

## Iloform™ PN 221

Chlorine free vanishing forming oil

### Description

Castrol Iloform™ PN 221 is a low viscosity, chlorine and heavy metal free, metal stamping fluid. It is a blend of high lubricity boundary lubrication additives and wetting agents, in low odour isoparaffinic hydrocarbon.

### Application

Iloform PN 221 is specially formulated for use in light duty sheet metal stamping operations where very low residues are required, in most cases eliminating the need for inter process cleaning.

The fluid is especially recommended for use in electrical steel stamping of metal sheets for transformers (e.g. Rotor sheets).

### Advantages

- Chlorine and heavy metal free which may help to fulfil aspects of legislative requirements and waste treatment requirements that specify that these chemicals are excluded
- Fluid based on a low odour isoparaffin hydrocarbon solvent
- Fluid gives a thin, homogeneous lubricating film on metal surfaces to support punch life and to provide excellent surface finish. Helps to minimise the costs associated with tool re-polishing
- Rapid evaporation of the solvent and low residue characteristics can eliminate the need for inter-process cleaning
- Low viscosity aids flushing effect to remove particles from punches and dies and it can also help to minimise product drag out
- Can provide limited inter-process corrosion protection

### Typical Characteristics

Description	Test Method	Unit	Value
Appearance	Visual	-	Colourless to pale yellow liquid
Density @ 15 °C	ISO 12185	g/ml	0.76
Viscosity @ 40 °C	ISO 3105	mm <sup>2</sup> /s	1.4
Flash Point, PMCC	ISO 2719	°C	65

Subject to usual manufacturing tolerances.

### Additional Information

Additives	Ester	Active Sulphur	Inactive Sulphur	Phosphorous	Chlorine	Other
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## Storage

To avoid product deterioration always keep the container/drum tightly sealed. Store the product in a cool, dry place away from direct sunlight. Prevent exposure to frost and avoid water ingress. For optimum product stability, it is preferable to store the product indoors between 5°C and 45 °C / 41°F and 113°F.

For more details, please refer the product safety data sheet.

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Castrol Industrial, Technology Centre , Whitchurch Hill , Pangbourne , Reading , RG8 7QR , United Kingdom

<http://msdspds.castrol.com>