Seal Material Specification Sheet

IST Scientific
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PeelASeal DMSO Foil™ IST-105 DMSO Resistant Foil Peel Seal

Product Description

A DMSO resistant foil laminate suited for Polypropylene and certain COC plates, with a good liquid barrier and high solvent-resistance (at high temperatures). The seal is peelable and non-pierceable.

Physical Properties

Flexible, not easily creased. Temperature Range: -80°C to +80°C.

Visual Description

Upper glossy metallic surface. Sealing surface less reflective, more highly burnished and smoother.

Application

Low temperature and ambient temperature storage with DMSO and other solvents.

Test Procedures:

Mass Loss	Confirming the materials ability to resist high temperatures	**Results:**	**PASS**

Details: Mass loss of solution evaluated after 30 cycles of 3 step PCR Programme. **Equipment:** ABI Thermocycler, Precision Balance.

Pierce	Measuring the force required to push a standardised needle through the material via compression measuring equipment.	**Results:**	**N/A**

Details 5 tests run using a standardised needle, ensuring that less than 10N is required to pierce the surface & access the wells. **Equipment** Instron 3343 Tensometer.

Optical	Determining the materials optical clarity by measuring the transmission of emissive dye through the material	**Results:**	**N/A**

Details Record the light transmission of a sealed microplate using a Flurophore dye stock solution and a microplate reader. **Equipment** BMG Labtech - FluroStar.

Peel	Measuring the materials permanence of adhesion & its ability to be removed, via extension measuring equipment.	**Results:**	**PASS**

Details Cohesive Failure, Adhesive Transfer, Material tear & Successful Peel are measured & recorded after a 180° peel test. **Equipment** Instron 3343 Tensometer.

Low Temp. Seal Test	Confirming the materials ability to resist low temperatures	**Results:**	**PASS**

Details: Microplates are sealed at specified low temperatures & subjected to a series of tests to substantiate seal integrity. **Equipment:** Laboratory Cold storage unit.

Solvent	Evaluating the materials resistance to solvents (DMSO used as an aggressive standard)	**Results:**	**PASS**

Details Sealed plate is subjected to a high concentration of DMSO for a time period at low temperatures after which seal damage & volume loss are determined. **Equipment** Laboratory Cold storage unit, DMSO solution.

Recommended Storage Conditions:

Store in a cool place. Avoid direct exposure to sunlight.

It is recommended to use the seals within three years from the date of purchase.

Three years when stored at 21°C (70°F), 50% relative humidity, out of direct sunlight, in original packaging.

Sealing Temp + Dwell Times:

Temperature and Dwell Time: 175°C, 2 seconds.

Plate Types:

Polypropylene (PP), certain Cyclo Olefin Copolymer(COC) plates, welds to Polyethylene (PE)

Recommended Sealing Equipment:

* Efly, Kseal, 4s2
** Wasp, Thermo ALPS300/3000, Kube, Flexiseal, Chameleon, REMP (PHS)
*** Agilent VII Plateloc, REMP (LHS/SHS)

Ordering:

Part Number	Format	Presentation	
IST-105-078LR**	Std LabRoll™	1 Roll	610M × 78 mm
IST-105-078SR**	Sterile LabRoll™	1 Roll	610M × 78 mm
IST-105-115LR***	VII Std LabRoll™	1 Roll	500M × 115 mm
IST-105-115SR***	Sterile VII LabRoll™	1 Roll	500M × 115 mm
IST-105-078LS*	Std LabSheet™	100 Sheets	125 mm × 78 mm
IST-105-078SS*	Sterile LabSheet™	100 Sheets	125 mm × 78 mm
IST-105-078TR	Trial LabRoll™	1 Roll	5 M × 78 mm
IST-105-115TR	Trial LabRoll™	1 Roll	5 M × 115 mm
IST-105-078TS	Trial LabSheet™	5 Sheets	125 mm × 78 mm