



## Iloform™ PS 305

Synthetic Soluble Forming Fluid

### Description

Castrol Iloform™ PS 305 is a fully synthetic, boron-free water based metalworking coolant for use in metal deformation.

### Application

Iloform PS 305 is used in the metal deformation industry where the coolant can contain up to 5% gear oil contamination.

It is used in high speed steel deformation processes which operate on a continuous basis 24 hours a day, 7 days a week.

To enable the fluid to be used at low concentrations Iloform PS 305 offers a very high degree of corrosion protection against ferrous and yellow metals and minimises cobalt leaching from machine tooling.

Iloform PS 305 is recommended for use with Castrol's fully compatible synthetic gear oil Alphasyn CF 150. A low level of contamination of Iloform PS 305 with Alphasyn CF 150 gear oil is recommended to support the deformation process.

### Conditions of Use

It is recommended to use Iloform PS 305 at concentrations between 1.6 to 3.3% in soft water in continuous steel deformation production processes with Alphasyn CF 150.

### Advantages

- Very good short-term corrosion protection helps minimise the scrap rate
- Minimises cobalt build-up which can lead to health hazards and tool/part failures
- Fines separate easily, resulting in a clean running system
- Stable, oil rejecting solution to provide easy skimming and long bath life which helps to reduce maintenance and disposal costs
- Excellent wetting and cleaning of the metal surface during the deformation process reduces the effort in downstream cleaning processes
- If required, it cleans off with a cold or warm water rinse at low pressure

## Typical Characteristics

Description	Test Method	Unit	Value
Concentrate			
Appearance	Visual	-	Clear, light yellow to yellow liquid
Density	ASTM D4052	g/ml	1.06
Dilution			
Appearance of Dilution (5% in DI-water)	Visual	-	Clear liquid
pH (3% in DI water)	ASTM E70-97	-	9.2
Cast Iron Corrosion Protection (1% in DI water)	IP 287	-	No stains

Subject to usual manufacturing tolerances.

## Concentration Control

BY REFRACTOMETER:

The concentration of the Iloform PS 305 can be easily measured on site with a hand held refractometer. It is important to realise that refractometer readings are dependent upon the type of refractometer and water used.

Certain rules should be observed:

- The sample should be clean and filtered, if necessary
- The refractometer must be zeroed
- Concentration Iloform PS 305 in % = refractometer reading x factor **1.6**

(It is recommended to verify this on new standard solutions made at several concentrations with the water used to prepare the bath).

## User Advice

The fluid can be removed by cold or warm water rinsing at low pressures. To enhance the metal cleaning stage a pre-treatment 'dip' with Iloform PS301 is recommended.

## 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 to the product safety data sheet.

Iloform™ PS 305  
05 Sep 2016  
Castrol, the Castrol logo and related marks are trademarks of Castrol Limited, used under licence.

This data sheet and the information it contains is believed to be accurate as of the date of printing. However, no warranty or representation, express or implied, is made as to its accuracy or completeness. Data provided is based on standard tests under laboratory conditions and is given as a guide only. Users are advised to ensure that they refer to the latest version of this data sheet. It is the responsibility of the user to evaluate and use products safely, to assess suitability for the intended application and to comply with all applicable laws and regulations. Material Safety Data Sheets are available for all our products and should be consulted for appropriate information regarding storage, safe handling, and disposal of the product. No responsibility is taken by either BP plc or its subsidiaries for any damage or injury resulting from abnormal use of the material, from any failure to adhere to recommendations, or from hazards inherent in the nature of the material. All products, services and information supplied are provided under our standard conditions of sale. You should consult our local representative if you require any further information.

Castrol (UK) Limited, PO BOX 352, Chertsey Road, Sunbury On Thames, Middlesex, TW16 9AW  
Orders/Enquiries: 0345 9645111 Technical Enquiries: 0345 082 1719  
[www.castrol.com/industrial](http://www.castrol.com/industrial)