# **Technical Data Sheet**



## Permanent Ink – PP200

**PP200** is an bio-ethanol based permanent ink specifically developed to conform to **EN71-3** while still having bold colours. **PP200** is a fast drying, cap-off capable marking ink with enhanced adhesion to polyethylene, polypropylene, aluminium and many more non-porous surfaces.

| Ink                 | Pantone<br>Reference <sup>§</sup> | Shade§ | Viscosity*<br>(mPa.s) | рН <sup>‡</sup> |
|---------------------|-----------------------------------|--------|-----------------------|-----------------|
| PP200 Black         | N/A                               |        | 3.8                   | 3.8             |
| PP200 Dark Blue     | Pantone Violet C                  |        | 2.7                   | 3.0             |
| PP200 Red           | 3517C                             |        | 3.0                   | 4.4             |
| PP200 Green         | 355C                              |        | 3.1                   | 5.3             |
| PP200 Bright Yellow | 395C                              | •      | 3.0                   | 8.2             |
| PP200 Purple        | 226C                              |        | 3.2                   | 7.1             |
| PP200 Pink          | 807C                              | •      | 2.8                   | 7.3             |
| PP200 Orange        | 158C                              |        | 3.2                   | 8.3             |
| PP200 Lime Green    | 7488C                             |        | 3.2                   | 8.0             |
| PP200 Aqua          | 306C                              |        | 3.0                   | 4.6             |
| PP200 Light Blue    | 2935C                             | •      | 3.2                   | 4.5             |

\*Viscosity is measured at 20°C, all viscosity values can vary ±0.5 mPa.s. <sup>§</sup>Pantone references are approximate and vary depend on the ink lay down;<sup>†</sup> colours may not be accurately represented on some computer screens / from certain printers; ‡pH variance is typically ±0.25

Density = **0.96 g.cm**<sup>-3</sup>; Surface tension = **27 nNm.m**<sup>-1</sup>; Multichem inks have a  $\Delta E \leq 3$ , Approximate VOC content **767 g/L** 

### **PP200 in Your Pens**

The performance features of all permanent inks can vary depending on the components which the inks have been paired with.

| Nibs: | Polyester and acrylic; Multichem recommends   |
|-------|---|
|       | polyester nibs with a porosity of around 65% for optimum flow performance and cap-off time. |
|       | opanian non periormance and cap on amer   |

Reservoirs: polyester; Multichem recommends a reservoir density of 0.185 g.cm<sup>-1</sup>

Barrels: PP , PE

Caps / Plugs: PP. Refer to BS 7272-1:2008 for more details

Once selected the component combination should be thoroughly tested.  $% \left( {{{\rm{D}}_{{\rm{D}}}}_{{\rm{D}}}} \right)$ 

For optimum performance markers should ideally be stored in a horizontal orientation and should be capped securely.

For further information about component selection, pen tests or pen storage please email <u>lab@multichem.net</u>

#### **PP200** in the Environment

Multichem strives to play its part in the responsible sourcing of raw materials and manufacturing of inks to help protect the environment. The **PP200** range has been made using a minimum of **54%** renewably sourced materials.



#### **PP200 in Your Factory**

Multichem **PP200** inks are guaranteed for 12 months from receipt when stored in the original sealed containers.

Store Multichem inks between 10°C <T< 30°C to avoid ink adverse performance features.

Multichem inks which have passed their shelf life may still be fine to use. To find this out simply follow the guidelines above to obtain a uniform 100g sample of ink, label the ink with the product name and batch number and send it to Multichem for a quality check.

Please remember that **PP200** inks are flammable liquids so please handle accordingly. For more information please refer to the CLP Material Safety Data Sheet for the **PP200** range.

#### PP200 in the Market

Multichem has developed PP200 to comply with;

☑ EN71-3:2013 + A1:2014 ☑ ASTM D-4236 TRA

Final markers may also require separate approval in order to meet some of the above regulations.

Our inks do not contain any Substances of Very High Concern (SVHC), Benzene, Toluene or Xylene. None of our inks require labelling under Proposition 65 (assuming a maximum reservoir capacity of 12ml).

All ingredients of **PP200** have been registered / pre-registered under REACh or are exempt from REACh registration

Disclaimer: It is your responsibility as the writing instrument manufacturer to establish the overall safety and fitness for purpose of the marker components incorporating our inks and to establish overall compliance to regulations and legislation related to the industry. All marker pen components should be thoroughly tested by you for compatibility with our inks. Multichem makes no guarantees (either express or implied) with respect to this technical data or the recommendations expressed within (other than that resulting from our gross negligence). Please contact your advice regarding component suppliers for more specific advice regarding component suppliers for more specific advice regarding component suppliers of more specific advice regarding component suppliers of more specific advice regarding component suppliers for more specific advice regarding component suppliers of more specific advice regarding component suppliers for more specific advice regarding component suppliers. Please is not exhaustive and you should verify the performance of your final product Form No: TDS037 Revision No: 002 Issue Date: 04/01/2017 1 of 1