



PRODUCT PROFILE

ICAT-LS 2001 is a two component, 100% solids epoxy field joint lining system which may be applied directly to steel and polyethylene at low temperatures. It exhibits excellent adhesion to steel and polyethylene when applied with ICAT Surface treatments to give resistance to cathodic disbondment from the steel, and peel resistance from the polyethylene.

<p>EXCELLENT Adhesion to Polyolefins SUPERIOR Cathodic Disbondment Resistance GOOD Flexibility</p>

ICAT-LS 2001 is a tough resilient membrane that is used as a lining for Polyethylene and steel surfaces. It is spray applied with plural component airless pumps at a film thickness exceeding 40 mils in one application. ICAT-LS 2001 provides the film thickness necessary to provide monolithic membrane protection to the field joint while providing outstanding adhesion and peel resistance. ICAT-LS 2001 is fully VOC compliant and is virtually odourless during and after application. Its solventless formulation eliminates shrinkage of the film and promotes faster cure and turnaround times.

TYPICAL APPLICATIONS:

- Field Joints for three layer Polyethylene Coated Pipeline
- Repair of Three Layer Systems



ICAT INDUSTRIES INC.

LS-2001

TECHNICAL DATA

PHYSICAL PROPERTIES: LS-2001 Basecoat

Specific Gravity	1.5
Flash Point	>121° C
Volatile Organic Compounds (VOC)	0 grams/litre
Operating Temperature	Immersion service 95°C Dry service 110°C
Colour	Grey
Recommended Coverage	30 - 40 mils or as desired
Container Size	200L Drum, 18L Pail, 1.33L Kit
Adhesion	FBE: >2000 PE/PP: > 1500 psi Steel: > 2000 psi
Elongation	< 5%
Hardness	Shore "D" 80
Impact Resistance	N/A
Pot Life	3 minutes @ 25°C
Tack Free / Recoat Time	< 20 minutes @ 25° C
Full Cure	1 day @ 25° C
Relative Humidity Tolerance	0 - 95%
Theoretical Coverage	1 sq. m / litre at 1 mm thickness
Cleaning Solvent	MEK, Xylene, Lacquer Thinner



TECHNICAL DATA

PHYSICAL PROPERTIES: LS-2001 Topcoat

Specific Gravity	1.08
Flash Point	>121° C
Volatile Organic Compounds (VOC)	0 grams/litre
Operating Temperature	95° C
Colour	Black
Recommended Coverage	40 - 80 mils or as desired
Container Size	200L Drum, 18L Pail, 1.33L Kits
Adhesion	Chemical bond to LS-2001 Basecoat
Elongation	> 15%
Hardness	Shore "D" 55
Impact Resistance	160 + inch pounds
Pot Life	< 5 minutes @ 25 C < 1 minute @ 65 C
Tack Free / Recoat Time	< 30 minutes @ 20° C
Full Cure	1 day @ 20° C
Relative Humidity Tolerance	0 - 95%
Theoretical Coverage	1 sq. m / litre at 1 mm thickness
Cleaning Solvent	MEK, Xylene, Lacquer Thinner



SURFACE PREPARATION:

Metal surfaces are recommended to be cleaned to an SSPC-SP10 standard using an abrasive sandblast to remove rust, scale, grease, dirt, debris and other contaminants. The anchor profile for surface preparation must be a minimum of 2.5 mils (65 microns).

Polyethylene surfaces shall be cleaned to remove dirt and damaged coating using water and detergent and then wire wheel cleaned to remove the surface layer of the PE coating. Light brush blasting is also acceptable. This mechanical cleaning removes the extrusion by-products which hinder the adhesion of the coating to the surface of the polyethylene.

APPLICATION PROCEDURES:

- 1) Store all materials in accordance with the manufacturers written recommendations. All materials shall be thoroughly mixed prior to application. Failure to do so may diminish the quality of the coating.
- 2) The field joint shall be abrasive blasted to near white metal using a suitable abrasive such as silica sand or nickel slag. Care should be taken to reduce the abrasion of the surrounding PE coating.
- 3) The PE coating shall be abraded using a wire wheel or brush blasted to remove the surface of the PE coating and create a profile without gouging to the FBE adhesive. Abrasive cleaning shall extend at least 6 cm into the surrounding coating.
- 4) The ICAT Wrap shall be applied to the field joint to cover over the steel surface and onto the prepared polyethylene surface. Extending past the prepared area shall be kept to a minimum.
- 5) Treat the covered area using the ICAT Surface Modifier and allow the treatment to remain for a minimum of 3 minutes.
- 6) Remove the ICAT Wrap and apply the LS-2001 Basecoat adhesive to the steel and prepared PE surface. The coating shall be applied as to produce a minimum film thickness of 500 micron. The volume of material required may be calculated using the area of the surface to be coated.
- 7) When the adhesive has set, apply the ICAT LS-2001 Topcoat using plural component spray or brush application to the specified film build. The entire joint and surrounding polyethylene shall be coated to produce an even coating system that covers the steel and transition area to the PE coating. Spray application

will produce a smooth surface while brush or trowel application may produce lines and runs. This is not detrimental to the coating if no hanging drips are present in the cured product. If this is encountered, remove them prior to cure, or grind with a suitable tool.

DESTRUCTIVE TESTING:

Destructive testing for substrate adhesion is best performed on the Basecoat only.

SUBSTRATE TEMPERATURE:

Minimum recommended: 0 °C Maximum recommended: 60°C

Note: The substrate must remain at least 3°C above the dewpoint and free from moisture during all coating procedures. For steel substrates, the substrate temperature must remain at least 3 °C above dewpoint during all surface preparation procedures as well in order to prevent flash rusting.

ORDERING INFORMATION

For additional information, prices or to place an order, please contact your ICAT sales representative or call our offices direct.

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