

CONDURSAL 777

Water Base Stop-off Paint for Carburizing and Carbonitriding in Gas

Properties

CONDURSAL 777 is a newly developed water base stop-off paint for all forms of gas carburizing and carbonitriding up to temperatures of 950°C max. Based on the concept of CONDURSAL 666, it provides improved properties in respect of **minimised evaporation losses and residues in the carburizing furnace** even at high temperatures.

CONDURSAL 777 is easy to apply and provides excellent adherence to the steel surface. After heat treatment is completed, the residues of the paint can be easily removed by simply washing with hot water or alkaline. This is important for mass production for example in the automotive and gear manufacturing industries.

Normally only one coating of CONDURSAL 777 is necessary for effective protection against carbon pickup up to case depths up to 1.7 mm.

Application

Before applying, stir the contents of the CONDURSAL 777 container well. As received, CONDURSAL 777 is suitable for painting. Prior to applying the paste, the surfaces of the components must be cleaned thoroughly by either a vapor degreaser or a detergent washer, so that they are free of oil and grease.

Painting

Soak the brush thoroughly in CONDURSAL 777, then paint the areas to be protected as evenly as possible. If the steel surface can be seen through after coating, a second layer is recommended. Drying time between two coatings should be at least half an hour.

If Condursal 777 is applied by **dipping / immersion** excessive paint should be removed from the bottom area by shaking in order to shorten the drying process.

Spraying / Feeding

Use spraying pistols with a beaker on top, supplying the paint by gravity. Spray as evenly as possible to a thickness of approx. 0.2 to 0.3 mm (.006" to .010"). As mentioned above, normally only one coating is necessary for effective protection.

Recommended pressure in the container is approx. 2 to 3 bar (29 to 43.5 psi).

Recommended diameter of the nozzles is 1.5 to 2.5 mm (.060" to .100").

If necessary for better sprayability, **small** amounts (less than 5%) of tap water can be added.

Drying time which strongly depends on coating thickness, ambient and workpiece temperature, atmospheric humidity etc. can range from approx. 3 to 8 hours. For effective protection it is important to have the coating thoroughly dried before heat treatment is started. This can be checked by "fingernail test".

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Notes

1. Prior to coating the surface must be metallic bright. A forging skin or any residues as cooling or drawing agents result in poor protective performance or run-off problems in the furnace.
2. The coated areas of the workpieces should not exceed 30% of the total surface of the load because otherwise the furnace atmosphere might be affected.
3. The coated parts should be placed in the batch in such a manner that they cannot come into contact because otherwise insulation defects on the coated areas and undue insulation on noncoated areas might occur.
4. The pre-heating temperature of coated parts must be limited to 100°C max. to avoid loss of the protective performance.

During use, with the container open, CONDURSAL 777 has a tendency to thicken due to evaporation of the liquid vehicle in the paint. Normal consistency can be restored by adding **small** amounts of tap water. Be aware that overthinning will impair the effectiveness of the paint.

Removal of Residues after Heat Treatment

After carburizing and quenching, residues of CONDURSAL 777 can be easily removed by just washing with hot water or alkaline.

Cleaning of Equipment

Immediately after use, CONDURSAL 777 containers should be tightly resealed and the pistols, tubes etc. cleaned with water. If spraying is interrupted for any length of time, the pistols should be set in water to prevent drying. Deposits as well as contents of the can cannot be rejuvenated if the liquid vehicle of the paste becomes dry.

Storage

CONDURSAL 777 should be stored in a dry cool place. Shelf life is approx. 12 months. CONDURSAL 777 is based on water and must therefore be prevented from freezing.