

WACKER® WEATHERSEAL NEUTRAL

SILICONE SEALANT

Product description

WACKER® WEATHERSEAL NEUTRAL is a one-part, neutral-curing, chalk-filled silicone sealant with excellent adhesion, weather resistance and long shelf life for weather sealing.

Properties

WACKER® WEATHERSEAL NEUTRAL cures at room temperature under the action of atmospheric moisture to give a permanently flexible silicone rubber.

Special features

- non-sag
- ready to use at low (+5 °C) and high (+40 °C) temperatures
- excellent weatherability
- flexible at low (-40 °C) and high temperatures (+150 °C)
- primerless adhesion to most materials
- excellent tooling characteristics for professional use
- non-corrosive to metals
- abrasion-resistant
- suitable for alkaline substrates such as concrete, mortar, fibrous cement
- long shelf life

Application

WACKER® WEATHERSEAL NEUTRAL is a sealant designed for sealing of exterior sealing with excellent weatherability, gunability and durability.

WACKER® WEATHERSEAL NEUTRAL is also suitable for internal sealing, like e.g. clean room joints, curtain wall joints or sealing of aluminum panels.

WACKER® WEATHERSEAL NEUTRAL is suitable for use on alkaline substrates such as concrete and mortar.

The sealant can be applied by either hand or machine to seal expansion joints and connecting joints in a wide variety of materials, such as glass, coated glass, ceramic tiles, enamel, painted surfaces (wood and others), aluminum, steel and many plastics.

Restrictions on use

WACKER® WEATHERSEAL NEUTRAL must not be used as a secondary sealant in insulating glass units. WACKER® WEATHERSEAL NEUTRAL must not be used for structural glazing bonding.

It is the responsibility of the user 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® WEATHERSEAL NEUTRAL is not suitable for use on natural stones, such as marble, granite, quartzite, as it can cause staining.

WACKER® WEATHERSEAL NEUTRAL must not be used for sealing of aquaria or swimming pools.

WACKER® WEATHERSEAL NEUTRAL is not suitable for food contact applications.

WACKER® WEATHERSEAL NEUTRAL is not suitable for mirror mounting.

WACKER® WEATHERSEAL NEUTRAL is not suitable for use with Polyethylene, Polypropylene, ABS, Acrylic and Lexane.

The curing time can be extended at lower temperature, lower humidity or by low volume of air exchange.

Adhesion

WACKER® WEATHERSEAL NEUTRAL exhibits excellent primerless adhesion to many non-porous siliceous materials, e.g. glass, tiles, ceramics, enamel, glazed tiles and clinker; metals, e.g. aluminum, steel, zinc or copper; impregnated, varnished or painted wood; and many plastics. Also suitable for alkaline substrates such as concrete, mortar and fibrous cement.

Users must carry out their own tests due to the great variety of substrates.

The adhesion can be improved in many cases by pre-treatment of the substrates with a primer.

If adhesion difficulties arise please contact our technical service.

Weather and heat resistance

WACKER® WEATHERSEAL NEUTRAL has excellent weatherability and is virtually unaffected by UV, radiation, ozone, rain, snow, sunlight, and extremes of temperature. Its mechanical and physical properties do not change appreciably on aging or exposure to weather. Even after many years in service, seals remain fully functional.

Cured WACKER® WEATHERSEAL NEUTRAL stays elastic at temperatures from as low as -40 °C to as high as +150 °C. It will even withstand brief exposure to lower and higher temperatures.

Processing

WACKER® WEATHERSEAL NEUTRAL is supplied as a paste-like, one-component, ready-to-use material. It may be gunned at temperatures ranging from +5 °C to +40 °C and can thus be used in any climate.

WACKER® WEATHERSEAL NEUTRAL is readily applied to most types of glass (laminated, coated, uncoated), ceramic tiles, glazed tiles, enamel, to metals such as steel, copper, zinc, lead, brass and impregnated, varnished or painted wood, and to plastics such as PVC, epoxies, polyester and many other materials. However, as surfaces vary greatly from application to application, it is best to carry out preliminary adhesion and compatibility tests before use.

WACKER® WEATHERSEAL NEUTRAL is compatible with all neutral curing one-component silicone sealants.

Joint design and dimensions

Window glazing regulations are given in DIN 18 545. In the construction field, the minimum joint width is 10 mm so as to allow proper application and tooling of the sealant. The sealant bead should be no thicker than 15 mm and the ideal ratio of joint width to depth is 2 : 1 (see Fig. 1). In any case, the minimum joint width must be four times the expected movement. For deep joints, it is best to use polyethylene or polyurethane foam backing material (backer rods) (see Fig. 1).

If joints are too shallow for backing material to be employed, we recommend using a polyethylene tape (see Fig. 2). This acts as a release film (bond breaker),

allowing the joint to move and the silicone to stretch freely.

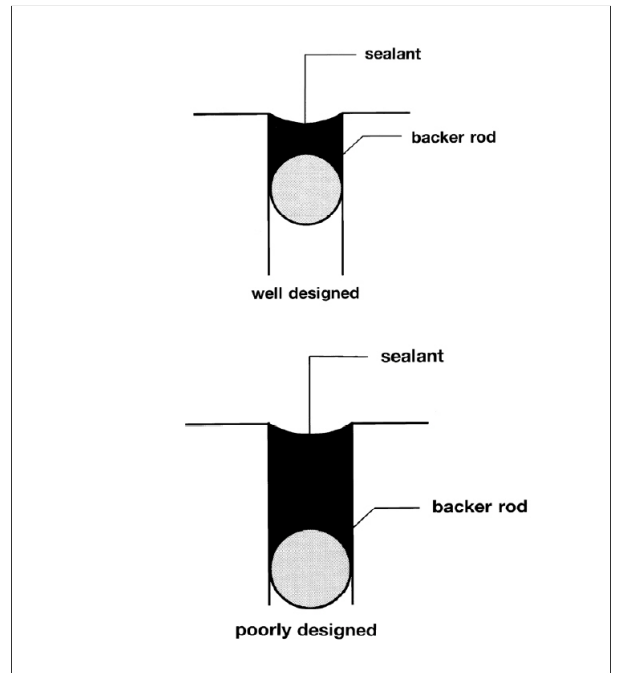


Fig. 1

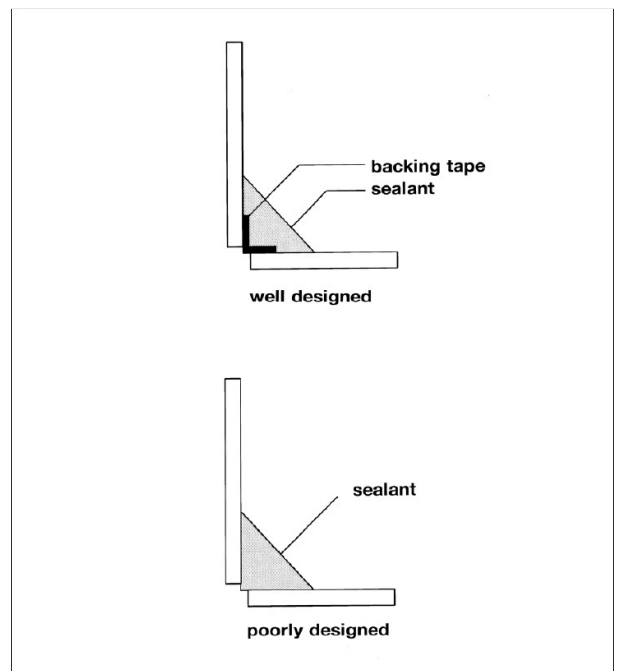


Fig. 2

Surface preparation

WACKER® WEATHERSEAL NEUTRAL should only be applied to surfaces which are clean, dry, free of all loose material, dirt, rust, or oil and other contaminants.

Cleaning:

Contaminated surfaces may be cleaned mechanically, if porous, or with a solvent if nonporous. Glass may be cleaned with water containing a surfactant or with a solvent. In the latter case, apply the solvent with a clean, oilfree, lintfree cloth. Remove residual solvent with a fresh, clean dry cloth before it evaporates.

Caution:

Always follow the recommendations and instructions provided by the solvent manufacturer. As solvents are usually flammable, keep them away from heat, naked flames or sparks. Ensure adequate ventilation. Do not inhale solvent fumes or allow solvent to remain in contact with the skin for prolonged periods.

Primers:

Ceramic tiles, enamels and glass do not usually require priming. To determine if priming is necessary, apply a bead of WACKER® WEATHERSEAL NEUTRAL to the substrate and test its adhesion.

Masking and Tooling:

Masking tape affords a simple means of protecting critical areas beside joints from contact with the sealant. Do not allow the masking tape to touch the clean faces of the joint. Tool the sealant immediately after application and remove the tape before a skin forms.

Storage

Store in a cool (below 25 °C) and dry place.

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.

Packaging

WACKER® WEATHERSEAL NEUTRAL is usually supplied in standard size cartridges that fit all standard caulking guns. Other types of packaging, e.g. for industrial applications, can be supplied on request. The product can also be applied by air-operated guns and almost all industrial dispensing equipment.

Safety notes

Limited evidence of a carcinogenic effect. Wear suitable protective clothing and gloves.

Contains:

Methyl-O, O', O"-butan-2-on-trioximo-silane,
2-butanone oxime,
3-(2-aminoethylamino)propyl trimethoxysilane,
O, O', O", O"'-butan-2-ontetraoximosilane.
May produce an allergic reaction.

Hence, good ventilation of the work place is necessary. Should unvulcanized RTV-1 silicone rubber come into contact with eyes or mucous membranes, the affected area must be cleaned with a cloth or towel and rinsed thoroughly with water afterwards as irritation will otherwise be caused. Avoid prolonged contact of uncured sealant with the skin - use a dry cloth or paper to remove it, rinse with water afterwards.

Keep out of reach of children.

Cured silicone rubber, however, can be handled without any risk to health.

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>.

Product data

Typical general characteristics	Inspection Method	Value
Product data (uncured)		
Density at 20 °C	ISO 1183-1A	1,38 ± 0,02 g/cm ³
Consistency, Flow resistance	KS F 2621; 4-1	0 mm
Extrusion rate at 23 °C		approx. 250 ml/min
Skin forming time at 23 °C / 50 % r.h.		approx. 10 min
Cure rate at 23 °C / 50 % r.h.		approx. 2 mm/day
Product data (cured)		
After 4 weeks' storage at 23 °C / 50 % rh		
Elongation at break	ASTM D 412	approx. 400 - 500 %
Modulus at 100 % elongation	KS F 2621; 4-3	0,4 N/mm ²
Hardness	ASTM D 2240	approx. 30 Shore A
Movement capability		+/-30 %
Tear strength	ISO 34, method C	4,5 N/mm

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

The data presented in this leaflet are in accordance with the present state of our knowledge, but do not absolve the user from carefully checking all supplies immediately on receipt. We reserve the right to alter product constants within the scope of technical progress or new developments. The recommendations made in this leaflet should be checked by preliminary trials because of conditions during processing over which we have no control, especially where other companies' raw materials are also being used. The recommendations do not absolve the user from the obligation of investigating the possibility of infringement of third parties' rights and, if necessary, clarifying the position. Recommendations for use do not constitute a warranty, either express or implied, of the fitness or suitability of the products for a particular purpose.

The management system has been certified according to DIN EN ISO 9001 and DIN EN ISO 14001

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

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