

NUtec Digital Ink Notice

NOTIFICATION

UV Ink Site Considerations

Light: UV light triggers the curing process in UV inks which could lead to print head failures.

Windows & Doors:

- Ensure there is no sunlight entering through windows and doors, onto the machine.
- Ensure there is no sunlight reflected from any surfaces, including the floor onto the machine.

Electrical lights, including LED and Fluorescent:

- Ensure light does not shine or reflect onto the print heads and faceplates.
- Ensure machine covers and doors are closed.
- When the carriage is in park position, ensure the print heads are lowered. Do not ever leave in the upper position on standby.
- Where possible use lights in the 2700 to 3500K range, light sources outside of this range include higher amounts of the UV spectrum which could lead to unwanted curing or reactions while handling ink, maintenance and stray light to the printheads.

Environmental:

- Although UV inks generally operate at elevated temperatures, it is still recommended to keep the room temperature between 18-27°C.
- Low humidity can lead to static on the substrate, which leads to print defects. It is recommended to control humidity between 50-80%RH.
- Ensure air conditioning is mounted in a way to prevent airflow directly onto the print bed or onto the print head face plate. This will lead to drying of the inks on the nozzles.
- If a humidifier is installed, ensure it is a non-condensing type. Also ensure that the humidifier does not face the machine, nor deposits any moisture onto the machine.

Ventilation:

- Refer to product SDS (Safety data Sheet), specifically Section 8: EXPOSURE CONTROL. Here you will find details regarding your specific product.
- Control parameters, referred to in the SDS, state the maximum level of exposure recommended before the product will affect you.
- It is required to have ventilation that will ensure that these levels are not exceeded.
- The rate at which the chemical builds up in the print area is influenced by the printed image and print mode among other things.
- The design of the ventilation system must be such that the air flow is always away from the machine. Consideration should be given to the flow of air as there may be areas where there is insufficient movement.
- In general, 5-10 air changes/hour is recommended, but consideration should be given to the factors above.

Chemical contaminants:

- Air born chemical contaminants can lead to print head blockages. As an example, cleaning glass with acid would lead to airborne mist of acid which settles on the machine and the print heads.
- Ensure the correct substrate preparation fluid is used. It is recommended to use IPA with a purity of 97%.
- Ensure the use of the correct cleaning solutions on the print heads and around the carriage. NUtec provides a matched cleaning solution, CMF, for our UV inks.
Note: Do not wipe the nozzle area of the print heads with flush.
- Be careful with the use of cleaning solutions for cleaning of dust or other marks from the machine as this may be incompatible with the ink.

Dust particles:

- A dusty environment will lead to dust settling on printer parts, on substrate surfaces as well as potentially on print head face plates.
- Dust on substrate could interfere with adhesion or could lead to white spotting and other defects.
- Dust on print heads will aggravate the accumulation of ink on the print head faceplate leading to printing defects and more regular cleaning requirements.
- Ensure dust and dirt cannot enter the print room through ventilation, or doors and windows that are open.

Substrate:

- It is not recommended to print onto mirrors or reflective substrates. Reflection on the surface of these substrates could reflect UV light onto the print head face plates and lead to ink curing in the nozzles.
- UV curing lamp heat can cause some media to curl or bubble which will lead to media crashing against the print heads resulting in scratches and other damage.
- Some substrates are more prone to static electricity charge which leads to print defects and could lead to nozzle issues. This is aggravated in low humidity conditions as described above. Ensuring a higher humidity environment helps reduce this effect. Another method is the use of anti-static bars to neutralise this effect

For further enquiries please contact the NUtec Digital Ink Technical team at support@nutecdigital.com

Technical Department
NUtec Digital Ink Proprietary Limited

DISCLAIMER:

This information is based on the present knowledge known to NUtec Digital Ink and shall not constitute a guarantee for any specific product features nor shall it establish a legally valid contractual relationship. Under no circumstances should NUtec Digital Ink be responsible for any damage to print heads, including arising from improper capping fluids used by the dealer or end user, either directly or indirectly. This includes, but is not necessarily limited to, damages arising from improper and inaccurate flushing and maintenance procedures. Statements regarding validity of standards and compliance certifications are valid for a year from publish date and could be subject to change should formulation changes be required. E&OE