OPERATING INSTRUCTIONS **851324**

LANTHANE BLACK 727

- ***Chromium(III)*** -
- ***Black Passivation for Zinc Iron*** -
- ***Performa 260 and 269*** -

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LANTHANE BLACK 727

Black Passivation for Zinc Iron

1.0 General description

LANTHANE BLACK 727 is a passivation process on Zn/Fe free of hexavalent chromium designed to give a black aspect. The iron content in the zinc-iron deposit should be comprised between 0.5 and 0.8%. LANTHANE BLACK 727 is a two step process consisting of a Cr(III)- based passivation combined with an organo-mineral sealer. Due to its high layer weight the passivation shows excellent receptivity for sealers/top-coats.

The sealer can be selected (in accordance with our technical staff) among the FINIGARD- or FOM-SYSTEMS.

After the passivation step, the resulting parts show a dark but slightly iridescent aspect. The second step with the organo-mineral sealer will result in a homogeneous black colour and high corrosion resistance.

2.0 Advantages

- Cr(VI)-free passivation
- One component for make-up and maintenance
- Low temperature (20-28 °C)
- Application for barrel and rack
- Very good receptivity for sealers / top-coats
- Exceptionally long service life
- Economical consumption
- High corrosion and temperature resistance

3.0 Corrosion resistance

Corrosion resistance with **LANTHANE BLACK 727** +Top Coat and thermal shock, according to DIN 50021 SS :

System	Corrosion resistance	
	Sealer	Corrosion resistance (with thermal shock 24 h, 120°C)
Zinc-Iron (ca. 8 - 12 µm)	x	>240 h WR >600 h RR

4.0 Operating conditions

4.1 Bath parameters

	Rack		Barrel		
Parameter	**Range**	**Optimum**	**Range**	**Optimum**	**Unit**
LANTHANE BLACK 727	230 - 250	240	230 - 250	240	ml/L
pH-Wert	2.2 - 2.6	2,4	2,2 - 2,6	2,5	
Temperature	20 - 28	22	20 - 28	22	°C
Immersion time	45 - 80	60	50 - 90	75	sec
Agitation: Rack	Air agitation				
Agitation: Barrel			Barrel or Basket rotation		

5.0 Solution make-up procedure

5.1 Make-up for rack and barrel

Make-up for 100 L	Rack		Barrel / Centrifuge	
LANTHANE BLACK 727	24,0 L	= 31,2 kg	24,0 L	= 31,2 kg

- Fill the tank to approximately ½ with DI water.
- Slowly add and mix **LANTHANE BLACK 727**
- **Mix the passivation thoroughly** and fill up to operating level.

Adjust pH-value to 2,4 with sodium hydroxide solution (20%) or with Sulfuric acid (50%).

Do not use water from closed loop operation for make-up!

6.0 Equipment

6.1 Tanks and accessories

Use PVC, Polypropylene or suitable plastic material, resistant to strong acids for **LANTHANE BLACK 727**.

6.2 Agitation

A good and regular air agitation is necessary for rack application in order to obtain a constant colour and optimal deposit. For barrel application the rotation of the barrel or basket is sufficient.

6.3 Temperature

Sometimes it may be necessary to heat the solution, especially in the winter time. In this case, use thermostatically-controlled immersion heaters sheathed in plastic, PVDF or Teflon.

6.4 Process steps for rack installation

- Zinc-Iron bath (8 - 12 µm)
- 3 x rinse with water
- Activation HNO_3 0,5 %
- Rinse
- LANTHANE BLACK 727 black passivation (rack and barrel)
- 2 x rinse (process steps for barrel application (*))
- Draining (Rack)
- Top coat
- Draining and drying

6.5 Process steps for barrel installation (*)

- Cold centrifuge to avoid drag-in
- Immersion 30 to 60s (Top Coat)
- Draining with low speed over the Top-Coat tank to avoid drag-out 1 – 2 minutes
- Dry spinning (80 °C on parts - 15 min. at 250 rpm for 60 cm diameter basket) The drying time will be adapted to the quantity of pieces in the basket.

7.0 Maintenance

7.1 Consumption

Consumption per 100 m²

7,5 - 12,0 L LANTHANE BLACK 727

Black passivation **LANTHANE BLACK 727** will be easily adjusted according to the appearance of the parts, pH-value and bath-analysis.

7.2 pH-value

Control every 4 hours
Adjustment only with **LANTHANE BLACK 727** (or sulfuric acid 50%, resp.) or caustic soda solution 20%.

8.0 Handling precautions

The supplied concentrates and working bath are sufficiently acidic to require handling precautions to be taken (gloves, glasses/goggles and boots).
The user should pay strict attention to information supplied on the product label and health & safety sheet.

8.1 First aid

- After skin contact wash thoroughly with water and soap, in case of continuous irritation contact a physician
- After eyes contact rinse 15 minutes with opened eyes and flush water, call a physician
- After ingestion call a physician immediately

9.0 Waste treatment

LANTHANE BLACK 727 does not contain hexavalent chromium, therefore discharge can be effected following neutralisation. Effluent streams must be treated with Calciumhydroxide to precipitate heavy metals.

10.0 Safety considerations

Handling with chemicals implies the absolute respect of the local regulations applying for the chemical products. We pack our products according to the required international rules.

Chemical products without dangerous declaration are never completely innocuous. Always avoid contact with skin and eyes.

Our responsibility is limited to handling according to the given instructions. For every technical requirement we remain at your entire disposal.

11.0 Product information

Article-n°:	Product name	Density
851324	LANTHANE BLACK 727	d=aprox. 1,30