

## EQUIPMENT LIST



Equipment and tools for abrasive surface cleaning. Propane cylinder, hose, burner, regulator. Roller (brush) for applying the primer. Knife, rags, solvent, digital thermometer (pyrometer). Standard personal protective equipment (safety shoes, hard hat, goggles, gloves) in accordance with local health and safety regulations.

**Personnel with no experience in applying corrosion protection tapes are strongly advised to receive training.**

## APPLICATION CONDITIONS

Steel pipe surface condition	Cleanliness min. St 3 (ISO 8501-1) Dust contamination $\geq$ grade 3 (ISO 8502-3) Roughness 50-100 $\mu\text{m}$	To prevent wrinkling of the corrosion protection coating due to thermal stretching of the polyethylene film, the temperature difference between the surface of the pipe (before and after application) and the tape roll must not exceed +30 °C (+54 °F). In case of intense direct sunlight, the applied insulation layer must be protected prior to pipe laying with a suitable material (e.g. Rock Shield DK-PROTEC®).
Pipe surface temperature	$\geq +3$ °C (+ 5.4°F) above dew point	
Ambient temperature	+0°C to +60°C (+32°F to +140°F)	
Relative humidity	$\leq 80\%$	
Primer temperature during application (recommended)	+15°C to +30°C (+59°F to +86°F)	
Tape temperature during application (recommended)	+5°C to +50°C (+41°F to +122°F)	

## SURFACE PREPARATION



Before applying the corrosion protection system, the pipe surface and the adjacent factory insulation must be free of rust, dust, dirt, paint, remnants of old and damaged insulation, oil stains (if necessary, use a suitable solvent). Humidity has to be removed by drying with a torch flame (propane).



Cut off the edges of the factory insulation at an angle of 30°.

Grind the factory insulation around the circumference with coarse sandpaper until it is roughened - an area equal to twice the width of the tape. Remove sanding dust.



Cleaning of the metal surface is done by hand using a metal brush and power tool (ISO 8504-3).

As a result of cleaning, the surface condition should be min. St3 (ISO 8501-1).

After cleaning is completed, the surface should be protected from dust and moisture. To achieve the greatest efficiency, surface preparation should be carried out immediately before applying the corrosion protection system.



## APPLICATION OF PRIMER



### Attention!

Read the generally accepted precautions and safety instructions for **Butyl Primer DK-BUT®** & **Bitumen Primer DK-BIT®** before use. Before use, the primer must be thoroughly mixed until all possible sediment disappears.

Recommended primer temperature during application is + 15 °C to + 30 °C (+ 59 °F to + 86 °F).

Apply a thin layer of the primer using a brush or roller to the cleaned and dried pipe surface and adjacent factory insulation (tape width + min. 50 mm).

Allow the primer to dry (until it "tackles" to the touch). The drying time of the primer depends on the ambient temperature and air circulation (3-10 minutes).

## APPLICATION OF TAPES



When winding manually, start by winding in a circle, then move in a spiral. The overlap on plant-applied coating on the entire circumference should be at least 50 mm.

When winding with winding devices, you can start straight away with spiral winding.

The tapes are wound on the outer surface of the pipeline by spiral winding, with an adhesive layer inward, with a 50% overlap of the turns. For tape width <50 mm, overlap  $\geq 50\%$ , and for tape width  $\geq 50$  mm, overlap  $\geq 25$  mm. The tension of the tape should be such that the tape is tapered by about 1% during application.

In the process, remove the layer of anti-adhesive film.

The outerwrap should completely cover the innerwrap.

Tapes must be applied within a maximum of 6 hours after primer application. If the primed surface is contaminated, the primer should be renewed.

## INSPECTION

When visually checking the quality of the corrosion protection system, the applied tape should not have folds, distortions, wrinkles, corrugations, sags. The applied corrosion protection system is checked for appropriate thickness, dielectric integrity (test voltage: 5 kV + 5 kV per mm of coating thickness, max. 25 kV), adhesion and impact resistance.

If the corrosion protection coating is damaged, use the pipe coating repair system **Repairing System DK-PROTEC®**.

## GENERAL RECOMMENDATIONS

**DK-BUT®** & **DK-BIT®** tapes  $\leq 50$  mm wide can be easily applied by hand wrapping.

The use of original winding devices **DK-WORKER®** is recommended to ensure high-quality and efficient application of tapes  $\geq 50$  mm wide.

In order to ensure that tapes are applied with sufficient wrapping tension, the tape width should be 150 mm.

### Measures for environmental protection:

During the work on the application of the corrosion protection system, measures are taken to prevent contamination of the territory with industrial waste and spillage of primers.

In the event of a spillage of the primer, it should be collected in a separate container, and the filling points should be covered with sand. The contaminated soil layer should be cut off and taken out for disposal.

Empty cans (barrels) from under the primer should be closed with lids and stored in a designated place for further disposal.

Waste generated during the application of the corrosion protection system must be disposed of in accordance with local regulations.

The product information shown here our application recommendations and other product related documents are made for your convenience only. Since many installation factors are beyond our control, the user shall determine the suitability of the products for the intended use and assume all risks and liabilities in connection therewith.

All information contained in this document is to be used as a guide and does not constitute a warranty of specification.

The information contained in the document is subject to change without notice.

For this reason, no liability can be accepted for inaccurate advice or any failure to provide advice.

The user is responsible for checking the applications of the product and verifying its suitability for the intended use.

This is the original translation of product information from the Polish language.

In case of any discrepancy or any dispute arising from the interpretation of this product information, the Polish text of the respective Polish product information, which is available at [www.dkdk-corporation.com](http://www.dkdk-corporation.com), shall be decisive.

The legal relationship shall be governed by Polish law.