BioInteractions

Advancing Healthcare Through Innovation™

Assist™ UV

Enhanced Lubricious Coating

The UV-cured **Assist™ Enhanced Lubricious Coating** combines a highly lubricious component with a non-thrombogenic component, providing ***dual comfort*** for the patient and ***superior ease of use***.

The Clinical Problem

The advancement of devices such as catheters and guidewires through the tortuous pathways of the body is restricted by frictional forces that act between the device surface and the surrounding tissue. Such restrictions can lead to patient discomfort, prolonged procedures and an increased risk of tissue damage. In addition, such devices can suffer from thrombosis (blood clots) owing to the poor haemocompatibility of the materials employed.

BioInteractions are striving to reduce such problems through application of their Enhanced Lubricious Coating, **Assist™ UV**.

Here to *Assist™*

The exceptional lubricity of **Assist™ UV** (coefficient of friction is less than 0.05) provides ***enhanced delivery*** as well as ***effortless removal*** capabilities for the coated device, thereby minimising the risk of tissue damage and patient discomfort. In addition, **Assist™ UV** provides ***non-thrombogenic*** properties, which help minimise the occurrence of thrombosis.

From the unique synthesis to the superior performance, **Assist™ UV** is leading the way as the next generation of hydrophilic coating.

Applications

The enhanced properties of **Assist™ UV** means it is particularly well suited to a wide range of medical applications, including tissue contacting devices, such as urinary catheters and endotracheal tubes, as well as blood contacting devices, such as PTA catheters.

The **Assist™ UV** coating can be applied to a wide range of substrates and has demonstrated excellent stability on materials such as:

- Poly(urethane)
- Poly(olefin)
- Poly(vinyl chloride)
- Latex
- ePTFE
- Parylene
- Poly(styrene)
- Poly(carbonate)
- Pebax
- Nylon
- Silicone
- Stainless steel
- Cobalt chromium
- Nitinol

Also applicable to many other substrates

Clinical Applications for Assist™ UV include:

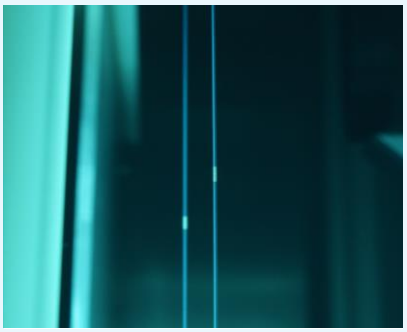
- Foley catheters
- Dilators
- Endotracheal tubes
- Feeding tubes
- PICC lines
- IOL inserters
- Guidewires
- Pacemaker leads
- Intermittent catheters
- Balloon catheters

Testing Data

The cytotoxicity of **Assist™ UV** has been evaluated on various substrates, against L929 mouse fibroblast cells (direct contact and extraction methods) and is considered non-cytotoxic. The coating has demonstrated excellent stability after 30 days incubation in saline (dye test and lubricity) and non-leaching after incubation in artificial urine. The *in-vivo* toxicity of coated articles has also been investigated in a rat model, which concluded that the coating was non-toxic.

The Coating Process

Utilising a bespoke UV-curing system, we have developed a simple, fast and reproducible process, capable of incorporating various device lengths and geometries. The total ***cure time is less than 30 seconds*** at room temperature and provides a thin, uniform coating.



PTCA catheters during UV-curing

Collaboration

BioInteractions is committed to the advancement of healthcare through the development of innovative technologies and, welcomes interest in the ***Assist™ Enhanced Lubricious Coating*** for application to both existing and new technologies that require the next generation of lubricious coatings.

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