

## Weather-resistant, industrial quality

Transparent

Glossy powder coating system for graffiti protection on metal surfaces

IGP Pulvertchnik AG  
Ringstrasse 30  
9500 Wil, Switzerland  
Telephone +41 71 929 81 11  
Fax +41 71 929 81 81  
www.igp-powder.com  
info@igp-powder.com

A DOLD GROUP Company

### Product Description

The system 8909B was developed as a top coat powder coating for permanent protection against graffiti on metal surfaces.

### Application with corona pistols

The first coat is applied with a high-voltage setting between 60 to 70 kV. The second coat with 8909B is set between 50 to 60 kV.

Back spray effects can be avoided by using diffuser rings (low ionic charge). We recommend flat spray nozzles. The spraying distance can be set to 250 mm. To optimize the coating thickness distribution for coating in long stroke operation, the speed of the lifting devices should be adjusted to the transport speed (coordinated sine wave pattern of pistols). For coating in short stroke operation, the stroke height must be adjusted to the distance between the pistols (coordinated pistol turning points). If using partially automated operation, any hand application required should be done as a pre-coating.

We recommend applying coating thicknesses of 50 µm to 70 µm. When using IGP-DURA<sup>®</sup>than 8909B for coating thicknesses > 90 µm, small bubbles may appear in the powder-coated surface after curing. We do not recommend the use of tribo coating pistols.

### Recycling

When using IGP-DURA<sup>®</sup>than 8909B in recycling mode, we recommend the continuous addition of fresh powder. Maintenance and cleaning of all the system components (pistols, hoses, cyclone, etc.) must be done with the utmost care.

### Earthing

If using IGP-DURA<sup>®</sup>than 8909B, particularly on previously coated substrates, adequate earthing of the suspension racks must be ensured.

### Curing Conditions

Time and temperature combinations that result in an ideal cross-linking of the coat are displayed.

Object temperature	Retention time at object temperature	
	Minimum	Maximum
180°C	20 min.	25 min.
<b>190°C</b>	<b>10 min. *</b>	15 min.
200°C	7 min.	12 min.

\* recommended curing conditions

If the object temperature remains below the required level, cracking in the powdered surface may occur. Exceeding the level will usually cause yellowing and foaming in the powder coating.

Based on these circumstances, we recommend before beginning production creating a temperature profile of the curing oven with an oven temperature measurement device using production conditions.

In any case, taking the recommended curing conditions into consideration, the curing of the coated object should be based on the combination of retention time and object temperature determined by the oven temperature measurement device. The recommended temperature and time combination may not be exceeded under any circumstances.

### Ventilation and smoke production

When using 8909B, elimination products escape in the form of caprolactam. Elimination products generate a lot of smoke, which must be removed from the oven interior by adequate ventilation in the curing oven. If the curing oven is not equipped with an adequate ventilation system, then it is absolutely imperative to ensure that the room and oven have adequate ventilation. When doing so, it is important to observe the list of notices about particular risks (R statements Xn R20/R22 and R statements Xi R36/37/38). Deposits of elimination products in the curing oven, in particular the oven walls and in the ventilation system, must be removed in due course depending on intensity.

### Stripping

IGP-DURA<sup>®</sup>than 8909B is difficult to strip using chemicals. Multi-component hangers used during the coating process can be freed of residual powder coating by means of flame stripping.

### Applicable documents

Safety information sheet SD 120  
technical data sheet IGP-DURA<sup>®</sup>than 8909B.

## Weather-resistant, industrial quality

Transparent

Glossy powder coating system for graffiti protection on metal surfaces

IGP Pulvertechnik AG  
Ringstrasse 30  
9500 Wil, Switzerland  
Telephone +41 71 929 81 11  
Fax +41 71 929 81 81  
www.igp-powder.com  
info@igp-powder.com

A DOLD GROUP Company

### Further recommendations for IGP-DURA<sup>®</sup> *than* 8909B applications

System and / or application parameters (devices / accessories)	Setting (parameters)	Possible effect (comment)	Impact		
			high	medium	low
High-voltage setting (pistols)	60 to 70 kV	Setting range for application IGP-DURA <sup>®</sup> <i>than</i> on uncoated substrates	↑		
High-voltage setting (pistols)	50 to 60 kV	Setting range for application of IGP-DURA <sup>®</sup> <i>than</i> on coated substrates	↑		
Current limit $\mu$ A (pistols)	80 $\mu$ A □ < 10 $\mu$ A □	□ for normal operation □ Reduces backspray effects		↘	
Diffuser ring (pistols)	with	Reduces backspray effects	↑		
Total air m <sup>3</sup> /h / conveying and dosage air (interior diameter of powder hose)	12 mm = 5 m <sup>3</sup> /h 11 mm = 4 m <sup>3</sup> /h 10 mm = 3 m <sup>3</sup> /h	Prevents powder cloud pulsing, ensures optimal atomisation	↑		
PEO powder hose with integrated earthing (injector pistol)	Injector earthing	Prevents electrostatic charging of the powder in the powder hose		↘	
Nozzle (pistols)	Flat spray nozzle	Good depth effect, even atomisation		↘	
Nozzle (pistols)	Baffle disc	Reduced depth effect		↘	
Distance between pistols, adjacent alignment (pistols)	250 to 300 mm	Distances less than 250 mm influence the spray stream	↑		
Coating with long stroke (pistols)	According to specifications of sinus program	Facilitates optimal powder distribution, reduces coating thickness fluctuations		↘	
Spray distance for coating with long stroke (pistols)	250 mm	For IGP-DURA <sup>®</sup> <i>than</i> applications	↑		
Coating with short stroke (pistols)	Stroke height approx. 50 to 100 mm less than distance between pistols	By non-observance, higher coating thicknesses and streaking at the pistol turning area		↘	
Spray distance for coating with short stroke (pistols)	250 mm	For IGP-DURA <sup>®</sup> <i>than</i> applications	↑		
Stroke speed (short stroke device)	0,4 bis 0,6 m/sec	Facilitates even coating distribution on the surface		↘	
Powder conveying with injector and fluidised container	Fluid air as needed	Well-suited for application			↓
Powder conveying with pumps, (e.g. DDF, HDLV, RDF) from fluidised containers	Fluid air as needed	Well-suited for application			↓
Powder conveying with injector from the delivery container	with + without fluid air	Suitable for application			↓
Sifting with US sieve (sifting machine)	Mesh width > 140 $\mu$ m	If the mesh is too tight, it will not let enough powder through			↓
IGP-DURA <sup>®</sup> <i>than</i> applications in recycling operation	Add fresh powder continuously	Even particle distribution	↑		

These application-related recommendations are based on current knowledge, but are to be regarded as non-binding information and do not release you from your obligation to conduct your own tests.