

# Hybrid Polyurethane Sealant

# FlexSeal®



## Description

**FlexSeal®** is a high performance one component gun grade sealant . **FlexSeal®** is ideal for sealing most types of joints in construction structures and buildings with excellent weathering resistance and excellent adhesion to most building materials.

## Uses

- Bonding different building materials with permanent elastic bond.
- Sealing of expansion, contraction & construction joints in buildings and other construction structures.
- Sealing of dynamic structural cracks.
- Glazing joints of windows, door frames and curtain walls.

## Features

- Tough, elastic, rubber-like seal.
- Paintable
- Excellent weatherability .
- Silicone and PVC free.
- Stays resilient even at high temperature.
- Excellent resistance to water, oils, grease, most solvents, mild acids and alkalis.
- Tenacious adhesion to metal, wood, glass, stone, ceramic, aluminium, and stainless steel.

## Technical Properties

Open time	>25min. @ 25°C
Tack free time	120 min. @ 25°C
Full cure time	7 days
Density	1.8 ± 0.05 gm/cm <sup>3</sup>
Shore A	40 ±5
Tensile strength	≈3.4 N/mm <sup>2</sup>
Adhesion loss to concrete	≈1.7 N/mm <sup>2</sup>
Adhesion loss to glass	≈2.0 N/mm <sup>2</sup>
Adhesion loss to steel	≈3.8 N/mm <sup>2</sup>
Adhesion loss to aluminum	≈4.2 N/mm <sup>2</sup>
Color	grey ,black, beige, white



## Standards

ASTM C 719	
ASTM C 920	
ASTM D 2240	Shore A-Hardness
ASTM C 794	Adhesion to peel

## Application procedure

### Surface Preparation:

• Surface preparation is the most important step before applying any type of adhesive and/or sealant to get best results and to avoid adhesion failure.

• The surface to receive **FlexSeal®** must be dry, free from dust, coatings, bituminous mastics, concrete curing agents, mold release agents, oils, greases and loose particles. For expansion joints avoid weak building materials such as cement mortar, aerated concrete or rigid foam.

• Clean the joint surface by wire brush and sanding with emery paper if needed in order to remove all traces of release agents, or curing compounds.

• Remove dust by compressed air or paint brush.

• Wipe out oil and grease by solvent soaked cloth such as Xylene, Toluene or Acetone.

### Application:

• Proper joint profile is 2:1 width to depth ratio with minimum joint depth of 8 mm and maximum width of 50 mm. For 10 mm wide joints proper width to depth ratio is 1:1.

• Insert compressible polyethylene rod as backup material to control depth of sealant in the joint and to provide support for tooling of the sealant.

• Apply tape to both edges of the joint.

# Hybrid Polyurethane Sealant

# FlexSeal<sup>®</sup>



- Tool sealant to ensure full contact with joint walls and remove air entrapment. For best results in tooling the sealant, use a spatula and liquid soap diluted 1 : 10 with water (for smoothing). Avoid contact with alcohol and other solvents during cure period (7 days).

### Storage & Packing

Store under cover, out of direct sunlight and protect from extreme temperatures. In tropical climates the product must be stored in air-conditioned environment for up to 6 month.

**Avialable in 7 kg, 10 kg, 15 kg pails and 600 ml sausage.**

### Health and safety

As with all construction chemicals products caution should always be exercised. Protective clothing such as gloves and goggles should be worn. Treat any splashes to the skin or eyes with fresh water immediately. Should any of the products be accidentally swallowed, do not induce vomiting, but call for medical assistance immediately.

### Legal Notes

The information provided in this data sheet, are given in good faith based on our current knowledge and experience of the product when properly stored, and applied by professional applicator, and under normal conditions in accordance with the mentioned recommendations. In practice under actual site condition differences are such that no warranty can be issued nor any liability can be taken, arising out of any legal relationship whatsoever. The product must be tested onsite to check its suitability for the intended application and purpose



[www.FlexSeal.Site](http://www.FlexSeal.Site)



وزارة البترول والثروة المعدنية  
مركز بحوث البترول والبحوث  
Egyptian Petroleum Research Institute (EPRI)  
مركز حماية الاسطح المعاديه spc

ISO 17025, 14001, 18001, 9001

## تقرير فني لعينة ملء فواصل PolyBit Company

لقد تمت الاختبارات لعينة ملء فواصل لونها رمادي من مادة FlexSeal طبقا والمواصفات القياسية العالمية  
DIN 53455, ASTM D 4145, ASTM C719 & ASTM C 920 وقد سجلت النتائج في الجدول التالي

Test type	Results	Standard	Remark
Tensile strength	3.47 N/mm <sup>2</sup>	DIN 53455 ASTM C 920	Accept
Adhesion With:			
5- steel	3.8 MPa	ASTM D 4145	Accept
6- glass	2.0 MPa		
7- aluminum	4.21 MPa		
8- concrete	1.7 MPa		
Movement capability compression	25 %	ASTM C719 ASTM C 920	Accept
Movement capability extension	26%		

استشاري المركز  
أ.د. أسامة أبو العينين



مدير مركز حماية الاسطح  
أ.د. أشرف السيد

5-11-2023

# Hybrid Polyurethane Sealant FlexSeal®



 وزارة الإسكان والمناطق والمجتمعات العمرانية		 المطور الدولي للمجتمعات العمرانية SITES INTERNATIONAL		 MCG MENTOR CONSTRUCTION GROUP		 ABNAA SINAI	
تطوير منطقة سانت كاترين- ارض التجلي الاعظم وزارة الاسكان و المرافق و المجتمعات العمرانية <b>SITES INTERNATIONAL</b> شركة ابناء سيناء مكتب متور جروب للاستشارات ( ا.د اشرف شوقي)						اسم المشروع المالك استشاري المالك الشركة المنفذة استشاري الشركة المنفذة	
طلب اعتماد عينة / مواد MATERIAL SUBMITTAL (MS)							
15 August 2023 تاريخ الطلب		All العماره / ZONE		P7 رقم المشروع		رقم الطلب SCI-P7-MS-ARC-0081-00	
اعتماد عينة مادة FlexSeal لاصال الخرسانة الملونة						المادة المطلوب اعتمادها	
B.O.Q Reference :		Specification Reference :		Sample Quantity:		1	
Datasheet		Sample		Catalog		Sample	
الرد / التقييم (المهندس الاستشاري) ارجو التقييم		باد المنشأ العينة رقم الكتالوج / الخ --		المصنع /المورد PolyBiz		وصف البند اسم/ نوعية العينة ، الابعاد، السعة ، الاستخدام ... الخ اعتماد عينة مادة FlexSeal لاصال الخرسانة الملونة	
Germany		Sample		PolyBiz		1	
هذا اقرار من المقلون بأن جميع العينات أو المواد المقلمة قد تم فحصها بمعرفة، و هي مطابقة للمواصفات و متماشية مع بترود و مستندات الطد		كهرباء <input type="radio"/> Landscape <input type="radio"/>		مساحه <input type="radio"/> تكيف <input type="radio"/>		مصري <input checked="" type="radio"/> صهي <input type="radio"/> شبكات <input type="radio"/>	
مدير المشروع		مدير المكتب الفني		التوقيع:		التاريخ:	
				التوقيع:		التاريخ:	
Inspector / نتائج الفحص							
Approved /مقبول (A)		Approved as noted /مقبول بملاحظات (B)		Re submit /إعادة تلم (C)		Rejected /مرفوض (D)	
Notes /الملاحظات جميع ما صل بماده ملو القدام للوسان الملونة على فودرد الا ان 3 ملعير مادك ملو القدام بنفس درجت لوسان الملونة المنفذة بالموقع والمعتبر							
استلام المقاول		يعتمد/ مهندس جهاز تعبير سيناء		اعتماد المالك		مدير المشروع	
الاسم التوقيع التاريخ		الاسم التوقيع التاريخ		الاسم التوقيع التاريخ		الاسم التوقيع التاريخ	
15 SEP 2023 مشروع تكوير سانت كاترين - ارض التجلي الاعظم RECEIVED		15 SEP 2023 مشروع تكوير سانت كاترين - ارض التجلي الاعظم RECEIVED		15 SEP 2023 مشروع تكوير سانت كاترين - ارض التجلي الاعظم RECEIVED		15 SEP 2023 مشروع تكوير سانت كاترين - ارض التجلي الاعظم RECEIVED	



Contractor: Atrium Quality Contractors 	Owner: Arab Company for projects and Urban Development 	Project Manager: Dar Al-Handasah 	Supervision Consultant: EHAFC Consulting Engineers 
--	--	--------------------------------------	--

  

**MATERIAL SUBMITTAL (MS)**

Project Name: Craft & Commercial Zone Project No. : 1157 Employer : TMG Project Manager: DAR From : Atrium Quality Contractors To : EHAFC Attn. : Eng. Ehab Hamdy	Package : Commercial Zone Phase : B14 & B15 Supervision Consultant: EHAFC Contractor: Atrium Quality Contractors Date: 18-10-2022 Submittal Ref.: 1157/MS/ATR/EHAFC/Arch/22/152/R00
---	--

**RECEIVED**  
 19 OCT. 2022

**Subject:** FlexSeal WS (Weather sealant for ACP & curtain walls) *for joints*

**Material/ Equipment for Approval:**  
**Description:** FlexSeal WS is a high performance one component gun grade sealant, based on the cutting edge silane terminated polymer (STP) hybrid technology. FlexSeal WS is 100% solid content, and ideal for sealing most types of joints in building facades with excellent UV and weathering resistance and excellent adhesion to most building materials.

**Specification Reference:** \_\_\_\_\_ **Quantity:** - **Bill of Quantities Reference:** \_\_\_\_\_

**Manufacturer's Details:**  
 Manufacturer: polybit  
 Model Number: \_\_\_\_\_  
 Country of Origin: UAE  
 Storage Location: On site

**RECEIVED**  
 23 Oct 2022  
 Madinatny Craft Zone  
 Madinatny Building 20

Date of arrival on site: \_\_\_\_\_  
 Bill of lading: \_\_\_\_\_  
**Eng. Ahmed Salah Eldin**  
 Main Contractor  
 Eng. Ahmed Salah Eldin  
 Projects Manager

**Action Code Legend:**  
 (A) Approved     (B) Approved as Noted    (C) Revise and Resubmit    (D) Rejected

**Notes:**

- Production, supply and /or implementation shall proceed only when action code is A / or B.
- Regarding action code C, resubmittal shall be within the limit set in the contract.
- Review does not relieve the contractor from responsibility of compliance with all requirements of contract documents.
- If rejected please see comments.

Consultant Comments:	Yes/No	Initials Inspector	Engineer
1- Physical damage?	_____	_____	_____
2- Details given above correct?	_____	_____	_____
3- Conforms with approved submission?	_____	_____	_____
4- Accessories / Spare parts included?	_____	_____	_____

**Remarks:** *\* Approved as noted & Subject to manufacture*

**Consultant Manager Remarks:** *(Sub contract) approval & Refer to (B. v.i. q. spec). - manufacturing recommendation & Subject to mockup approval & Subject to tests required approval as per spec.*

**Attachments:**  Hard Copy     Soft Copy     Sample     Mockup     Test report

\_\_\_\_\_  
 Supervision Consultant  
 Authorized representative

**Employer's Representative Comments (if quired):** \_\_\_\_\_

\_\_\_\_\_  
 Employer Representative  
 Authorized representative

*22-10-2022*

Hybrid Polyurethane Sealant

**FlexSeal<sup>®</sup>**

