

OTTOSEAL®

M 390

Technical Datasheet



1-component hybrid polymer STP sealant

For indoor and outdoor application

Characteristic:

- **Very high abrasion resistance and tear resistance**
Resists high mechanical loads
- **Good chemical resistance**
Suitable for use in areas subject to heavy chemical exposure
- **Very good adhesion on many materials**
Can be used on many materials without pretreatment
- **Cures practically without shrinkage**
No reworking and no concave fillets that tend to become soiled
- **Extremely elastic**
Compensates movements
- **Low odour**
Convenient processing
- **Silicone-free**
No interactions with commercially available parquet coatings
- **Free of isocyanates**
- **Good weathering and ageing resistance**
For long-lasting indoor and outdoor applications
- **Grindable and paintable after curing**
Optically flawless joint adaptation

Fields of application:

- Stress-equalising sealing of floor and connection joints in interior and exterior areas on pedestrian paths, balconies, terraces and public areas
- Sealing of movement joints between concrete slabs
- Sealing of mechanically highly loaded movement and connection joints, which are exposed to stationary loads or rolling traffic, e.g. in warehouses and production halls, workshops, yards, car washes, parking decks, underground car parks etc.
- Sealing of chemically heavily loaded floor and connecting joints, e. g. in dairies, abattoirs, beverage and food production plants, canteen kitchens, etc.
- Sealing of joints in parquet, laminate, wooden, cork, plastic and vinyl floors

Standards and tests:

- Tested according to EN 15651 – Part 4: PW EXT-INT CC 25 HM
- Tested according to EN 15651 – Part 1: F EXT-INT CC 25
- EMICODE® EC 1 Plus - very low emission
- Declaration of no objection – tested for use in food-related area (ISEGA Forschungs- und Untersuchungs-Gesellschaft mbH, Aschaffenburg, Germany)
- Suitable for applications according to IVD instruction sheet no. 1+8+21+35 (IVD = German industry association sealants)
- Classification according to building certification systems, see the sustainability data sheet
- French VOC-emission class A+
- Tested fire behaviour in accordance with EN 13501: class E

Important information:

Before applying this product the user has to ensure that the materials in the area of contact (solid, liquid and gaseous) are compatible with it and also amongst each other and do not damage or alter (e. g. discolour) each other. As for the materials that will be used at a later stage in the surrounding area of the product the user has to clarify beforehand that the substances of content or evaporations do not lead to an impairment or alteration (e. g. discolouration) of the product. In case of doubt the user should consult the respective manufacturer of the material.

Paints, lacquers, plastics and any other coatings must be compatible to the adhesive/sealant.

For oiled surfaces and wood containing oil, we recommend that preliminary tests be carried out with regard to compatibility and adhesion.

Avoid contact with materials which contain bitumen and which release solvents, e. g. butyl, EPDM, neoprene, insulating- and bituminous paint.

If horizontal joints are subject to vehicle operation, e.g. mechanical stress caused by forklift trucks, protection plates or profiles (T-shaped) are recommended to cover the elastic joints. The use of protection plates is highly recommended for floor joints measuring more than 15 mm width.

Clamping sections can be used to protect joint flanks of concrete and flooring screed, or the joint flanks can be chamfered.

Important information about sealing of floor joints as well as construction plans is given in the IVD instruction sheet no. 1. It can be downloaded from the Industrieverband Dichtstoffe e.V. on the website www.abdichten.de.

On using a steam-jet apparatus the distance between the joint and the steam nozzle is to be at least 50 cm.

The sealant has to be cured for between 24 and 48 hours, depending on the depth of the joint, before the sealant is exposed to mechanical stress. During this time make sure you protect the sealant accordingly.

When working with high pressure cleaners, maintain at least 50 cm distance between the spray nozzle and the sealant.

Please contact our technical department if joints are exposed to heavy chemical or physical load.

Not suitable for sealing / bonding copper upon impact of UV-radiation and temperature.

The colours of the sealant may be affected by environmental influences (high temperature, chemicals, vapours, UV-radiation). This does not affect the characteristics of the product.

Technical properties:

Skin-forming time at 23 °C/50 % RH [minutes]	~ 20
Curing in 24 hours at 23 °C/50 % RH [mm]	~ 2 - 3
Processing temperature from/to [°C]	+ 5 / + 40
Viscosity at 23 °C	pasty, stable
Density at 23 °C according to ISO 1183-1 [g/cm ³]	~ 1,4
Permissible movement capability [%]	25
Stress expansion modulus at 100% according to ISO 8339 [N/mm ²], method B	~ 0,5
Stress expansion modulus at 100 % according to ISO 37, S3A [N/mm ²]	~ 0,8
Tensile expansion according to ISO 37, S3A [%]	~ 1500
Tensile strength according to ISO 37, S3A [N/mm ²]	~ 4,9
Shore-A-hardness according to ISO 868	~ 35
Tear resistance ISO 34-1 [N/mm]	~ 15,9
Shrinkage of volume according to ISO 10563 [%]	~ 4
Temperature resistance from/to [°C]	- 40 / + 90
Shelf life at 23 °C/50 % RH for cartridge/foil bag [months]	12 (1)

1) from date of manufacture

These data are not suitable for the issue of specifications. Please contact OTTO-CHEMIE before issuing specifications.

Chemical resistance:

Ammonia (10%)	temporarily resistant (72 hours)
Ammonia (30%)	not resistant
Petrol	not resistant
Distilled water	resistant
Diesel	temporarily resistant (72 hours)
Acetic acid (10%)	temporarily resistant (72 hours)
Ethylene glycole	resistant
Isopropyl	not resistant

Tap water	resistant
Machine oil	resistant
Lactic acid (10 %)	not resistant
Sodium chloride solution, saturated (e.g. table salt, de-icing salt)	resistant
Sodium hypochlorite (13%)	resistant
Phosphoric acid (10%)	resistant
Phosphoric acid (30%)	resistant
Rapeseed oil	resistant
Hydrochloric acid (10%)	resistant
Hydrogen peroxide (10%)	resistant

Tested at +23°C

Pretreatment:

The adherent surfaces have to be clean, free from fat, dry and sustainable. All adherent surfaces must be clean and any contaminant such as release agents, preserving agents, grease, oil, dust, water, old adhesives or sealants and other substances which could affect adhesion, should be removed. Cleaning of non-porous substrates: Apply OTTO Cleaner T (airing time approx. 1 minute) using a clean, lint-free cotton cloth. Cleaning porous substrates: Clean surfaces with steel-wire brush e. g. or a grinding disk to remove loose particles.

Primer Table:

The demands on elastic sealings and bondings depend on the respective exterior influences. Extreme fluctuations in temperature, tensile or shear forces, repeated contact with water etc. demand high requirements of a bonding. In such cases it is advisable to apply primer according to the recommendations of our technical department (e. g. +/OTTO Primer 1216) in order to achieve a resilient bonding.

Aluminium	+ / 1101
Aluminium anodized	1101
Aluminium powder-coated	+ / 1226 / T
Concrete	1105
Floor covering, rubber	+ / 1227
Floor covering, PVC	+ / 1227
Floor covering, vinyl	+ / 1227
Stainless steel	+ / 1216
Epoxid resin coating	+
Fibre cement	1105
Wood, painted (solvent systems)	+
Wood, painted (aqueous systems)	+ / 1226
Wood, varnished (solvent systems)	+
Wood, varnished (aqueous systems)	+
Wood, untreated	+ / T
Ceramic, glazed	+
Ceramics, unglazed	+ / 1216
Cork	+
Copper	+ (1)
Laminate	+
Brass	+
Natural stone / marble	-
Parquet, oiled	1227
Parquet, other	+
Plaster	1105
PVC unplasticized	+ / 1217
PVC-soft-foils	+ / 1217
Zinc, galvanised iron	+ / 1216

1) See "Important information"

+ = good adherence without primer
 - = not suitable
 T = Test/pilot test advised

Application information:

Floor joints / connection joints according to IVD instruction sheet no. 1 on inside and outside areas made of concrete and screed which are exposed to static loads or vehicle traffic in warehouses, production halls, yard areas, underground and multi-storey car parks. Because of the very high notch resistance and the very high tear strength, the sealant is very well suited for areas which are regularly cleaned by machines. Nevertheless, you have to be careful not to damage the joints with hard cleaning brushes. In case of using high-pressure cleaners you have to keep a minimum distance of 50 cm between the spray nozzle and the sealant.

The additional use of cleaning chemicals may have an influence on the stability of the sealant. - Floor joints / connecting joints in surroundings contaminated with chemicals e. g. barrel storages, filling station, yard areas, trans-shipment areas, laboratories, workshops and washing bays – ceramic floors e. g. food industry, dairies, canteen kitchens

Please consider, that elastic jointings in these areas are maintenance joints according to DIN 52 460, which must be checked at regular intervals (e. g. annually) and replaced if necessary to prevent consequential damages.

If, in exceptional cases, after successful compatibility test our product is coated over the entire surface, this coating must also be able to follow the elastic movement of the sealant. Otherwise crack formations in the coat of paint or optical impairments may occur.

Due to the many possible influences during and after application, the customer always has to carry out trials first.

Please observe the recommended shelf life which is printed on the packaging.

We recommend to store our products in unopened original packagings dry (< 60 % RH) at temperatures of +15 °C up to +25 °C. If the products are stored and / or transported at higher temperatures / air humidity for longer periods (some weeks), a diminution of durability or a change of material characteristics may arise.

Packaging:

	310 ml cartridge	580 ml aluminium foil bag
bahamabeige	M390-04-C10	M390-08-C10
basalt	M390-04-C2260	M390-08-C2260
cherry	M390-04-C17	M390-08-C17
concrete grey	M390-04-C56	M390-08-C56
dark brown	M390-04-C49	M390-08-C49
dark oak	M390-04-C1237	M390-08-C1237
fair oak	M390-04-C64	M390-08-C64
pebble grey	M390-04-C8180	M390-08-C8180
rustic oak	M390-04-C98	M390-08-C98
titan grey	M390-04-C1172	M390-08-C1172
Packaging unit	20	20
Pieces per pallet	1200	600

Safety precautions:

Please observe the material safety data sheet.
After curing the product is completely odourless.

Disposal:

Information about disposal: Please refer to the material safety data sheet.

Warranty information:

All information in this publication is based on our current technical knowledge and experience. However, since conditions and methods of use and application of our products are beyond our control, we suggest that you test the product before final use. Information given in this technical data sheet and explanations of OTTO-CHEMIE in connection with this technical data sheet (e.g. service description, reference to DIN regulations etc.) is not to be seen as a warranty. Warranties require a separate written declaration of OTTO-CHEMIE to prove their validity. The characteristics stated in this data sheet define the characteristics of the article broadly and conclusively. Suggestions of use are not to be taken as confirmation of the appropriateness for the recommended intended use. We reserve the right to alter the product, adjusting it according to technical progress and new developments. We are at your disposal both for inquiries as well as specific application problems. If a governmental approval or clearance is necessary for the application of our products, the user is responsible for the obtainment of such. Our recommendations do not excuse the user from the obligation to take into consideration the possibility of infringement of third parties' rights and - if necessary - resolving it. For the rest our general terms and conditions apply, in particular regarding a possible liability for defects. You can find our general terms

and conditions on our homepage: <http://www.otto-chemie.de/en/terms-and-conditions>



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