
# Uvibond UV Curing Overprint Varnishes

**Uvibond UV Overprint Varnishes are available in gloss and matt finishes and are suitable for papers, boards and many plastics, including screen and offset prints.**

## Uvibond Gloss Varnishes

**UV383 Varnish** is medium slip for overprinting screen and other inks on vinyl substrates. It may be intermixed with UV400 to produce intermediate satin finishes.
Available in 5 kg. containers.

**UV390 Varnish** is low slip and may be used to overprint screen inks for paper and board as well as a wide range of offset inks. It may be intermixed with UV400 to produce intermediate satin finishes.
Available in 5 kg. containers

**UV391 Varnish** is high slip for paper and board applications including screen and offset inks. It is particularly suitable for varnishing double-sided work.
Available in 5 kg. containers.

**UV453 Varnish** adheres to paper and board and OPP laminating film, as well as a wide range of screen and offset inks, including metallics.
Available in 5 kg. containers.

**UV454 Varnish** is for overprinting water-based UV curing inks.
Available in 200, 10, and 5 kg. containers.

## Uvibond Matt Varnishes

**UV400 Varnish** is for overprinting screen inks on vinyl substrates. It may be intermixed with UV383 to produce intermediate satin finishes.
Available in 5 ltr. containers.

**UV405 Varnish** is for overprinting screen and offset inks on paper and board. Used for the same applications as UV390 and UV391, it may be intermixed with them to produce intermediate satin finishes.
Available in 5 ltr. containers.

## Uvibond Special Varnishes

**UV437 Low Viscosity Varnish** is a press ready overprint varnish with a high slip finish, making it particularly suitable for varnishing double sided work at high production speeds.
Available in 5 kg. containers.

**UV438 Foil Blocking Varnish** adheres to paper, board and most screen inks for these substrates. It accepts hot foil blocking, but may also be used solely as an overprinting varnish.
Available in 5 kg. containers.

## Reducers

| | |
|---|---|
| ZE637 | Thinner |
| ZE807 | Thinner |

Available in 5 and 1 ltr containers.

## Main Characteristics

### Finish
High gloss, or Matt.

### Curing
Up to 50 metres per min. through dryers with 2 x 80 watt/cm lamps.

### Thinning
Not normally required, but up to 15% ZE637 may be used to adjust viscosity of UV383, UV390, UV391, UV453 and UV438.

Up to 10% ZE807 will reduce viscosity of UV400 and UV405, whilst maintaining the lowest finish.

### Wash-up
Xtend Screenwash and Screen Cleaners.
See Xtend Screen Cleaners Product Information Sheet.

### Mesh
Nos. 140-165 monofilament.

### Stencil Type
All solvent resistant.
***Recommended:***
Dirasol 902, Dirasol 916.
Indirect or 25 micron capillary film.

### Coverage & Mesh No.
80-100 $m^2$/ltr. No. 150.34.

### Properties
Unlimited screen stability.
Fast UV cure, free from re-wetting or blocking.
Substantially higher coverage than conventional varnishes.
Low odour and negligible atmospheric pollution.
Tough, flexible films, comparable to film lamination.
Unmatched physical, chemical and solvent resistance.

### Co-use With Inks
Compatible with a wide range of screen printing and other inks, but users must test for adhesion, discolouration and other requirements on the stock and ink to be varnished before starting production. Wax free offset inks or inks with a low wax content should be used on prints intended for overprinting with Uvibond UV varnishes. Some offset inks can be discoloured by UV curing screen varnish particularly where offset on the underside of a sheet comes into contact with varnish on the sheet below - compatibility must be tested before production. To print on to Uvibond UV varnishes, Uvispeed Gloss UX or Uvispeed Matt UM are recommended. For further recommendations on co-use with Fujifilm inks, refer to the Product Selector on page 3.

**IMPORTANT: Stir well before every use. It is strongly recommended that all plastics are tested before use, as supposedly similar plastics can vary between different manufacturers and even between different batches.**

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## Pre-production Tests

Certain plastics may be impregnated with lubricants which, like plasticiser migration, may impair adhesion even a considerable period after printing. This can usually be overcome by wiping the surface with white spirit before printing. Surface adhesive left from protective papers on rigid PVC and acrylic sheets should be thoroughly removed in line with suppliers' instructions. Plastics can become brittle when printed, possibly to the point of shattering, often after several weeks. It is therefore essential to check compatibility between varnish and plastic to guard against this problem. When hot foil blocking using UV438, suitability of foil and varnish should be fully determined, as the quality and performance of blocking foils can vary between suppliers. **If prints with Uvibond UV Varnishes are to be cut or creased, an unvarnished channel should be left in the areas to be cut or creased. If this is not possible, then pre-production testing is required.**

## Resistance Characteristics

Uvibond UV varnishes have better chemical and solvent resistance properties than conventional varnish formulations. The following table shows the resistance of prints made with Uvibond UV383 Varnish printed through a No. 140 monofilament screen on to self-adhesive PVC, cured at 20 m/minute. The dryer comprised two medium pressure mercury vapour lamps of 80 w/cm (200 w/inch), operating in a normal atmosphere. The resistance was assessed after 24 and 96 hours immersion in each product.

| | 24 hrs. | 96 hrs. |
|---|---|---|
| Alcohol | E | E |
| Alkali (10% Caustic Soda) | F | F |
| Antifreeze | E | E |
| Bleach | E | E |
| Brake Fluid | E | E |
| Trichloroethane | E | E |
| Cosmetics | E | E |
| Detergent | E | E |
| Motor Oil | E | E |
| Petrol | E | E |
| Water | E | E |

(E = Excellent, F = Fair)

## Storage

Uvibond UV varnishes and reducers should not be stored in direct sunlight or near heat sources and should be kept away from peroxides. For maximum shelf-life, storage temperatures should be between 10°C and 25°C. When stored in a cool environment the varnishes are expected to have a shelf-life of approximately 12 months from the date of manufacture.

## Safety and Handling

Uvibond UV Overprint Varnishes:

- Are formulated to be free from any (toxic) carcinogenic, mutagenic or reprotoxic chemicals.
- Do not have a flashpoint and are therefore exempt from the Highly Flammable Liquid Regulations.

Comprehensive information on the safety and handling of Uvibond UV Overprint Varnishes is given in the appropriate Fujifilm Safety Data Sheet, available upon request.

## Environmental Information

Uvibond UV Overprint Varnishes:

- Do not contain ozone depleting chemicals as described in the Montreal Convention.
- Are formulated free from aromatic hydrocarbons which are known to have an adverse effect on the environment.
- Are free of any volatile solvent and are therefore beneficial to the environment when compared to solvent-based products.

# Uvibond UV UV Curing Overprint Varnishes

## Uvibond UV Overprint Varnish Selector

| | General Purpose Products | | | | | | | Specialist Products | |
|---|---|---|---|---|---|---|---|---|---|
| | **UV390** | **UV391** | **UV405** | **UV383** | **UV400** | **UV453** | **UV454** | **UV437** | **UV438** |
| Finish | High Gloss | High Gloss | Matt | High Gloss | Matt | Gloss | High Gloss | High Gloss | High Gloss |
| Viscosity | Low | Low | Medium | Low | Medium | Medium | Low | Very Low | Low |
| Thinning | 0-15% ZE637 | 0-15% ZE637 | 0-10% ZE807 | 0-15% ZE637 | 0-10% ZE807 | 0-15% ZE637 | 0-15% ZE637 | - | 0-15% ZE637 |
| Slip | Medium | High | Low | Medium | Low | High | Medium | High | Low |
| Gloss Reduction | UV405 | UV405 | - | UV400 | - | - | UV405 | UV405 | - |
| Foil Blocking | - | - | Good | - | Good | - | - | - | Excellent |
| **Papers & Boards** | | | | | | | | | |
| Offset Prints* | ° | •• | •• | • | •• | •• | •• | •• | • |
| Colorstar CS | •• | •• | •• | • | • | • | •• | •• | • |
| Colorjet CO | •• | •• | •• | • | • | • | •• | •• | • |
| Coolstar OT | •• | •• | •• | • | • | • | •• | •• | • |
| Seristar SX | ° | •• | •• | • | • | •• | •• | •• | • |
| Tristar GT | •• | •• | •• | • | • | • | •• | •• | • |
| Prostar OS | •• | •• | •• | • | • | • | •• | •• | • |
| Hystar HY | •• | •• | •• | • | • | • | •• | •• | • |
| Aquaspeed Ultra Display XR | ° | •• | •• | •• | • | • | •• | •• | •• |
| Uvispeed Gloss UX | ° | •• | ° | • | • | ° | •• | •• | • |
| Uvispeed Satin UH | ° | •• | •• | •• | •• | •• | •• | •• | •• |
| Uvispeed Matt UM | ° | •• | ° | ° | ° | •• | •• | •• | • |
| Uvispeed Multiflash UZ | ° | •• | •• | •• | •• | •• | •• | •• | •• |
| Uviplast 2000 UP | ° | •• | • | • | • | • | •• | •• | • |
| Aquacolor QL | ° | ° | ° | • | • | • | ° | ° | • |
| **Plastics** | | | | | | | | | |
| OPP Laminate | ° | ° | ° | ° | ° | •• | ° | ° | • |
| Offset Prints* | ° | ° | ° | •• | •• | •• | ° | • | • |
| Polyplast PY | ° | ° | ° | •• | •• | ° | ° | ° | • |
| Plastijet XG | ° | ° | ° | •• | •• | ° | ° | ° | • |
| MattPlast MG | ° | ° | ° | •• | •• | ° | ° | ° | • |
| Matt Vinyl MV | ° | ° | ° | •• | •• | ° | ° | ° | • |
| Aquaplast PW | ° | ° | ° | • | • | • | ° | ° | • |
| Uvispeed Gloss UX | ° | ° | ° | •• | •• | ° | ° | ° | • |
| Uvispeed Matt UM | ° | ° | ° | • | •• | ° | ° | ° | • |
| Uviplast 2000 UP | ° | ° | ° | •• | •• | ° | ° | ° | • |

KEY: •• = Excellent • = Good = Not Recommended

* Suitable wax-free or low-wax offset inks must be used.

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