

■ **PRODUCT DESCRIPTION**



Shrinkable Sleeve DK-HSS®80 is supplied cut-out complete with a lock and an appropriate amount of 2-component epoxy resin - "Epoxy" part A-base and "Hardener" part B - hardener, calculated by the manufacturer for each diameter. Delivery of non-cut material is possible.

■ **EQUIPMENT LIST**



Equipment and tools for abrasive surface cleaning. Propane cylinder, hose, burner, regulator. Epoxy sponge, 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 heat shrink sleeves are strongly encouraged to receive training.**

■ **APPLICATION CONDITIONS**

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|--|---|
| Steel pipe surface condition: - degree of purification - the roughness | Sa 2.5 50 – 100 microns |
| Pipe surface temperature | ≥ +3°C (+5.4°F) above dew point |
| Temperature Range: -application | + 5 ° C to + 50 ° C (+ 41 ° F to + 122 ° F) |

■ **SURFACE PREPARATION**



Before applying the sleeve, the welded joint area 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).



Cut off the edges of the factory insulation at a 30 ° angle. Grind the factory insulation around the circumference with coarse sandpaper to roughness. Remove sanding dust.



Sandblast the metal surface. As a result of cleaning, the surface condition should be St 2.5 ("white metal"). After sandblasting the surface should be protected from dust and moisture. Use a dry cloth to wipe down steel and factory coated areas or blow with air to remove foreign material.



■ **APPLICATION OF EPOXY RESIN**



Mix "Epoxy" Part A Base and "Hardener" Part B Hardener. Stir for at least 1-3 minutes until a homogeneous mixture is obtained. The lifetime of the epoxy after mixing is 45 minutes. at 23 ° C (73 ° F) and 15 min. at 40 ° C (104 ° F).



Heat the area around the welded joint and the adjacent factory coating to a temperature of 80-90 ° C (176-194 ° F), but not more than 100 ° C (212 ° F).



Pipes Ø ≤ 450mm for preheating and shrinking - a flame of moderate intensity.



Pipes Ø > 450mm for preheating and shrinking - moderate to high flame intensity.



The joint heating temperature at different points is monitored with a pyrometer to make sure that the pipe is heated around its entire circumference.

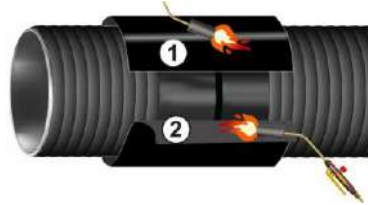


Apply the epoxy mixture in an even layer with a thickness of at least 100 - 150 microns on the entire metal surface and on 10 mm of the adjacent pipe coating. Epoxy mixture is flammable therefore all necessary precautions and safety measures must be taken when using it.

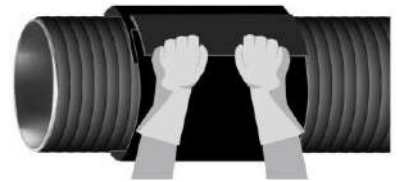
■ APPLICATION OF THE SLEEVE



Place the sleeve over the weld seam, center aligned. Loosely wrap the sleeve around the pipe, ensuring the required overlap. In this case, the sleeve should sag at the bottom of the pipeline. Overlap the ends of the sleeve between the 10 and 2 o'clock positions. Press down firmly on the bottom layer of the sleeve in the overlap.



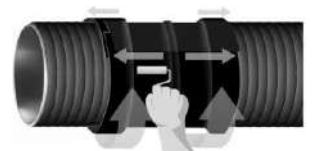
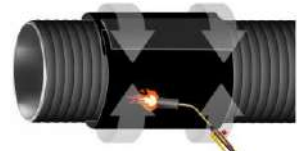
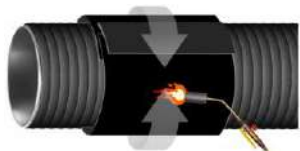
Carefully heat the base of the lower layer of compound "1" and the upper layer on the side of the adhesive "2"



Press the lock firmly into position.



Gently heat the lock and smooth with a gloved hand. Repeat this procedure moving from one end to the other. Smooth out all wrinkles with a gentle roller from the center of the lock.



Using a burner of appropriate power, heat the pipe from the center of the sleeve around the circumference in wide passages. When using two burners, operators must work on opposite sides of the pipe.
For pipes $\varnothing \leq 450\text{mm}$ - 1 burner.
For pipes $\varnothing > 450\text{mm}$ - 2 burners.

Continue heating from the center to one end of the sleeve until it shrinks completely. Heat and shrink the other side in the same way.

Complete shrinkage with long horizontal passes over the entire surface to ensure an even bond. The shrinkage is complete when the thermo-marking indicator has disappeared on the surface of the sleeve, the coating is shiny and smooth, there should be a slight release of adhesive at the edges of the sleeve.

While the sleeve is hot and soft, use a hand roller to gently roll out the surface of the sleeve, pushing any trapped air out from under the sleeve, as shown above. Continue the procedure by rolling the lock in long horizontal passes from the weld to the edges.

■ INSPECTION



Visually inspect the applied sleeve to verify that it meets the following requirements:

- The sleeve fits completely against the steel joint.
- Adhesive protrudes around all edges of the sleeve.
- There are no cracks or holes at the base of the sleeve.

■ INSTRUCTIONS FOR FILLING THE PIPE

Allow the sleeve to cool down for 2 hours after the completion of shrinkage prior to running and backfilling the pipeline. Use carefully selected backfill material (no sharp stones or large particles) to avoid damaging the sleeve.

■ ENVIRONMENTAL MEASURES

During the work on applying the sleeve, measures are taken to prevent contamination of the area with production waste and spillage of primers (epoxy mixture). In case of spillage of the primer (epoxy mixture), 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 (epoxy mixture) should be closed with lids and stored in a designated place for further disposal. Waste generated during sleeve application should be disposed of in accordance with local regulations.

■ RELATED PRODUCTS

Repairing System DK-PROTEC® (filling mastic / fusible rod / repair plaster) is a system for repairing damage to anticorrosive coatings of pipelines. **Repairing System DK-PROTEC®** can be used without the use of special tools as a quick solution for repairing damage to corrosion resistant coatings of pipelines.

Rock Shield DK-PROTEC® is a rock sheet, additional mechanical protection of anticorrosive coatings of gas and oil pipelines from physical damage when laying in difficult soils, which have inclusions of stones, pebbles and other things.

Rock Shield DK-PROTEC® protects the pipeline during its operation from the influence of rocky soil during its possible displacement.

Rock Shield DK-PROTEC® protects insulated piping surfaces during transport and installation.

■ Consult us for specific projects or unique offers

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 on the interpretation of this product information, the Polish text of the respective Polish product information, which is available at www.dkd-korporation.com, shall be decisive.

The legal relationship shall be governed by Polish law.