



Technical Data Sheet

Style: **DefenZall™** PPF - Paint Protection Film

Face Film:	0.006" Aliphatic TPU with topcoat
Adhesive:	0.002" Acrylic
Release Lining:	Release Coated Bleached Kraft

Automotive Painted Metal Peel Adhesion Performance		
Test Method	Unit of Measure	Typical Results
180° Peel Initial State 20 min @ 22°C (72°F) ASTM D1000	N/m (lb/in)	930 (5.3)
180° Peel Room Temperature Aged 72 hrs @ 22°C (72°F) ASTM D1000	N/m (lb/in)	1119 (6.4)
180° Peel Heat Aged 168 hrs @ 70°C (158°F) ASTM D1000	N/m (lb/in)	1385 (7.9)
180° Peel Humidity Resistance 168 hrs @ 38°C (100°F) & 100% RH ASTM D1000	N/m (lb/in)	1281 (7.3)
Physical Performance		
Tensile Strength ASTM D412	MPa (psi)	45 (6527)
Elongation ASTM D412	%	389
Chemical/Environmental Resistance Testing		
Isopropyl Alcohol Wipe AATCC TM8	No objectionable color change, delamination, cracking, blistering, yellowing, or mildew growth	PASS
Acid Spotting Resistance KC-16-01	No objectionable color change, delamination, cracking, blistering, yellowing, or mildew growth	PASS
Heat Resistance 168 hrs @ 70°C (158°F)	No objectionable color change, delamination, cracking, blistering, yellowing, or mildew growth	PASS
Humidity Resistance 168 hrs @ 35°C (95°F) & 100% RH	No objectionable color change, delamination, cracking, blistering, yellowing, or mildew growth	PASS
Xenon Lightfastness SAE J1960 – 1250 kJ/m ²	No objectionable color change, delamination, cracking, blistering, yellowing, or mildew growth	PASS

Storage: Haartz recommends that DefenZall™ PPF be stored at 13-27C (55-81F) and 40-60% RH. Haartz DefenZall™ should be used within one year from date of purchase.

Application Suggestions: Haartz DefenZall™ PPF should be applied to a clean surface at temperatures between 13-32C (55-90F).

Notes: The information listed is provided in good faith to be representative of Haartz DefenZall™ PPF. Values listed are typical properties and should not be used as a product specification.