

Technical Information – Tag Ink – LB9.3

● General Information

Our tag ink is a form of permanent ink used for marking polyurethane and polystyrene plastic surfaces. It varies from commonly available permanent inks in that it penetrates the surface it is used on, resulting in a truly permanent, weatherproof and light-fast mark.

It was specially designed for marking tags used to identify cattle and other livestock but is also appropriate for marking polyurethane and polystyrene in any situation that needs protection against water and sunlight such as garden labels.

- Etches into the surface
- Weather-proof
- Lightfast
- Water-proof

● Available Colours and Pantone References*

Ink Colour Shades			
● Black	N/A	● Red	1767C

*Pantone references quoted are approximate to give an indication of colour shade

● Typical Physical Properties

Ink	Viscosity (20°C) (cP)	Density (20°C) (g.cm ⁻³)	Surface Tension (mNm/m)	pH
● Black	4.0 to 10.0	0.91	27	5.6
● Red	4.0 to 10.0	0.97	27	5.5

cP = centipoise

g.cm⁻³ = grams per cubic centimetre

mNm/m = milli Newton metre per metre

● Light Fastness

Ink	Light Fastness (3 months exposure to direct sunlight)
● Black	5
● Red	5

5 = Excellent

4 = Very good

3 = Good

2 = Poor

1 = Very Poor

0 = Failure

Test Method Summary – Test pieces placed outside at a south facing site in direct sunlight

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 our advice regarding component selection. Multichem will not accept any liability for any loss arising in connection with this technical data or the recommendations expressed within (other than that resulting from our gross negligence). Please contact your component suppliers for more specific advice regarding component suitability and selection. The information contained within this technical data sheet is not exhaustive and you should verify the performance of your final product

● Adhesion – Metals and Plastics

Ink	Rub Resistance					Tape Resistance				
	Steel	Mild Steel	Aluminium	Brass	Galvanized	Steel	Mild Steel	Aluminium	Brass	Galvanized
● Black	3	5	5	5	5	0	5	0	1	5
● Red	5	5	5	5	5	3	5	0	3	5

Ink	Rub Resistance						Tape Resistance					
	Polyethylene Terephthalate (PET)	Low Density Polyethylene (LDPE)	High Density Polyethylene (HDPE)	Polypropylene (PP)	Polystyrene (PS)	Polyurethane (PU)	Polyethylene Terephthalate (PET)	Low Density Polyethylene (LDPE)	High Density Polyethylene (HDPE)	Polypropylene (PP)	Polystyrene (PS)	Polyurethane (PU)
● Black	5	5	5	3	5	5	3	5	5	2	5	4
● Red	5	5	5	3	5	5	3	5	5	2	5	4

5 = Excellent 4 = Very good 3 = Good 2 = Poor 1 = Very Poor 0 = Failure

Test Method Summary

Rub Resistance - a comparative test where the test surface is repeatedly rubbed with a dry fingertip

Tape Resistance - the tape is applied to the test surface and light pressure is applied with the finger to remove air bubbles. After a period of 10 minutes the tape is removed at an angle of 90°

● Shelf Life

Our inks are guaranteed for 12 months from receipt when stored in the original sealed containers and protected from extreme temperatures – do not allow to freeze. Drums should be stored for at least 24 hours at room temperature (~20°C) and then thoroughly agitated until the ink is uniformly consistent prior to use. If the ink has passed its shelf life, it does not automatically mean that it is not fit for purpose – please follow the guidelines above to obtain a uniform 100g sample of ink, label it with the product name and batch number and send it to Multichem for a quality check.

● Marker Storage Advice

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

● Component Selection Advice*

Component	Details
Nib	Polyester or acrylic
Barrel	Polypropylene (PP)
Head/Tail Caps	Polypropylene (PP)

**this advice is given in good faith based on our current knowledge and does not dismiss the need to test thoroughly in your own components*

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