



CYTEC



EBECRYL[®] 267

New High Abrasion Resistant Sealer (S42)

Target Application: S 42

<p>Taber CS 10/CS 17 CS 10/CS17 wheels</p>	<p>S 42 Rubber wheels + Abrasive Paper</p>	<p>Grit feeder Leather wheels + Falling Sand</p>
		
<p>Hardness CS10<CS17 Sealer EBECRYL® 6040 Fillers</p>	<p>Hardness Sealer EBECRYL® 267 Al₂O₃</p>	<p>Flexibility & Mechanical Properties IRR 732</p>

EBECRYL[®] 267- Product Properties

- **EBECRYL 267 is an aliphatic polyester based urethane acrylate with high abrasion resistance (S 42)**
- **The product shows an excellent balance in hardness and elasticity (Hamberger Höbel, Cold check & adhesion)**
- **Aliphatic in nature, EBECRYL 267 shows a good yellowing resistance**

EBECRYL[®] 267 - Typical Data

- **Viscosity, 25°C, C&P:** 2500 mPa.s
- **Aspect:** clear
- **Stability, 10 days at 80°C:** OK
- **Density:** 1.14 g/cm³
- **Color Value:** max. 1 Gardner

EBECRYL[®] 267 – Mechanical Properties

100 µm free film – EB cured, 5Mrad, 250 keV

- Tg: 86 °C
- Ultimate Elongation: 0.6%
- Ultimate Tensile strength: 14 MPa
- Young modulus, 23°C: 2330 Mpas

EBECRYL[®] 267- Test Conditions

- Substrate: beech, sanded with 150/180
- Primer: UCECOAT[®] 7177 + ADDITOL BCPK 1.5% +
+ UCECOAT 8460/water (1:1) 3%
 - 8 g/m² via roller coater
 - Flash off at 5m/min at 40°C
 - Curing: 1x80W/cm, 20m/min
- Sealer: starting point formulation (next slide)
- Topcoat: EBECRYL 265/DPGDA/EBECRYL 810 + PI + matting
 - 8 g/m² via roller coater
 - Curing: 2x Hg 80W 10m/min

EBECRYL[®] 267- Starting Point Formulation

EBECRYL 267	77
Additol BCPK	3
Al₂O₃ (Korund)	20

- **100% solids**
- **2x35g/m² + 1x35g/m² (without Korund) via roller coater**
- **Curing: 1x Hg 80W/cm @ 20m/min**

EBECRYL[®] 267: Evaluation Abrasion Resistance (S42)

Visual inspection after a number of S42 abrasion cycles:

Cycles	1600	1800	2000	2100
Ref.				
EBECRYL 267				

EBECRYL[®] 267: Weight Loss (mg) after Abrasion S42

# cycles	Reference	EBECRYL 267
0	0	0
200	41	38
400	60	56
600	77	70
800	98	83
1000	120	97
1200	143	116
1400	163	133
1600	181	150
1800	234	164
2000		180
2100		201

Results are comparative, as formulation and type of Al_2O_3 will also have a significant impact

Testing Results - continued

- **Hamberger Höbel: +25 N**
- **Cold-check 2x25 Cycles (-20°C <> 70°C)**
 - No visual cracks
 - No cracks upon analysis by microscope
- **Yellowing test - 92 h Vitalux 300W lamp**
 - 65µm thick film cured 5m/min Hg(80W)
 - Delta b: 7.9



EBECRYL[®] 267 - Conclusion

- A new aliphatic polyester based urethane
- 100% solids
- Very high abrasion resistance (S42)
- Excellent balance in hardness – Elasticity
- Low Yellowing
- Viscosity, 25°C, C&P: 2500 mPa.s