



RAMSAUER®
DICHTSTOFFE

440 NATURSTEIN

(Natural Stone)

Neutral 1-component silicone sealant

TESTS, COMPLIANCE WITH STANDARDS

DIN EN 15651-1 F20LM Ext.-Int.

DIN EN 15651-3 XS1

DIN EN 15651-4 PW20LM Ext.-Int.

ISO 16938-1:2008

DIN EN ISO 846

EMICODE EC1 PLUS "very low emission"

Suitable for application in clean rooms

Meets the French VOC-requirements for class A+

Suitable for application in the food industry

Certification of compliance for the food industry

TECHNICAL DATA

Basis: neutrally cross-linking oxime system, Meko-free

Skin-over time: ~ 6 min. (23°C/50 % relative humidity)

Curing time: ~3.3 mm/24 hours (at +23°C / 50 % relative humidity)

Density: ~ 1.02 (EN ISO 1183-1)

Shore hardness: ~ 38 (EN ISO 868)

Shrinkage: ~ 4.6% (EN ISO 10563)

Sag resistance: <3

Tear strength: ~ 5.5 N/mm (ISO 34-1)

Stress at break: ~ 0.47 N/mm² (EN ISO 8339)

Modulus: ~ 0.4 N/mm² (EN ISO 8339)

Shear strength: ~ 0,83 N/mm² (DIN 52455-3)

Elongation at break: ~ 250 % (DIN 53504-1 S2)

Movement capability: ~ 20%

Processing temperature (substrate, environment): + 5°C to + 35°C

Temperature resistance: - 50°C to + 150°C

Storage life: 12 months in a cool and dry place

Colours: according to current colour chart, also available with textured surface and mat

2 colours in silver Ag+ version: prolonged mould protection thanks to new technology

Packaging: 310ml-cartridges and 400ml-foil bags



CHARACTERISTICS

440 NATURSTEIN cures in the presence of air humidity, forming a vulcanised material with a dry surface. Thanks to neutral cross-linking no corrosion occurs in contact with metals. Furthermore, the sealant does not contain any migrating components (plasticisers). Thus there is no risk of contamination of edges of natural stone. 440 NATURSTEIN

contains fungicidal and bactericidal agents counteracting the infestation of micro-organisms (mould fungus, bacteria). 440 NATURSTEIN is resistant to commercially available detergents and disinfectants.

The product is highly UV-, weather- and ageing resistant. After curing, 440 NATURSTEIN is physiologically safe and inert.

APPLICATION

440 NATURSTEIN is a silicone sealant which has been developed especially for sealing joints in natural stone, such as marble, gneiss, porphyry, granite, terrazzo, etc. 440 NATURSTEIN is suitable for sealing joints subjected to high

strain, as well as underwater joints. Thanks to its excellent and tested mechanical properties the product is suitable for application in kitchens too. 440 NATURSTEIN is suitable for application in clean rooms.

MEETS THE REQUIREMENTS OF IVD-INSTRUCTION SHEETS

As of the date of publication only No. 14 is available in English, all other instruction sheets are available in German only.

No. 3: Design and sealing of joints in sanitary facilities and moist rooms

No. 14: Sealants and mould infestation - Causes, precaution, restoration

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- No. 17: Connection joints in swimming pool construction
No.21: Elastic sealing of joints in the food industry
No. 23: Sealing of joints and connections in natural stone

PROCESSING

Cover joint edges with adhesive tape and backfill properly (e.g. with suitable backer rod) in order to avoid three-point adhesion. Preparation of adherent surfaces: The adherent surfaces must be solid, dry, and free from dust, grease, and oil. Prime joint edges with "70 PRIMER". It is imperative to take into account the open time of approx. 20 minutes! For underwater applications and on absorbent substrates use "160 PRIMER", for plastics use "100 PRIMER" and for non-absorbent substrates use "140 PRIMER". Prime with maximum care since any unintended exposure to primer may cause stains in some types of natural stone.

Joint design: In case of joints accommodating movement the joint dimensions must be chosen according to the maximum allowed distortion. A minimum joint cross section of 3x5 mm is imperative.

Introducing the sealant: 440 NATURSTEIN must be introduced into the joint evenly and without bubbles while the product is within the processing temperature range. Ensure good contact with adherent surfaces/joint edges during finishing work (smoothing with Ramsauer smoother "506 Glättmittel"). Use only fresh smoother from container. Remove any excess smoother immediately. Use only small quantities of smoother.

When using the product in colour NIRO the pigment may cause visual flaws in overlapping silicone layers in the form of dark separation lines etc. This is not a defect or reason for complaints but a typical product characteristic.

In order to preserve the mat appearance of the surface, joints filled with MAT colour sealant must be tooled without using a smoother.

LIMITATIONS OF APPLICATION

Keep natural stone surface free from primer. Primers produce stains which can only be removed mechanically (e.g. by grinding). In rooms where dispersion paints are used make sure that the paint coats are completely dry and that there is sufficient ventilation since any combination with 440 NATURSTEIN may result in discolouration of the sealant when sealing joints indoors. The product versions with textured and mat surface are not suitable for underwater applications.

The product is not suitable for tarry or bituminous substrates. Generally, any contact with bituminous materials and materials releasing plasticisers (e.g. butyl, neoprene, EPDM, etc.) must be avoided.

Due to its fungicidal components the product is not suitable for building aquariums and terrariums. Not authorised for gluing

mirrors. Heavy exposure to environmental factors, tobacco smoke, etc. may cause discolouration of the silicone.

The Ag+ agent is not compatible with detergents or disinfectants containing hypochlorite (e.g. Ramsauer anti-mould spray "503 Schimmelspray") since this may affect the visual impression. We recommend using neutral or alkaline detergents for cleaning.

The method of disinfection of swimming pools (e.g. chlorination, alternative procedures by means of UV irradiation, etc.) as well as water circulation must be chosen according to the size and type of pool. Take into account the applicable standards and guidelines for operating swimming pools as amended from time to time. Inadequate disinfection and/or circulation of water may result in mould formation on the joints.

SAFETY ADVICE

Consult the current EC Safety Data Sheet which is available at any time on our website at www.ramsauer.at.

ADVICE FOR APPLICATION

Ensure sufficient ventilation during processing and curing. In view of the large number of factors which may affect processing and application the user must always try the specific application in an experiment before using the product. Take into account the expiry date of the product. 1-component silicone sealants are not suitable for full surface bonding. The curing time increases with the thickness of the layer. Before

using the 1-component silicone sealant in layers with a thickness of more than 15 mm get in touch with our application engineering department. Storage and/or transportation of products at increased temperature/air humidity for a prolonged period of time (several weeks) may result in a reduction of storage life and/or changes of characteristics of the product.

PRIMING TABLE

Glass	+
Tiles	+
Pine wood	+

Concrete, wet ground	+
Concrete, according to form work	RP 70
Steel DC 04	+
Hot dip galvanised steel	+
High grade steel	+
Zinc	+
Aluminium	+
Aluminium AlMg1	+
Aluminium AlCuMg1	+
Aluminium 6016	+
Aluminium anodised	RP 40
Brass MS 63 hardness F 37	+
Rigid PVC Kömadur ES	RP 100 / RP 105
PVC plasticised	RP 100 / RP 105
PC Makrolon Makroform 099	-
Polyacryl PMMA XT 20070 Röhm	-
Polystyrene PS Iroplast	-
ABS Metzoplast ABS 7 H	RP 100 / RP 105
PET	+
PU blend quality	+
Copper	+
Polycarbonate	-
PMMA Röhm sanitary quality	-
Mirrors	-
Natural stone	+

Legend: + = adheres well without a primer
 - = not suitable
 RP = Ramsauer primer

This table is based on adhesion tests with test solids of Rocholl corporation under laboratory conditions. Under field conditions the adhesion characteristics are dependent on a variety of external factors (weather, impurities, burdens, etc.). Therefore this table serves for guidance only and does not constitute any binding statement. For more information get in touch with our application engineering department.

LIABILITY FOR DEFECTS

The information provided including but not limited to the proposals for processing and using our products is based on our knowledge and experience, usually at the time of going into print. The results of work may deviate from this information depending on the specific circumstances, in particular with respect to substrates, processing and environmental conditions. Therefore, neither this information nor any oral counselling shall constitute warranty or give rise to any liability on whatever legal ground for any specific result

of work, unless we acted intentionally or by gross negligence. Ramsauer warrants that its products will have the technical characteristics according to the Technical Data Sheets up to their expiry date.

Product users must consult the latest data sheet which is available upon request. Our current General Terms and Conditions apply which are available for download on our website www.ramsauer.at.



QUALITY YOU CAN RELY ON

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