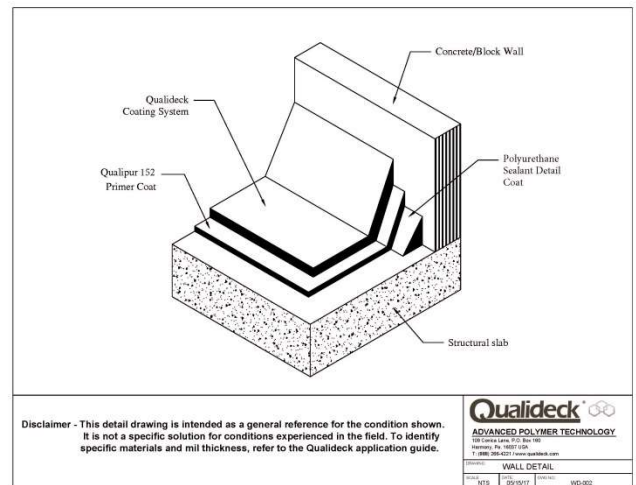
The substrate shall be CLEAN and DRY before primer (152) is applied. The substrate surface shall be inspected and made sure to be free of grease, oil, dust, dirt and other foreign matter, before primer coating is applied.

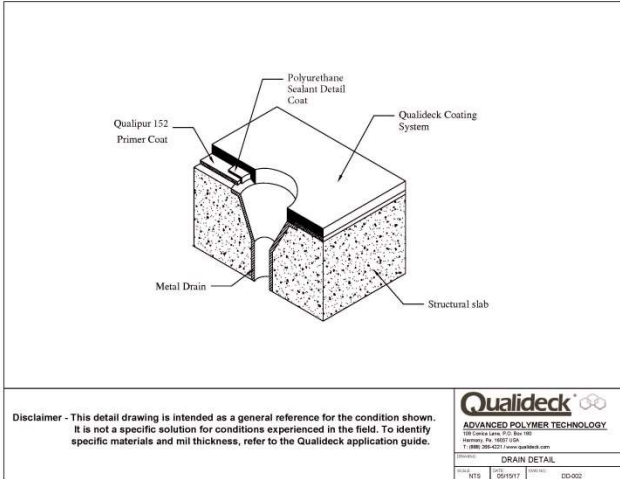
Prepare concrete surfaces by shot-blast method to achieve a proper profile, and confirm that the profile meets ICRI's (International Concrete Repair Institute) guidelines. Manufacturer recommends application of primer as soon as possible after the shot blasting operation, but no later than 72 hours, to ensure proper substrate conditions.

The applicator is responsible for maintaining a clean substrate during this period. The prepared surface shall be in accordance with manufacturer's installation recommendations.

### DETAIL PREPARATIONS

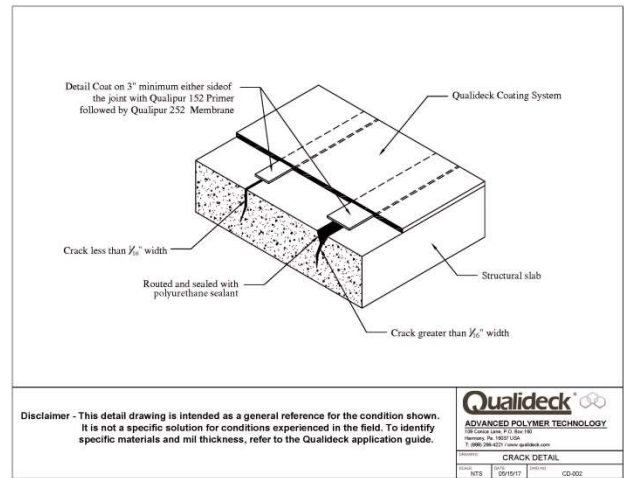
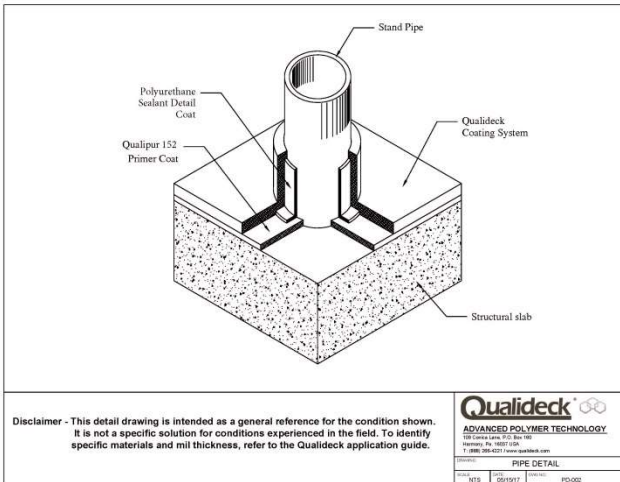
**SYSTEM TERMINATION** – Cut or rout a ¼ in. wide by ¼ in. deep maximum slot in the slab at the designated termination line. Mask off the termination edge of the slot. Apply coatings, leaving sufficient thickness to key in the top coat. Allow the top coat to remain level with the substrate at the termination edge.





**MOVING AND NON-MOVING CRACKS (<1/16 IN)** – Apply the mixed Qualipur 152 primer at a 4 to 6 wet mil thickness a minimum of 3 in. wide on both sides of the joint or crack. Allow the primer to cure, typically 4 to 6 hours. Apply the mixed Qualipur 252 detail coat at 25-30 wet mil thickness taking care to ensure both filling and overlapping the crack 3 in. on each side. Tool to a feather-edge. Continue with surface work when detail coat becomes tack-free, typically 3 to 4 hours and not longer than 24 hours.

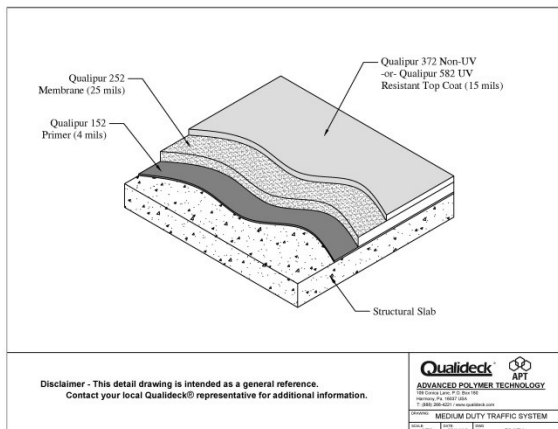
**MOVING AND NON- MOVING CRACKS (>1/16 IN)** – Cut or rout out cracks to a minimum ¼ in. wide by ½ in. deep. Apply the mixed Qualipur 152 primer at 4 to 6 wet mil thickness a minimum of 3 in. wide on both sides of the crack. Allow the primer to cure, typically 4 to 6 hours. Fill routed crack with a polyurethane sealant and apply mixed Qualipur 252 detail coat over the crack and overlapping the crack 3 in. on either side at 25-30 wet mil thickness and feather edge. After the repair becomes tack-free, typically 3 to 4 hours and not longer than 24 hours, continue surfacing work.



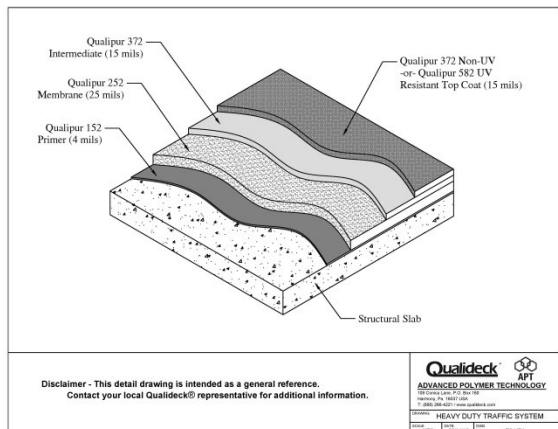
The Qualideck® coating system shall be flash covered at the perimeter walls and columns.

## APPLICATION OF SYSTEMS

### MEDIUM DUTY TRAFFIC SYSTEM



### HEAVY DUTY TRAFFIC SYSTEM



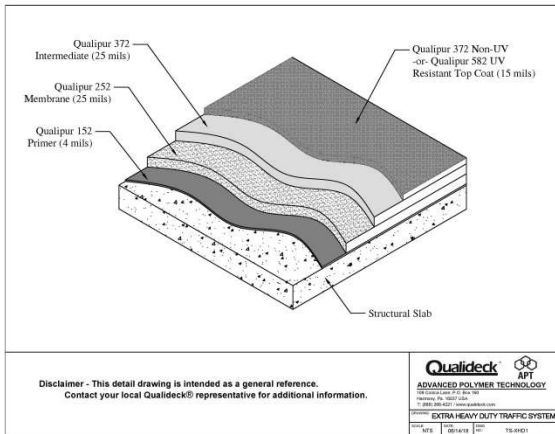
### MEDIUM DUTY TRAFFIC SYSTEM

- 1) PRIMER COATING - The prepared substrate will receive Qualipur 152 primer, at 4 mils, using high quality rollers, flat squeegees, or airless spray units. Allow the material (152) to completely saturate into the concrete substrate while removing any excess and applying said excess to other unprimed areas and repeat the procedure until the area is completely primed. Allow the Qualipur 152 primer 4 to 6 hours to cure at 68°F (but not longer than 24 hours).
  - 2) MEMBRANE COAT - After the primer (152) and any detail applications have cured to a tack-free state but no longer than 24 hours, apply Qualipur 252 membrane coating evenly, at 25 mils, using a notched trowel or squeegee and backroll with a high quality roller to create a consistent appearance. Take care to achieve recommended coverage rates at specified mil thickness as required by the end user or specifier. PLEASE
  - 3) TOP COATINGS - After the membrane coat has cured, but no longer than 24 hours, apply the specified Qualipur topcoat (372 non-UV, 461 UV, or 582 UV resistant) evenly, at 15 mils, using a notched trowel or squeegee. Apply a uniform broadcast of sand (angular), flint (angular), or aluminum oxide (angular) into the wet top coat and backroll to fully encapsulate the sand aggregate. See chart contained within this guide for additional details.
- PLEASE NOTE: NEVER SAND TO EXCESS QUALIPUR 461.

### HEAVY DUTY TRAFFIC SYSTEM

- 1) PRIMER COATING - The prepared substrate will receive Qualipur 152 primer, at 4 mils, using high quality rollers, flat squeegees, or airless spray units. Allow the material (152) to completely saturate into the concrete substrate while removing any excess and applying said excess to other unprimed areas and repeat the procedure until the area is completely primed. Allow the Qualipur 152 primer 4 to 6 hours to cure at 68°F (but not longer than 24 hours).
  - 2) MEMBRANE COAT - After the primer (152) and any detail applications have cured to a tack-free state but no longer than 24 hours, apply Qualipur 252 membrane coating evenly, at 25 mils, using a notched trowel or squeegee and backroll with a high quality roller to create a consistent appearance. Take care to achieve recommended coverage rates at specified mil thickness as required by the end user or specifier. PLEASE
  - 3) INTERMEDIATE COATING - After the membrane coat (252) has cured but no longer than 24 hours, apply the Qualipur 372 polyurethane intermediate coating or Qualipur 522E epoxy intermediate coating evenly, at 15 mils, using a notched trowel or squeegee. Backroll to achieve a consistent surface. Take care to apply the specified mil thickness per the end user's / specifier's requirements. The intermediate coat can be seeded and backrolled, or sanded to excess, as required per the written specification. See chart included in this guide for further details.
  - 4) TOP COATINGS - After the intermediate coat has cured, but no longer than 24 hours, apply the specified Qualipur top coat (372 non-UV, 461 UV, or 582 UV) evenly, at 15 mils, using a notched trowel or squeegee. Apply a uniform broadcast of sand (angular), flint (angular), or aluminum oxide (angular) into the wet top coat and backroll to fully encapsulate the sand aggregate. See chart contained within this guide for additional details.
- PLEASE NOTE: NEVER SAND TO EXCESS QUALIPUR 461

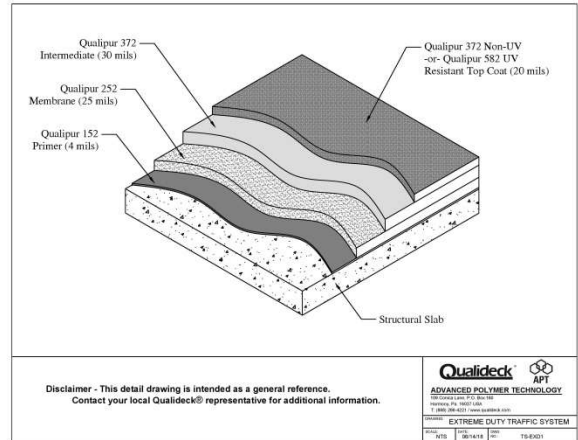
**EXTRA HEAVY DUTY TRAFFIC SYSTEM**



**EXTRA HEAVY DUTY TRAFFIC SYSTEM**

- 1) PRIMER COATING - The prepared substrate will receive Qualipur 152 primer, at 4 mils, using high quality rollers, flat squeegees, or airless spray units. Allow the material (152) to completely saturate into the concrete substrate while removing any excess and applying said excess to other unprimed areas and repeat the procedure until the area is completely primed. Allow the Qualipur 152 primer 4 to 6 hours to cure at 68°F (but not longer than 24 hours).
- 2) MEMBRANE COAT - After the primer (152) and any detail applications have cured to a tack-free state but no longer than 24 hours, apply Qualipur 252 membrane coating evenly, at 25 mils, using a notched trowel or squeegee and backroll with a high quality roller to create a consistent appearance. Take care to achieve recommended coverage rates at specified mil thickness as required by the end user or specifier. PLEASE
- 3) INTERMEDIATE COATING - After the membrane coat (252) has cured but no longer than 24 hours, apply the Qualipur 372 polyurethane intermediate coating or Qualipur 522E epoxy intermediate evenly at 25 mils, using a notched trowel or squeegee. Backroll to achieve a consistent surface. Take care to apply the specified mil thickness per the end user's / specifier's requirements. The intermediate coat can be seeded and backrolled, or sanded to excess, as required per the written specification. See chart included in this guide for further details.
- 4) TOP COATINGS - After the intermediate coat has cured, but no longer than 24 hours, apply the specified Qualipur topcoat (372 non-UV, 461 UV, or 582 UV resistant) evenly, at 15 mils, using a notched trowel or squeegee. Apply a uniform broadcast of sand (angular), flint (angular), or aluminum oxide (angular) into the wet top coat and backroll to fully encapsulate the sand aggregate. See chart contained within this guide for additional details.  
 PLEASE NOTE: NEVER SAND TO EXCESS QUALIPUR 461.

**EXTREME DUTY TRAFFIC SYSTEM**



**EXTREME DUTY TRAFFIC SYSTEM**

- 1) PRIMER COATING - The prepared substrate will receive Qualipur 152 primer, at 4 mils, using high quality rollers, flat squeegees, or airless spray units. Allow the material (152) to completely saturate into the concrete substrate while removing any excess and applying said excess to other unprimed areas and repeat the procedure until the area is completely primed. Allow the Qualipur 152 primer 4 to 6 hours to cure at 68°F (but not longer than 24 hours).
- 2) MEMBRANE COAT - After the primer (152) and any detail applications have cured to a tack-free state but no longer than 24 hours, apply Qualipur 252 membrane coating evenly, at 25 mils, using a notched trowel or squeegee and backroll with a high quality roller to create a consistent appearance. Take care to achieve recommended coverage rates at specified mil thickness as required by the end user or specifier. PLEASE
- 3) INTERMEDIATE COATING - After the membrane coat (252) has cured but no longer than 24 hours, apply the Qualipur 372 polyurethane intermediate coating or Qualipur 522E epoxy intermediate coating evenly at 30 mils, using a notched trowel or squeegee. Backroll to achieve a consistent surface. Take care to apply the specified mil thickness per the end user's / specifier's requirements. The intermediate coat can be seeded and backrolled, or sanded to excess, as required per the written specification. See chart included in this guide for further details.
- 4) TOP COATINGS - After the intermediate coat has cured, but no longer than 24 hours; apply the specified Qualipur topcoat (372 non-UV, 461 UV, or 582 UV resistant) evenly, at 20 mils, using a notched trowel or squeegee. Apply a uniform broadcast of sand (angular), flint (angular), or aluminum oxide (angular) into the wet top coat and backroll to fully encapsulate the sand aggregate. See chart contained within this guide for additional details.  
 PLEASE NOTE: NEVER SAND TO EXCESS QUALIPUR 461.



**LIMITATIONS**

- A. Do not apply over damp or wet substrates
- B. Do not apply to surfaces during the out-gasing of vapor
- C. Minimum application and curing temperature 40° F (4° C)
- D. Maximum substrate temperature 120° F (50° C)
- E. Substrate temperature must be a minimum of 4° F above the dew point
- F. Do not use on sandwich or split slabs with a buried membrane, on slabs or un-vented metal pan, or on epoxy resin bonded patches or overlays
- G. The systems are not intended for tire chain or metal studded tire traffic, and should not come in contact with a steel tipped snow removal plow blade (snow removal blade must be equipped with a rubber type plow blade and rubber skid pads)

**HEALTH & SAFETY INFORMATION**

Consult the Safety Data Sheet (SDS) for complete information.

**MAINTENANCE**

Consult the Qualideck® Maintenance Manual for more information. Or, for the most up-to-date information, please reference our website at [www.qualideck.com](http://www.qualideck.com).

**WARRANTY**

Advanced Polymer Technology (APT) warrants its products to be free of manufacturing defects and to meet the published physical properties when applied, cured, and tested in accordance with ASTM and APT standards. THIS WARRANTY IS IN LIEU OF ALL WARRANTIES, EXPRESSED OR IMPLIED, INCLUDING ANY WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE IN CONNECTION WITH THIS PRODUCT. NEITHER SELLER NOR SUPPLIER SHALL BE LIABLE FOR ANY LOSS OR DAMAGE EITHER DIRECT, INCIDENTAL OR CONSEQUENTIAL REGARDLESS OF LEGAL THEORY ASSERTED, INCLUDING NEGLIGENCE, MERCHANTABILITY AND/OR STRICT LIABILITY.

Seller's and suppliers obligation shall be to replace such quantity of product proven to be defective. Before using, user shall determine suitability of product for his intended use and user assumes all risk in connection therewith.

**COVERAGES**

Actual coverage rates are dependent upon a variety of factors relative to the field application. The installer must assess the conditions prior to ordering material. With 100% solids material one (1) wet mil will equal one (1) dry mil. For those materials containing solvents, the dry mil yield will be proportionately reduced by the percentage of solvents. Generally, one (1) gallon of 100% solids material will yield 1600 square feet at one (1) mil thickness. But allowances must be made for waste in mixing and pouring as well as field conditions, such as concrete surface/ rough texture, etc.

Consumption Chart				
100% Solids, Fast Cure, Low VOC, 2-Component				
Product	Type	Dry Mills	SF/Gal	kg/m <sup>2</sup>
Qualipur 152	Primer	4	300	0.150
Qualipur 172 MVB Epoxy	Epoxy MVB	18	90	0.507
Qualipur 552E Epoxy	Primer	4	375	0.123
	Intermedite/Top	15	100	0.461
Over sand loaded		15	64	0.720
Qualipur 252	Membrane	25	64	0.650
Qualipur 372 Aromatic	Intermediate/Top	15	107	0.564
		20	80	0.755
		25	64	0.943
Over sand loaded		15	64	0.943
Qualipur 582 Aliphatic	Top	15	107	0.564
		Over sand loaded		20
Qualipur 461 Aliphatic	Top	15	89	0.490
		Over sand loaded		20
Over sand loaded		15	70	0.624

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**ADVANCED POLYMER TECHNOLOGY CORP.  
QUALIDECK INDUSTRIAL & TRAFFIC COATINGS**

109 Conica Lane, Harmony PA 16037  
[www.advpolytech.com](http://www.advpolytech.com) [www.qualideck.com](http://www.qualideck.com)

**Customer Service** (724) 452-1330