



Adhesion of ELLE

Coatings and Substrates

Introduction

This document summarizes the results obtained from the technical qualification of ELLE solution on various substrates and coatings. The evaluation is done upon 90° peel testing at 23±2°C according to ASTM D3330-F(modified), where ELLE is mounted on top of the various substrates and coating using sealant and tape adhesive. The peel performance for both adhesives is important to the performance of the final product.

Peel test performance of sealer

ELLE is mounted on the various substrates, listed in below table, using the PolyTech sealant Centaur 960. As it is clear from the table, ELLE with sealant has excellent adhesive performance towards the various substrates tested with a primarily cohesive failure and peel strength above 20 N/cm.

Adhesive	Substrate	Type	Value	Unit
Centaur 960	PolyTech substrate	GFRP (Epoxy)	>20	N/cm
Centaur 960	Mankiewicz Alexit 498-92 / hardener 405-70	PU topcoat (solvent)	>20	N/cm
Centaur 960	Carboline Windmastic Topcoat HS200	PU topcoat (solvent)	>20	N/cm
Centaur 960	Carboline Windmastic Topcoat HSX	PU topcoat (solvent)	>20	N/cm
Centaur 960	SikaForce 7800	PU filler	>20	N/cm
Centaur 960	Polyester laminate	GFRP (polyester)	>20	N/cm
Centaur 960	Polyester Gelcoat	Polyester topcoat	>20	N/cm
Centaur 960	MEGA FU300	PU topcoat (solvent)	>20	N/cm
Centaur 960	MEGA WU500	PU topcoat	>20	N/cm
Centaur 960	Wind Hullo Topcoat	Fluoresin topcoat	>20	N/cm
Centaur 960	PPG LT255	PU topcoat (solvent)	>20	N/cm
Centaur 960	PPG LT255-I	PU topcoat (solvent)	>20	N/cm
Centaur 960	PPG QT 255	PU topcoat (water)	>20	N/cm
Centaur 960	PPG LT259	PU topcoat (water)	>20	N/cm
Centaur 960	PPG LT969	PU topcoat (solvent)	>20	N/cm
Centaur 960	PPG LT969-FD	PU topcoat (solvent)	>20	N/cm
Centaur 960	Mega P&C 3650PF	PU topcoat	>20	N/cm
Centaur 960	Aluminium EN-AW 6082-T6		>20	N/cm
Centaur 960	Copper EN 136016_2011_CU-OF_CW008A		>20	N/cm
Centaur 960	Belzona 5711	PU filler	>20	N/cm
Centaur 960	Alexit BladeRep LEP9	PU topcoat (solvent)	>20	N/cm
Centaur 960	Alexit BladeRep Topcoat 12	PU topcoat (solvent)	>20	N/cm

Peel test performance of tape

ELLE is mounted on the various substrates, listed in below table, using the PolyTech adhesive Meliade 660. Meliade 660 is the PSA on ELLE with long shelf-life, excellent 3D conformability and improved weathering resistance. As it is clear from the listed results in below table, the tape perform as intended with a broad and good adhesive performance towards the different substrates and coatings.

Adhesive	Substrate	Type	Value	Unit
Meliade 660	PolyTech substrate	GFRP (Epoxy)	>8	N/cm
Meliade 660	Mankiewicz Alexit 498-92 / hardener 405-70	PU topcoat (solvent)	>8	N/cm
Meliade 660	Carboline Windmastic Topcoat HS200	PU topcoat (solvent)	>8	N/cm
Meliade 660	Carboline Windmastic Topcoat HSX	PU topcoat (solvent)	>8	N/cm
Meliade 660	SikaForce 7800	PU filler	>8	N/cm
Meliade 660	Polyester laminate	GFRP (polyester)	>8	N/cm
Meliade 660	Polyester Gelcoat	Polyester topcoat	>8	N/cm
Meliade 660	MEGA FU300	PU topcoat (solvent)	>8	N/cm
Meliade 660	MEGA WU500	PU topcoat	>8	N/cm
Meliade 660	Wind Hullo Topcoat	Fluoresin topcoat	>8	N/cm
Meliade 660	PPG LT255	PU topcoat (solvent)	>8	N/cm
Meliade 660	PPG LT255-I	PU topcoat (solvent)	>8	N/cm
Meliade 660	PPG QT 255	PU topcoat (water)	>8	N/cm
Meliade 660	PPG LT259	PU topcoat (water)	>8	N/cm
Meliade 660	PPG LT969	PU topcoat (solvent)	>8	N/cm
Meliade 660	PPG LT969-FD	PU topcoat (solvent)	>8	N/cm
Meliade 660	Mega P&C 3650PF	PU topcoat	>8	N/cm
Meliade 660	Belzona 5711	PU filler	>8	N/cm
Meliade 660	Alexit BladeRep LEP9	PU topcoat (solvent)	>8	N/cm
Meliade 660	Alexit BladeRep Topcoat 12	PU topcoat (solvent)	>8	N/cm