



Styrene Barrier for CIPP

Δ Overview

The new CIPP technology shows a reduction in styrene permeation of over 98% in current systems while maintaining the performance benefits of TPU including abrasion, tear and chemical resistance, low temperature flexibility and a wide range of properties. Traditional systems commonly use styrene as a crosslinker for polyester and vinyl-ester based curing resins due to its low cost. However, drawbacks of styrene resin include strong odor and contaminated water that requires special disposal, resulting in additional costs.



Δ Major Benefits of Estane[®] TPU

Estane TPU has proven itself for CIPP applications as a superior coating for the tubing liners. TPU is well known for its exceptional tear, cut and puncture resistance during installation. It can be soft which allows for easier installation of the tube even with the most complicated sewer systems. Also, it can be repaired easily with cold methods such as tape or solvent patches.

- Easy on-site repair (solvent, tape, heat)
- Sufficient low-temperature flexibility provides easy storage and installation where other materials can crack.
- High melting point (~145 °C/293 °F) allows the use of hot water and steam across a wide range of pipe thicknesses.
- Depending on the rehabilitation project, Estane TPU allows the lining of sharp bends (45-90°) thanks to its low coefficient of friction and flexibility.
- Accommodates the use of a winch during installation.
- Can be used in combination with a wide range of thermosetting resin matrix systems.
- Bonds well to resin absorbent felt.

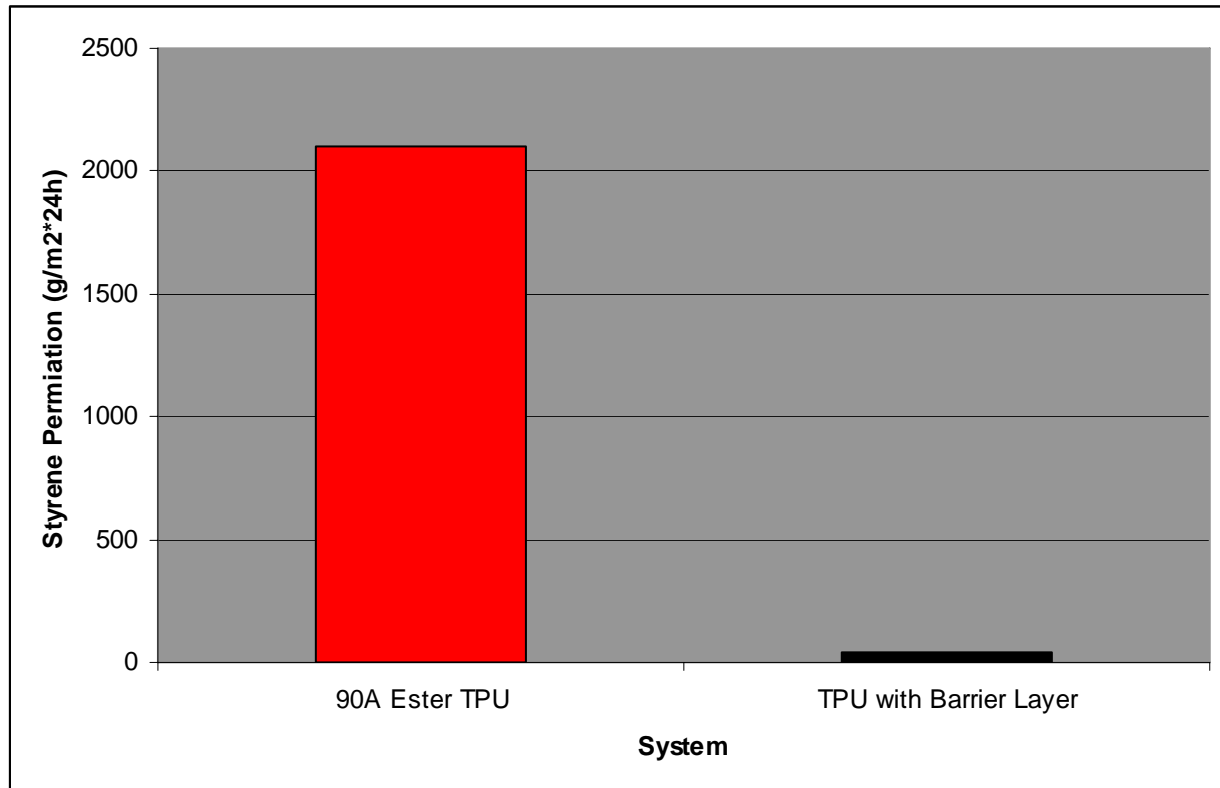


Δ Ideal for a wide range of customer manufacturing processes

Estane TPUs are highly versatile materials that can be processed through a number of methods – meltroll coating, calendaring and flat die extrusion across a wide range of thicknesses – all in one pass. Our technical experts have extensive experience and knowledge with each of these processes to help you select the right TPU and quickly scale up your production to supply the trenchless pipe re-habilitation market.



Δ Improvement in Styrene Barrier Properties



- *Data was collected according to ASTM D814 run at 23°C and 50%RH.”*
- *Construction was pre-treated in Styrene for 1 week*
- *Nominal 11 mill thickness*

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