

G4 EXTRA PRIMER

POLYURETHANE

01/18
March 2018

CHARACTERISTIC

G4 EXTRA PRIMER is a one component, solvent containing polyurethane resin. Once the primer is applied in thin coatings, solvents evaporate and the primer cross-links by absorption of air moisture. The result is a wear-resistant coating with high impact strength. The weather resistance of G4 EXTRA coatings is good. The G4 EXTRA coatings have a brownish transparent colour and are not UV-resistant.

G4 EXTRA PRIMER has excellent adhesion to wood, concrete and metal as long the surface is grease-free, dry, clean and open-pored (in case of wood and concrete). A prior roughening of the surface (especially for metal) is highly recommended.

G4 EXTRA PRIMER shall not be applied on bitumen and other non-solvent-resistant surfaces.

AREA OF APPLICATION

G4 EXTRA PRIMER can be used as a primer and sealer for porous surfaces like concrete, plaster and masonry. The sealer is able to protect those materials from moisture.

Furthermore G4 EXTRA PRIMER is an excellent adhesion primer for GRP and polyurethane FLEXOVOSS coatings on wood, concrete and metal. Surfaces should be open-pored or should be sanded thoroughly. Additionally G4 EXTRA can be used as a binder for mortar and wood repair compounds.

G4 EXTRA PRIMER shall not be used in living areas. Special treated concrete surfaces cannot be roughened sufficient even by peening. G4 EXTRA and the ESTOVOSS-system will not be usable in this case. Grounds need a barrier against ascending humidity. Otherwise it may lead to spalling of the G4 EXTRA coating, due to its higher vapour resistance.

PRODUCT DATA

MATERIAL DATA

Colour	brownish transparent
Viscosity at 20 °C in the flow cup (4mm-nozzle)	15 – 20 sec.
Solids content	55 – 58 % (pwb)
Density	approx. 1.0 g/cm ³
NCO content	8,5 – 9,5 %
Flashpoint	30 °C
Consumption	100 ml/m ² on non-absorbent substrates (metal) 200-250 ml/m ² on absorbent substrates, like wood, concrete
Dry film thickness	0.1 mm by using 200 ml/m ² on non-absorbent substrates
Shelf life (dry and cool)	min. 6 months in the closed original container

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Qualitätsmanagement-System
zertifiziert von LLOYD'S nach
der Qualitätssicherungsnorm
DIN EN ISO 9001 : 2008



:: INSTRUCTION FOR USE

GENERAL WORKING INSTRUCTIONS

G4 EXTRA PRIMER can be applied with a brush, roller or spray gun (spray respirator has to be used). The consumption should not exceed 250 ml/m² on absorbent surfaces and 100 ml/m² on non-absorbent surfaces, in order to ensure sufficient curing and to prevent an entrapment of the solvents. The formation of puddles must be avoided.

On slightly porous or dense surfaces it is recommended to apply a primer coat of thinned G4 EXTRA first. The G4 EXTRA should be thinned using polyurethane thinner. The last coat should always be applied without thinners. G4 EXTRA PRIMER should always be used in well ventilated areas and above 5 °C.

APPLICATION OF G4 EXTRA AS A PRIMER FOR POROUS CONCRETE, PLASTER AND MASONRY

The surface to be coated has to be grease-free, dry and clean. Moisture in the substrate will cause blistering and has to be avoided. Loose parts and old coatings should be thoroughly removed by brushing before application. The surface has to be open-pored, in order to ensure good adhesion. If necessary, the surface should be roughened. No adhesion will be achieved on cement slurry. Concreted and screed surfaces must at least be 28 days old and dry before they are coated. The first G4 EXTRA coating should be applied with a brush. For further coatings a roller can be used. Depending on the absorbency of the surface a maximum amount of 200 ml/m² should be used for the first coating. The next coating or the next two coatings would need an amount of 150 ml/m² per coating. Allow to harden each coating minimum 2 up to 4 hours, respectively until the G4 EXTRA is still slightly tacky (see chapter "OVERCOATING TIMES").

APPLICATION OF G4 EXTRA AS A PRIMER FOR GRP AND POLYURETHANE COATINGS

G4 EXTRA PRIMER is used as a primer for GRP and polyurethane coatings due to its excellent adhesion to roughened metal surfaces and its good penetration into wood and concrete. In practice, G4 EXTRA can be applied on concrete swimming pools, plaster, wood and metal hulled boats and on other parts made from the above mentioned materials. Wooden surfaces have to be roughened with 80-120 grit dry abrasives. Metal surfaces shall be sandblasted (SA 2 ½). Concrete and plaster surfaces have to be open-pored. If necessary, the surface should be roughened. G4 EXTRA PRIMER is usually applied just once in supplied form (see chapter "GENERAL WORKING INSTRUCTIONS"). The polyester resin with glass fibres can be applied after a drying time of 0.5 to 4 hours. During this period the best adhesion will be achieved.

For concrete, wood and metal surfaces to be covered with a polyurethane coating (e.g. FLEXOVOSS) G4 EXTRA PRIMER can be used as a primer and barrier against moisture from the ground. Only one G4 EXTRA coating is usually applied and has to be hardened properly. The required drying time is minimum 6 to 8 hours, maximum 12 hours. The G4 EXTRA coating must only be still slightly tacky, otherwise it will cause blistering in the FLEXOVOSS coating (see chapter "GENERAL WORKING INSTRUCTIONS").

APPLICATION OF G4 EXTRA AS A BINDER FOR MORTAR REPAIR COMPOUNDS

Cracks and damages in concrete can be filled with a G4 EXTRA-sand-mixture used as mortar repair compound. After the damaged area is cleaned and loose parts are removed, the area should be well impregnated with G4 EXTRA, without creating puddles. The mortar repair compound can be made from 10 to 15 pbw (or 1 pbv) of G4 EXTRA and 85 to 90 pbw (or 4 to 5 pbv) of dry sand with grain size 0.7 to 1.2 mm. The grain size will allow the proper evaporation of the solvents and an access to the air humidity, if the maximum thickness of 1 cm in a single step is kept. The working time is approx. 20 min. If necessary, the filling should be divided in several steps. Each layer of maximum 1 cm can be filled within 12 to 24 hours. Layers with a thickness up to 8 cm in a single step can be applied by addition of approx. 10 pbw of cement to the mixture. The repair should be allowed to harden for at least one day, before it can be sealed with G4 EXTRA.

APPLICATION OF G4 EXTRA AS A BINDER FOR WOOD REPAIR COMPOUNDS

G4 EXTRA can be used to fill splits and holes in wood. Loose parts shall be removed and the surface has to be cleaned. The damaged area should be well impregnated with G4 EXTRA. The wood repair compound can be made from G4 EXTRA and sawdust. The mixture should be no longer flowable. This G4 EXTRA -sawdust-mixture can be filled into the splits. Even if the same colour sawdust is used, it will not be possible to match the colour of wood completely. The hardening time depends on the depth of the filling and the moisture in the wood. The surface will harden more rapidly than the inside.

OVERCOATING TIMES

The overcoating times of G4 EXTRA depend on absorption capacity of the surface, temperature, ventilation as well as air and ground humidity. G4 EXTRA hardens by the release of solvents and in the second step by its reaction with the moisture in the air and in the ground. In winter G4 EXTRA may take longer to harden or could harden incomplete at temperatures near to freezing point (and the consequent lack of humidity). In this case the waiting time between the coats is longer because the tack free time is extended. When G4 EXTRA is used as a primer for GRP laminates, the drying time shall always be between 0.5 to 4 hours. For usage as a primer for one-component polyurethane coatings, the G4 EXTRA coating must be only slightly tacky, before it can be overcoated. If a two component coating is being applied the solvent of G4 EXTRA must be allowed to almost evaporate, a minimum of 6 hours.

coating surface	surface preparation	waiting time until G4 EXTRA can be applied	drying time of G4 EXTRA coating until the following coatings can be applied
wood	roughening with abrasive paper; with 24 grit or with a toothed plane, if GRP coatings should be applied	none	<u>G4 EXTRA</u> : 2 to 4 hours, as soon the surface is tack free, max. 12 hours. <u>GRP</u> : 0.5 to max. 4 hours.
metal	roughening by sandblasting (SA 2 ½) or needle scaler (1mm)	none	<u>GRP</u> : 0.5 to max. 4 hours. <u>Flexovoss</u> : approx. 6 hours to 12 hours.
concrete	cleaning by sweeping. The surface has to be grease-free, dry, clean and absorbent (slurry has to be removed and pores have to be opened)	28 days for hardening of concrete and drying time for the water used for rinsing out of the salts and acid residues	<u>G4 EXTRA</u> : 2 to 4 hours, as soon the surface is tack free, max. 12 hours. <u>GRP</u> : 0.5 to max. 4 hours. <u>Flexovoss</u> : approx. 6 hours to 12 hours.

COATING PROCESS FOR WORKS WITH G4 EXTRA

The minimum hour indication refers to a substrate temperature of 20° C and 75% relative air humidity. By exceeding the maximum drying time, G4 EXTRA has to be fully sanded and overcoated again. If old coatings of other materials (not G4 EXTRA) have to be coated, it is highly recommended carrying out a compatibility test beforehand. All old coatings (as well as G4 EXTRA) have to be fully sanded.

REMOVING OF HARDENED G4 EXTRA COATINGS

Hardened G4 EXTRA can only be removed by sanding due to its hard surface.

:: SAFETY ISSUES

The before mentioned technical data and information, especially the recommendations for applying and using our products, are based on our current knowledge and experience when applied under normal conditions. In practice, the materials, surfaces or site conditions are so different that no warranty regarding the working results or liability, arising out of any relationship, can be inferred neither from this information nor from a verbal consultation, except we are charged with intent or gross negligence. In this case the user is obliged to prove that he has informed us about all points required for a proper and promising judgement in writing, in time and completely. Patent rights of any third party are to be observed. Furthermore, our general sales and delivery Terms and Conditions and the latest Technical Data Sheet, which should be demanded, apply.

Directions for handling and waste disposal are in our Security Safety Data Sheet and the specifications of the Employers Liability Insurance Association for the chemical industry .

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