



## External Sealing Fire Stop Joints **ORBASIL N-28**

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### DESCRIPTION:

One-part, neutral curing, silicone rubber based sealant with fire resistant.

### PROPERTIES:

- One component room temperature vulcanising (RVT), easy application system.
- It does not slump in joints.
- Solvent free, low contract while curing.
- It does not attack to concrete and ferrous metals.
- Excellent adhesion without primer to a wide range of substrates.
- Unaffected by water, sun, and in general, by the weather.
- Up to 4 hours of fire resistance (to see attached detail of results of the test).

### APPLICATIONS:

- Intended for those applications that require a flame-resistant sealant\*.
- Dilatation joints in firewalls and slabs.
- Sealing of connexions, pipes, cable leadthroughs, etc., where a fire protection is required.
- Sealing of firewall doors.
- Sealing all kind of joints with maximum requirements for construction.
- Sealing PVC elements.
- Automotive, aviation and boat industry.

*\*Apply with rock wool as a joint background.*

### CERTIFICATIONS:

- **CE Mark:** EN 15651-1 F -EXT- INT -CC    Dop nº: SIB0000124 <http://ce.selena.com/>
- **A + Certificate**, very low emission product. Determination of Volatile Organic Compounds according to ISO 16000.



### SPECIFICATIONS:

- ✓ Up to 4 hours of fire resistance (RF/EI), test according to UNE EN-1366-4 and classification according to EN-13501-2.
- ✓ Reaction to fire classification EN 13501-1: B-s3, d0.
- ✓ Fire resistance: UNE 23-093-81 (LGAI nº 3012831).
- ✓ Smoke classification NF F 16101 (F1), Report 25192 CIDEMCO.
- ✓ UNE 85232. Sealant E.
- ✓ DIN 18545. - Part 2. Type E.
- ✓ TT-S-001543 A. Class A: Products resisting up to 50% of the joint's maximum movement.
- ✓ ISO 11600 F25 LM, ISO 11600 G 25 LM
- ✓ NFP 85305 25 E.



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### CHEMICAL RESISTANCES

|                                      |            |                          |            |
|--------------------------------------|------------|--------------------------|------------|
| Water, soapy water, brine:           | Excellent. | Mineral oils and grease: | Very good. |
| Oil, fuel, hydrocarbons:             | Very good. | Other products:          | Consult.   |
| Inorganic diluted acids and alkalis: | Very good. |                          |            |

### TECHNICAL FEATURES

#### Uncured ORBASIL N-28:

|                                    |                           |           |
|------------------------------------|---------------------------|-----------|
| Appearance:                        | Homogeneous creamy paste. |           |
| Slump resistance (ISO 7390):       | mm                        | 0         |
| Skin over time (BS 5889 Ap.A):     | minutes                   | 35        |
| Curing rate at 23° C and 55% h.r.: | mm/day                    | 2         |
| Volume loss (ISO 10563)            | %                         | 5         |
| Application temperature:           | °C                        | +5 to +50 |

#### Cured ORBASIL N-28, (4 weeks at 23°C and 55%) H.R.

|                                |                   |              |
|--------------------------------|-------------------|--------------|
| Appearance:                    | Similar to rubber |              |
| Shore a hardness (ISO 868):    |                   | 22           |
| Elastic recovery (ISO 7389):   | %                 | 90           |
| Elastic modulus 100% (ISO 37): | MPa               | 0,36         |
| (ISO 8339):                    | MPa               | 0,34         |
| Tensile strength (ISO 37):     | MPa               | 1,1          |
| (ISO 8339):                    | MPa               | 0,60         |
| Elongation at break (ISO 37):  | %                 | 600          |
| (ISO 8339):                    | %                 | 300          |
| Movement accommodation factor  | %                 | 25           |
| Temperature in service:        | °C                | -50 to + 150 |

### FIRE RESISTANCE TEST

ACCORDING TO UNE 23-093-81. Carried out in the LGAI: N° 3012831

| Width (mm) | Depth (mm) | Joint type | Backing | Integrity (Minutes) | Heat insulating (Minutes) | Classification |
|------------|------------|------------|---------|---------------------|---------------------------|----------------|
| 40*40 (1)  | 15         | 1          | MW      | 240                 | 134                       | RF-120         |
| 75*75 (1)  | 25         | 1          | MW      | 240                 | 240                       | RF-240         |

ACCORDING TO UNE EN 1366-4, Classification according to EN-13501-2 (test n° 17989-7 CIDEMCO)

| Width (mm) | Depth (mm) | Joint type | Backing | Integrity (Minutes) | Heat insulating (Minutes) | Classification (EI) |
|------------|------------|------------|---------|---------------------|---------------------------|---------------------|
| 10         | 10         | 1          | PE      | 241                 | 129                       | EI 120/E 240        |
| 10         | 10         | 2          | PE      | 241                 | 210                       | EI 180/E 240        |
| 20         | 10         | 2          | PE      | 241                 | 241                       | EI 240/E 240        |
| 30         | 15         | 2          | PE      | 241                 | 241                       | EI 240/E 240        |
| 10         | 10         | 1          | MW      | 241                 | 241                       | EI 240/E 240        |
| 20         | 10         | 2          | MW      | 241                 | 241                       | EI 240/E 240        |



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### TEST REPORT 14-06030

(Reinforced concrete wall structure, thickness 200 mm)

| Width (mm) | Depth (mm) | Joint type | Backing | Integrity (Minutes) | Heat insulating (Minutes) | Classification | Position   | Report Nº     |
|------------|------------|------------|---------|---------------------|---------------------------|----------------|------------|---------------|
| 10         | 10         | 2          | PE      | 242                 | 242                       | EI-240         | vertical   | 14-06030-2-4  |
| 20         | 10         | 2          | PE      | 242                 | 242                       | EI-240         | vertical   | 14-06030-2-4  |
| 30         | 15         | 2          | PE      | 242                 | 180                       | EI-180         | vertical   | 14-06030-2-11 |
| 10         | 10         | 1          | PE      | 242                 | 191                       | EI-180         | horizontal | 14-06030-2-15 |
| 10         | 10         | 2          | PE      | 242                 | 242                       | EI-240         | horizontal | 14-06030-2-2  |
| 20         | 10         | 2          | PE      | 242                 | 242                       | EI-240         | horizontal | 14-06030-2-2  |
| 30         | 15         | 2          | PE      | 242                 | 242                       | EI-240         | horizontal | 14-06030-2-3  |

### TEST REPORT 26696-2

| Width (mm) | Depth (mm) | Backing                   | Integrity (Minutes) | Heat insulating (Minutes) | Classification | Position | Report Nº |
|------------|------------|---------------------------|---------------------|---------------------------|----------------|----------|-----------|
| 30         | 15         | 180 mm ORBAFOAM FIRE STOP | 247                 | 180                       | EI-180         | vertical | 26696-2   |

1: Simple joint.  
2: Double joint  
PE: PE foam strip.  
MW: mineral wool (density 100 kg /m3)  
(1): penetration size.

## INSTRUCTIONS:

### Dimensioning of joints:

The joint must have a width between  $> 5$  mm and  $\leq 35$  mm. Their width must be at least 4 times greater than the maximum foreseen movement.

The sealing depth will be chosen, depending on the width of the joint, in accordance with the Table "Values of depth and width of joint". Values given in mm.

|       |     |     |       |       |
|-------|-----|-----|-------|-------|
| WIDTH | 5/6 | 7/9 | 10/12 | 12/15 |
| DEPTH | 5   | 6   | 7     | 8     |

For joint widths greater than 16 mm depth must be one half of width.

For the specific application of sealing expansion joints on facades and floors, the "width/depth" ratio will be 2:1, with a minimum sealing depth of 10 mm.

For more information, see ["Quilosa Professional Sealing Manual"](#)



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### Formation of joints:

A filler should be used in order to avoid adhesion of **ORBASIL N-28** to the bottom of the joint, this would exercise unnecessary tension on the sealant. Meanwhile, regulation of its depth is achieved as well as greater yield. The material to be used must be inert, mechanically stable, homogeneous, corrosion-resistant, and must not adhere to either the sealant or contiguous materials.

A particularly recommendable product is closed-cell polyethylene foam, extruded in regular-section strips, such as our **POLITEN-CELL**. **To obtain the best results of fire resistance, it is necessary to use mineral wool (density 100 kg/m3).**

### Treatment of joints:

The surfaces to be sealed must be clean and dry. If necessary, in addition to mechanical means, cleaning with non-grease solvent such as acetone is recommended. Cement slurries must be removed. For joints to be subjected to major stress, we suggest the use of an appropriate primer for each type of substrate:

PRIMER C-27: For porous materials and general construction use.

*(See technical Data)*

Any material not known by the user in terms of adhesiveness must first be tested by or consulted with our Technical Department.

### Procedure:

Cut off cap from adapter nipple, screw the nozzle on the cartridge, clip the tip of the nozzle to required opening and insert into caulking gun. Fill in the appropriately treated joint with **ORBASIL N-28**. In order to avoid messing the edges, they may be protected with masking tape. For a better finish, the seal may be smoothed with a spatula.

### Yield:

The following formula is an approximate guideline in order to calculate foreseen yield for a standard cartridge of product:

Where:

L= Length of sealant in metres obtained per cartridge.

A= Width of the joint in mm.

D= Depth of the joint in mm.

$$L = \frac{300}{A \times D}$$

### Further treatment:

**ORBASIL N-28** may not be painted or varnished.

### STORAGE:

Keep in a cool and dry place.

Lifetime: 18 months in original sealed container. See expiration date on the packaging.

### PRESENTATION:

300 ml Plastic cartridges.

600 ml Aluminium bags.

### COLOURS:

White.

Pearl Grey.



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### **CLEANING:**

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Fresh product is easily removed with an organic solvent. When cured it can be removed by mechanical mean only.

### **HEALTH & SAFETY:**

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Avoid contact with eyes, skin, or clothing.

The use of gloves is recommended during the application of the product.

In case of skin contact, wipe off as much of the product as possible with paper and then wipe off any remaining product with acetone or alcohol. The use of acetone and alcohol can cause dryness and/or cracks in the skin.

*For more information request Safety Data Sheet.*

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