

Iridite LY-FPC

Hexavalent iridescent passivate

Code 186010

Iridite LY-FPC (previously known as M.1309) provides a low concentration, low cost passivation solution for zinc and cadmium plated components.

The solution can be used to produce:

- (a) Bright iridescent films of maximum corrosion resistance by single dip treatment.
- (b) Blue chromate films with slight iridescence and having medium corrosion resistance by using a separate bleaching solution.

1. SOLUTION COMPOSITION

Iridite LY-FPC (186010)	10 to 25 ml*
Waer	to 1 litre

**The initial make-up concentration will depend on the immersion time required, see table below.*

10 - 15 seconds immersion	
for manual operation	25 ml/l
20 seconds } } for automatic 30 seconds } operation	20 ml/l
40 seconds }	15 ml/l
	10 ml/l

The required volume of Iridite LY-FPC should be added to cold water in the tank and stirred thoroughly.

2. EQUIPMENT:

Tank	Moulded polythene or polypropylene. PVC or polypropylene lined mild steel
Heating	Occasional heating is required to keep operating temperature above the minimum. PTFE electric immersion heaters are ideal
Agitation	Air agitation recommended.

3. OPERATING CONDITIONS

Temperature	Room temperature within the limits 12 to 24°C.
Time	10 to 40 seconds as described in paragraph 1.
pH	1.2 to 1.8

4. PROCESS SEQUENCE

- (a) Bright zinc or cadmium plate.
- (b) Rinse thoroughly in cold, running water preferably through two swills*.
- (c) Passivate in Iridite LY-FPC Solution.
- (d) Rinse thoroughly in cold, running water preferably through two swills.
- (e) Dry at a temperature not exceeding 65°C. The use of a centrifugal dryer is ideal.

**It is not generally necessary to employ a dilute acid dip between the plating and passivation stages, however, where an extra bright passivated film is required, the use of Metex IT is advised. This will also extend the working life of the process.*

5. SOLUTION MAINTENANCE

Regular additions of Iridite LY-FPC are required in order to maintain the free acid content of the solution and ensure a consistent passivation film coating.

It is recommended that additions be made to maintain the pH at its original value between 1.2 and 1.8.

If a pH meter is not available then it is recommended that an addition of 1.5 to 2.5 ml/l of Iridite LY-FPC be made whenever there is a reduction in the normal performance of the passivation solution.

6. PRODUCTION OF BLUE CHROMATE COATINGS

For blue chromate passivation films the following sequence is recommended:

- (a) Passivate in Iridite LY-FPC Solution.

- (b) Rinse thoroughly in running water.
- (c) Bleach in the following solution:

Sodium Hydroxide (caustic soda)	25 g
Water	to 1 litre
- (d) Rinse well in water.
- (e) Dry out.

The sodium hydroxide bleach solution is used at a temperature of 50 to 60°C depending on the degree of colour removal required. For the bleach solution a mild steel, plastic or plastic lined container may be used.

N.B. The higher the concentration of caustic soda, or temperature, used to bleach the iridescent film, the lower will be the final corrosion resistance of the subsequent passivation film.

7. SAFETY IN HANDLING AND USE

Refer to relevant Material Safety Data Sheets.

8. EFFLUENT

It is recommended that waste water treatment is carried out to conform to the specific requirements of the local authority. Advice on how to meet these requirements, once known, can be obtained from MacDermid plc.

Disclaimer

Any information given here relating to Health & Safety should be regarded as general advice and is not to be regarded as comprehensive or definitive.

Every user should also be in possession of Safety Data Sheets for each individual product/chemical used. These are available for all products sold by MacDermid plc.

The Safety Data Sheet contains the definitive advice.

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July 2007

