



Polished Concrete S80 is a very high strength, hydraulic self-leveling mortar that requires only the addition of water. It is specifically designed to create polished concrete floors for residential, commercial, and industrial applications using the DPA (Grinding, Polishing, and Burnishing) system. It allows for varying levels of gloss depending on the process applied and is available in different formulations, colors, and finishes, including microterrazzo

USES

- Industrial plants, warehouses, and distribution centers
- Department stores and supermarkets
- Shopping malls, hotels, and restaurants
- Offices and corporate buildings
- Showrooms and automotive dealerships
- Museums, galleries, and cultural spaces
- Schools and universities
- Building lobbies and common areas
- Private residences

Suitable for pedestrian traffic, vehicular traffic, and rubber-tire forklift traffic, provided that the loads and operating conditions are compatible with the installed system

ADVANTAGES

- Good flow characteristics and ease of application
- Allows light foot traffic within 2–3 hours after application, depending on thickness and environmental conditions
- Rapid setting and development of very high strength

TECHNICAL DATA

Water required per 55 lb bag	1.00 to 1.06 US gal
Working time ¹	≈ 20 minutes
Ready for light foot traffic at ≈ 3/8 in ¹	2 to 3 hours
Drying time before starting the polishing process ²	18 to 24 hours
Compressive strength (ASTM C109, 28 days) ¹	13,200 psi (928 kg/cm ²)
Flexural strength (ASTM C348, 14 days) ¹	1,237 psi
Bond strength test (ASTM C1583, 28 days) ¹	519 psi (3.57 MPa)
Ford No. 5 cup reference time (viscosity) ¹	2 min 33 sec
TABER abrasion test (ASTM D4060-19) ¹	0.00882 oz (weight loss)
Shrinkage test (ASTM C157, 28 days) ¹	0.041%

¹ Based on laboratory testing at 68–73°F / 50% RH; actual results may vary depending on job site conditions

² Depending on the leveling thickness. Verify substrate moisture using appropriate moisture-testing equipment, as drying times may vary

APPEARANCE AND AESTHETIC LIMITATIONS

Due to its cementitious nature and the conditions of substrate preparation, application, and drying, **Polished Concrete S80** may exhibit variations in color and shade, mottling, staining, differences between pours, application marks, pores, texture variations, uneven aggregate exposure, and non-structural surface microcracks (“hairline cracks”). These conditions do not, in themselves, constitute manufacturing defects and do not necessarily affect product performance

When used as an exposed, polished, or decorative surface, a representative mock-up is recommended prior to installation to evaluate the final appearance. Polishing, densifiers, pigments, sealers, and other finishing treatments may alter the product’s color, shade, gloss, and texture

Surface Protection: **Polished Concrete S80** may absorb liquids and become stained by water, oils, grease, beverages, dirt, and other contaminants. The finished floor must be protected with the final sealer specified for the DPA system to reduce absorption, facilitate cleaning, and preserve its appearance

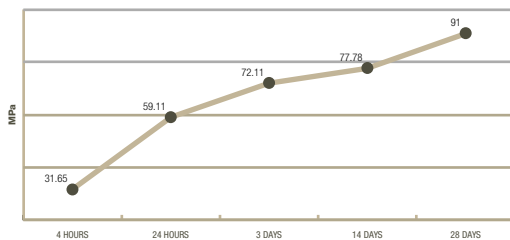
Nominal Thickness	Approximate Yield
≈ 3/8 in	17.22 ft ²
≈ 5/8 in	10.76 ft ²

Minimum application thickness: 3/8 in. for DPA finishes and 5/8 in. for areas subject to vehicular traffic. The thickness must be uniform across the entire surface.

Material consumption estimates are based on THEORETICAL calculations derived from laboratory testing. Actual consumption on the job site may vary due to factors such as rough, uneven, cracked, or porous surfaces; voids; warping; and application thicknesses that differ from those specified, among other conditions. TECNODRY shall not be held responsible for the quantities of materials ordered, consumed, or ultimately applied

Compressive Test

Polished Concrete S80

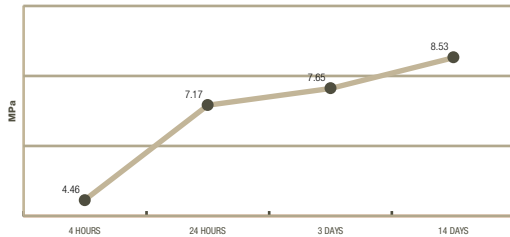


Compressive Strength Test

4 hours	31.65 MPa (≈ 4,590 psi)
24 hours	59.11 MPa (≈ 8,573 psi)
3 days	72.11 MPa (≈ 10,459 psi)
14 days	77.78 MPa (≈ 11,281 psi)
28 days	91.00 MPa (≈ 13,200 psi)

Flexural Test

Polished Concrete S80



Flexural Strength Test

4 hours	4.46 MPa (≈ 647 psi)
24 hours	7.17 MPa (≈ 1,040 psi)
3 days	7.65 MPa (≈ 1,109 psi)
14 days	8.53 MPa (≈ 1,237 psi)

SUBSTRATE PREPARATION

The substrate must be structurally sound, fully cured, clean, dry, and free of contaminants that may adversely affect adhesion, such as dust, grease, oils, paints, sealers, curing membranes, adhesives, weak laitance, or loose particles

The concrete surface must have adequate strength and be at least 28 days old, or have achieved its specified design strength. Prior to installation, moisture conditions should be evaluated using recognized test methods such as ASTM F2170, ASTM F1869, or ASTM D4263

Do not install over substrates subject to negative hydrostatic pressure or excessive moisture

All cracks, fissures, deteriorated joints, voids, and weak areas must be repaired prior to application. Construction and control joints must be honored and treated in accordance with the specified flooring system

For optimal performance, mechanical substrate preparation is recommended, using grinding or shot blasting to achieve an appropriate concrete surface profile (CSP 2–4 in accordance with ICRI guidelines)

Recommended methods:

- Shot blasting • Grinding • Scarifying

Apply the primer recommended by TECNODRY in accordance with the instructions provided in its corresponding technical data sheet. On highly porous surfaces, applying two coats of primer is recommended. For industrial or heavy-traffic applications, the use of epoxy primers with a silica sand broadcast is recommended

Improper substrate preparation may adversely affect system performance and void the product warranty

MIXING AND APPLICATION

To ensure product performance and properties, the specified mixing ratios must be strictly followed, and the installation procedure must be carried out correctly.

A low-speed electric mixer (450–650 rpm) suitable for self-leveling mortars is recommended. Professional pumping equipment may also be used for large-area projects or industrial applications

First, add the required amount of clean, fresh potable water to the mixing container, preferably at a temperature between 50°F and 68°F. Then, gradually add **Polished Concrete S80** while maintaining constant agitation until a homogeneous, fluid mixture free of lumps is obtained

Use:

- 1.00–1.06 US gal of potable water

Do not add cement, sand, additives not specified as part of the system, or excess water

Mix for approximately 2–3 minutes until a homogeneous, lump-free mixture is obtained. Allow the material to rest for approximately 1 minute, then remix for 30 seconds before application, avoiding excessive air entrainment during the process

Once a homogeneous mixture with the proper flow characteristics has been achieved, immediately pour the material onto the substrate in uniform sections, taking into account the expected coverage and specified thickness. When necessary, install temporary barriers or edge dams to control material flow and maintain the specified design thickness. Spread the self-leveling material using a gauge rake, notched trowel, or suitable specialized tool to control the applied thickness. Then, roll a spiked roller over the fresh material in multiple directions to release entrapped air and promote a uniform, defect-free finish

Recommended application temperature (ambient and substrate): 50°F to 86°F

High temperatures, low relative humidity, air currents, or direct sunlight may significantly reduce the material's open time and workability

CURING

Polished Concrete S80 does not require wet curing, water application, or post-installation curing membranes.

To ensure optimal performance and proper strength development, the material must be protected during the first 24 hours from:

- air currents and drafts
- direct sunlight
- extreme temperatures
- excessive moisture

Maintain ambient and substrate temperatures within the recommended ranges during application and the initial setting period

Do not force drying through intensive ventilation, direct heating, or aggressive dehumidification equipment

Observe the specified waiting times before beginning the DPA process, applying the densifier and final sealer, and opening the floor to heavy-duty service

DRYING

Drying times and the start of the DPA process may vary depending on the applied thickness, ambient temperature, ventilation, relative humidity, substrate conditions, and the moisture content requirements specified by the manufacturer of the final finish

Under controlled laboratory conditions at 73°F (23°C) and 50% relative humidity (RH), **Polished Concrete S80** allows the DPA process to begin 18–24 hours after placement

GRINDING, POLISHING, AND BURNISHING (DPA)

In partnership with RetroPlate, the **Polished Concrete S80** system combines mechanical grinding, polishing, and burnishing with the application of a RetroPlate densifier and final sealer to develop gloss and protect the surface

For application steps and specified products, please refer to our DPA Process Guide

The latest versions of our technical data sheets are available at:

www.nivelantes.com | www.self-leveling.us

Refer to the Safety Data Sheet (SDS) for information on safety, handling, and emergency procedures.

[Link](#)

STORAGE AND SHELF LIFE

Polished Concrete S80 must be stored in its original, unopened, tightly sealed packaging in a cool, dry location, protected from moisture, rain, freezing conditions, and direct sunlight

Bags should be kept off the floor and stored on suitable pallets in areas with controlled ventilation

Under proper storage conditions, the product has a shelf life of up to 12 months from the date of manufacture

Improper storage or exposure to moisture may adversely affect the product's performance and properties

SPECIAL PRECAUTIONS

Refer to the Safety Data Sheet (SDS) for information on safety, handling, and disposal. The use of personal protective equipment (PPE), including safety goggles, a dust mask, and latex gloves, is recommended

Keep out of reach of children

LIMITED WARRANTY

TECNODRY guarantees the quality of its products based on the use of premium raw materials, ensuring the product's quality, performance, and compliance with our technical specifications. However, **TECNODRY** shall not be held liable for failures resulting from inadequate preparation, improper installation or finishing, or substrate defects where the product is applied

The information contained in this document is provided in good faith and reflects the current knowledge and experience of **TECNODRY**. It applies exclusively to the specific uses and applications mentioned herein. Users are responsible for verifying the product's suitability by conducting their own tests under actual application conditions

