



**EUCLID CHEMICAL**

**PROJECT PROFILE**

# SEVIER COUNTY COMPOSTING FACILITY



**PROJECT DATA**

**Location** – Sevier County, TN  
**Application** – Tipping Floor Overlay  
**Architect/Engineer** – Sevier County Solid Waste Inc.  
**Contractor/Installer** – Osborne Contract Services  
**Material Supplier** – Euclid Chemical  
**Total Area** – 5,000 ft<sup>2</sup> (464.5 m<sup>2</sup>)

**PRODUCTS FEATURED**

**EUCOFLOOR™ 404**  
 Wear, Impact and Chemical Resistant Concrete Topping

**EUCOFLOOR™ EPOXY PRIMER**  
 High Strength Epoxy Primer

**SUPER DIAMOND CLEAR™ VOX®**  
 High Solids, Water-Based Cure & Seal

**SCOPE OF PROJECT**

Application of high performance topping to give longer life to a solid waste facility concrete tipping floor

**PROJECT SUMMARY**

This Solid Waste facility in Sevierville, TN is the largest municipal composting facility in the nation. They handle all of the county’s combined organic solid waste and food waste including from the local theme park, Dollywood. They additionally process all the organic waste from the Great Smoky Mountains National Park. As such, chemical attack on the floor is a big concern and accounts for at least half of the concrete floor’s deterioration over time, aside from the normal wear and impact from the loader operation. Ultimately they needed a durable flooring overlay that could take wear, impact and chemical attack and yet be installed over a weekend minimizing facility downtime.

Soution: In 2009, they overlaid the high wear areas of the tipping floor with EUCOFLOOR 404. This is a concrete topping specifically designed to take the abuse and chemical attack of a high volume solid waste facility. Early strengths exceed 5,000 psi (34.5 MPa) and ultimately exceeds 15,000 psi (103 MPa) within a few weeks. It can be placed over a weekend with the floor back in service Monday morning. Based on the performance of the product, the management elected to overlay other parts of the floor with EUCOFLOOR 404 in 2018. Then in 2020, when it became necessary to expand the facility footprint, they again chose EUCOFLOOR 404, placing the topping during the new construction process.

Osborn Contracting Services is part of a network of qualified contractors across the U.S. who have the expertise to install a variety of Euclid Chemical products, including EUCOFLOOR 404. For additional information call Bob Swan: 702-239-1027.



# EUCOFLOOR 404

## WEAR, IMPACT, AND ABRASION RESISTANT FLOOR TOPPING

### DESCRIPTION

**EUCOFLOOR 404** is an extremely durable floor topping for use in areas subject to heavy wear, impact, and abrasion such as tipping floors in waste transfer stations. EUCOFLOOR 404 utilizes a combination of high-strength hybrid paste along with a unique blend of natural quartz, calcined, and iron aggregates. The floor may be returned to high wear service as soon as 48 hours of topping placement at 70°F (21°C).

### PRIMARY APPLICATIONS

- Waste transfer station tipping floors
- Industrial floors

### FEATURES/BENEFITS

- High wear, abrasion, and impact resistance
- High early strength for quick turnaround time

### TECHNICAL INFORMATION

PROPERTY	CONTROL (6,000 PSI MIX)	EUCOFLOOR 404
Unit Weight ASTM C138	150.0 lb/ft <sup>3</sup> (2,403 kg/m <sup>3</sup> )	171.4 lb/ft <sup>3</sup> (2,746 kg/m <sup>3</sup> )
Slump ASTM C143	5" (12.7 cm)	10" (25.4 cm)
Set Time ASTM C403	Initial: 4 - 5 hours Final: 6 - 7 hours	Initial: 3 - 4 hours Final: 4 - 5 hours
Compressive Strength ASTM C39	1 day: 1,910 psi (13.2 MPa) 3 days: 3,980 psi (27.4 MPa) 7 days: 4,870 psi (33.6 MPa) 28 days: 6,360 psi (43.9 MPa) 90 days: 6,700 psi (46.2 MPa)	1 day: 8,500 psi (58.6 MPa) 3 days: 9,000 psi (62.1 MPa) 7 days: 11,500 psi (79.3 MPa) 28 days: 15,000 psi (103.4 MPa) 90 days: 16,000 psi (110.3 MPa)
Flexural Strength ASTM C78	3 days: 540 psi (3.70 MPa) 7 days: 660 psi (4.55 MPa) 28 days: 780 psi (5.40 MPa) 90 days: 875 psi (6.05 MPa)	3 days: 1,300 psi (8.95 MPa) 7 days: 1,355 psi (9.35 MPa) 28 days: 1,475 psi (10.15 MPa) 90 days: 1,565 psi (10.80 MPa)
Rapid Chloride Permeability ASTM C1202	28 days: 3,430 coulombs 90 days: 2,846 coulombs	28 days: 122 coulombs 90 days: 38 coulombs
Salt Scaling ASTM C672	50 Cycles: loss of 2.222 lb/ft <sup>2</sup>	50 Cycles: loss of 0.000 lb/ft <sup>2</sup>
Absorption after Immersion ASTM C642	3 days: 5.88% 28 days: 4.06%	3 days: 0.82% 28 days: 0.76%
Impact Resistance ACI 544.2	3 days: 4 drops until cracking 28 days: 10 drops until cracking 90 days: 11 drops until cracking	3 days: 50 drops* 28 days: 50 drops* 90 days: 50 drops*
Chaplin Abrasion Resistance (depth after 15 minutes)	3 days: 0.030" (0.76 mm) 28 days: 0.022" (0.56 mm) 90 days: 0.022" (0.56 mm)	3 days: 0.009" (0.23 mm) 28 days: 0.007" (0.18 mm) 90 days: 0.002" (0.05 mm)
LA Abrasion Resistance (Loss after 2,000 revolutions)	3 days: 82.1% 28 days: 69.4% 90 days: 62.4%	3 days: 45.9% 28 days: 36.6% 90 days: 33.9%
Abrasion Resistance ASTM C944 (depth after 6 minutes)	3 days: 0.042" (1.07 mm) 28 days: 0.031" (0.79 mm) 90 days: 0.030" (0.76 mm)	3 days: 0.003" (0.08 mm) 28 days: 0.001" (0.03 mm) 90 days: 0.001" (0.03 mm)

\*Specimens did not crack  
Data above was determined at laboratory conditions.