



# INSTRUCTIONS FOR USE

## TKR BASIC COATING, GELS AND TKR PIPING

8 March 2011

**For base materials:** Concrete, metal, wood, polystyrene, glass fibre, rubber, stone, bitumen. For information on other materials, please contact us.

**Working methods:** Brush, spatula, roller, casting

**Successful coating requires carefulness. In order to ensure the best possible result, read and follow these instructions.**

**Evaluation of the area:** The area to be coated has to be clean and dry, and its profile has to be suitable. Concrete must be surface dry; gravimetric humidity 4 % or less, max 90% RH. Relative humidity of the structure less than 90%. Take into account air temperature, air humidity and air condensation point. See to proper ventilation to prevent condensation if the area has been protected with a tarpaulin or plastic. Do not coat outdoors before noon if temperature on the preceding night has been less than +10 °C.

**Evaluation of the dryness of concrete surface:** You can check the dryness of concrete with a plastic film test. Tightly tape the film on a concrete slab. If the surface under the plastic has darkened in at least 24 hours, the surface is too humid to be coated. The drying time of a new concrete surface is 1 to 2 weeks / 1 cm. The surest method of measurement is borehole logging. Surface humidity measurement is not always reliable.

**Evaluation of the cleanliness of concrete surface:** The cleanliness of the surface can be estimated with two simple methods. The surface can be wiped with a dark towel. If light powder is seen on the towel, the surface is usually not clean enough for coatings required for industrial floors. The powder prevents the moistening of concrete with the coating. You can splash water on the concrete floor. If water forms islets and does not spread evenly across the surface, there is possibly oil or grease on the surface. The concrete glue applied after casting must be removed mechanically from a new concrete surface. All concrete curing compounds must also be removed in accordance with the instructions provided by the manufacturer. Clean the concrete surface by vacuuming it carefully in order to remove dust.

**Steel surfaces:** For steel surfaces, sandblasting is recommended. In pipe casting, the drain pipe has to be washed, cleaned mechanically, washed again and dried before casting.

### **Uneven surfaces:**

If there are cracks or irregularities in the base, it is recommended to fix them with TKR coating before the actual coating. If needed, mark out the area with a masking tape. Remove the tape in about 1.5 hours after the coating.

**In uncertain situations, we recommend doing a test coating before the actual coating.**

**Before coating:** Get the following ready: a digital scale, (plastic) pots for mixing the coatings, stirring spatulas or a slow-rotating power drill and coating tools, such as a roller or spatulas.

**Pot life:** The pot life of a mixed coating is approximately 20 minutes. We recommend that you start with a small portion.

**Storage and installation temperature:** The hardener must be stored at circa +16 - +25 °C and always in a carefully closed, dedicated bottle. Check that the hardener is running and amorphous. The plastic part must be stored in a carefully closed container. Keep out of reach of children. Installation temperature +16 - +50°C. The evening out of a product with a temperature of more than +30 °C becomes weaker because of quick drying.

**Industrial safety:** Always use gauntlets of protection class 3 to 5 and goggles as defined in the standard. When spraying, use a respirator. Because of superior adhesion, dry coating cannot be taken off from clothes. Remove splashes immediately with paper. Avoid skin and eye contact of the substance. In case of eye contact, immediately rinse with eye washing liquid and seek medical advice. Take the product labels with you. You can find protection information in the safety data of the product, delivered with the first order.

### **Mixing of plastic part before weighing (also ready-measured)**

In both coatings to be weighed and ready-measured coatings, the contents of the plastic part must first be mixed carefully and unhurriedly to ensure that the various components get evenly mixed. We recommend manual mixing, with for example a mixing stick. If a machine is used, a slowly rotating mixer (300 rpm) must be used. A wrong ratio of substances or insufficient mixing prevents a full-fledged reaction and causes, among others, a non-drying surface. Mix unhurriedly in order to prevent air from entering the mass. Mix for at least 3 minutes, till the mixture is homogenous. In order to ensure the quality of the mix, pour the finished mixture in another container and mix once more for 1 minute (not for ready-measured coatings).

**Weighing:** To ensure a sufficiently accurate mixing ratio, use a digital scale. Do this also in ready-measured portions if you wish to divide the portion into many lots. **Remember to take into account the weight of the containers.** Follow the mixing ratios given by the factory.

**Portioning examples:**

**Portioning table for mixing ratio 100:60**

| Plastic part in grammes | Hardener in grammes | Portion size in grammes |
|-------------------------|---------------------|-------------------------|
| 62.5                    | 37.5                | 100                     |
| 200                     | 120                 | 320                     |
| 625                     | 375                 | 1000                    |
| 1875                    | 1125                | 3000                    |
| 3125                    | 1875                | 5000                    |
| 5000                    | 3000                | 8000                    |

**Mixing:**

**Ready-measured shot:** After the plastic part has been mixed as described above, pour the contents of the hardener bottle in the plastic part. Carefully mix the components, not omitting the bottom and edges of the container. Mix unhurriedly in order to prevent air from entering the mass. Mix for at least 3 minutes, till the mixture is homogenous.

**Portions to be weighed:** It is recommended to do small portions first, for instance a 160 g portion (or smaller), in order to find the correct feel. After the plastic part has been mixed as described above, pour 100 g of it in the mixing container, followed by 60 g of the hardener (depending on the mixing ratio given). Carefully mix the components, not omitting the bottom and edges of the container. A wrong ratio of substances or insufficient mixing prevents a full-fledged reaction and causes, among others, a non-drying surface. Mix unhurriedly in order to prevent air from entering the mass. Mix for at least 3 minutes, till the mixture is homogenous. In order to ensure the quality of the mix, pour the finished mixture in another container and mix once more for 1 minute.

**Coating:** For coating the base layer, we recommend colourless TKR Coating. When coating with colourless TKR Basic Coating, you should keep the layers thin and the substance running. TKR Gels are intended for applications where curtaining needs to be prevented. However, we recommend using TKR Basic Coating as undercoating. In difficult and wet circumstances, use MSS 600 for undercoating.

The actual coating is done twice. In the first treatment, spread a tight and thin layer with a spatula, using a brush at the corners. Do the second treatment approximately 4 hours after the first treatment. The surface is sticky at this point. Remove any air bubbles with a steel spatula. Do the surface layer with a toothed spatula, and immediately after that roll it lightly with a roller. The second treatment can be done as late as the following day, but if it is done later, an interim grinding will be needed.

**Puttying, evening out of surfaces.** Even if you use TKR coating, mixing it with e.g. quartz sand, undercoating must always be done with TKR Basic Coating. (The sand shall be washed and dry.) You can mix max. 7 kg of quartz sand in a finished 1 kg TKR portion. Grain size 0.1–3.0 mm.

**Surface roughening, anti-slip:** Outdoor areas and other places where snow will fall have to be roughened with quartz rock or rubber granules. Grain size in roughening 0.4–2.0 mm depending on application. Sprinkle stone or rubber granules on a finished TKR coating. When using a small grain size, let the surface dry up for a moment before sprinkling in order to avoid the stone from sinking too deep into the mass. When using rough stone for roughening, you can roll the surface if needed after sprinkling the stone which partly mixes into the mass.

**Take into account when coating wood:** When you have done the first treatment of a clean wooden surface, polish the surface lightly on the following day to grind off the "thorns" risen. After you have carefully removed the grinding dust, you can do a second coating and possibly a third coating 4 hours after that.

**Take into account in pipe casting:** Only use the tools of the TKR Piping system. Always consult the manufacturer to find out about the system.

**Portion sizes:** Ready-measured 320 g portion. Ready-measured 1.5 kg portion. 1.3 kg and 14 kg portions to be weighed

Preservability of the product: Plastic part 10 years after the manufacturing date. Hardener 6 months after the manufacturing date. Storage temperature +16 - +50°C.

This information is presented in good faith and is believed to be reliable, but is only meant as a tool to help you. TKR Coatings and its representatives cannot be held responsible for consequences caused by persons whose courses of action are not under our control or are beyond it. It is the responsibility of the user to make decisions about the applicability indicated in our documentation, working methods and preparations before use. In addition, the user is obliged to follow and use safety precautions recommended in order to protect the personnel and property during the use of any of our products.