Sealex®
シーレックス

TECHNICAL SUBMITTAL

Sx-100

HYBRID TECHNOLOGY
Adhesive / Sealant



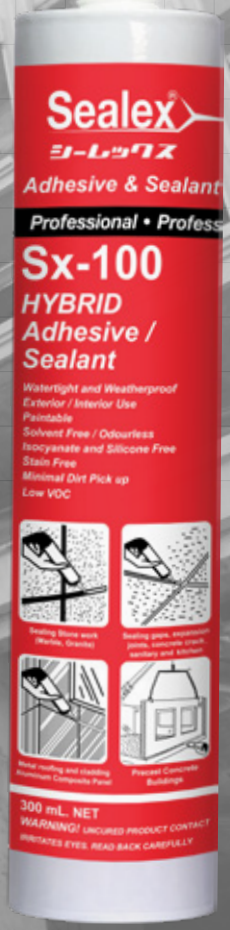





Sx-100 is a high performance sealant and adhesive based on Hybrid technology Sealex Sx-100, having only 2% VOC, is a green sealant suitable for all green building designs. All Sealex Hybrid range of products has excellent weathering capability and high resistance to ultraviolet and does not shrink nor bubble and swell. As it does not contain any oil nor solvent Sealex Hybrid does not attract dirt particles so does not stain on any substrates and at the same time is paintable.

- *Very low VOC – 2% achieved green standard*
- *For both external and internal application*
- *Isocyanate free and silicone free*
- *Watertight and weatherproof*
- *Solvent free and odorless*
- *Minimal dirt pick up*
- *Stain free*
- *Paintable*





GREEN STANDARDS

** LEED 2009 for New Construction and Major Renovations: Low Emitting Materials (Section 4.1), SCAQMD rule 1168 (2005)*

** ASTM D 2369 EPA Method 24 VOC content 15g/l or 1%*

U.S. GREEN BUILDING COUNCIL MEMBER

ASTM INTERNATIONAL ORGANIZATIONAL MEMBER

TÜV SÜD PSB Singapore

Sealex®
シーレックス

Features	Benefits
Excellent adhesion to most substrates	Versatile and flexible in applications.
Isocyanate and solvent free	Safe to users and owners especially interior applications Green & environmentally friendly.
Low VOC	Less than 2%. Approved for all confined application.
Odorless (Safe to human)	Work in comfort. Live in comfort.
Excellent weather & UV resistance	Shows no cracking, splitting or adhesion failure after long term desert test. 20 years service life expectancy.
Non gassing, bubbling or foaming	Provide a strong solid long life seal
Quick cure	Increase productivity. Cleaner work space.
Stain-free (Non-migration)	Excellent stain resistant when applied to porous substrates.
Minimal dirt pickup (Silicone free)	Non-bleeding throughout the life span of the product result in clean joint.
Excellent paintability	Paintable even with water based paints.
One part system and primerless	Versatile and easy to apply and adhere even to wet surfaces.
High strength	High tensile and shear strength provides a strong joint.

Applications

- Precast concrete joint
- Stone & metal facade
- Steel pre-engineered building
- Metal Roofing & Walling
- Sandwich panel
- Expansion joint
- Door and window frame
- Ducting
- Floor & wall tile
- Timber floor and skirting
- Kitchen and sanitary
- Mirrors and cabinets

* not applicable for structural glazing

Technical Specification

Basic Material	Hybrid Sealant
Color	Basic / Light Grey
Odor	Odorless
Specific Gravity	1.4-1.5
Viscosity	300-500 Pa•s (10rpm, at 26°)
Tack Free Time	20mins(23 C°, 50%RH)
Cure Depth	4 mm/24hr (23°C, 50%RH)
Application Temperature	5°C to 40°C
Service Temperature Range	-30°C to 90°C
Stress at 100% Elongation	0.59 MPa ISO 37
Tensile Strength	1.9 MPa ISO 37
Elongation To Break	695% ISO 37
Shelf Life	12 month
Movement Capability	±25% ASTM C719 Class 25

Conformance

- Sealex Sx-100 complys to ASTM C920, Type S, Grade NS, Class 25
- Singapore PSB for HDB

Size of Packaging

Size of Packaging



Curing-Best Compare to PU and Silicone

PAINTABLE

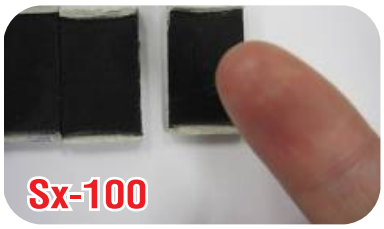
Sx-100 offers excellent paintability for all paints and colours compared to all sealants.

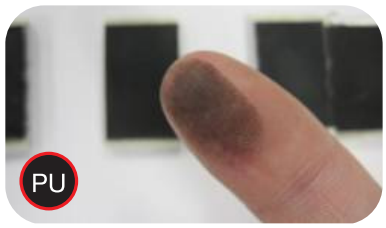
WATER BASE ACRYLIC PAINT

SEALANT	A	B
Sx-100		
Silicone		
Polyurethane		

WEATHERABILITY

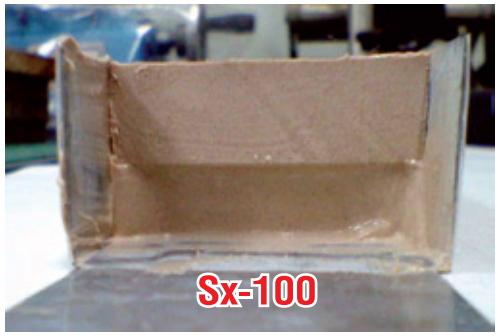
No degradation and change in colour after 2000hrs exposure to UV, irradiation and water. PU shows signs of degradation and colour change after only 1000hrs exposure.



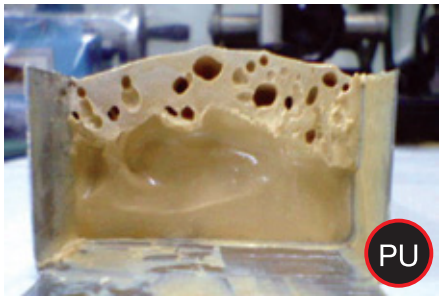


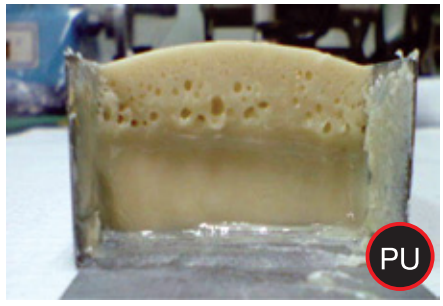
NO BUBBLE, NO FOAM, NO HOLLOW, NON SHRINKAGE

Sx-100 when cured remains flexible but provide a solid seal and excellent adhesion without any bubble, hollow and shrinkage compared to all PU which naturally produces bubbles and shrinks.









EXCELLENT ADHESION

With excellent adhesion properties Sx-100 is the most versatile adhesive sealant available compared even to PU and other solvent base products.



Aluminium	
Sx-100	PU
5	4



Stainless Steel	
Sx-100	PU
5	4



PVC Steel	
Sx-100	PU
5	4



PlyWood	
Sx-100	PU
5	5



MDF	
Sx-100	PU
5	5



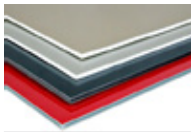
Particle Board	
Sx-100	PU
5	5



Concrete	
Sx-100	PU
5	4



Slate	
Sx-100	PU
5	5



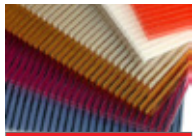
ALC	
Sx-100	PU
5	5



Melanin	
Sx-100	PU
5	4



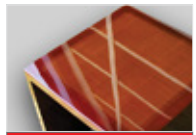
Polystyrene	
Sx-100	PU
5	2



Polycarbonate	
Sx-100	PU
5	3



FRP	
Sx-100	PU
5	3



Enamel	
Sx-100	PU
5	3

Comparison Table

Properties	Sx-100	Polyurethane (PU)	Silicone	Comparison and Results
Non-hazardous, safe to human and environment	10	5	9	Unlike PU, Sx-100 does not contain any isocyanate and solvent which are hazardous to health and environment.
Non Dirt Pickup	10	8	5	Sx-100 does not bleed throughout its life span and so does not attract dirt to stick. This property prevents dirt streaking on aluminium composite panels and curtain walls.
Stain Resistance	8	7	5	Due to its non-bleed property, Sx-100 does not stain the substrates especially marble, granite and other porous material.
Weatherability	9	6	10	Sx-100 displays excellent weather resistance.
Non-bubbling and foaming	10	6	10	This provides a very strong, long live and solid seal and adhesion.
Adhesion Versatility	10	5	8	Sx-100 can be used with most substrates and yet displays the strongest adhesion.
Paintability with water-based paints	10	8	3	When painted it is able to blend well with its environment.
Fast Curing	10	7	10	Increases productivity and also prevents messy working environment when accidently touched.
Storage Stability	7	7	9	When stored properly and protected from moisture, Sx-100 has an excellent shelf-life.

Compliance

TEST RESULTS OF ASTM C920 BY TUV SUD.

Test	'Sealex Sx-100'	ASTM C920 : 2008 Standard Specification For Elastomeric Joint Sealants
1. Staining And Colour Change **ASTM C501:2005**	No staining and no colour change	The sealant shall not cause any visible staining on the top surface of a white cement mortar base
2. Extrudability **ASTM C1183**	>10 ml/min	Type S (single component), grade NS (non-sag or gunnable sealant) shall have an extrusion rate time of not < 10 ml/min
3. Rheological (Flow) Properties **ASTM C639:2007**	Vertical displacement: 0 mm sag Horizontal displacement: No deformation	Grade NS (non-sag) or gunnable sealant shall have flow characteristics such that it does not sag >4.8mm in vertical displacement and shall show no deformation in horizontal displacement (refers to Types II and IV sealants)
4. Indentation Hardness test piece 1, average test piece 2, average **ASTM C661:2006**	 28 28	T (traffic) sealant shall have a hardness reading of not <25 or >50 after being properly cured NT (non-traffic) sealant shall have a hardness reading of not <15 or >50 after being properly cured
5. Adhesion & Cohesion Under Cyclic Movement, Class 25 **ASTM C719:2005**	No bond failure	The total loss in bond and cohesion areas among the three specimens tested for each surface shall not be >9 cm2 with mortar substrates
6. Effects Of Heat Ageing On Weight Loss, Cracking And Chalking, average **ASTM C1246:2006**	0.9% No cracking and chalking	The sealant shall not lose >7% of its original weight or show any cracking and chalking
7. Effects Of Accelerated Weathering **ASTM C793:2005**	No cracks after UV exposure and bend test	The sealant shall show no cracks after the specified UV exposure and shall show no cracks after exposure at cold temperature and the bend test
8. Adhesion-In-Peel, average **ASTM C794:2006**	235.6 N (53.1 lbf) cohesive failure within the sealant and no adhesive bond loss between sealant and substrate for each test piece	The peel strength for each individual test shall not be <22.2 N (5 lbf) and the sealant shall show no >25% adhesive bond loss for each individual test
9. Material Identification/ Verification By FTIR	MS polymer-based material (refer to Figure 1)	-
10. a. Maximum Tensile Strength, average b. Modulus Of Elasticity, average **ASTM C1135:2005**	 0.7 N/mm² 0.9 N/mm²	-

LEED 2009 (Section 4.1)

Analytical Result

	Solid content, % mass	Water content, % mass	Exempt compounds, % mass	VOC less water less exempt compounds, g/l	VOC limit g/l
Sealex Sx 100	99.2	0	0	**15**	250*

* VOC limit for "Architectural sealants"

LIMITED WARRANTY

The information contained in this document offered in good faith is believed to be accurate. However, as it is beyond our control on the conditions and methods of use of our products by our clients the information contained in this document should not be used in substitution for customer's tests to ensure that our products are safe, effective, and fully satisfactory for the intended end application.

Sealex warranties that all Sealex products meet the specifications herewith at the time of shipment. In the event of breach of such warranty Sealex is limited to refund of purchase price or replacement of any product shown to be other than as warranted.

Caution :

Do not apply Hybrid Sealant onto protective film. Plasticizers contained in these materials penetrate the film and may cause gloss change on the coating.

Sealex® シーレックス www.sealexchem.com

inno-cons

INNO-CONS (THAILAND) CO., LTD.
78 Moo7 Klongsi, Klongluang, Patumthani 12120
Tel : 02-524-0778-9 Fax : 02-524-2085-7
www.inno-cons.com