

DURAT

DURAT SOLID SURFACE MATERIAL TECHNICAL PROPERTIES

Durat is a polyester resin based solid surface material which contains pre-consumer plastic waste.

MECHANICAL AND PHYSICAL PROPERTIES

PROPERTY	METHOD	RESULT
APPROXIMATE WEIGHT (12MM THICK DURAT)		18,3 kg / m ²
DENSITY	ASTM D792A	1,41 ± 0,01 g / cm ³
FLEXURAL STRENGTH	ASTM D 790	36,3 ± 2,6 MPa
MODULUS OF ELASTICITY (FLEXURAL)	ASTM D 790	4810 ± 50 MPa
TENSILE STRENGTH	ASTM D 638	16,1 ± 3,1 MPa
MODULUS OF ELASTICITY (TENSILE)	ASTM D 638	4780 ± 260 MPa
ELONGATION AT BREAK	ASTM D 638	0,3 ± 0,1 %
IMPACT RESISTANCE (CHARPY)	ISO 179	1,7 ± 0,5 KJ / m ²
BARCOL HARDNESS	ASTM D2583	52 ± 2
LINEAR THERMAL EXPANSION (COEFFICIENT)	ASTM D 696	72 × 10 ⁻⁶ (0,0072 % / °C)

EMISSION CLASSIFICATION OF BUILDING MATERIALS

THE BUILDING FOUNDATION RTS	CLASS M1
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Durat does not emit any toxins and has passed the Finnish standard M1 for surface materials, which tests the following substances TVOC, HCOH, NH3, IARC classified carcinogenic substances and smell.
<https://cer.rts.fi/>

SUITABILITY FOR SURFACES WHERE FOODSTUFFS ARE HANDLED

VTT BIOTECHNOLOGY AND FOOD RESEARCH / RESEARCH REPORT NO. BEL71 /98

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RESISTANCE TO CHEMICALS

EVERYDAY HOUSEHOLD SUBSTANCES

BLACK CRAYON	1	HAIR DYE	1
BLACK SHOE POLISH	1	IODINE SOLUTION	1
BLUE INK (BALL POINT)	4	LIPSTICK	1
BLUE INK (WASHABLE)	1	PLAIN MUSTARD	2
COFFEE	1	TEA	1
ETHANOL 48 %	1	TOMATO KETCHUP	1
GENTIAN VIOLET SOLUTION	1	VEGETABLE OIL	1
GRAPE JUICE	1	WHOLE MILK	1

1 = NON-STAINING

2 = REMOVABLE BY ALCOHOL OR NAPHTHA

3 = REMOVABLE BY 1ST APPLICATION OF HOUSEHOLD SCOURING POWDER

4 = REMOVABLE BY 2ND APPLICATION OF HOUSEHOLD SCOURING POWDER

CHEMICALS - SERVICEABLE AND REPAIRABLE

THE SURFACE FINISH SHALL BE UNAFFECTED BY THE REAGENTS EXCEPT FOR SUPERFICIAL SURFACE CHANGES WHICH ARE REMOVABLE BY 600 GRIT WET SANDPAPER. ANY RESULTING DAMAGE SHOULD NOT IMPAIR USE OF UNIT AND SHOULD BE EASILY REPAIRABLE USING ABRASIVE AND POLISHING COMPOUNDS.

ACETONE
AMMONIA, 10 % IN H₂O
AMYL ACETATE
CITRIC ACID, 10 % IN H₂O
ETHYL ACETATE
ETHYL ALCOHOL
HYDROGEN PEROXIDE, 3 % IN H₂O
LYE, 1-2 % (DRAIN CLEANER)

NAPHTHA
PINE OIL
PHENOL, 5 % (DISINFECTANT)
SODIUM HYPOCHLORITE (BLEACH)
TOLUENE
UREA, 6,0 % IN H₂O
VINEGAR

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DURAT FINISH PERFORMANCE BRITISH STANDARDS TESTING AND EVALUATION

TEST PIECE: DURAT 910 DATE 08 / 2007

TEST	RESULTS	COMMENT
<u>MECHANICAL DAMAGE</u>		
BS3962 PT.6. SCRAPE S.P.	5	20 NEWTONS
SCRAPE P.S.	5	28+ NEWTONS
<u>WET HEATS BS EN 12721</u>		
55 °C	5	NO DAMAGE
70 °C	5	NO DAMAGE
85 °C	5	NO DAMAGE
<u>DRY HEATS BS EN 12722</u>		
120 °C	4	SLIGHT MARKING
140 °C	3	SLIGHT VISIBLE DISTURBANCE
160 °C	2	VISIBLE DISTURBANCE
<u>COLD LIQUIDS BS EN 12720</u>		
ACETONE	2	VISIBLE DISTURBANCE
ETHANOL 96 %	4	SLIGHT MARKING
ETHANOL 48 %	5	NO DAMAGE
TEA	5	NO DAMAGE
COFFEE	5	NO DAMAGE
DISINFECTED PHENOL	3	CHANGE OF GLOSS LEVEL
DISINFECTED CHLORO	5	NO DAMAGE
PARAFFIN OIL	5	NO DAMAGE
BLACKCURRANT JUICE	5	NO DAMAGE
AMMONIA SOLUTION	5	NO DAMAGE
ACETIC ACID	5	NO DAMAGE
OLIVE OIL	5	NO DAMAGE
COLD OILS (24HRS)	5	NO DAMAGE
COLD FATS (24HRS)	5	NO DAMAGE
<u>LARGE BALL IMPACT BS6222/3 CLAUSE 7.2.1</u>		
10 MM MAX 4 4 MM	4	4 MM

Notes:

1. The rating code for the results of the tests are explained in the various relevant British Standards. A rating of 5 is the best result that can be achieved and the rating of 1 is the poorest.
2. Any test given a 1 rating automatically fails the test specimen.