

High Technology

Light Technology Specialists

RC 517K Gloss UV Polymer for use on Static Charge In-Mould Labeling

Incorporating UV blocking to prevent ink fading and substrate damage.

Properties

RC 517K Gloss is a UV curing polymer combination formulated for use on plastic substrates. When fully cured it gives exceptional adhesion in combination with good abrasion resistance.

It can be applied from Sacuri screen print press or equivalent out of line engraved roller system at good print speeds. Coating should be run using a suitable screen and pressures to obtain between 18gsm to 22gsm for good UV light protection. Starting silkscreens would be around 70 mesh.

To obtain best resistance coating film weight must have a good overall, even, integral smooth surface.

Note this product is intended for further lamination or moulding process. The coating is designed to hold a static charge during the in-mould process.

Physical Characteristics

Non volatile content.

100% viscosity.

Supplied press ready, to run through screen press or out of line.

Suggested coating levels UV protect 18.0–22.0gsm.

Normal coating weights can be 3.5–6gsm.

Special Features

Low odour, fast curing with good solvent and water resistance. Good abrasion resistance. Has the ability to static charge for use in-mould labels. Can block damaging UV light to prevent inks from fading and substrates from damage.

Can be applied over wet or semi dry conventional or UV curable ink systems. Can be used over digital inks used in the in-mould process.

When applied in the correct manner can be used in high temperature injection moulding processes.

Since the product is available in gloss, matt and “sparkle” other effects can be considered in any design / decoration product required.

End Use

A typical use for this material is the production of in-mould label products and products that may need some additional outdoor protection.

In-mould products can be produced in a number of ways and it is advisable to talk to our technical personnel before you proceed to clarify the best way of applying and testing the material.

In many cases moulded products are made by coating over a digital ink printed porous polypropylene (Teslyn). This also gives rise to the use of individual bar coding of items.

The end result is a surface that can be printed to a very high standard and finished in such a way as to have exceptional wear and long term appearance.

We can formulate materials to adhere and perform in this way on a number of flexible and non absorbent substrates. Therefore it is advisable to discuss your requirements in order that we provide the most appropriate coating polymer. Also that we advise on the manufacturing procedure that is most appropriate.

We look forward to hearing about any surface protection requirement that demands abrasion resistance flexibility and versatile finish and appearance.

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Important Factors with Static Charging of Labels.

Label must be dead flat (pre-flatten labels).

Surface of label should be smooth flat and grippy.

When label is placed into mould press down flat and even to ensure the face is fully contacted with mould surface (note the more pressure you put onto the label against the mould the more it will stick).

Put label into mould with insulated arm fully charged with no delay.

Ideally charge label whilst in robot arm just before pressing against mould face.

Put in the highest charge possible 15 to 20kv. Note, the more charge the more it sticks.

Drying/Curing

Normal high intensity, focused medium pressure mercury UV arc lamps.

Drying speed will be determined by the number of lamps and the line speed.

Two to three lamps are common on most printing machines.

Storage and Usage

UV Coating polymers should be used within three months and stored no longer than six months. Sealed light impervious containers must be used and kept stored in dry ambient (16-28 Centigrade) conditions. Exposure to any ultraviolet light or sunlight may cause premature viscosity increase, gelling and curing to a solid. Exposure to high temperatures greater than 38 degrees centigrade and sunlight could also cause bulk exothermic high temperature reactions and curing/crosslinking to a gel or solid form.

Health and Safety

UVA Cure materials are classed as irritants and as such should be prevented from coming into contact with you or any other person. Irritants have the potential to sensitise. Personnel with sensitive skin would need to take strict precautions in the use of these products. Gloves/goggles/glasses overalls and other suitable protective wear must be used were necessary to protect from any personnel contact.

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We specialise in light technologies including light measuring equipment (IR, UV, visible), light curing coatings, inks, adhesives, lamps and equipment.

High Technology (Intl) Ltd
Campbell House, 21 Campbell Road, Brighton, BN1 4QD
t. +44(0)1273 682 499 e. info@hightech.co.uk w. hightech.co.uk

