

CONDURSAL N9

Stop-off Paint for Plasmanitriding/Ionitriding

Properties

Condursal N9 is a solvent based stop-off paint offering very effective protection against pick-up of nitrogen during plasmanitriding. Because of the electric conductivity of the Condursal N9 coating it provides good electric connection between the workpiece to be plasmanitrided and the cathodic base plate. Condursal N9 is drying quickly and its consistency is like that of an oil paint. So precisely limited insulation areas are easily achieved with Condursal N9.

Instructions for Use

The areas to be coated with Condursal N9 must be free of dust, rust, oil and grease. This is normally achieved by either washing with alkaline or by vapor degreasing. Before applying Condursal N9, stir the contents of the tin thoroughly. After that the paste can be applied by painting or immersion. For painting use flat clean brushes with soft bristles and make sure to get a coating of uniform thickness. Normally one coating is sufficient for effective insulation. Only for very long cycle times of the plasma nitriding process, a second or third coating is recommended. In that case it is important to have each coating thoroughly dried before the next one is applied. For optimum protection it is necessary that the whole coating is fully dry before the parts are put into the furnace.

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".

Thinning of the paint, which can be necessary if it has thickened in the course of time due to evaporation of the solvent, should be achieved using small amounts of the "Special Thinner for Condursal N9". Never use chlorinated or other not approved solvents. Avoid overthinning; it would impair the protective effect of Condursal N9.

To prevent the paint from thickening, the tins should always be closed tightly after use.

Removal of Residues

After plasmanitriding the residues of Condursal N9 can be removed easily by wiping, rubbing or using a steel brush. To clean brushes or other equipment which have come into contact with the paste, the "Special Thinner for Condursal N9" is suited as well as solvents like Xylene, but by no means water.

Special Notes

1. Coated areas of the workpieces should not exceed 30% of the total surface of the batch to be plasmanitrided because otherwise short-circuits in the furnace might occur due to copper powder sputtered off from the coating.
2. Residues of Condursal N9 are of powdery appearance after the nitriding process. So, to prevent them from settling in the retort, it is recommended to remove them occasionally using a vacuum cleaner.

Excessive usage of CONDURSAL N9 (more than 20% of the total surface of the load) as well as unsatisfactory drying of the coating might affect the plasmanitriding process.