



ISO 9001:2008

# Deluxe

Meproché

TECHNICAL BULLETIN

## MEPROCHE N- 475 NITRIDING SALT

Nitriding process is suitable for components/parts which have been finally machined and a hard case is to be imparted on them without distortions.

This is achieved by formation of hard nitrides of iron on the top surfaces. However the layer of nitrides insulate further penetrations and therefore the case depth achievable is low and the process time is long.

**MEPROCHE N-475** is a specially designed salt for nitriding components by salt-bath technique, which is much cheaper than gas-nitriding equipments.

### Method of use of MEPROCHE N-475:-

1. The bath should be melted and aged for four hours before use.
2. Only cleaned, degreased and preheated components should be placed in the bath.
3. The bath should be analysed periodically and necessary salt should be added to maintain total cyanates at 35 to 45% level.
4. Oxidation products formed from time to time should be removed.
5. Bath temperature should not be allowed to go beyond 600°C in any case. The bath quality deteriorates at high temperature. The nitriding is to take place at 570°C and the ideal temperature is 570°C.
6. It is advisable to keep the bath covered when not in use; it increases the life of bath.
7. Generally titanium crucibles or titanium plated crucibles give the best results.
8. The time of nitriding cycle depends upon the case depth required and the ratio of job surface to salt weight.
9. Time of nitriding can be curtailed if a slow current of air is passed through the molten salt. The bath temperature should not be allowed to go below 500°C, at this temperature, if reached, heating should be accelerated to elevate the temperature.
10. Removal of white layer: - A white layer on top of the surfaces is obtained, which can be removed by soaking the components in a solution of Meproche SC (10%) at 90 degree C, preferably by ultrasonics.
11. To minimise the white layer effect the nitriding can be done in two stages, the first stage comprising of 525°C for 0.5 to 1.0 Hrs and the second stage at 570°C upto a time in which required case depth is achieved. In any case the white nitride layer can be removed by Meproche SC solution.
12. The bath should be changed after use for three to four months.

**IMPORTANT:** Addition of Meproche K2S to the extent of 2 to 3gms/100kgs of the molten bath improves wear resistance, anticorrosion properties, fatigue limits and lowers coefficient of friction.

For more details please contact to:-

**M/s. Deluxe Metal Processing Chemicals Pvt.Ltd.**

404, Sai Chamber, 365 /69, Narsi Natha Street,  
Mumbai - 400 009.

Tel:-2344 31 48 / 66312982 /65290511

Fax: (91-22)2342 96 63

Email: [pcb@deluxemetal.com](mailto:pcb@deluxemetal.com)

Website: [www.deluxemetal.com](http://www.deluxemetal.com)