DEGADUR®
Chemical Resistance

30. September 2019

Chemical Resistance

DEGADUR® coatings show high resistance to chemicals. Finished coatings can only be attacked by oxidation (e.g. through concentrated nitric acid) or show pronounced swelling due to solvents (e.g. ethyl acetate) to the extent where they are no longer able to withstand mechanical loads.

Notes to be observed

The resistance of a coating is influenced both by the addition of pigments and fillers and by fluctuations in temperature. Moreover, the simultaneous influence of two or more chemicals may have a major impact. For these reasons, we urgently recommend that customers conduct their own tests to assess chemical resistance.

With the presented results you should take into account that with changes of formulations, fillers and pigments different results can be obtained.

The Topcoats and their complete polymerization, their thickness and intactness (abrasion) have an essential influence on the resistance of a system.

Special observations

In some cases with unpigmented Topcoats and after a loading of 30 days also if they have covered totally

coloured sands these showed after a loading with 50% sulphuric acid a reddish discolouration.

flakes these showed after a loading with 20% and concentrated caustic soda solution a yellowish discolouration.

stand 2019-09-30

Chemical resistance DEGADUR®

DEGADUR®
Flooring Systems
Chemical resistance adapted from DIN EN ISO 2812-1
Assessment of resistance adapted from DIN EN ISO 4628-1 and DIN EN ISO 4628-2
Resistance at +23 ° C over one week (7 days)

DGD = DEGADUR ®
FS = Polymer coated colored sand

Code	Chemicals and test substances	- DGD 419sl (with pigment), broadcast with 0.7-1.2mm FS - Topcoat DGD 163	- DGD 418sl (with pigment), coloured flakes 3-5 mm - Topcoat DGD 163	- DGD 151sl (with pigment) - Intermediate layer DGD 112 - Topcoat DGD 165	- DGD 151sl (with pigment), coloured flakes 3-5 mm - Intermediate layer DGD 112 - Topcoat DGD 165	- DGD 151gl, FS, trowel applied - Intermediate layer DGD 112 - Topcoat DGD 165	- DGD 151sl, broadcast with 0.7-1.2 mm FS - Topcoat DGD 165	- DGD 418sl, broadcast with 0.7-1.2 mm FS - Topcoat DGD 526 - Topcoat DGD 165	- DGD 418sl, broadcast with 0.7-1.2 mm FS - Topcoat DGD 526	- DGD 419sl (with pigment), broadcast with 0.7-1.2 mm FS - Topcoat DGD 526	- DGD 419sl (with pigment), broadcast with colour chips 3-5 mm -Topcoat DGD 526	- DGD 418sl, pigmented - Topcoat DGD 527	- DGD 418sl (with pigment), broadcast with chips 3-5 mm - Topcoat DGD 527	- DGD 419sl (with pigment), broadast with chips 3-5 mm -Topcoat DGD 527	- DGD 332sl, broadcast with 0.7-1.2 mm FS - Topcoat DGD 527	- DGD 332sl, broadcast with 0.7-1.2 mm FS - Topcoat DGD 529	- DGD 332/430sl (Ratio 2:1), broadcast 1.2-1.8 mm FS - Topcoat DGD 529	- DGD 419sl (with pigment), broadcast with 0.7-1.2mm FS - Topcoat DGD 529	- DGD 332sl, broadcast with 0.7-1.2 mm FS - Topcoat DGD 529	- DGD 332sl, broadcast with 0.7-1.2 mm FS - Topcoat DGD 530
Fuels and oils																				
037	Kerosene, grade Jet A	++	++	++	++	++	++	++	-	-	-	o	o	o	o	-	-	-	-	-
038	Brake fluid (ATE) DOT4	o	o	o	o	o	o	o	o	o	o	o	o	o	o	o	o	o	o	-
039	Petrol fuel, Super E5, unleaded	o	o	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
040	Petrol fuel, Super Plus E5, unleaded	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
041	Diesel fuel	++	++	++	++	++	++	++	-	-	-	o	o	o	o	-	-	-	-	-
042	Hydraulic fluid, grade Scharr HLP 46	++	++	++	++	++	++	++	++	++	++	++	++	++	++	++	++	++	++	++
Food and beverages																				
043	Beer	++	++	++	++	++	++	++	++	++	++	++	++	++	++	++	++	++	++	++
044	Lemonade (Coca Cola Classic)	++	++	++	++	++	++	++	++	++	++	++	++	++	++	++	++	++	++	++
045	Glycerol/Oleic acid/Linoleic acid (1:1:1)	++	++	++	++	++	++	++	++	++	++	++	++	++	++	++	++	++	++	++
046	Cream	++	++	++	++	++	++	++	++	++	++	++	++	++	++	++	++	++	++	++
047	Olive oil	++	++	++	++	++	++	++	++	++	++	++	++	++	++	++	++	++	++	++
048	Sunflower oil	++	++	++	++	++	++	++	++	++	++	++	++	++	++	++	++	++	++	++
049	Rapeseed oil	++	++	++	++	++	++	++	++	++	++	++	++	++	++	++	++	++	++	++
062	Salmon oil	++	++	++	++	++	++	++	++	++	++	++	++	++	++	++	++	++	++	++
050	Orange peel oil	o	o	++	++	++	++	++	-	-	-	-	-	-	-	-	-	-	-	-
051	Brandy	++	++	++	++	++	++	++	++	++	++	++	++	++	++	++	++	++	++	++
052	Red wine	++	++	++	++	++	++	++	++	++	++	++	++	++	++	++	++	++	++	++
Desinfectantes and industrial cleaners																				
053	Hydrogen peroxide 35 %	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
054	Sterillium (BODE CHEMIE)	+	+	o	o	o	o	o	o	o	o	o	o	o	o	o	o	o	o	+
055	Meliseptol (BRAUN)	++	++	++	++	++	++	++	++	++	++	++	++	++	++	++	++	++	++	++
057	Sator (ECOLAB)	++	++	++	++	++	++	++	++	++	++	++	++	++	++	++	++	++	++	++
058	DanKlorix (COLGATE PALMOLIVE)	++	++	++	++	++	++	++	++	++	++	++	++	++	++	++	++	++	++	++
065	Etolit intensiv (ETOL)	++	++	++	++	++	++	++	++	++	++	++	++	++	++	++	++	++	++	++
066	Etolit intensiv diluted in water 35 ml/l	++	++	++	++	++	++	++	++	++	++	++	++	++	++	++	++	++	++	++
Household cleaners																				
059	Sagrotan all purpose cleaner (RECKITT BEUCKISER)	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
060	Meister Propper all purpose cleaner (HENKEL)	++	++	++	++	++	++	++	++	++	++	++	++	++	++	++	++	++	++	++
061	Fairy Ultra plus (PROCTER & GAMBLE)	++	++	++	++	++	++	++	++	++	++	++	++	++	++	++	++	++	++	++
Miscellaneous																				
063	Blood (pig)	++	++	++	++	++	++	++	++	++	++	++	++	++	++	++	++	++	++	++

++	7 days resistant (no mechanical or visual changes)
+	7 days resistant (mechanical). Discoloration, loss of glare other visual changes might occur
o	1 hour resistant (short term exposure)
-	non-resistant

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Inorganic acids																				
001	Hydrochloric acid 20 %	++	++	++	++	++	++	++	++	++	++	++	++	++	++	++	++	++	++	++
002	Hydrochloric acid 37 %	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
003	Sulfuric acid 50 %	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
064	Sulfuric acid 96 - 98 %	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
004	Phosphoric acid 40 %	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
005	Phosphoric acid 85 % (conc.)	o	o	o	o	o	o	o	+	+	+	+	+	+	+	o	o	o	o	+
006	Nitric acid 5 %	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
007	Nitric acid 25 %	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
008	Nitric acid 65 %	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Organic acids																				
009	Formic acid 10 %	++	++	++	++	++	++	++	++	++	++	++	++	++	++	++	++	++	++	++
010	Formic acid 30 %	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
011	Acetic acid 10 %	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
012	Acetic acid 25 %(= vinegar essence)	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
013	Acetic acid 100 % / Glacial acetic acid	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
014	Lactic acid 30 %	++	++	++	++	++	++	++	++	++	++	++	++	++	++	++	++	++	++	++
015	Lactic acid 90 %	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
016	Lactic acid 50 %	++	++	++	++	++	++	++	++	++	++	++	++	++	++	++	++	++	++	++
017	Citric acid 50 %	++	++	++	++	++	++	++	++	++	++	++	++	++	++	++	++	++	++	++
Alkalien																				
018	Ammonia solution 10 %	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
019	Ammonia solution 25 %	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
020	Sodium hydroxide solution 10 %	++	++	++	++	++	++	++	++	++	++	++	++	++	++	++	++	++	++	++
021	Sodium hydroxide solution 20 %	++	++	++	++	++	++	++	++	++	++	++	++	++	++	++	++	++	++	++
022	Sodium hydroxide solution 45 %	++	++	++	++	++	++	++	++	++	++	++	++	++	++	++	++	++	++	++
Aqueous solutions of inorganic salts																				
023	Calcium chloride, saturated	++	++	++	++	++	++	++	++	++	++	++	++	++	++	++	++	++	++	++
024	Sodium hypochlorite solution 14 %	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Organic solvents																				
025	Acetone	o	o	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
026	Butyl acetate	o	o	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
027	Ethylene glycol	++	++	++	++	++	++	++	++	++	++	++	++	++	++	++	++	++	++	++
028	Ethanol 70%, undenatured	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
029	Ethanol 96%, undenatured	o	o	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
030	Isopropanol / Isopropyl alcohol	o	o	o	o	o	o	o	-	-	-	o	o	o	o	-	-	-	-	-
031	Methanol	o	o	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
032	Methyl ethyl ketone / 2-Butanone	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
033	n-Hexane	++	++	++	++	++	++	++	++	++	++	++	++	++	++	++	++	++	++	++
035	Toluene	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
036	Xylene	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

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TRADITIONALLY
INNOVATIVE