TopSeal 793 Structural Silicone Sealant
Technical Data Sheet (2026)

Description

TopSeal 793 is a neutral-cure, one-part silicone sealant designed for structural glazing and weatherseal applications. This non-sag, room-temperature-vulcanizing (RTV) silicone cures to a high-strength, medium-modulus elastomer providing long-term flexibility and adhesion under severe environmental conditions.

When properly designed and applied, TopSeal 793 accommodates ±50% joint movement and provides structural bonding performance suitable for glass, aluminum, and metal façade systems, subject to appropriate surface preparation and adhesion testing.

Product Classification

One-part, neutral-cure structural silicone sealant. Tested in accordance with ASTM C1184 (Structural Silicone Sealants) and ASTM C920 (Elastomeric Joint Sealants) by independent laboratory.

Applications

- Structural and non-structural glazing
- Factory or field glazing of unitized or stick-built curtain walls
- Structural attachment of façade or panel systems, where permitted by project specifications and engineering review
- Weathersealing of glass, metal, stone, and other common building materials

Note: *Substrate suitability shall be confirmed through manufacturer guidance and project-specific adhesion and compatibility testing. Joint design, bite calculations, and substrate suitability must be confirmed through project-specific engineering review.*

Features & Benefits

- Meets ASTM C1184 and ASTM C920 requirements
- ±50% movement capability demonstrated in accordance with ASTM C719; SWRI validation applies to listed substrates
- Resistant to UV, ozone, and temperature extremes
- Consistent extrusion, easy tooling, low-odor cure by-product

Approvals / Specifications

Independently tested by Intertek Building & Construction, York, PA. Test methods include ASTM C1184, ASTM C920, ASTM C719, ASTM C1135, ASTM C794, ASTM C792, and related durability evaluations. This testing does not constitute third-party certification or product listing.

Conforms to: Korean KS F 4910 G-25HM Standard; Korea Eco-Label Certification; VOC compliant per SCAQMD Rule 1168 and eligible for use in projects pursuing LEED® and Green Globes low-emitting material criteria.

Typical Physical Properties

(Typical laboratory values; not intended for specification development)

Property	Test Method	Result
Tack-Free Time	ASTM C679	~3 hours
Working Time	—	20 – 30 min
Flow, Sag or Slump	ASTM C639	0 mm (no sag)
Specific Gravity	ASTM D1475	1.43
As Cured (7–21 days @ 25 °C [77 °F], 50 % RH)		
Durometer Hardness (Shore A)	ASTM C661	43 (avg)
Peel Strength (SS Substrate)	ASTM C794	Avg. 99–123 N (substrate dependent; cohesive failure observed)
100 % Modulus	ASTM C1135	0.65 MPa (≈ 94 psi)
Ultimate Tensile Strength	ASTM C1135	1.06 MPa (≈ 154 psi)
Ultimate Elongation	ASTM C1135	344 %
Heat Aging (21 days @ 88 °C / 190 °F)	ASTM C792 / ASTM C1246	≤1% weight loss; no cracking or chalking observed
Stain and Color Change	ASTM C510	None observed
Accelerated Weathering	ASTM C1442 / ASTM G155	No cracking or visual degradation observed following accelerated weathering exposure.
Joint Movement Capability	ASTM C719	± 50 %
Classification	ASTM C920	Type S, Grade NS, Class 50, Use NT, G, A, O

Surface Preparation

- Remove all dust, oil, frost, old sealant, and contaminants.
- Clean non-porous surfaces using the two-rag solvent wipe method with isopropyl alcohol.
- Abrade porous surfaces as required and clean with compressed air.

Application Method

- Install backer rod or bond-breaker tape to control joint depth.
- Mask adjacent surfaces for neat lines.
- Apply sealant using positive pressure from a bulk gun or sausage applicator.
- Tool within 15 minutes before skin formation to ensure complete contact.
- Remove masking immediately after tooling.

Handling and Storage

- Store in original unopened containers at 5 – 25 °C (41 – 77 °F).
- Avoid freezing and direct sunlight.
- Shelf life: 12 months from date of manufacture.

Limitations

Do not apply TopSeal 793:

- In totally confined joints without air exposure (cures with atmospheric moisture)
- On wet, frosted, or contaminated surfaces
- Below 5 °C (41 °F) or above 50 °C (122 °F) substrate temperature
- In continuously immersed or below-grade conditions
- On materials that bleed oils, plasticizers, or solvents
- On self-cleaning glass or fluoropolymer coatings without adhesion testing
- Where painting is required (silicone is non-paintable)

Health, Safety, and Environmental Information

Before handling, review the Safety Data Sheet (SDS) for health, safety, and environmental information.
Use adequate ventilation and appropriate PPE (gloves, safety glasses).

**Refer to SDS available at www.topseal.co.kr or upon request.*

Warranty

Warranty terms are provided under a separate written TopSeal Warranty document applicable to the specific project.
Refer to the issued warranty for complete terms and conditions.