

# TECHNICAL DATA SHEET

## UV FLEXO OPAQUE WHITE INKS

**DESCRIPTION** A range of opaque white inks for various applications in UV flexo printing.

- PROPERTIES**
- ✓ High opacity
  - ✓ Fast cure
  - ✓ Good printability
  - ✓ Excellent adhesion properties
  - ✓ 20-901, 20-902, 20-903 Excellent shrink (more than 70% with good retained adhesion) with steam or hot air

**RANGE**

	Opacity	First Down	Mixing	Overprintable* / Foil blockable	High Slip	Shrink	Toned	Optical Brightener
20-901 UV FLEXO MIXING OPAQUE WHITE <sup>(1)</sup>	Good	✓	✓	✓	No	✓	No	No
20-902 UV FLEXO FIRST DOWN OPAQUE WHITE <sup>(2)</sup>	Good	✓	No	✓	No	✓	✓	✓
20-903 UV FLEXO SHRINK SLEEVE OPAQUE WHITE <sup>(3)</sup>	Very Good	No	No	No	✓	✓	✓	✓
20-904 UV FLEXO LOW CURL OPAQUE WHITE <sup>(4)</sup>	Excellent	✓	No	✓	No	No	✓	No
20-905 UV FLEXO HIGH ADHESION OPAQUE WHITE <sup>(5)</sup>	Good	✓	✓	✓	No	No	No	No
HD002 UV FLEXO HIGH OPACITY OPAQUE WHITE <sup>(6)</sup>	Good	✓	No	✓	No	No	✓	No

\* Overprintability depending on inks.

- (1) Untoned, shrinkable mixing white. Can be used as 1<sup>st</sup> Down.
- (2) Previously known as SG001 and SG9027. Shrink up to 70%. Excellent adhesion on almost commonly used substrates. It is always advisable to conduct testing prior to the commencement of any production run to ensure that the label construction meets all of the prerequisites.
- (3) Has replaced SG9032. Suitable as last down for reverse printing of shrink labels to obtain good slip against the packaging, e.g. bottles.
- (4) Previously known as SG9029. Very high opacity. Suitable for thin wrap-around labels. Especially designed for metallised and synthetic substrates.
- (5) Superior adhesion to rigid plastics, PE without topcoat and PET for box packaging. Hard curing.
- (6) Very high opacity. Suitable for a variety of substrates where shrink is not required.

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Unless the printed layer is a barrier to migration and there is no possibility of set off to the unprinted (food contact) surface, **all inks described in this TDS are not intended for food packaging applications.** For applications where the material is not a barrier, or set off is possible, we recommend our food packaging compliant (FPC) inks and varnishes. Contact us for further details.

Please, be aware that the Printer/Converter and Packer/Filler has legal responsibility to ensure compliance with the relevant legislation for food packaging.

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## SUBSTRATES

- ✓ Coated papers
- ✓ Treated/primed PE, PP, PVC, PET, OPP
- ✓ 20-901, 20-902, 20-903: Shrink films – typically PVC, PET, PET-G, OPS

Other substrates may be suitable on testing.

The suitability for other substrates such as uncoated PP should be tested before printing. The surface tension should be 38 dyne/cm or above. Corona treatment should be considered to improve the wetting out of the ink to obtain maximum ink adhesion to the substrate.

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## APPLICATION

**Stir very well before use to ensure the ink is uniform and homogeneous**

Anilox: 120 – 180 l/cm  
Anilox minimum: 10 volume  
Rollers: EPDM  
UV lamps minimum: 160 W/cm

In order to achieve high film weights with even coverage to obtain the desired opacity, excellent transfer from the anilox onto the substrate is critical. Switching from the standard 60° engraving to an anilox with 30° engraving pattern can significantly reduce micro turbulence during transfer and consequently pin holing.

The higher the line count, the smoother the ink laydown. Yet, extremely high cell numbers require cells of conical shape which plug more easily and thus affect the ink transfer negatively. Open and linked channel engravings are recommended to overcome these difficulties.

**Doctor Blade:** Thicker blades will be less efficient leaving more ink for the plate/sleeve to pick up. Suggested range: 0.25 mm (0.010") - 0.30 mm (0.012") made of quality carbon steel with radius edge.

**Mounting Tape:** Solid coverage is best achieved with the harder mounting tapes.

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**Plate/Sleeve:** Consider screening the solid plate surface with 90-98% screen for increased surface area to pick up and transfer ink. This also provides relief at impression instead of a squeegee effect to the sides and back of plate. Best solid ink densities are always measured at 90-95% on testing. Medium durometer recommended.

New plate technology provides better solid coverage for this very reason, increased texture/surface area. Please consult your plate supplier for advice.

**Optimal cure and resistance properties** will be seen 24 hours after printing. In order to achieve solvent, product and chemical resistance, the following factors are important:

1. Even layer of the white ink
2. Good flow out
3. Optimum UV curing (High Opacity Whites can be difficult to cure. Please ensure that UV lamps and reflectors are in very good order to ensure full UV curing)
4. Optimal ink/material combination

In case there should be the need to increase cure, 1-3% of RLA211 Photoinitiator Liquid can be added on press.

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**PACKAGING** 5kg, 10kg, 25kg, 200kg, 1000kg

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**STORAGE & HANDLING** Store at temperatures between 5°C and 25°C.  
Protect from sunlight.  
Shelf life in unopened containers: 12 months.

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**AUXILIARY PRODUCTS** RLA350 UV Wash-Up  
RLA211 UV Photoinitiator Liquid

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**HEALTH & SAFETY** Please refer to the relevant SDS for information on labelling classifications, waste product and container disposal, and personal protection measures.

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**FURTHER INFORMATION** For more information, please contact your local representative or email [technical@pulserrl.com](mailto:technical@pulserrl.com).

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#### DISCLAIMER

The information contained in this data sheet is correct to the best of our knowledge. It is intended as a guide only for the optimum use of the named product(s) and is not intended as a warranty or as a specification. This datasheet may not be suitable for combinations with other materials or in processes other than those specifically described. The user should always make their own tests to establish that the product(s) meets their requirements.