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Additional technical information no. 54

Chemical resistance AQUAFIN®-CA (storage at +23 °C)

Chemicals	Duration of storage	Hardness			Weight change [%]	Visual evaluation
		Shore A (start)	Shore A (end)	Change		
Water	7h	51	49	-2	0.47	OK
	3d	41	40	-1	1.32	OK
	7d	49	38	-11	2.43	OK
NaCl, 20%	7h	51	46	-5	0.21	OK
	3d	46	42	-4	0.40	OK
	7d	48	43	-5	0.40	OK
Citric acid, 20%	7h	50	42	-8	2.59	slightly yellowish
	3d	52	37	-15	16.11	OK
	7d	50	38	-12	30.19	slightly swollen
Acetic acid, 10%	7h	49	33	-16	15.40	slightly swollen
	3d	48	24	-24	21.68	swollen
	7d	51	32	-19	21.23	swollen
Boric acid, 4%	7h	50	44	-6	0.35	OK
	3d	50	40	-10	3.17	OK, sol. yellowish
	7d	48	37	-11	6.20	OK, sol. yellowish
Sulphuric acid, 20%	7h	50	47	-3	2.06	OK
	3d	49	47	-2	4.54	OK
	7d	50	46	-4	6.99	sticky
Urea, 37%	7h	49	47	-2	0.34	OK
	3d	50	43	-7	0.64	OK
	7d	49	40	-9	0.76	OK
NaOH, 20%	7h	49	43	-6	0.39	yellowish
	3d	49	42	-7	1.17	yellowish
	7d	50	43	-7	2.05	yellowish
Glycerine, 86.5%	7h	56	52	-4	0.05	OK
	3d	55	53	-2	0.33	OK
	7d	54	52	-2	0.33	OK
Methanol	7h	51	26	-25	42.63	swollen
	3d	44	5	-39	141.65	heavily swollen
	7d	50	./.	./.	198.21	heavily swollen
Ethanol	7h	51	30	-21	48.41	slightly swollen
	3d	55	11	-44	135.01	swollen
	7d	53	6	-47	109.55	swollen
Tetrahydro-furan (THF)	7h	49	27	-22	97.94	heavily swollen
	3d	52	16	-36	90.53	heavily swollen
	7d	50	6	-44	44.36	heavily swollen
Ethyl acetate	7h	51	32	-19	82.50	swollen
	3d	55	24	-31	138.89	heavily swollen
	7d	52	17	-35	154.95	heavily swollen
Crystal oil	7h	53	38	-15	18.23	slightly swollen
	3d	56	16	-40	81.63	swollen
	7d	52	8	-44	119.28	swollen
Hydraulic oil (RSL 68)	7h	54	51	-3	0.48	OK
	3d	54	49	-5	1.39	OK
	7d	53	47	-6	3.62	OK
Gearbox oil on mineral oil basis (CLP 150)	7h	53	53	0	0.44	OK
	3d	52	47	-5	1.58	OK
	7d	50	50	0	2.05	OK
Diesel	7h	52	42	-10	8.82	yellowish
	3d	52	28	-24	30.98	slightly swollen
	7d	54	17	-37	51.24	slightly swollen
Petrol ("Super")	7h	52	28	-24	66.41	swollen
	3d	49	12	-37	123.15	heavily swollen
	7d	49	7	-42	148.00	heavily swollen

Sol. = solution ./. = no measurement data

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Test procedure:
A thin (2–3 mm) film is produced from the material to be tested and heated at +23°C / 50% r.h. stored until fully cured. The sample is then weighed and then immersed completely in the desired test medium (closed plastic/steel container). Storage is either at +23°C (standard) or another agreed temperature. After the specified test intervals, the sample is removed from the medium, briefly rinsed with water or isopropanol and then dabbed dry with crepe paper. After reweighing, other parameters (Shore A, mechanical properties) are checked if necessary and the sample is evaluated visually and haptically.

Evaluation:
The evaluation of the results depends on the intended purpose and the changes that are still tolerated.
In general, chemicals that cause no or negligible changes after 7 hours do not present a problem with regard to short-term, sporadic contact with the cured sealant.
If there is no relevant change after 3 days, even longer occasional contact is unproblematic. Stability after one week of storage indicates good compatibility with the jointing compound, but is no guarantee of unlimited stability with permanent contact. It should be noted that the temperature can have a strong influence on the result. The data reported is therefore only valid in the range of the measurement temperature (deviations of a few °C are usually not critical).