

## Nickel Sulfamate MS

Nickel Sulfamate MS is a process for the deposition of nickel layers with low internal stress at high achievable deposition rates.

This makes the process ideal for the electro forming process, for thick nickel coating in tool-making and engineering and in some branches of the electrical industry.

The electrolyte is also excellent for use in reel-to-reel applications. Application of high cathodic current densities and the exceptionally ductile deposits are the features of this process.

In reel-to-reel applications the electrolyte is made-up and operated in two variants.

Variant 1 is the most frequently applied variant and is used if high cathodic current densities are required.

Variant 2 is applied if lower cathodic current densities up to approx. 15 A/dm<sup>2</sup> are required. The thickness of the deposited layer is thinner.

The electrolyte is operated without organic additives, so semi-bright coatings are deposited.

The information in this data sheet is based on laboratory as well as practical experience. Figures quoted for operating limits and replenishment quantities are for guidance. Actual values necessary will depend on the components being plated (material and geometry), their application and plating plant conditions.

### Important:

Please read these instructions carefully and follow recommendations given. We reserve the right to make technical changes as necessary. In the interests of safety, please pay attention to the R- and S- phrases on the labels of the containers. The minimum shelf life of the additives is printed on the label of the container. The current IMDS number of the layer deposited from the process can be found on the internet at [www.schloetter.de/downloads](http://www.schloetter.de/downloads).

For the storage of chemical products only the TRGS 514 and TRGS 515 regulations must be followed. The Hazardous Goods Regulation (ADR/GGVS) are only valid **for transportation** and must not be applied to storage.

