

Case Study

Europe & Russia

LinaShield

Thermoplastic Polyurethane

PRODUCT:	LinaShield Thermoplastic Polyurethane Wear Liners
LOCATIONS:	Various locations in Russia and Europe
PRODUCT DESCRIPTION:	4, 5 & 10mm LinaShield
SHORE A HARDNESS:	85°
CONVEYED MATERIALS:	Case 1 Copper, Case 2, 3, 4, 6 Coal & Case 5 Diamond
MAXIMUM PARTICLE SIZE:	Coal (<40mm)
TEST RESULTS:	All trials were successful and outlasted Hardox, Rubber, Mn-Steel, Cast PU, Rubber 20mm & Linatex red rubber 20mm

Case studies of TPU performance in Europe and Russia

CASE NUMBER	DETAIL	RESULT
Case 1	Copper casting plant – slag chute (Average particle size < 40mm)	Hardox - worn after 15 days LinaShield TPU - Still in service for more than 30 days
Case 2	Coal mine – cone chute	Rubber 15mm - Worn after 6 months LinaShield TPU 10mm - No sign of wear after 6 months in service
Case 3	Coal mine – Main chute towards power plant	Mn-steel - Worn out after 2 months LinaShield TPU 10mm - After 1 year (1MIO t) wear less than 1mm
Case 4	Coal mine – Slurry channel	Cast PU 10mm - Worn after 4 weeks LinaShield TPU 10mm - In service 20 weeks

Case 5	Diamond Mine - chute	Rubber 20mm - Worn out after 2 weeks LinaShield TPU 4mm - Worn out after 2 months
Case 6	Coal mine – curtain over screens	Linatex red rubber 20mm Worn out after 3 months LinaShield TPU 5mm - Still in service after 8 weeks

TEST RESULT CONCLUSION:

Liner Life:

- LinaShield outperformed conventional methods in all trials

Key industries that TPU can be used:

- Mines – Copper, chrome, iron, coal, asbestos, diamond, gold, zinc, lead, platinum, silver
- Copper casting plants
- Thermal power stations
- Transportation – Dump trucks, wagons, belts
- Wheat transportation – Silos, chutes, feeding channels

Key properties of this material include:

- Outstanding resistance to abrasion and strokes
- Great resistance to penetration of sharp objects
- Resistance to oils, greases, many solvents and fats
- Good resistance to weathering
- and high energy radiation
- Elasticity in large temperature window
- Does not irritate skin
- No plasticizers – therefore no aging, as rubber
- Perfect welding and bonding – welding strength = material strength