



ENVIROWALL LIMITED NBS SPECIFICATION :GRANOL TS RAIL SYSTEM

M21 INSULATION WITH RENDERED FINISH

To be read with Preliminaries/General conditions.

SYSTEM SUPPLIER:- Envirowall Ltd., Orchard House, Aire Valley Business Centre, Keighley, Yorkshire, BD21 3DU Tel.01535 661633 Fax.01535 661933 email info@envirowall.co.uk web. www.envirowall.co.uk.

TYPE(S) OF COATING

210 External Wall Insulation System with drainage cavity.

Granol TS Rail System: incorporating Expanded Polystyrene or Mineral Wool
Base Coat-Granol-G highly polymer modified base coat **Ref.GRBC101**
Mesh-Envirowall glass fibre plastic coated alkali resistant reinforcing mesh **Ref.EM1**
Primer-Acrylic Primer **Ref.GRP101** for Mineral wool use Silicone primer **Ref.GRP102**
Topcoat- Acrylic top coat **Ref.GRTC101**.for Mineral Wool use Silicone Topcoat **Ref.GRTC102**

Insulation – Fire retardant Expanded Polystyrene **Ref.PRS__**_(select insulation thickness) or Mineral Wool EWI Slab HD **Ref.RHD__**_(select thickness-state **TS rail type**)

RAILS - To be PVC and aluminium at fire break details. The rails are to be anchored to the pre formed framework. Contactor to ensure that system complies with CP3: chapter V; part 2 1972 in relation to structural stability.

FIRE BARRIERS - To be fitted in accordance with BRE guidelines. Placed at every floor above the second floor. Barriers consist of 1000mm x 200mm Rockwool façade lamella. Each lamella secured back to the cement particle board by two stainless steel insulation fixings. All fire barriers must be double meshed with a 200m overlap above and below the fire barrier. A sealmaster intumescent strip must be applied behind each fire break as shown in the system designers detail.

PROFILES - Base profiles to suit insulation manufactured from aluminium. Corner profiles to be Aluminium with attached reinforcing mesh.

SEALING TAPE - All insulation to be sealed at junctures with illmod 600 sealing tape 3-7mm.

BASE COAT: to be Granol –G highly polymer modified base coat **Ref.GRBC101** applied 3-5mm thick over insulation boards. Plastic coated glass fibre reinforcing mesh **Ref.EM1** trowelled into base coat mortar. Base coat mortar allowed to fully cure before applying Granol Acrylic primer or Silicone primer.

Top coat - Granol Acrylic Topcoat **Ref.GRTC101** or Silicone Topcoat **Ref.GRTC102** to be applied and finished to an even texture.
System to be covered by 10 guarantee.

310 DESIGN

Envirowall to provide drawings for all standard and non-standard details.

320 INSTALLATION REQUIREMENTS

Weather tight under all anticipated conditions
Capable of resisting all dead loads and design live loads including impact and wind loads and accommodating all thermal movements without damage.

330 IMPACT LOADING

Impact resistance of finished walls to be 5Nm.

350 WIND LOADING

Design Wind loads + 1.0kN/m²

360 SAMPLES

Submit samples of 900mm x 600mm of insulated render.

370 UNIFORMITY OF COLOUR AND TEXTURE OF COATINGS

Type/proportion of constituent materials: Unchanged once samples of coatings have been approved

INSTALLATION

410 SITE STORAGE OF GRANOL MATERIALS

Site storage and protection of Granol materials must be in accordance with the manufacturer's instructions.

420 MIXING OF RENDERS AND ADHESIVES

All Granol renders are mixed using a paddle mixer in accordance with manufacturer's recommendations.

430 WEATHER CONDITIONS

Application of the system must only be carried out in suitable weather conditions. Granol renders and adhesives must not be applied in rain, fog or mist, at temperatures below 5⁰C or above 30⁰C or if exposure to frost is likely to occur during drying. Granol renders and adhesives must not be applied to saturated or frostbound walls and insulation boards. In sunny weather work should commence on the shady side of the building and be continued round following the sun to prevent the rendering drying out too rapidly.

440 COATING OF NEWLY APPLIED RENDER

Coating of newly applied render is to be delayed as long as possible, particularly in wet weather, mist, fog or cold conditions, to allow the render to dry out and shrink so that the surface can be stopped and sealed when painted. A minimum of 48 hours in good drying conditions is normally recommended.

450 PROGRAMMING THE WORK

The Contract Administrator must ensure that the work is programmed to be carried out during suitable weather conditions, taking into consideration seasonal variations and allow sufficient time in the programme for stoppages due to inclement weather.

460 PROTECTION TO NEW WORK

The main contractor must provide protection to new work during inclement weather using a protection system suited for the worst weather conditions that can reasonably be anticipated. The main contractor must monitor local weather forecasts and if necessary, modify their protection system accordingly. Failure to carry out such protective measures must make any resulting failure in the Granol products or systems the sole responsibility of the main contractor.

470 COVERAGE RATES

Envirowall Limited will not, under any circumstances, guarantee coverage rates quoted for products. The rates quoted are based on site experience but may vary due to site conditions, operator skills etc. Contractors quoting for contracts must ensure that coverage figures can be achieved in each particular instance. No claim against Envirowall limited will be allowed relating to coverage of materials.

480 AVOIDANCE OF COLOUR SHADING

To minimise colour shade variations of and to avoid dry line jointing, continuous surfaces should be completed without a break. If breaks cannot be avoided they should be made where services or architectural features, such as drainpipes, reveals or lines of doors and windows, help mask cold joints. Where long uninterrupted runs are planned, bags of the material should be checked for batch numbers should be checked for colour consistency. Materials having the same batch number should be used to complete an elevation.

All rendering should be in accordance with the relevant recommendations of BS 5262 : 1991, Code of Practice for external renderings, BS 8000 Part 10 : 1995, code of Practice for plastering and rendering, and Envirowall Limited's instructions.

BS 6150: 1991 AND BS 8000: PART 12: 1989

All Granol masonry paints and decorative finishes must be applied during suitable weather conditions to dry backgrounds, strictly in accordance with Envirowall Limited's instructions and the relevant clauses in BS 6150 : 1991, Code of Practice for painting of buildings, and BS 8000 : Part 12 : 1989, workmanship on building sites, Code of Practice for decorative wall coverings and painting.

490 REPAIR TO DAMAGE

An Envirowall Registered Contractor using the appropriate components must be used to repair damaged areas and procedures detailed in the Envirowall installation instructions.

Conventional rendering techniques and Granol render materials are used to repair damage to the product. Damage to the product should be repaired immediately and repairs should be carried out in accordance with the relevant recommendations of BS 5262: 1991. Regular maintenance checks should be carried out on architectural details for shedding water and on external plumbing and fittings to prevent penetration of water into the rendering.

500 HEALTH AND SAFETY

The fibres as used in Granol renders may irritate the skin. Protective clothing should be worn to avoid contact with both dry, unmixed material and with wet mortar. Great care must be taken to avoid contact with eyes.

When mixing Granol materials a filter respirator should be worn.

Where excessive concentrations of dust may accumulate the measures defined in the Health and Safety Executive publication EH40/96 'Occupational Exposure Limits 1196 for unlisted substances should be followed. Note that EH40 is published annually, and the current edition should be followed.

510 DURABILITY

The system should remain effective for at least 30 years, provided any damage to the surface finish is repaired immediately, and regular maintenance is undertaken including checks on joints in the system and on external plumbing fittings to identify leakage of rainwater into the system, and appropriate steps are taken to correct the defects.

520 LIME BLOOM

Render containing Portland cement may be subject to lime bloom during the application and curing process. The occurrence of this may be reduced by programming the work to be carried out during suitable weather conditions and by provision of adequate protection from rain, cold, and mist or fog conditions during curing and hardening of the render. The effect is less noticeable on lighter colours. It can be expected to disappear with time, the rate depending on the environment to which it is exposed.

For sensitive areas where aesthetics are one of immediate importance the contractor should allow for careful removal of lime bloom should the above precautions not be successful.

530 SPILLAGE OF GRANOL COATING MATERIALS AND MASONRY PAINTS

Granol renders coatings and paints are highly adhesive and all necessary precautions must be taken to protect footpaths, windows, adjacent walls, roof surfaces etc. from spillage, which may cause stains. All windows and adjacent surfaces should be protected during the application of Envirowall and Granol products.

540 WINDOW SILL PROTECTION

Where window frames incorporating window sills are to be provided by others, then the sill projection must be to a minimum of 50mm beyond the outside line of the Granol system.

550 SCAFFOLDING

Wherever possible independent scaffolding should be used to avoid the need to subsequently make good holes and other breaks in the work.

Where the scaffolding is required to be tied back to the building it is normal to recommend and to provide access points for future scaffolding required for maintenance inspection and repairs.

The scaffolding must be arranged to enable good access to be obtained to the whole of the face of the building and sufficient clearance for working is to be provided between the scaffolding and the finished surface of the external wall insulation system.

An allowance must be included for the thickness of the finished system on the face of the building.

580 SEALING TAPE

Prior to the application of the insulation boards, supply and apply Illmod 20/3 EWI sealing tape to seal all joints between all system abutments and against other materials e.g. window/door frames, soffit boards, projecting vents, gas and electric meter boxes etc.

590 FIXING INSULATION, LEVELLING OF BASE BEADS AND RAILS

Fix base rail with Envirowall anchors spaced at a maximum of 30mm apart. Base rail connectors should be inserted at all joints and joints should form on a support stud. Corners should be made with mitred cuts. The correct line and level can be achieved using Envirowall packers.

Horizontal rails are to be fixed using appropriate Envirowall fixings at 300mm centres. Packers are used to achieve correct drainage gap and alignment. The EPS insulation boards are placed at base bead level with T rails inserted at all vertical joints of the insulation boards. The next horizontal rail is then fitted into position. These holding rails are then fixed in the normal way at 30mm centres. The fixings should be packed with minimum 15mm packers to ensure the minimum drainage gap is achieved.

IF POLYSTYRENE INSULATION IS TO BE USED Rockwool façade lamella fire breaks are fitted in a similar fashion to the polystyrene boards but utilising aluminium rails in place of PVC ones.

650 SEALING PROFILE

Supply and apply Envirowall Sealing Profile (Ref: 8585) where system abuts window and door frames and embed the mesh strip in Granol-G on insulation to reveals. Remove self-adhesive tape and apply lightweight polythene protection to window and door openings.

660 FORMING OF WALL SYSTEM JOINTS

Movement joints should be formed in the Granol system over existing movement joints in the background and where dissimilar background materials abut each other.

No additional joints are required for the integrity of the system. Day joints may be required for practical reasons and the positioning of these joints should be agreed between the client contractor and Envirowall prior to the commencement of the works. For timber frame construction please refer to Envirowall Technical Department for recommendations.

670 CORNER BEAD TO EXTERNAL BUILDING CORNERS

Supply and fix meshed stainless steel corner bead to all window/ door heads and jambs.

680 SCRIM REINFORCEMENT TO ALL WALL OPENINGS

Prior to the application of the main scrim reinforcement, bed on Granol-G Composite Mortar 300 x 500mm minimum pieces of scrim diagonally across corners of all wall openings and cover with Granol-G composite mortar and leave flat to receive finish render.

690 REINFORCING MORTAR

Supply, mix and apply Granol-G Composite Mortar in accordance with the manufactures printed instructions.

Supply and apply the mortar with a 10 x 12mm – notched trowel, to the entire surface of the insulation board in such a way that the combed bed corresponds to the notched comb profiles. Apply the alkali-resistant glass reinforcing mesh, overlapping joints by 100mm, overlapping joints at building corners and return into window/door reveals and heads. The surface is closed with a smoothing trowel ensuring the thickness of the reinforcing coat is nominal 5mm thick and that the mesh is fully embedded in the upper third of the mortar.

700 SURFACE PREPARATION

The Granol-G must be allowed to dry and shrink for approximately 2 days in good drying conditions prior to applying the chosen Granol Acrylic or Silicone finish.

Granol-G must be flat, clean, dry and free from dust, grease, chalking or anything else likely to prevent a good bond, prior to applying the Granol Acrylic or Silicone finish.

710 SURFACE FINISH JOINTS

Areas or panels in different colours are set out prior to applying the finish using Masking Tape

720 ACRYLIC OR SILICONE RENDER FINISH

Supply and apply a thick coat of Acrylic or Silicone primer with brush or lambs wool roller (diluted up to 10% with water) in the colour shade of the topcoat.

Supply and apply strictly in accordance with the manufacturers printed instructions, Granol Acrylic or Silicone render grained finish to approved colour.

Granol Acrylic or Silicone is ready to use after stirring briefly. A small amount of water may be added (max. 2%) if required, due to the substrate or the climatic conditions.

Apply the Granol Acrylic or Silicone with a stainless steel smoothing trowel in the thickness of the grain and rub with a plastic float in a circular motion. Granol Acrylic or Silicone can also be applied with a suitable conveying pump with spraying equipment. Granol Acrylic dries naturally by water evaporation; the drying time may be increased in high air humidity and/or low temperatures.

730 CLEANING

Wipe clean at each work stage all exposed nosing, movement joints, sills etc.