

L100 Hydrophilic coating

L100 is a coating with superior hydrophilic and lubricating properties, which can be applied to most surfaces and materials. L100 can be used for a number of applications, but is developed for single use medical devices.

L100 Coating features

- Very lubricating when wetted with water
- Long functional life (10+ years) thus easily supporting a 2 year shelf life of the coated medical device
- Fast, simple and flexible coating process
 - Dip in solution - Let excess drip off the device - Dry
- The coating is tolerant to storage without temperature and humidity control
- Excellent adhesion to most materials
- Biocompatible
- Safe solvent chemistry
- Only recommended for single use due to the strong interaction with liquid water
- FDA approved ingredients

Material compatibility

For any material we have tested, L100 has given uniform coatings, excellent adhesion and left the surface very hydrophilic.

Tested materials; Polycarbonate, polystyrene, Acrylic/PMMA, COC/COP, glass, Aluminium, Steel.

Price

- | | |
|------------------------|----------|
| • 1 liter bottle | 95 Euro |
| • 5 liter bottle | 210 Euro |
| • 10 liter plastic can | 300 Euro |

In volume production of a medical device this pricing corresponds to an L100 material cost of 1 cent per medical device (credit card size). The price is subject to change without notice.

Processing guidelines

Surface preparation

The surface to be coated with L100 should be clean and free of dust, oil, water and volatiles. Other than this the surface does not need any preparation.

Coating methods

L100 can be applied to most substrates by dip, spray, spin, brush or roller coating. The available equipment and the device to be coated will determine the best coating method.

Drying

At room temperature the solvent will evaporate quickly. Drying time depends on how thick the coating is.

Coating thickness

The optimum coating thickness depend on the use of the medical device. The thickness should be adjusted for optimum lubrication and functional duration time.

Thickness is easiest adjusted by diluting the L100 solution with pure IPA. Dilution will reduce the coating thickness, but will not negatively affect the properties of the coating.

Optional stabilization

Once dry the L100 coating is ready for use. If further stability is needed, then the dry L100 coating can be further stabilized by 30 minutes at 150°C.

Removal

If needed an L100 coating can be removed by washing the coated surface in water or IPA. Ultrasound or mild abrasion may be needed to remove L100 completely.

Functional life of an L100 coating

Unlike many hydrophilic treatments, an L100 coating has a very long functional life.

An accelerated functional life study (ASTM-F1980) has been made in normal humid air. No degradation can be measured over the effective 12 years of the study.

If stored as recommended a device with an L100 coating will stay hydrophilic for many years, and the hydrophilic coating thus easily support a 2 year product shelf life.

Storage, disposal and safety

Storage

Liquid L100 solution

Store L100 upright and in tightly closed containers in a cool, dry environment away from direct sunlight at a temperature of 4-27°C (40-80°F). Shelf life is 24 months from date of manufacture.

Dry L100 coating

Unlike many hydrophilic treatments, a device with an L100 coating can be stored at normal room temperature and without humidity control, provided these conditions do not cause condensation of water on the L100 coated surface.

The device with the L100 coating should be stored so it is not exposed to;

- Temperatures above 60°C (5 minute exposure to 130°C is acceptable)
- Liquids or condensing atmosphere
- UV radiation
- Abrasion

An L100 coating is very tolerant toward low and high humidity, temperature variations and vibration.

Disposal

L100 may be included with other waste containing similar organic solvents to be discarded for destruction or reclaim in accordance with local state and federal regulations. It is the responsibility of the customer to ensure the disposal of L100 and residues made in observance of all federal, state, and local environmental regulations.

Environmental, Health and Safety

Liquid L100 solution

L100 solution is mainly Isopropanol (IPA) use the same precautions you would when using IPA. Handle with care. Wear chemical goggles, chemical gloves and suitable protective clothing when handling L100. Do not get into eyes, or onto skin or clothing. Use with adequate ventilation to avoid breathing vapors or mist. In case of contact with skin, wash affected area with soap and water. In case of contact with eyes, rinse immediately with water and flush for 15 minutes lifting eyelids frequently. Get emergency medical assistance.

Dry L100 coating

When dried the L100 coating is biocompatible and completely safe. No precautions are needed, but we don't recommend getting L100 dust into the eyes or consuming it.

Warranty

The information in this datasheet is based on our experience and is, we believe to be reliable, but may not be complete. We make no guarantee or warranty, expressed or implied, regarding the information, use, handling, storage, or possession of this product, or the application of any process described herein or the results desired, since the conditions of use and handling of the product is beyond our control.