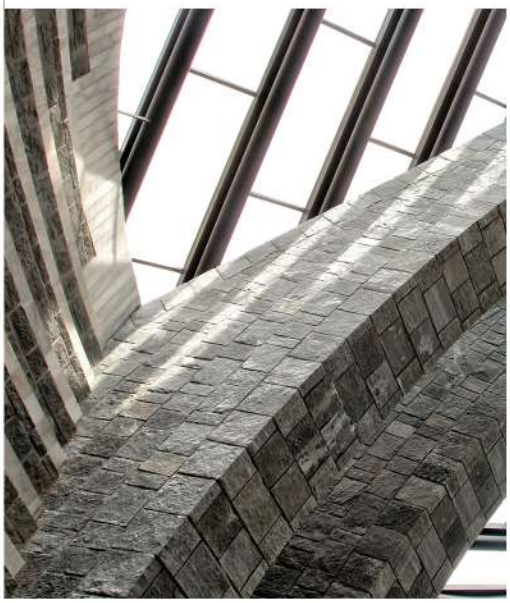
CONSTRUCTION SEALANTS

Insulating Glass



MF910H

Hotmelt Sealant
for Insulating Glass

TYCOON GLOBAL

MF910H

Hotmelt Sealant for Insulating Glass

Secondary Sealant for the Manufacturing of Insulating Glass

♦ DESCRIPTION

TG-SEALANT MF910H is a hot melt sealant formulated for single seal insulating glass . This product has been designed for insulating glass manufacturers running hand applied, semi- automated, and linear extruded operations .

♦ APPLICATION FIELD

- One component , solvent fr ee , non-fo gging , permanently plastic butyl sealant, formulated for secondary sealing of insulating glass units.
- It can keep its plastic and sealing properties in a wide temperature range.
- Excellent adhesion properties on glass, aluminum alloy, galvanized steel and stainless steel.
- Immediate high strength development for superior handing and transportation capabilities.
- Excellent slump resistance , resulting in reduced after-application tooling.
- Low after-application tack for easy of handing.
- Minimum moisture vapour and gas permeation.
- Excellent temperature stability: - 30°C to 80°C.

♦ TECHNICAL DATA - TYPICAL PROPERTIES

TEST ITEMS	TEST RESULTS	TEST STANDARD
Color	Black	
Consistency	100% Solid mass	
Density	Approx. 1.18 [g/cm^3]	GB/T 1033.1
Shear Strength	0.25 MPa	Q/ZZY 031
Penetration (1110mm, 25°C)	28	GB/T 4509
Volatile Content (130°C, 50 hrs)	Max. 0.02 %	
Elongation at Yield	Approx. 20%	Q/ZZY 031
Moisture Vapour Transmission Rate (MVTR)	0.39 [gr/m^2. 24hrs. 2mm]	EN1279-4
Gas Permeation Rate (Ar)	1.48 x 10^{-3} [gr/m^2. hrs]	EN1279-4

♦ SURFACE PREPARATION

GLASS / SPACER - To achieve good adhesion , the glass/ spacer surface must be clean, dry and free of any residue .

♦ APPLICATION INSTRUCTIONS

TG-SEALANT MF910H shall be applied at a temperature between 160 °C and 190 °C using appropriate extruders.

APPLICABLE STANDARDS

- EU Specification: EN1279 - part 4

SHELF LIFE AND STORAGE

24 months stored in cool, dry and ventilated places..

PACKAGING

6.5 kg/ box
220 kg/ drum (ct> 571.5mm)

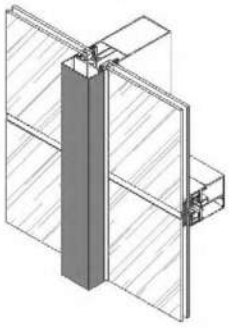
FIRST AID INFORMATION

Eye Contact: Flush eyes with large amounts of water . If signs/symptoms persist, get medical att ention . **Skin Contact:** Remove contaminated clothing and shoes . Immediately flush skin with large amounts of water. Wash contaminated clothing and clean shoes before reuse. **Inhalation:** Remove person to fresh air. If signs/symptoms develop, get medical attention. **If swallowed:** Do not induce vomiting unless instructed to do so by medical personnel. Give person two glasses of water. Never give anything by mouth to an unconscious person. **Keep out of reach children.** Refer to Material Safety Data Sheet (MSDS) and Technical Date Sheet(TDS) for det a i l s.

Joint Design--Correct Planning is Essential

In structural glazing, the adhesive joints should be planned and arranged according to optical requirements, but they should also take into consideration changes in the adjacent parts under the effects of temperature and the movement capability of the silicone sealant. The joint design thus combines shape with functionality.

Important



Seven criteria must be observed:
1.The joint seal must be able to freely accommodate tensile and compressive movements between the joint edges. Three-sided adhesion of the sealant must be avoided, because it inevitably results in damage to the joint.
2.The ratio of joint bite Cs to joint thickness ts should be at least 1:1 and at most 3:1.
3.The minimum joint bite is always 6mm, irrespective of the calculated value.
4.The joint thickness ts should be at least 6mm.
5.Always round the result up, never down.
6.The structural joints must not be subjected to external loads as a result of forces such as settlements, shrinkage, creep or permanent stress caused by gaskets etc.

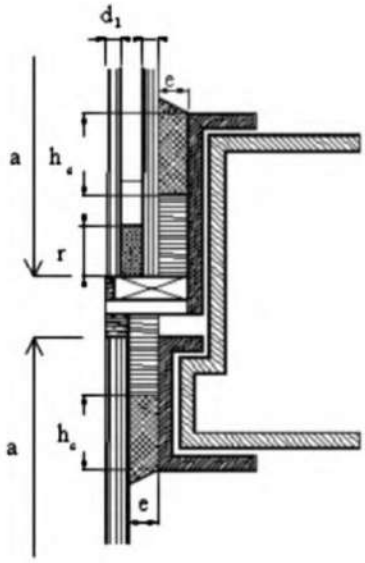
Calculating the joint bite Cs

Joint bite Cs as a function of the wind load in supported constructions:

$$Cs = \frac{wa}{2000\,f1}$$

Cs– minimum bite of the adhesive joint(mm)
a-- length of the short edge of the glass pane or of the element(mm); with irregularly dimensioned glass element: longest of the short glass panes [1)]
w-- maximum wind load to be received (kN/mm^2).
f1-- maximum adhesive stress for supported construction, 0.2N/mm^2.

[1)] If the sides of the glass panes are of varying length, then the length of the longest side is used for the calculation.

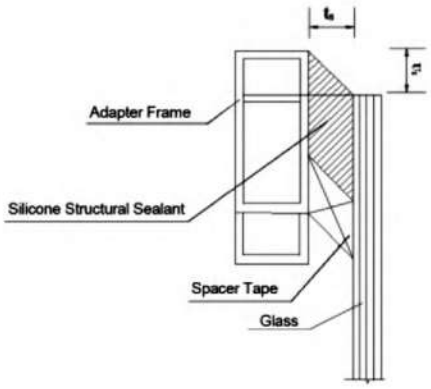


Calculating the joint thickness ts

$$ts \geq \frac{us}{\sqrt{\delta(2+\delta)}} \quad ①$$

$$us = \theta hg \quad ②$$

ts-- minimum thickness of the adhesive joint (mm). us-- relative displacement in length of glass panel to adapter frame(mm), relative displacement yield from support construction lateral displacement can be calculated according to formula ②, take into account displacement from temperature difference if necessary.
θ -- elastic layer displacement angle limit value (rad) of support construction subject to wind load standard value.
hg -- glazing height = vertical dimension a or b.
-- adhesive deformation tolerance, elongation subject to tensile stress of 0.14kN/mm^2.



Silicone Structural Sealant Joint Thickness Drawing