



AVAL KT 77

standard decorative mosaic render

- high resistance to mechanical impact
- perfect resistance to washing
- creates unique colour compositions



PROPERTIES

AVAL KT 77 is a line of mosaic renders made of advanced base: mix of acrylic water dispersions, hydrophobic agents, modifiers and specially selected natural and dyed aggregates (depending on the expected colour composition).

AVAL KT 77 forms light and durable rendering coat of improved resistance to washing, cleaning and scrubbing.

Rich colour palette – can be applied on various substrates, gives unrestrained offer of designs of walls at exhibition halls, car showrooms, offices, flats, staircases, waiting rooms, halls, antechambers, facades of residential and public access buildings, etc. Mosaic render AVAL KT 77 can be enriched with silicon carbide which strengthens their decorative effect.

Great flexibility, resistance to mechanical damage – can bridge thermal stress and mechanical impacts owing to high content of specially selected dispersions of polymers. The render perfectly compensates stress resulting from thermal expansion of layers located beneath which can occur, for example, in strong sunlight.

Great operational durability – owing to the use of mix of acrylic dispersions,

- special admixtures and modifiers the product offers:
- improved coat durability,
 - improved resistance to atmospheric factors and UV radiation,
 - improved resistance to growth of microorganisms,
 - long term aesthetic façade appearance.

Great surface hydrophobization, self – cleaning ability – greatly UV – resistant hydrophobic layer efficiently reduces structural coat absorptiveness and allows for durable hydrophobic effect which prevents dust and dirt particles adhesion and allows for their possible wash off during precipitation.

Dark and intensive colours – dyed natural quartz aggregate used in the product offers wide range of choice and design modification. Therefore, it gives rich colour palette, also with dark and intensive shades, which meets trends and needs of users.

Great shade durability – owing to the use of aggregate dyed with polyurethane resins and special hybrids of inorganic and organic pigments of improved resistance to external factors.

| AVAL KT 77 | TM 0 |
|---|--|
| appearance | standard effect |
| number of available aggregates | 27 |
| number of available render compositions | unlimited |
| packaging 25 kg | component A – aggregate 17.7 kg component B – base in a bucket 7.6 kg |
| Decorative additives | silicon carbide |

USE

AVAL KT 77 is used for outdoor and indoor application of decorative and protective rendering coats on existing and newly constructed buildings:

- in composite external thermal insulation systems (ETICS) with polystyrene boards (EPS),
- on even, appropriately prepared mineral substrates (e.g. concrete, traditional cement, cement-lime and gypsum plasters), plasterboards, gypsum-fiber boards, chipboards, OSB boards, well bonded paint coats (e.g. oil dado, etc.).

AVAL KT 77 render is recommended for:

- indoor use on surfaces exposed to intensive traffic and high operational loads (halls in schools, kindergartens, healthcare objects, offices, underground passages, etc.),
- outdoor use on surfaces exposed to high thermal loads, atmospheric factors action or those requiring frequent washing: on plinths, fences, retaining walls, posts.

| PLACE OF USE | |
|--|---|
| facade of thermal insulation system with polystyrene | + |
| facade of thermal insulation system with XPS boards | + |
| facade of a single-leaf wall | + |
| wall indoors | + |

| OBJECT TYPE | |
|--|---|
| residential housing | + |
| public access, educational, office, healthcare | + |
| commercial and service | + |
| industrial warehouses | + |
| infrastructure | + |
| outbuildings | + |
| passive building | + |
| energy efficient buildings | + |

| OBJECT LOCATION | |
|---|---|
| city and urban areas | + |
| industrial, investment and economic zones | + |
| rural and agricultural areas | + |
| damp and wet areas, close to water reservoirs | + |
| close to forests and clusters of greenery | + |
| shaded places | + |

| SUBSTRATE TYPE | |
|---|---|
| base coats of thermal insulation systems listed above | + |
| concrete | + |
| traditional cement, cement-lime plasters applied on walls made of brick, ceramic, cellular or silicate blocks and hollow blocks | + |
| gypsum plasters, plasterboards (indoors) | + |

TECHNICAL DATA

| | |
|---|---------------------------------|
| density | approx. 1,7 g/cm ³ |
| diffusive resistance | 0,14 m ≤ S _d < 1,4 m |
| pH* | 8 |
| temperature of use* | from +5 °C to +30 °C |
| relative air humidity* | < 80 % |
| application in high temperature (up to +35°C) | with ATLAS HOTER DL added |
| time of initial render drying** | approx. 15 minutes |
| time of render drying** | approx. 24 h |

*) mass preparation, substrate and ambient before and during application and during coat drying

***) at temperature +20°C and humidity 60%

TECHNICAL REQUIREMENTS

AVAL KT 77 render conforms to PN-EN 15824:2017-07 – decorative mosaic render, water dilutable for use on external and internal walls, posts and partition walls.

| AVAL KT 77 (2019) Declaration of Performance No.049/1/CPR. EN 15824:2017 (PN-EN 15824:2017-07) | |
|---|----------------|
| Intended use: for use on internal walls, ceilings, posts and partition walls. For use on external walls, posts. | |
| Water vapour permeability | V ₂ |
| Water absorption | W ₂ |
| Bonding | 0,35 MPa |
| Reaction to fire – class | |
| • for renders up to 2.0 mm | A2-s1, d0 |
| • for renders up to 1.2 mm | B-s1, d0 |

AVAL KT 77 is listed in the following approvals for thermal insulation systems:

| System name | Technical Approval |
|-------------|--------------------------------|
| ATLAS ETICS | ITB-KOT-2020/1616 1 edition |

RENDERING

The substrate should be:

- **stable** – sufficiently rigid and appropriately long stabilized and primed
- **dry**,
- **even** – irregularities and gaps should be filled with, e. g. ATLAS ZW 330, ATLAS PLASTERING MORTAR or adhesive mortars used for application of base coats of thermal insulation systems; prime the surface with ATLAS UNI-GRUNT emulsion before the substrate repairs.
- **clean** – free from layers which would impair render bonding, especially dust, dirt, lime, oil, grease, wax, residues of oil and emulsion paints; substrates infected by biological corrosion (fungi, algae, etc.) must be cleaned with ATLAS MYKOS PLUS or ATLAS MYKOS No. 1.

Detailed substrate requirements:

| Substrate types | Stabilization | Priming |
|---|--|---|
| Base coat of ETICS, made of ATLAS STOPPER K-50 mortar | min. 3 days* | No priming mass required |
| Base coat of thermal insulation system made of other ATLAS adhesive mortars | min. 3 days* | AVAL KT 16** |
| Freshly applied cement plasters made of ATLAS ready-made plastering mixes, traditional cement and cement-lime plasters | min. 7 days/1cm of thickness* moisture content 4% | Initial priming – ATLAS UNI-GRUNT Main priming – AVAL KT 16** |
| Concrete | min. 28 days* structural moisture < 4% | AVAL KT 16** |
| Well bonded to the substrate paint coatings indoors | no requirements | AVAL KT 16** |
| Gypsum substrates | moisture content < 2% | - Initial priming – ATLAS UNI-GRUNT (use ATLAS UNI-GRUNT PLUS for cement-fibre boards) Main priming – AVAL KT 16** |
| Plasterboards and cement-fiber boards, stably fixed in accordance to manufacturers' guidelines and engineering principles | | |

*) note: for setting conditions T=+20°C, air humidity 50%

***) it is advisable to use AVAL KT 16 of recommended colour (table with appropriate priming mass colour can be found in IMPORTANT ADDITIONAL INFORMATION section)

Plasters applied beneath ATLAS DEKO M should be floated rough, do not pull out “bleeding” water in case of gypsum plasters. If gypsum plaster was classically grinded during application its surface should be made matt.

Render preparation

AVAL KT 77

The render can be prepared at the wholesale point in accordance to recipes

provided. The set consists of two components:

- component A – aggregate in bags (27 colours, bags 25 kg)

- component B – base in a bucket (4.6 kg or 7.6 kg)

Aggregate should be prepared according to the ratio listed in a recipe, next poured into a bucket with base (25 kg). The total weight of aggregates poured into a bucket with base should be: 17,7 kg.

So prepared render should be mixed thoroughly.

Aggregates

| Colour of dyed aggregate used for preparation of TM0 type render | Grain size |
|--|------------|
| White 110 | 0,6 – 1,2 |
| Brown 809 | 0,6 – 1,2 |
| Brown 831 | 0,6 – 1,2 |
| Black 908 | 0,6 – 1,2 |
| Red 30 | 0,6 – 1,2 |
| Cream 226 | 0,6 – 1,2 |
| Blue 450 | 0,6 – 1,2 |
| Grey 715 | 0,6 – 1,2 |
| Grey 1733 | 0,6 – 1,2 |
| Turquoise 644 | 0,6 – 1,2 |
| Green 685 | 0,6 – 1,2 |
| Green 1610 | 0,6 – 1,2 |
| Earth 1/28 | 0,6 – 1,2 |
| Yellow 20 | 0,6 – 1,2 |
| Yellow 266 | 0,6 – 1,2 |
| Yellow 2112 | 0,6 – 1,2 |
| Brick red 2001 | 1,0 – 1,6 |
| Pearl 1013 | 1,0 – 1,6 |
| Black 9011 | 1,4 – 2,0 |
| Chocolate 8016 | 1,4 – 2,0 |
| Navy blue 5010 | 1,4 – 2,0 |
| Khaki 6003 | 1,4 – 2,0 |
| Ochre 8001 | 1,4 – 2,0 |
| Nutbrown 8011 | 1,4 – 2,0 |
| Pearl 1013A | 1,4 – 2,0 |
| Grey 7001 | 1,4 – 2,0 |
| Green 6029 | 1,4 – 2,0 |

Additives

For type TM 0 – **25 kg packaging** – it is possible to modify the composition with silicon carbide. Silicon carbide can be added at the stage of render or mass preparation. Pour the whole package of additive into a bucket with base or a bucket with previously mixed rendering mass. In the second case the whole mass should be thoroughly stirred again so the additive is uniformly distributed within the mass.

Preparation of rendering mass

The mass should not be mixed with other materials, thinned or thickened. Stir the mass directly before use in order to unify its consistency.

Mass application and render smoothing

Apply the mass with a smooth stainless steel trowel (standard or venetian one), keep the coat thickness same as the aggregate grain size, smoothen in one direction simultaneously. Lead the trowel at the possibly smallest angle against the smoothened surface in order to avoid slight irregularities. Collect excessive material back into a bucket and remix.

Irregular smoothening (particularly when using additives) can cause local differences of shade of the rendering coat.

Manual mass application and render smoothing (use with templates)

In order to form additional visual effect, one can use self-adhesive cardboard templates (available on custom order). The template projects shape of natural stone or brick on walls. In order to strengthen the effect formed with a template, it is recommended to use AVAL KT 16 priming mass of contrastive shades.

When the priming mass dries, stick the templates upon the wall, make sure they adjoin precisely and bond well to the substrate. Next, apply ATLAS DEKO M render as described above. Just after the render application and smoothening, remove all the templates – AVAL KT 16 will imitate grout between surfaces imitating stones.

CONSUMPTION

Average consumption of AVAL KT 77 :

- approx. 3 - 4 kg / 1 m²

- approx. 4.5-5.5 kg / 1 m² for renders of aggregates 1,4-2,0

Actual consumption depends on: substrate type, coat thickness, final texture. It is advisable to establish actual consumption on basis of sample application..

PACKAGING

| Type | Packaging |
|--------------------|---|
| AVAL KT 77 – 25 kg | Plastic buckets with base 7.6 kg Paper bags with aggregate 25 kg Silicon carbide 0.2 kg |

SAFETY INFORMATION

The product has been given the Radiation Hygiene Certificate.

Safety information is provided on the product packaging and in the Safety Data Sheet available at www.atlas.com.pl.

STORAGE AND TRANSPORT

Information on storage and transport is provided on the product packaging and in the Safety Data Sheet, available at www.atlas.com.pl.

The shelf life of the product (use-by date) is 12 months from the production date shown on the packaging.

IMPORTANT ADDITIONAL INFORMATION

Generally, beneath particular colour compositions, it is advisable to use either white (not dyed) or dyed (clinker, grey, graphite, sand, brown, coffee) AVAL KT 16 priming mass:

| AVAL KT 16 priming mass colour | AVAL KT 77 colour – type TMO |
|--------------------------------|--|
| BROWN | 120, 221, 316, 512, 513, 514, 516, 710, 718, 719, 720, 734, 736, 740 |
| CLINKER | 121, 220, 319, 320, 416, 417, 418, 517 |
| GRAPHITE | 122, 219, 314, 315, 419, 420, 518, 519, 522, 713, 715, 716, 738 |
| SAND | 706, 707, 725, 729, 730, 732 |
| GREY | 703, 704, 705, 711, 712, 714 |
| COFFEE | 708, 709, 717, 726, 727, 728, 731, 733, 735, 737, 739 |
| WHITE | 111, 112, 113, 114, 116, 117, 118, 119, 211, 212, 213, 214, 215, 216, 217, 218, 222, 311, 312, 313, 317, 318, 321, 322, 411, 412, 413, 414, 415, 421, 422, 511, 515, 520, 521, 700, 701, 702, 721, 722, 723, 724 |

After application the render shows milky-white colour and gets proper shade after drying. High air humidity and low temperature can extend the time of setting and can cause change of the colour shade.

The appearance of mosaic render on different surfaces may be different. This is due to the specifics of this type of product, especially due to the content of several colours of mineral aggregates. Aggregates clusters in one colour are not considered a material defect.

At constant contact with water, the render can get milky-white top coat which disappears when the render surface dries. It is not recommended to apply the render upon surfaces exposed to prolonged water or damp action (e.g. on horizontal surfaces or those with slight slope, in ponds, etc.) or on elements without appropriate damp proofing.

In order to avoid differences in colour shades:

- an individual surface should be coated with render of the same manufacturing date,
- when a composition requires same aggregates from a few bags, they should be of the same manufacturing date,
- an individual surface should be coated during one technological cycle,
- the mass should always be stirred before use.

The maximum surface possible to coat during one technological cycle (application and smoothening; for particular substrate type and weather conditions) should be established experimentally.

Apply the render on adjoining application areas with the “wet on wet” method, prevent the smoothened rendering coat from drying. Otherwise the seams will be visible. Technological breaks have to be planned in advance, e.g. in corners and angles of a building, under rainwater pipes, on lines of contact of two colours, etc.

Protect the rendered surface, both during mass application and drying, against direct sunlight, wind and precipitation.

Obligatorily use scaffolding covers (mesh) for application outdoors. If air and substrate temperature just before application and during the render drying exceeds +25°C, then the application should be limited to early hours only. Nonconformance with these guidelines may lead to insufficient binder transparency at points exposed to strong

sunlight or direct action of temperature higher than accepted in this data sheet.

Time of drying depending on substrate type, temperature and relative air humidity is approx. 24 hours. In high humidity and temperature close to +5°C the time of drying can be longer.

Tools must be cleaned with clean water directly after use. Difficult to remove residues of the set mass can be removed with ATLAS SZOP 2000 agent.

The above information constitutes basic guidelines for the application of the product and does not release the user from the obligation of carrying out works according to engineering principles and OHS regulations. At the time of publication of this product data sheet all previous ones become void. Documents accompanying the product are available at www.atlas.com.pl/en.

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