PRODUCT / STRUCTURAL GLAZING

SS-998
Neutral Structural Silicone Sealant

One-component neutral-oxime structural silicone for properly designed façade and curtain-wall bonding systems.

CURE TYPE	LOAD ROLE	ENVIRONMENT	CHEMISTRY
One-component neutral cure	Structural bonding / sealing	Façade and curtain-wall systems	Neutral oxime cure

Product description

SS-998 is a one-component, neutral oxime structural silicone sealant supplied as a non-sag paste for structural bonding and sealing in properly designed façade and curtain-wall systems. It cures to form a resilient silicone elastomer and requires project-specific adhesion, compatibility, joint-design and quality-control review.

Key benefits

Structural tensile and shear performance
0.99 MPa tensile adhesion strength and 0.97 MPa shear strength, each with 0% adhesion-failure area, provide a measured basis for structural bonding evaluation.

Conditioning and weathering resistance
Tensile adhesion remained above the reference requirement after 90°C, −30°C and water–UV exposure, with 0% reported adhesion-failure area.

Controlled vertical application
0 mm vertical slump and 2 s extrudability support clean bead placement, with 10–20 minutes of working time for controlled assembly.

Recommended applications

Façade structural glazing
Structural bonding of glass and approved framing materials in properly designed façade systems.

Curtain-wall unit bonding
Factory or project assembly where joint geometry, adhesion, compatibility and production controls are approved.

Glass, metal and selected panel bonding
High-demand bonding and sealing where actual substrates, finishes and adjacent materials have been evaluated.

STRUCTURAL-USE BOUNDARY
Structural glazing is an engineered system. Project loads, actual materials, joint dimensions, application procedures and QA/release criteria require written technical approval before use.

Applications, benefits and substrate suitability

Intended uses

APPLICATION	TYPICAL ASSEMBLY	LOAD ROLE	PROJECT CONTROL
Façade structural glazing	Glass bonded to approved metal framing	Structural bonding	Project design, adhesion and compatibility approval required
Curtain-wall unit bonding	Factory- or project-assembled curtain-wall units	Structural bonding / sealing	Approved joint geometry, production process and QA plan required
Selected panel and metal bonding	Approved glass, metal or panel combinations	Project-specific	Actual finishes and adjacent materials must be evaluated

Features and benefits

FEATURE	PERFORMANCE STATEMENT	PRACTICAL VALUE	CONDITIONS / LIMITS
Structural tensile and shear performance	0.99 MPa tensile adhesion strength; 0.97 MPa shear strength; 0% adhesion-failure area in both tests	Measured basis for demanding structural bonding evaluation	These results are not structural design stresses
Conditioned adhesion retention	0.61–1.05 MPa after 90°C, −30°C and water–UV exposure; 0% adhesion-failure area	Supports façade-system evaluation across demanding reference conditions	Use the exact conditioning results and actual project materials
Flexible response under load	102% elongation at maximum tensile strength	Demonstrates deformation before maximum tensile load in the referenced test	Not elongation at break or movement capability
Non-sag application	0 mm vertical slump; no horizontal deformation	Clean bead placement and controlled vertical application	Apply within the stated temperature range and approved geometry
Neutral one-component cure	One-component neutral oxime system	Ready-to-use application without component mixing	Compatibility testing remains required for actual materials

Substrate suitability matrix

Working reference substrates are listed below. Actual surface finish, cleaner, primer, coating and adjacent materials require project-specific adhesion and compatibility verification.

SUBSTRATE	WORKING STATUS	REQUIRED VERIFICATION	PRIMARY CONSIDERATION
Float glass	Reference substrate	Project adhesion and compatibility test	Actual coating, ceramic ink, edge treatment and cleaning process
Anodized aluminum	Reference substrate	Project adhesion and compatibility test	Anodizing type, seal condition, production batch and cleaner
Coated glass	Conditional	Adhesion and compatibility test required	Coating chemistry, coating adhesion and edge-treatment requirements
Powder-coated aluminum	Conditional	Adhesion test required; primer may be required	Coating supplier, color, production batch and cure
PVDF-coated aluminum	Conditional	Adhesion test required; primer may be required	Fluoropolymer coating and surface-energy variability
Stainless steel	Conditional	Adhesion test required	Oil, polishing compound, passivation and fabrication residue
Laminated-glass edge	Specialist review	Compatibility test required	Interlayer contact and edge compatibility
Insulating-glass secondary seal	Specialist review	System compatibility approval required	Secondary-seal chemistry and IG-unit durability
Gaskets, setting blocks and adjacent sealants	Project-specific	Compatibility test required	Cure interference, migration, discoloration and adhesion effects

Technical data and performance interpretation

Physical and application properties

PROPERTY	REPORTED TEST RESULT	REFERENCE REQUIREMENT	TEST METHOD
Appearance	**Conforms**	Fine, homogeneous paste; free from bubbles, agglomerates, skin and gel	GB 16776-2025, 6.2
Density	**1.37 g/cm³**	**1.35 ± 0.05 g/cm³**	GB/T 13477.2-2018
Vertical Slump	**0 mm**	**≤ 3 mm**	GB/T 13477.6-2002
Horizontal Slump	**No deformation**	No deformation	GB/T 13477.6-2002
Extrudability	**2 s**	**≤ 10 s**	GB 16776-2025, 6.8
Tack-free Time	**0.5 h**	**≤ 3 h**	GB/T 13477.5-2002

The specified density reference was manufacturer-declared in the source report. Tack-free Time is not a full-cure or return-to-service time.

Cured physical properties

PROPERTY	REPORTED TEST RESULT	REFERENCE REQUIREMENT
Shore A Hardness	**50**	**20–60**

Heat-aging performance

PROPERTY	REPORTED TEST RESULT	REFERENCE REQUIREMENT
Weight Loss	**4.2%**	**≤ 6.0%**
Cracking	**None**	None
Chalking	**None**	None

Tensile adhesion at 23°C

PROPERTY	REPORTED TEST RESULT	REFERENCE REQUIREMENT	TEST METHOD
Tensile Adhesion Strength	**0.99 MPa**	**≥ 0.60 MPa**	GB 16776-2025, 6.11
Elongation at Maximum Tensile Strength	**102%**	**≥ 100%**	GB 16776-2025, 6.11
Adhesion Failure Area	**0%**	**≤ 5%**	GB 16776-2025, 6.11
Secant Stiffness K12.5	**1.99**	Reported measured value	GB 16776-2025, 6.11
Tensile Modulus at 5% Elongation	**0.08 MPa**	Reported measured value	GB 16776-2025, 6.11
Tensile Modulus at 10% Elongation	**0.20 MPa**	Reported measured value	GB 16776-2025, 6.11
Tensile Modulus at 15% Elongation	**0.30 MPa**	Reported measured value	GB 16776-2025, 6.11
Tensile Modulus at 20% Elongation	**0.38 MPa**	Reported measured value	GB 16776-2025, 6.11
Tensile Modulus at 25% Elongation	**0.45 MPa**	Reported measured value	GB 16776-2025, 6.11

Referenced companion methods: GB/T 13477.8-2017 and GB/T 37126-2018. Elongation at Maximum Tensile Strength is not elongation at break or a movement-capability classification.

REFERENCE CLASSIFICATION	MAIN TESTING STANDARD	DATA TYPE
1 C G/AL	**GB 16776-2025**	**Reported Test Result**

Conditioned tensile adhesion and shear performance

Tensile adhesion after conditioning

CONDITIONING	PROPERTY	REPORTED TEST RESULT	REFERENCE REQUIREMENT	METHOD
90°C	Tensile Adhesion Strength	**1.05 MPa**	**≥ 0.45 MPa**	GB 16776-2025, 6.11
90°C	Adhesion Failure Area	**0%**	**≤ 5%**	GB 16776-2025, 6.11
−30°C	Tensile Adhesion Strength	**0.99 MPa**	**≥ 0.45 MPa**	GB 16776-2025, 6.11
−30°C	Adhesion Failure Area	**0%**	**≤ 5%**	GB 16776-2025, 6.11
Water–UV Exposure	Tensile Adhesion Strength	**0.61 MPa**	**≥ 0.45 MPa**	GB 16776-2025, 6.11
Water–UV Exposure	Adhesion Failure Area	**0%**	**≤ 10%**	GB 16776-2025, 6.11

The conditioning results do not establish a service-temperature range, permanent-immersion suitability or a specific outdoor service life.

Shear properties

PROPERTY	REPORTED TEST RESULT	REFERENCE REQUIREMENT	TEST METHOD
Shear Strength	**0.97 MPa**	**≥ 0.60 MPa**	GB 16776-2025, 6.12
Adhesion Failure Area	**0%**	**≤ 5%**	GB 16776-2025, 6.12
Shear Modulus at 5% Elongation	**0.03 MPa**	Reported measured value	GB 16776-2025, 6.12
Shear Modulus at 10% Elongation	**0.06 MPa**	Reported measured value	GB 16776-2025, 6.12
Shear Modulus at 15% Elongation	**0.09 MPa**	Reported measured value	GB 16776-2025, 6.12
Shear Modulus at 20% Elongation	**0.12 MPa**	Reported measured value	GB 16776-2025, 6.12
Shear Modulus at 25% Elongation	**0.15 MPa**	Reported measured value	GB 16776-2025, 6.12

REFERENCE TEST SUBSTRATES
Anodized aluminum + float glass

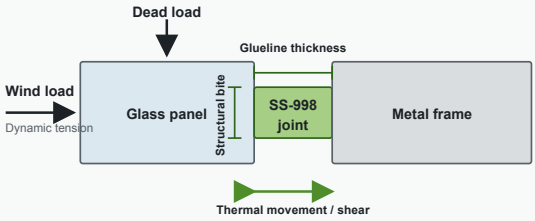
ALKANE PLASTICIZER
Not detected
GB/T 31851-2015

MEASURED-VALUE STATUS
K12.5 and modulus values
No separate pass/fail criterion

INTERPRETATION BOUNDARY
Reported tensile and shear test results support product comparison and project evaluation; they are not allowable design stresses or substitutes for project joint calculations.

Structural joint design and application conditions

Structural joint design basis



Project design inputs

WIND
Pressure and panel short span

DEAD LOAD
Glass weight and support condition

MOVEMENT
Glass/frame thermal differential

GEOMETRY
Structural bite and glueline thickness

SS-998 DESIGN STRESS
Project-specific

Figure 5.1 — Conceptual structural glazing load path. Diagram not to scale. No default SS-998 design stress or joint dimensions are declared in this TDS.

Do not size structural joints from tensile strength, shear strength or elongation values alone. Joint dimensions and structural bite must follow the approved project calculation and technical evaluation.

Application conditions

CONTROL	PRODUCT INFORMATION	APPLICATION MEANING
Application temperature	**5–40°C**	Application range; not a service-temperature range
Working time	**10–20 min**	Complete application and tooling within the workable period
Tack-free time	**0.5 h**	Reported result; not full cure or return to service
Surface condition	Sound, clean and dry	Free from dust, oil, release agents, frost and other contaminants

PROJECT APPROVAL BOUNDARY

Structural applications require actual-material adhesion and compatibility testing, verified joint geometry, documented application controls and written technical approval before production use.

PREPARATION / PROJECT CONTROL

Application controls, limitations and document control

Surface preparation

All bonding surfaces must be structurally sound, clean, dry and free from dust, oil, release agents and other contaminants. Establish the cleaning method for the actual substrate system.

Compatibility and adhesion

Test the actual glass, coating, metal, spacer, gasket, setting block, backing material and adjacent sealants before production application.

Primer guidance

Primer requirements are substrate- and system-specific. Determine any primer requirement by project adhesion testing.

Project QA and release

Approve actual materials, joint dimensions, preparation and acceptance criteria before production. Release bonded units only after the required cure and adhesion checks are complete.

Limitations

- Do not use without project-specific structural evaluation and written technical approval.
- Do not assume compatibility with coated or laminated glass, insulating-glass components, natural stone, plastics or adjacent sealants without testing.
- The conditioning results do not establish permanent-immersion suitability, service temperature or a specific outdoor service life.
- Do not use reported tensile, shear, modulus or elongation values as structural design values.
- Refer to the current Safety Data Sheet before handling and application.

Packaging, colors and storage

PACKAGING	300 mL cartridge; 600 mL foil sausage
COLORS	Black, White, Grey, Clear
SHELF LIFE	18 months. Keep the original packaging closed until use and follow the manufacturing and expiry information on the product label.

Manufacturer and contact information

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