

CONDURSAL 777/I

Water base stop-off paint for carburizing and carbonitriding in gas

List for Troubleshooting

Preface

CONDURON 777/I can be applied like a viscous water base paint. As with other paintings, it is important to clean and degrease the surfaces to be coated thoroughly, to use soft brushes, to apply a coating of uniform thickness and **to allow the coating to thoroughly dry** before the workpieces are put into the furnace (**check by fingernail test**).

It is recommended to stir the paint thoroughly prior to use; **just shaking the tin will not provide satisfactory homogenisation!**

For cases where in spite of proper use poor insulation or other trouble is noted, please find listed below the possible defects, the reason why they can occur and the way how to avoid them.

TROUBLE	POSSIBLE REASONS FOR TROUBLE	HOW TO AVOID TROUBLE
Paste runs off after being applied by painting/ spraying/ immersion	1. Paint has been stored at too high temperatures	Store paint at ambient temperature
	2. Workpieces have not been degreased thoroughly prior to coating	Clean parts thoroughly by vapor degreasing or alkaline washing
	3. Paste has been thinned excessively	Use paint as delivered after homogenizing the content of the bottle/bucket; add small amounts of clean water only if thickening has occurred
	4. Paint has been applied in a too thick layer	Apply paint in a thin coating of uniform thickness; if necessary for deep cases, apply twice.
Paste pops off after drying	Surfaces of workpieces have been wet or greasy when paste was applied	Clean parts thoroughly by vapor degreasing or alkaline washing and make sure that they are dry prior to coating
Paste pops off in the carburizing furnace	1. Paint has been applied in a too thick coating or has not been allowed to dry thoroughly	Apply paint in a thin uniform coating and have it air-dried thoroughly before the parts are put into the furnace



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	2. The organic binder of the paint has been burnt because parts had a temperature of more than 200°C and oxygen was present	Limit preheating temperature to 180°C
	3. Coating has come into contact with oxygen in the carburizing furnace due to incorrect atmosphere regulation or cracking / leaking of the retort of the furnace	Make sure by purging with nitrogen that even in the beginning of the carburizing process, furnace atmosphere does not contain oxygen / repair retort
Residues of the paint are hard to remove after carburizing and surface attack has occurred	Coated parts have been cooled down after carburizing and then reheated for quenching	In case of such processes remove the residues of the paint before the second heating cycle
Protection against carbon pickup has been found to be non-uniform or non-satisfactory	1. Foreign substances left behind on the steel surface after drawing, cutting, stamping, forging etc.	Remove any contaminants / layers from the parts' surfaces by washing, solvent degreasing or shotblasting before paint is applied
	2. Paint has not been stirred thoroughly prior to use	Stir paint thoroughly prior to use for homogeneous consistency
	3. Paint has been applied in a too thin or non-uniform layer	Apply paint in a layer of even thickness; if necessary for deeper cases, apply twice but keep in mind that the first coating must be completely dry before the second one is applied

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