**Westag & Getalit AG** manufactures a diverse range of concrete formwork panels tailored to different applications. These are made of special weather-resistant, glued wood materials (veneered plywood, blockboard and chipboard) with extra-low moisture absorption and high quality surface coatings – both melamine and phenolic resin film coatings and polypropylene coatings (PP). Many of the formwork edges are factory-treated with a special acrylic water-based paint.

In 1955, Westag & Getalit AG received patent protection for the Betoplan Top panel from the German Patent Office. The panel design, which has proven effective over many decades and is subject to continuous improvement, is used primarily in precast concrete plants and on building sites for exposed concrete surfaces with cost-effective, multiple reuse rates. To achieve the desired results, the following information should be taken into account when using our concrete formwork panels:

**1.** Storage: The formwork panels should be stored in a dry location on level, squared timber. For prolonged storage outdoors, protective sheets should be ventilated in order to prevent trapped moisture and condensation. Ideally, the protective sheets should be made of breathable materials. Westag formwork panels are made of wood composites. The natural swelling and shrinkage deformations of the materials in length, width and thickness should be noted for all applications.

**2.** Cutting should be carried out using carbide-tipped tools in accordance with the cutting conditions for coated, wood-based materials. The use of blunt tools can result in damaged edges. Fine-toothed saw blades should be used. The peripheral rim speed of the saw blade should be at least approx. 50 m/s, i.e. the minimum rotational speed for a saw blade diameter of 30 cm should be over 3000 revolutions per minute.

**3.** Careful treatment of the film coating is the most important requirement for fault-free concrete surfaces and long life of the formwork facing. The most common causes of damage to film are:

- Missed hammer blows when driving nails
- Scratching, e.g. due to reinforcement installation or material and equipment storage on the formwork, especially with floor formwork
- Abrasion during transport
- Vibrator contact during compacting
- Hard rubber caps can reduce damage to film
- Slipping with drilling machines and screwdrivers
- Do not sink screw heads below the panel surface

Mechanical damage to the surface can be repaired using Westag filler, but will remain visible.

**4.** Carefully grind or sand the area to be filled without damaging the original film. Dents to panels should be sealed with Westafill joint tape. To reduce water absorption, the edges of cuttings, anchor drill holes, etc. should be sealed with a protective coating in the formwork yard or on the building site. In general, we recommend resealing the factory edge sealing.

**5.** Prior to concreting, the surfaces should be cleaned, concrete residue removed, and a wafer-thin film of release agent (colourless if possible) should be applied. The release agent should be tested for compatibility with the edge protector colour before use in order to avoid dissolution, which can lead to staining of the concrete surface. In the period between the application of the formwork oil and concreting, the formwork elements should be protected from contamination.

Phenolic resins can emit yellow substances when exposed to intense UV radiation. In exceptional cases, concrete discolouration has been reported as a result of this. The work procedure on the building site (protection of the formwork facing, form stripping times) must be adapted accordingly. In general, we recommend performing a test pour for high-quality exposed concrete SB3 and SB4 in order to test the compatibility of the concrete, form oil and formwork panel.

**6**. When preparing exposed concrete surfaces, please note the following:

- Protect the formwork facing from moisture absorption and from drying out
- The panels must be kept out of direct sunlight
- Ideally, the formwork should be stored upright (in the shade during the summer), two elements with the formwork facing sides together. If the formwork is stored horizontally, the stacking blocks may leave imprints on it.

**7.** The absorbent formwork facing should be adequately moistened with water or concrete slurry before installation (e.g. RS Special and Betoplan S). (Note changes to dimensions!) These Westag formwork panels are manufactured intentionally with a matt surface in order to create a smooth, non-gloss concrete surface and avoid different levels of gloss from forming over long periods of use. On contact with alkaline concrete, phenol-coated formwork panels with light-coloured coatings tend to take on a reddish-brown hue. This colour change is an unalterable characteristic of phenolic resin, and is not the cause of surface discolouration in the concrete.

This information is provided in good faith in accordance with the latest technological advancements, but is not a guarantee for fault-free processing of the panels.

**Disposal**. The remains of formwork panels can be incinerated safely in industrial incineration plants or communal waste incinerators.
Waste code (EWC): 170201 (Wood).
(European Waste Catalogue/EWC Group: Wood, glass and plastic). Waste wood category A II

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