

Z22 - SEALANTS

IRAL-NH[Z22]0001

Rev	Summary of Changes	Author	Date	Check	Status
E00	Stage E issue	TMQ	04.04.08	AS	Stage E
F00	Stage F	TMQ	31.07.08	AS	Tender
K00	Issued for Construction Added clauses 104-108 Revised clause 113	AC CR	19.01.09	AS	Stage K
K01	Revised: 111 Added: 101, 102, 103	AC	10.07.09	TM	Stage K
K02	Added: 119, 310, 320	AC	23.07.09	TM	Stage K

Z22 SEALANTS

To be read with A00 Architectural Preliminaries.

100 TYPES AND METHODS

- Sealant shall be suitable for the purpose intended, and used strictly in accordance with the manufacturer's instructions.
- Sealants shall not be in any way a potential health hazard. Maintain full up-to-date records of all current published research and legislation in this respect. Obtain information from the sealant manufacturer regarding storage, handling, use and disposal of sealants.
- Wet applied sealants shall only be used in the locations shown on the Design Drawings or Working Drawings or as and where agreed with the CA, provided that all the requirements of the Specification are satisfied.
- Sealants shall be the most appropriate type and grade suitable for the intended application.
- Written confirmation from the sealant manufacturer shall be obtained and submitted to the CA for consideration as to the suitability of the sealant for the application intended.
- Submit proposals and reference samples to the CA of the type and colour of the sealant prior to ordering.
- Sealant colour shall be agreed with the CA. State the period during which the sealant shall not change in appearance or colour. Any discolouration of sealant during this time shall not be acceptable.
- The chemical composition of the sealant and primers, where any, shall be compatible with the joint substrate, and with adjacent surface treatments or building components with which they may come into contact.
- Determine the appropriate hardness, compressibility or consistency of sealants in consultation with the manufacturer, considering the joint movement and exposure for the size of joint. Upon request, furnish information concerning theoretical joint movement related to the anticipated temperatures at which sealants shall be installed and cured.
- Demonstrate to the satisfaction of the CA that the sealant joints can accommodate and are compatible with any movements to which they may be subjected.
- Sealants shall have the lowest modulus of elasticity which is consistent with the degree of exposure to wear, abrasion and vandalism. Any sealant exposed to traffic shall have strength and modulus sufficiently high to resist damage by traffic, including indentation.
- Sealants that are likely to stain, discolour or bleed into adjacent building materials shall not be used. Provide independent testing evidence to this effect.
- Where the sealant location involves special requirements, comply with the following:
- Where the sealant is used in trafficked surfaces and/or requires to be fuel resistant, it shall comply with BS 2499 and BS 5212.
- Where the sealant is required to achieve a period of fire resistance, provide independent UK performance certification of the proposed sealants to show the sealant satisfies the required fire resistance requirement.
- Where sealants are in contact with drinking water, provide evidence of compliance with UK water quality standards.
- Resistance to permanently wet service environments.
- Sealant performance shall be verified by provision of current independent test certificates.
- Manufacturers' product descriptions shall confirm compliance with performance standards including the BS ISO 11600 coding and be confirmed on the package labels, in the technical data sheets and on any certificates demonstrating performance capability.
- Sealants complying with the Specification shall be manufactured within an independently assessed BS EN ISO 9000 series quality system. Each pack supplied shall have a batch number and date of manufacture.
- An on-Site test procedure as recommended by the manufacturer, shall be used as a means of assessing the extent of sealant cure and/or adhesion to joint surfaces
- Sealants Selection:
 - Prior to commencing work on site the Contractor to:
 - a. Submit technical specification, data sheets and manufacturer's recommended application methodology and a representative sample of each material for acceptance prior to commencing on site.
 - b. Confirm in writing the suitability/compatibility of all materials for the application.

- c. Confirmation of the manufacturer's acceptance of the use of each product for the proposed application.
- Where the sealant identified below is considered inappropriate for the specific application, the Contractor to propose a suitable alternative.

101 ONE-PART POLYSULPHIDE SEALANT

- Material: One-part Polysulphide Sealant
- Manufacturer: Adshead Ratcliffe or Equivalent approved
Derby Road
Belper, Derby, DE56 1WJ
Tel: 01773 826661, Fax: 01773 821215
- Product: Arbokol 1000
- Color: White
- Placement: Build in as work proceeds and in accordance with manufacturer's recommendations.
- Other requirements: -

102 SILICONE WEATHERPROOFING SEALANT

- Material: One-part silicone neutral cure sealant
- Manufacturer: Dow Corning or Equivalent approved
Dow Corning Limited
Meriden Business Park, Copse Drive
Allesley
Coventry
CV5 9RG
United Kingdom
TEL:+441676 528 000
FAX:+44 1676 528 001
- Product: Dow Corning 791
- Color: Anthracite
- Placement: Build in as work proceeds and in accordance with manufacturer's recommendations.
- Other requirements: Non paintable, fully seal all gaps.

103 ACOUSTIC FLANKING BAND

- Material: Closed cell polyolefin foam strip
- Manufacturer: CMS Acoustic Solutions
2 Luard Way, Birch,
Colchester,
Essex
CO2 OLR
T: 01206 330810
F: 01206 330830
- Product: Acoustic Flanking Band, 40mm (or as required), without self adhesive backing
- Thickness: 10mm
- Placement: Build in as work proceeds and in accordance with manufacturer's recommendations.
- Other requirements: Fill in all gaps, trim/cut back as needed.

104 DRY FOAM COMPRESSIBLE JOINT FILLER

- Material: Closed cell polyethylene
- Manufacturer: Grace Construction Products Ltd
Ajax Avenue
Slough, Berkshire
SL1 4BH
Tel +44 (0)1753 692929
Fax +44 (0)1753 691623www.graceconstruction.com
- Product: Aerofil 1
- Color: White

- Placement: Build in as work proceeds and in accordance with manufacturer's recommendations.
Filler to be adhered to one or both sides of joint as per manufacturer's recommendation in order to prevent the filler from moving.
 - Other requirements: Where filler is to act as a sealant stop the filler should be recessed the same dimension back from the finished face as the joint is wide.
- 105 DRY FOAM FIRE-RESISTING COMPRESSIBLE JOINT FILLER
- Material: Open-cell polyurethane flexible foam
 - Manufacturer: Sealmaster or Equivalent approved
Pampisford, Cambridge, CB2 4HG
T: 01223832851
 - Product: Firefoam
 - Color: Black
 - Placement: Build in as work proceeds and in accordance with manufacturer's recommendations.
 - Joint Filler installed in accordance with manufacturer's recommendations.
 - Other requirements:
For 30 and 60 min fire rating use min 30mm wide strips and in accordance with manufacturer's recommendations.
- 106 JOINT SEALANT - FIRE RESISTING LOW MODULUS SILICONE SEALANT
- Material: One-part Low Modulus, Fire resisting Silicone Sealant
 - Manufacturer: Adshead Ratcliffe or Equivalent approved
Derby Road
Belper, Derby, DE56 1WJ
Tel: 01773 826661, Fax: 01773 821215
 - Product: Arbosil 1071
 - Color: White
 - Backing: where applicable, appropriate joint filler e.g. mineral wool or closed polyethylene foam, should be used to provide correct depth and in accordance with manufacturer's recommendations.
 - Sealant installed in accordance with manufacturer's recommendations.
 - Other requirements:
Non paintable, flexible joint
- 107 JOINT SEALANT – LOW MODULUS SILICONE SEALANT
- Material: Neutral cure silicone sealant with fungicide
 - Manufacturer: Tremco- illbruck Limited or Equivalent approved
Coupland Road
Hindley Green, Wigan WN2 4HT UK
T: 01942 251400, Fax: 01942 251410
 - Product: Tremsil 600
 - Color: White
 - Sealant installed in accordance with manufacturer's recommendations.
 - Other requirements:
Non paintable, flexible joint
- 108 JOINT SEALANT – ACRILIC SEALANT
- Material: A water-based acrylic sealant.
 - Manufacturer: British Gypsum or Equivalent approved
 - Product: Gyproc sealant
 - Color: White
 - Sealant installed in accordance with manufacturer's recommendations.
 - Other requirements:
Paintable
- 109 JOINT SEALANT – ONE PART HIGH MODULUS MODIFIED POLYMER SEALANT
- Colour: Grey.
 - Manufacturer: Adshead Ratcliffe or Equivalent

- Derby Road
Belper, Derby, DE56 1WJ
Tel: 01773 826661, Fax: 01773 821215
- Product: Arbomeric MP 20 One-Part Low Modulus Modified Polymer Sealant
- Preparation: For stainless steel: No primer required
For galvanised steel: No primer required
For concrete/stone: Arbo Primer 2650
- Back up material: low tack polyethylene tape or closed cell polyethylene backer rod.
- Sealant installed in accordance with manufacturer's recommendations.

- 110 POLY-BUTYL SEALING TAPE
- Material: Poly-butyl sealing tape with integral EPDM spacer shim.
- Manufacturer: Alfes Industries or Equivalent
Bentall Business Park
Glover, District 11
Washington, Tyne and Wear, NE37 3JD
Tel 0191 419 0505, Fax 0191 419 2200
- Product: Alfes PB Shim.
- Sealant installed in accordance with manufacturer's recommendations.
- Preparation: Surfaces to be clean and dry, free of dust, oil, grease and solvents.

- 111 ONE PART SILICONE SEALANT
- Manufacturer: Adshead Ratcliffe or Equivalent
Derby Road
Belper, Derby, DE56 1WJ
Tel: 01773 826661, Fax: 01773 821215
- Product: Arbosil 1096 low modulus silicone sealant.
- Preparation: For stainless steel: Arbo Primer 2402.
For concrete: Arbo Primer 2650.
For brick/stone: Arbo Primer 2650.
- Back up material: low tack polyethylene tape or closed cell polyethylene backer rod.
- Sealant installed in accordance with manufacturer's recommendations.

- 112 TWO PART POLYSULPHIDE SEALANT
- Manufacturer: Adshead Ratcliffe or Equivalent
Derby Road
Belper, Derby, DE56 1WJ
Tel: 01773 826661, Fax: 01773 821215
- Product: Arbokol AG2 two part polysulphide sealant
- Preparation: For stainless steel: Arbo Primer AG2NPP.
For concrete: Arbo Primer AG2PP.
For stone: Arbo Primer AG2PP.
- Backing: Low tack polyethylene tape or closed cell polyethylene backer rod.
- Sealant installed in accordance with manufacturer's recommendations.

- 113 FIRE RESISTANT ACRYLIC SEALANT
- Material: A water-based acrylic intumescent sealant.
- Manufacturer: Promat UK Limited, The Sterling Centre, Eastern Road, Bracknell, Berkshire, RG12 2TD. Tel: 01344 381 400. Fax: 01344 381 401.
Technical Services Department Tel: 01344 381 400.
Email: technicaluk@promat.co.uk Web: www.promat.co.uk
- Product: Promaseal Intumescent Sealant
- Color: White
- Placement: Build in as work proceeds with no projections into cavities and to correct depth to receive sealant system.
- Sealant installed in accordance with manufacturer's recommendations.
- Other requirements:
For gaps up to 25 mm wide.

- 114 PRE COMPRESSED WEATHERSEAL STRIP

- Material: Pre-compressed high performance weather seal.
 - Manufacturer: Alfas Industries or Equivalent.
Bentall Business Park
Glover, District 11
Washington, Tyne and Wear, NE37 3JD
Tel 0191 419 0505, Fax 0191 419 2200.
 - Product: Alfas C Seal.
 - Sealant installed in accordance with manufacturer's recommendations.
 - Pre-compression: C Seal to be installed at a pre-compressed thickness equal to the joint width to be filled. The pre-compression to be 80%.
 - Preparation: Contact surfaces to be clean and dry, free of dust, oil, grease and solvents.
 - Continuity: A continuous seal is achieved by forming tapered lap joints or on thin sections by overlapping the C Seal material.
- 115 TWO PART POLYSULPHIDE SEALANT
- Manufacturer: Adshead Ratcliffe or Equivalent
Derby Road
Belper, Derby, DE56 1WJ
Tel 01773 826661, Fax 01773 821215
 - Product: Arbokol 2150 two part polysulphide sealant.
 - Preparation: For stainless steel: Arbo Primer 7781
For galvanised steel: Arbo Primer 7781
For concrete: Arbo Primer AG2PP
For stone: Arbo Primer AG2PP
For Masonry: Arbo Primer AG2PP
 - Backing: Close cell polyethylene foam 25% wider than the gap to be set back 10mm.
 - Sealant Joint : Joint size to be min 12mm width with 12mm depth.
 - Sealant installed in accordance with manufacturer's recommendations.
- 116 COMPRESSIBLE EXPANSION JOINT FILLER
- Manufacturer: Grace Construction Products or Equivalent
Ajax Avenue
Slough, Berkshire SL1 4BH
Tel: 01753 692929
 - Product: Aerofil 1120
- 117 FIRE RESISTANT SILICONE SEALANT (SOLVENTLESS)
- Manufacturer: Nullifire Limited or equivalent and LUL approved
Torrington Ave
Coventry CV4 9TJ
Tel: 024 7685 5000, fax: 024 7646 9547
 - Product: Nullifire M703 Silicone Sealant
 - Preparation: In accordance with manufacturer's recommendations.
 - Sealant installed in accordance with manufacturer's recommendations.
 - Special requirements: 2 hour fire rated
LUL approved
Allowing movement of at least 10mm
- 118 FIRE RESISTANT ACRYLIC MASTIC SEALANT
- Manufacturer: Nullifire Limited or equivalent and LUL approved
Torrington Ave
Coventry CV4 9TJ
Tel: 024 7685 5000, fax: 024 7646 9547
 - Product: Nullifire M701 Acrylic Mastic
 - Preparation: In accordance with manufacturer's recommendations.
 - Installation: Sealant installed in accordance with manufacturer's recommendations.
 - Special requirements: 4 hours fire rated
10mm min gap.

119 SEALANT FOR GLASS FLOOR

- **Description:** Sealant for glass floor on 2nd floor in between glass panels and around glass panels.
- **Product:** Contractor's design to CA approval.
- **Colour:** Translucent to CA approval.
- **Other requirements:**
 - Trafficable, to resist a point load of 80kg on a 5mm square without permanent damage / deformation.
 - To accommodate predicted movements within the 10mm joint: tolerances, thermal movement and movement due to loads on both the glass and the supporting structure.

120 SUITABILITY OF JOINTS

- Before commencing, check that:
- Joint dimensions are within limits specified for the sealant.
- Surfaces are smooth, regular, undamaged and stable.
- All preparatory work is complete before assembly of the joint has been carried out.
- If joints are not suitable to receive sealant inform the EA and submit proposals for rectification

130 PREPARING JOINTS

- Clean surfaces to which sealant must adhere using methods and materials recommended by sealant manufacturer.
- Remove all temporary coatings, tapes, loosely adhering material, dust, oil, grease and other contaminants which may affect bond.
- Keep joints clean and protect from damage until sealant is applied.
- Backing strip, bond breaker, primer: Types recommended for the purpose by sealant manufacturer.
- Insert backing strips and/or bond breaker tape into joint leaving no gaps.
- Cover adjacent surfaces with masking tape to prevent staining and protect surfaces which would be difficult to clean if smeared with primer or sealant.
- Application:
 - Carefully prepare surfaces to receive sealant, using correct de-greasing solvents and bonding agents as
 - Where sealants are applied, either on or off Site, they shall be in accordance with BS 6213, BS 6093 or BS 8000: Part 16 and BS ISO 11600 as appropriate.
 - The application of sealants shall be in accordance with the supplier's/manufacturer's written preparatory and application procedures and the Code of Practice prepared by the British Adhesives and Sealant Association Manual of Good Practice or acceptable equivalent organisation.
 - Excess sealant shall be removed and all joints shall be neat and clean. Only liquids approved by the sealant manufacturer shall be used to tool freshly applied sealants.
 - Sealant shall be evenly applied without bubbles in joints.
 - Sealants shall be adequately protected during the curing process to avoid contamination or damage from other activities or conditions on Site.
 - Joint fillers, when placed in the joint, shall provide a gap consistent with the required depth of sealant. The cross section of sealant in the joint shall be of 2:1 width to depth unless otherwise accepted. Joint fillers shall be as follows:
 - Compatible with the sealant used and surrounding construction elements.
 - Formed from closed cell foam.
 - Non-adhering to cured sealant.
 - Applicators shall operate within an approved BS EN ISO 9002 scheme.
 - Only materials meeting the Specification requirements and stored under appropriate conditions shall be used for installation.
- Applying Sealants
 - Ensure that operatives observe manufacturer's requirements and statutory requirements for storage and safe usage of sealants.
 - Use equipment and methods recommended by sealant manufacturer and apply within the recommended application life of primer and sealant, and the recommended air and substrate temperature ranges.

- Do not apply to damp surfaces (unless recommended otherwise), to surfaces affected by ice or snow or during inclement weather. Do not heat joints to dry them or raise the temperature.
- Fill joints completely; leaving no gaps, excluding all air and ensuring firm adhesion of sealant to required joint surfaces. Tool the sealant to a neat, slightly concave profile unless specified otherwise.
- Protect until cured.

170 GASKETS
Refer to IRA-NH[Z36]0001.

310 PVC FOAM TAPE

- **Material:** (Polyvinyl Chloride)
- **Manufacturer:** Alfas Industries or Equivalent.
Bentall Business Park
Glover, District 11
Washington, Tyne and Wear, NE37 3JD
Tel 0191 419 0505, Fax 0191 419 2200.
- **Product:** Alfas Seal PVC- Grade P235 SR
- **Colour:** Black
- **Thickness:** 10mm or as required to achieve appropriate seal.
- **Sealant installed in accordance with manufacturer's recommendations.**
- **Pre-compression:** in accordance with manufacturer's recommendations.
- **Preparation:** Contact surfaces to be clean and dry, free of dust, oil, grease and solvents.

320 TWO PART POLYSULPHIDE SEALANT

- **Location:** Glazed balustrade to Stair 7 B11/G06
- **Manufacturer:** Adshead Ratcliffe or Equivalent
Derby Road
Belper, Derby, DE56 1WJ
Tel 01773 826661, Fax 01773 821215
- **Product:** Arbokol 682 two part polysulphide sealant.
- **Preparation:** The surface must be thoroughly cleaned to remove all traces of dirt, grease or any other foreign matter.
- **Sealant installed in accordance with manufacturer's recommendations.**
- **Visual sealant:** ArbokSil 1096 capping sealant Z22/111 to manufacturer's recommendations.

END OF SECTION Z22