

TECHNICAL DATA SHEET

Two-Component Structural Glazing Silicone Sealant (DZ9908)

Technical Overview and Applications:

This product is a two-component, neutral-curing, high-modulus silicone sealant designed for manufacturing of high performance insulating glass units and used in structural glazing application. It boasts high strength, robust adhesion, resistance to aging, and performance across extreme temperatures, while maintaining low permeability. A specific two-component dispensing machine is required for application, ensuring the components mix correctly before curing into a durable elastomer that supports the insulating glass's structural stability over time.

- It offers persistent high strength and modulus, essential for the long-term stability of insulating glass;
- It forms a reliable bond with various glass types and spacers;
- The neutral cure is non-corrosive to metals and other construction materials;
- Adjustable curing speed facilitates rapid deep section curing suitable for factory settings;
- It is free from any irritating or unpleasant odors;
- Exhibits exceptional resistance to weathering, aging, UV light, ozone, and water;
- Remains resilient at temperatures ranging from -50°C to +150°C, avoiding brittleness, hardening, or cracking, while not softening or degrading, thus preserving strength and elasticity;
- This sealant is compatible with other neutral silicone sealants.

Typical Application:

- Structural glazing and sealing in an insulating glass unit.

Color & Package

- Component A is white, Component B is black; the mixture results in black.
- Packaging: Component A in 200L steel drums; Component B in 20L plastic pail.

Mixing Ratio

- The volume ratio is 8:1 to 14:1.

Instructions for Application:

- Prior to application, an adhesion test between the sealant and the substrate should be conducted to confirm the product's suitability;
- Dust on the substrate surface should be blown off or vacuumed clean, followed by thorough cleaning with alcohol, acetone solvent, or an appropriate cleaner to ensure the bonding surface is dry, and sealant application should occur within 30 minutes of cleaning;
- The sealant should be applied to fully occupy the gaps, creating a dense layer in close contact with the substrate surface, and if necessary, any adjustments should be made within 20 minutes after application;
- The recommended temperature range for sealant application is 5°C to 40°C.

Application Restrictions:

- Used as a structural sealant;
- Unsuitable for application when the material surface temperature is below 5°C or above 40°C;
- Not suitable for frosty or damp surfaces;
- Not suitable for areas subject to continuous immersion in water or perennially damp conditions;
- Contact with rubber materials (such as sealing strips, rubber pads, etc.) should be avoided to prevent yellowing;
- Contact with acidic or alkaline substances (such as exterior wall cleaning solutions) should be avoided to prevent discoloration;
- Not suitable for use with materials that may leach oils, plasticizers, or solvents, like surfaces of oil-soaked wood.

Technical Parameters:

No.	Test Item		Standard	Test Result
1	Sag Degree	Verticality mm	≤3	0
		Horizontal	No deformation	No deformation
2	Surface drying time, h		≤2	1.8
3	Applicable period, min		≥20	40
4	Hardness, Shore A		30-60	37
5	Elasticity recovery rate, %		≥80	83
6	Tensile Adhesion	Tensile bonding strength, MPa	≥0.60	0.74
		Elongation at max tensile strength, %	≥50	133
		Bond destruction area, %	≤10	0
7	Defined elongation bonding		No deformation	No deformation
8	Tensile Adhesion after water & UV-radiation	Tensile bonding strength, MPa	≥0.45	0.62
		Elongation at max tensile strength, %	≥40	184
		Bond destruction area, %	≤30	0
9	Tensile Adhesion after Hot Air aging treatment	Tensile bonding strength, MPa	≥0.60	0.81
		Elongation at max tensile strength, %	≥40	129
		Bond destruction area, %	≤30	0
10	Thermal weight loss, %		≤6.0	3.6
11	Moisture vapor transmission rate, g/(m ² ·d)		Report value	8.33

Quality Assurance

- The company is certified under ISO9001/ISO14001/ISO45001 management systems, strictly adhering to ISO9001 quality system requirements for production and quality control.

Maintenance

- Generally requires no maintenance. If sealant in the joints is damaged, replace the damaged part by cleaning the accumulated dirt with a solvent and resealing. Our product adheres well to cured sealant of the same type.

Storage and Transportation

- This product is non-hazardous and can be transported as general chemical products;
 - Store in a dry, ventilated, cool place below 27°C. The shelf life is 12 months from the production date. Pay attention to the production date on the product packaging.

Safety Instructions

- Consult the Material Safety Data Sheet (MSDS) before use.
 - The sealant is non-toxic once fully cured. Avoid contact with eyes before curing; in case of contact, rinse with plenty of water and seek medical attention. Keep uncured products away from children. The product releases small molecule substances during curing; ensure ventilation to prevent adverse effects from high concentrations.

Recommendations and Declarations

- Given the diversity of situations, it's impossible to account for all conditions, hence cannot guarantee the product's suitability for all uses and applications. Users should familiarize themselves with the product before use and determine its suitability and optimal use method on their own. The company ensures the product meets relevant standards but does not

offer any other explicit or implied warranties. Remedies are limited to product return or exchange. The company disclaims any liability for incidental or consequential damages. For issues during use, contact our after-sales service for assistance.

- Production date: See printed code on packaging.
- Packaging: Component A in 200L steel drums; Component B in 20L plastic pails.

TEST REPORT ON RHEOLOGICAL PROPERTIES

Client	Dermax Industrial Co., Ltd.		
Sample Description	DZ9908 A Sealant	Lab Report No.	WD-R-240613-0467/1
Source	Dermax Industrial Co., Ltd.	Request No.	WD-Q-240613-0136
Client's Ref.	N.G	Sample No.	WD-S-240613-0435
Curing and test condition	Temperature: 23°C Relative Humidity: 50%	Date Received	13/06/2024
Test Method	ASTM C639-15(2020)	Date Tested	19/06/2024
Sampled By	N.G	Date Reported	06/08/2024
Wimpey Ref No.	240613066	Tested By	SU

Rheological Properties

Test	Standard Requirement as per ASTM C920-18	Result
Rheological Properties	The sealant shall have flow characteristic such that when tested in accordance with test method ASTM C639. It shall exhibit a smooth level surface.	The tested specimen exhibits a smooth leveled surface.

Remarks: None

Signed for and on behalf of Wimpey Laboratories LLC

S.Sarath Kumar
Head of Department

Test results relate only to the samples tested

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TEST REPORT ON APPLICATION LIFE

Client	Dermax Industrial Co., Ltd.		
Sample Description	DZ9908 A Sealant	Lab Report No.	WD-R-240613-0467/2
Source	Dermax Industrial Co., Ltd.	Request No.	WD-Q-240613-0136
Samples by	N.G	Sample No.	WD-S-240613-0435
Client's Ref.	N.G	Date Received	13/06/2024
Curing and test condition	Temperature: 23°C Relative Humidity: 50%	Date Tested	19/06/2024
Test Method	ASTM C1183/C1183M-13	Date Reported	06/08/2024
Wimpey Ref No.	240613066	Tested By	SU

Test Result

Test	Standard Requirement as per ASTM C920-18	Result
Application Life	The sample shall be extrudable at a rate of not less than 10 ml/min, 3 h after mixing.	25 ml/min

Remarks: None

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Head of Department

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TEST REPORT ON TACK FREE TIME

Client	Dermax Industrial Co., Ltd.		
Sample Description	DZ9908 A Sealant	Lab Report No.	WD-R-240613-0467/3
Source	Dermax Industrial Co., Ltd.	Request No.	WD-Q-240613-0136
Client's Ref.	N.G	Sample No.	WD-S-240613-0435
Curing and test condition	Temperature: 23°C Relative Humidity: 50%	Date Received	13/06/2024
Test Method	ASTM C679-15(2022)	Date Tested	19/06/2024
Sampled By	N.G	Date Reported	06/08/2024
Wimpey Ref No.	240613066	Tested By	SU

Tack Free Time

Test	Standard Requirement as per ASTM C920-18	Result
Tack Free Time	There shall be no transfer of the sealant to the polyethylene film when tested at 3 h in accordance with Test Method ASTM C679-15	Pass – No Transfer of test specimens to the polyethylene film

Remarks: None

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Head of Department

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TEST REPORT ON EXTRUSION RATE

Client	Dermax Industrial Co., Ltd.		
Sample Description	DZ9908 A Sealant	Lab Report No.	WD-R-240613-0467/4
Source	Dermax Industrial Co., Ltd.	Request No.	WD-Q-240613-0136
Client's Ref.	N.G	Sample No.	WD-S-240613-0435
Curing and test condition	Temperature: 23°C Relative Humidity: 50%	Date Received	13/06/2024
Test Method	ASTM C1183/C1183M-13	Date Tested	19/06/2024
Sampled By	N.G	Date Reported	06/08/2024
Wimpey Ref No.	240613066	Tested By	SU

Extrusion Rate

Test	Standard Requirement as per ASTM C920-18	Result
Extrusion Rate	>10mL/min	21 mL/min

Remarks: None

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Head of Department



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TEST REPORT ON HARDNESS

Client	Dermax Industrial Co., Ltd.		
Sample Description	DZ9908 A Sealant	Lab Report No.	WD-R-240613-0467/5
Source	Dermax Industrial Co., Ltd.	Request No.	WD-Q-240613-0136
Client's Ref.	N.G	Sample No.	WD-S-240613-0435
Test Method	ASTM C661-15(2022)	Wimpey Ref No.	240613066
Equipment Type	Durometer Shore A	Date Received	13/06/2024
Equipment Model	SHR-A-GOLD	Date Tested	10/07/2024
Serial Number	23167	Date Reported	06/08/2024
Mean of Testing	Manual	Indentation Hardness Time	1 second
Room Temperature	23°C	Tested By	SU
Curing condition	21 days as follows: 7 days at standard conditions, 7 days in a chamber controlled at 38°C & 95 % relative humidity and 7 days at standard conditions.		

Test Result

Test	Test Readings	Result
Shore A Hardness	29,26,30,27,26	A/28/1

Remarks: None

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TEST REPORT ON STAIN AND COLOR CHANGE

Client	Dermax Industrial Co., Ltd.		
Sample Description	DZ9908 A Sealant	Lab Report No.	WD-R-240613-0467/6
Source	Dermax Industrial Co., Ltd.	Request No.	WD-Q-240613-0136
Client's Ref.	N.G	Sample No.	WD-S-240613-0435
Curing and Room condition	Temperature: 23°C Relative Humidity: 50%	Date Received	13/06/2024
Test Method	ASTM C510-16(2022)	Date Tested	03/07/2024
Test Conditioning	24hours at 23°C 100hours UV at 60°C	Date Reported	06/08/2024
Control Sample Exposure	14 days Standard condition	Duration of Exposure to UV	100 Hours
Wimpey Ref No.	240613066	Tested By	SU

Test Result

Test	Standard Requirement as per ASTM C920-18	Result
Stain and colour change	The sealant shall not cause any visible stain on the top surface of a white cement mortar base	Pass

Remarks: None

Signed for and on behalf of Wimpey Laboratories LLC



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Head of Department

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TEST REPORT ON PEEL ADHESION

Client	Dermax Industrial Co., Ltd.		
Sample Description	DZ9908 A Sealant	Lab Report No.	WD-R-240613-04677
Source	Dermax Industrial Co., Ltd.	Request No.	WD-Q-240613-0136
Client's Ref.	N.G	Sample No.	WD-S-240613-0435
Curing and Room condition	Temperature: 23°C Relative Humidity: 50%	Wimpey Ref No.	240613066
Test Method	ASTM C794-18(2022)	Date Received	13/06/2024
Substrate Surface Preparation procedure	ASTM C1375-00(2020)	Date Tested	10/07/2024
Curing Time	21 days	Date Reported	06/08/2024
Wire Mesh	Standard Wire mesh 25mm width	Duration of Exposure to UV	Not applicable
Substrate Used	Concrete	Tested By	SU

Test Result

Sample No.	Peel Strength (N)	Failure Type	Standard Requirement as per ASTM C920-18
WD-S-240613-0435	41.7	No Adhesion Bond failure observed	The peel strength for each individual test shall not be less than 22.2 N (5 lbf). The sealant shall show no more than 25 % adhesive bond loss for each individual test.
	40.5		
	44.2		
	45.2		
	40.2		
Average	42.4		

Remarks: None

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TEST REPORT ON PEEL ADHESION AFTER UV EXPOSURE

Client	Dermax Industrial Co., Ltd.		
Sample Description	DZ9908 A Sealant	Lab Report No.	WD-R-240613-0467/8
Source	Dermax Industrial Co., Ltd.	Request No.	WD-Q-240613-0136
Client's Ref.	N.G	Sample No.	WD-S-240613-0435
Curing and Room condition	Temperature: 23°C Relative Humidity: 50%	Wimpey Ref No.	240613066
Test Method	ASTM C794-18(2022)	Date Received	13/06/2024
Substrate Surface Preparation procedure	ASTM C1375-00(2020)	Date Tested	31/07/2024
Curing Time	21 days	Date Reported	06/08/2024
Wire Mesh	Standard Wire mesh 25mm width	Duration of Exposure to UV	250
Substrate Used	Concrete	Tested By	SU

Test Result

Sample No.	Peel Strength (N)	Failure Type	Standard Requirement as per ASTM C920-18
WD-S-240613-0435	33.7	No Adhesion Bond failure observed	The peel strength for each individual test shall not be less than 22.2 N (5 lbf). The sealant shall show no more than 25 % adhesive bond loss for each individual test.
	33.2		
	34.9		
	30.4		
	32.7		
Average	33.0		

Remarks: None

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Head of Department

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TEST REPORT ON EFFECTS OF ACCELERATED WEATHERING

Client	Dermax Industrial Co., Ltd.		
Sample Description	DZ9908 A Sealant	Lab Report No.	WD-R-240613-0467/9
Source	Dermax Industrial Co., Ltd.	Request No.	WD-Q-240613-0136
Client's Ref.	N.G	Sample No.	WD-S-240613-0435
Curing and test condition	Temperature: 23°C Relative Humidity: 50%	Date Received	13/06/2024
Test Method	ASTM C793-05 & ASTM C1442-14	Date Tested	23/07/2024
Test Temperature	23°C	Date Reported	06/08/2024
Curing condition	21 days at standard condition 250 hours at UV 24hours at -26°C	Mandrel Diameter	12.7mm
Wimpey Ref No.	240613066	Tested By	SU

Test Result

Test	Standard Requirement as per ASTM C920-18	Result
Effects of Accelerated Weathering	Should not crack after Accelerated weathering and Bend test	Pass

Remarks: None

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Head of Department

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TEST REPORT ON EFFECT OF HEAT AGEING

Client	Dermax Industrial Co., Ltd.		
Sample Description	DZ9908 A Sealant	Lab Report No.	WD-R-240613-0467/10
Source	Dermax Industrial Co., Ltd.	Request No.	WD-Q-240613-0136
Client Reference	N.G	Sample No.	WD-S-240613-0435
Curing and test condition	Temperature: 23°C Relative Humidity: 50%	Wimpey Ref No.	240613066
Test Method	ASTM C1246-17	Date Received	13/06/2024
Curing condition	28 days at standard condition	Date Tested	06/08/2024
Heat Ageing	21 days at 70°C	Date Reported	07/08/2024
Sampled by	Client	Tested By	SU

Test Result

Test	Standard Requirement as per ASTM C920-18	Result
Effects Of Heat Ageing	The sealant shall not lose more than 7 % of its original weight or show any cracking or chalking	3.82 %

Remarks: None

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Head of Department



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TEST REPORT

Client Name	Dermax Industrial Co., Ltd.		
Product Description	DZ-9908A	Lab Report No.	WD-R-240613-0466
Test Reference	SASO 2070:2010	Lab Request No.	WD-Q-240613-0136
Test Method	GSO 2022:2010	Lab Sample No.	WD-S-240613-0435
Wimpey Ref.	240613066	Date Received	13/06/2024
Client Reference	N.G	Date Test Completed	17/07/2024
Tested By	SU	Date Reported	05/08/2024

Test Results

Test		Unit	Result
Appearance			Homogenous and free from strange material
Coatability			Coat Easily
Non Volatile Content		%	46
Adhesion Strength	Peeling strength	kN/m	4.1
Marking		-	Nil

Remarks: None

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