# WACKER® 465 - FIRE RETARDANT

## WACKER Brand

WACKER® 465 - FIRE RETARDANT is a one-component, neutral-curing, fire retardant, low modulus silicone sealant with outstanding adhesion, long shelf life, excellent tooling characteristics and very good fire retardant properties for construction, glass and window building, as well as industrial applications.
WACKER® 465 - FIRE RETARDANT cures at room temperature in the presence of atmospheric moisture to give a permanently flexible silicone rubber.

## Properties

- fire retardant
- excellent weatherability
- excellent tooling characteristics for professional use
- non-corrosive to metals
- suitable for alkaline substrates such as concrete, mortar, fibrous cement
- matt finish
- excellent adhesion on most substrates without primer
- solvent-free, thus featuring low volume shrinkage during vulcanization
- ready gunnability at low (+ 5 °C) and high (+ 40 °C) temperatures
- flexible at low (-40 °C) and high temperatures (+150 °C)
- almost odorless
- non-sag

# Technical data

## Properties Uncured

| Property | Condition | Value | Method |
|---|---|---|---|
| Consistency | - | non-sag | ISO 7390, profile U 20 |
| Density | 23 °C | 1.5 g/cm$^3$ | ISO 1183-1 A |
| Extrusion rate - mass flow | 6 bar | 100 - 400 g/min | - |
| Skin formation time | - | approx. 25 min | internal method |

These figures are only intended as a guide and should not be used in preparing specifications.

## Properties Cured

| Property | Condition | Value | Method |
|---|---|---|---|
| Hardness Shore A | - | 25 | ISO 868 |
| Modulus at 100 % elongation (S2-dumbbell) | - | 0.5 N/mm$^2$ | ISO 37 |
| Modulus at 100 % elongation (joint) | - | 0.4 N/mm$^2$ | ISO 8339 |
| Movement capability | - | 25 % | ISO 9047 |
| Tensile strength (S2-dumbbell) | - | 1.4 N/mm$^2$ | ISO 37 type 1 |
| Tensile strength (joint) | - | 0.6 N/mm$^2$ | - |
| Ultimate elongation (S2-dumbbell) | - | 600 % | - |
| Ultimate elongation (joint) | - | 300 % | - |

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All the information provided is in accordance with the present state of our knowledge. Nonetheless, we disclaim any warranty or liability whatsoever and reserve the right, at any time, to effect technical alterations. The information provided, as well as the product's fitness for an intended application, should be checked by the buyer in preliminary trials. Contractual terms and conditions always take precedence. This disclaimer of warranty and liability also applies particularly in foreign countries with respect to third parties' rights.

# Applications

- Weatherseal & Fire retardancy
- WACKER Brand

## Application details

### Application fields

- sealing of connection and expansion joints in the building industry
- sealing of perimeter joints
- sealing of joints between glazing and supporting structures (frames, transoms, mullions)
- Industrial application as sealant in the automotive, aircraft and shipbuilding industries

### Processing

The substrate areas that will be in contact with the sealant must be clean, dry and free of all loose material such as dust, dirt, rust, oil and other contaminants. Non-porous substrates should be cleaned with a solvent and clean, lint-free, cotton cloth. Remove residual solvent before it evaporates with a fresh clean, dry cloth. For application from cartridges cut thread open, fix nozzle on top and cut to required bead size. The sealant can be applied in beads or layers. It requires moisture in order to cure.
The curing time can take longer at lower temperatures, lower humidity or by low volume of air exchange.

### Certification

WACKER® 465 - FIRE RETARDANT is certified and classified according to
- ISO 11600 F/G, Class 25LM
- EN 15651-1, Class 25LM F-EXT-INT-CC
- EN 15651-2, Class 25LM G-CC
- ASTM C920, Class 50/50
- EN 13501-1, Class B-s2,d0
- EN 13501-2, Class E 240-H-X-F- W15-25
- EN 13501-2, Class EI 240-H-X-F- W15-25
- EN 13501-2, Class E 240-V-X-F- W5-25
- EN 13501-2, Class EI 240-V-X-F- W5-25

### Adhesion

WACKER® 465 - FIRE RETARDANT exhibits excellent primerless adhesion to most non-porous siliceous materials (e.g. glass, tiles, ceramics, enamel, glazed tiles); metals (e.g. aluminum, steel, zinc or copper); impregnated, varnished or painted wood; and many plastics.
Users must carry out their own tests due to the great variety of substances. The adhesion can be improved in many cases by pretreatment of the substrates with a primer. If adhesion difficulties arise please contact our technical service.

### Restrictions on use

It is the user's responsibility to test the compatibility of the sealant with the adjoining materials. Incompatible substances like coating materials (paints, varnishes and glazes) or organic plasticizer containing rubbers (EPDM, butyl and neoprene) can lead to discoloration or other impairments like loss of adhesion of the sealant. Materials in direct contact with the applied sealant like cleaning agents and materials in indirect contact like gaseous emissions can damage the sealant in its function or change its appearance. Because of the multitude of these materials. Wacker cannot make a general statement to the compatibility of materials with the sealant. In case of doubt the user shall conduct appropriate preliminary tests.
WACKER® 465 - FIRE RETARDANT must not be used for insulating glass applications.
WACKER® 465 - FIRE RETARDANT should not be used in contact with prestressed polyacrylate elements as it may cause stress cracking.
WACKER® 465 - FIRE RETARDANT must not be used for sealing of aquaria or for longer-term use under water. WACKER® 121 - AQUARIUM has been specifically developed for aquarium applications.
WACKER® 465 - FIRE RETARDANT is not recommended for use on natural stone, such as marble, granite, quartzite, as it can cause staining. In this case use an alternative grade such as WACKER® 460 - NATURAL STONE.
WACKER® 465 - FIRE RETARDANT is not recommended for structural glazing bonding.
WACKER® 465 - FIRE RETARDANT is not recommended for sealing areas where contact to drinking water or food is likely. WACKER® 120 – FOOD AND WATER has been specifically developed for these applications.
WACKER® 465 - FIRE RETARDANT is not suitable for use as a mirror adhesive.
The time until complete curing may be extended at lower temperature, lower humidity, increasing film thickness or by low volume of air exchange - the use of tooling agents should be avoided if possible. Otherwise, water or a diluted solution of a little neutral soap or alcohol in water should be sparingly applied.

## Packaging and storage

### Packaging

WACKER® 465 - FIRE RETARDANT is usually supplied in standard size cartridges that fit all standard caulking guns.

### Storage

The 'Best use before end' date of each batch is shown on the product label.
Storage beyond the date specified on the label does not necessarily mean that the product is no longer usable. In this case however, the properties required for the intended use must be checked for quality assurance reasons.

## Safety notes

Comprehensive instructions are given in the corresponding Material Safety Data Sheets. They are available on request from WACKER subsidiaries or may be printed via WACKER web site http://www.wacker.com.
During vulcanization methanol and ethanol are released. These vapors should not be inhaled for long periods or in high concentration. Hence, good ventilation of the work place is necessary.
Should uncured silicone rubber come into contact with eyes or mucous membranes, the affected area must be rinsed thoroughly with water as irritation will otherwise be caused. Avoid prolonged contact of uncured sealant with the skin - use a dry cloth or paper to remove it.
Keep out of reach of children.
Cured silicone rubber, however, can be handled without any risk to health.
Additional information
WACKER® 465 - FIRE RETARDANT meets following specifications:
- DIN 4102-1, Class B1
- ASTM C 920, Class 25
- ISO 11600-F, Class 25 LM
- EN15651-1:2012-F-EXT-INT-CC
- EN15651-2: 2012 - G-CC
- EN15651-4: 2012 - PW-EXT-ING-CC

## QR Code WACKER® 465 - FIRE RETARDANT

### For technical, quality or product safety questions, please contact:

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