

OR 55

Description

OR 55 is a high solid, spray-applied, aliphatic polyurea with excellent retention, gloss and UV stability characteristics. It can be applied at any thickness of 8-12 mils (200-300 microns) in a single pass on horizontal surfaces or multiple passes on vertical surfaces. OR 55 is quick curing and specifically formulated to be installed in thin film applications.

Recommended Use

- Concrete
- Plywood
- Cold Storage Areas
- Industrial Warehouses
- Chemical Plants
- Off-Shore Oil Platforms
- Steel
- Plastic
- Food Processing Areas
- Pulp and paper Mills
- Fertilizer Plants
- Pipeline Barges

Advantages

- Quick Cure
- High Tensile Strength
- Abrasion Resistant
- Topcoat over aromatic polyurea, polyurethane and epoxy applications ranging from 35°F to 130°F, service temperature 0°F to 200°F
- UV Resistant for Superior Gloss Retention
- Meets California VOC and AQMD Requirements, including SCAQMD areas
- Versatile Application: Can be applied by squeegee, phenolic resin core roller, plural component high pressure spray, or through a Pressure Pot
- Color Stable
- Very Durable
- Excellent Weatherability

Colors

Clear, Tan, Dark Gray, Cool Gray, Black, and White

Packaging

- 2-gallon kit (7.5 liter): 1-gallon (3.78 liters) Part-A and 1 gallon (3.78 liters) can Part-B.
- 10-gallon kit is not an in-stock item and is available with advanced notice. Contact Oak Ridge Foam & Coating Systems, Inc. for availability.

Mixing:

OR 55 may not be diluted under any circumstance. Proportions are premeasured. OR 55 Part-A and Part-B should be mixed individually before combining. Add Part-B to Part-A while mixing, using a mechanical mixer at medium speed. Mix until a homogeneous mixture and color is obtained (at least 5 minutes) and mix frequently during application to maintain uniform color. Do not thin. Do not mix in an up and down motion. If thinning is absolutely needed, use a max amount of 10% of Xylene, then clean with MEK.

Use care to scrape the sides of the container to ensure that no unmixed material remains.

Use caution not to whip air into the material as this may result in pinhole blisters and/or shortened pot life. Do not mix any material that cannot be used within 20-30 minutes.

Surface Preparation

Surface must be clean, dry, and in sound condition. Remove all oil, dust, grease, dirt, loose rust, and other foreign material to ensure adequate adhesion. Refer to product Application Bulletin for detailed surface preparation information.

Minimum recommended surface preparation:

Atmospheric:
SSPC-SP6/NACE 3, 2 mils
(50 microns) profile
Concrete & Masonry:
SSPC-SP13/NACE 6 or ICRI

Technical Data is based on draw down film

Mix Ratio by Volume	1A: 1B
Coverage Rate	80 Sq. Ft. per gal @ 20 mils
Dry Film Thickness, exclusive of aggregate	15 mils 381 microns
Pot Life at 75°F (24°C), 50% R.H	30-40 minutes
Hardness, ASTM D-2240	65 ± 2 Shore D
Tear Resistance, Die C, ASTM D-624	
Clear	450 ± 50 pli 78.8 ± 8.8 kN/m
Color	400 ± 50 pli 70.1 ± 8.8 kN/m
Tensile Strength, ASTM D-412	3000 ± 200 psi 20.7 ± 1.4 Mpa
Ultimate Elongation, ASTM D-412	
Clear	70 ± 10%
Color	50 ± 10%
Specific Gravity	
Side A	1.14
Side B	1.06
Total Solids by Weight, ASTM D-2369	
Clear	90 ± 2%
Color	91 ± 2%
Total Solids by Volume, ASTM D-2697	91 ± 2%
Viscosity at 75°F (24°C)	
Side A	300 ± 100 cps
Side B	
Clear	1000 ± 300 cps
Color	1400 ± 300 cps
Volatile Organic Compounds, ASTM D-2369-81	0 lb./gal 0 gm/liter

Application

OR 55 can be applied by phenolic resin core roller, plural component high pressure spray, or through a pressure pot. OR 55 should be applied at a minimum film thickness of 5 mils. It should be noted that the heavier the application, the longer the curing process takes.

For best results, use an airless sprayer. A phenolic resin core roller may be used, but extra care should be taken not to cause air bubbles.

Curing

At 75°F (24°C) and 50% relative humidity, allow each coat to cure 3-4 hours. Cure time will vary depending on temperature and humidity. Allow 6 hours before permitting light pedestrian traffic and at least 24-48

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hours before permitting heavy pedestrian traffic on to the finished surface.

Uncured OR 55 is very sensitive to heat and moisture. Higher temperatures and/or high humidity will accelerate the cure time. Use caution in batch sizes and thickness of application. If more than 48 hours passes between coats, re-prime the surface.

Low temperature and/or low humidity extend the cure time.

Equipment Cleanup

Equipment should be cleaned with an environmentally safe solvent, as permitted under local regulations, immediately after use.

Storage

OR 55 has a shelf life of one (1) year from date of manufacture in original, factory-sealed containers when stored indoors at a temperature between 60-95°F (15-35°C).

Limitations

The following conditions must not be coated with Oak Ridge Foam & Coating Systems, Inc. deck coatings or systems: split slabs, buried membrane, sandwich slabs with insulation, slabs over unvented metal pan, magnesite, and lightweight concrete.

On grade slabs may receive Oak Ridge Foam & Coating Systems, Inc. system coatings provided a moisture-vapor transmission test is first performed.

With regard to coating asphalt surfaces, please contact Oak Ridge Foam & Coatings Systems, Inc. technical department.

Surfaces must be dry, clean and free of foreign matter. Clear coating may turn opaque and cloudy due to moisture penetration, especially in exterior applications. Surface may be slippery when wet. Containers that have been opened must be used as soon as possible. Do not dilute under any circumstance.

Warning

This product contains Isocyanates.

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