



TECHNICAL SPECIFICATIONS

CHEMICAL PERMEATION DATA

Chemical	CAS Number	Generic Representation	MDPR $\mu\text{g}/\text{cm}^2/\text{min}$	BDT Minutes	SBT (minutes) $0.1\mu\text{g}/\text{cm}^2/\text{min}$	NBT(minutes) $1.0\mu\text{g}/\text{cm}^2/\text{min}$	EN Class
Acetone (99.9wt%)	67-64-1	Ketone	0.02	>480	>480	>480	6 of 6
Acetonitrile (99.9wt%)	75-05-8	Nitrile Compound	0.03	>480	>480	>480	6 of 6
Acetic Acid (glacial 99.88wt%) #	64-19-07	Carboxylic Acid	0.05	49	63	131	3 of 6
Acetyl Chloride (99.3wt%)	75-36-5	Acyl Chloride	0.05	24	33	40	2 of 6
Acrylic Acid (90wt%)#	79-10-7	Carboxylic Acid	0.06	61	65	280	3 of 6
Acrylic Acid (99wt%)**	79-10-7	Carboxylic Acid	0.04	116	159	192	4 of 6
Ammonia (aqueous solution, 35wt%)	1336-21-6	Aqueous Ammonia	0.04	57	64	118	3 of 6
Ammonia Gas (99.98wt% 1 atmos.)#	7664-41-7	Basic Gas	0.04	21	24	47	2 of 6
Benzene (99.99wt%)	71-43-2	Hydrocarbon	0.01	320	324	>480	6 of 6
Carbon Disulphide (99.9wt%) #	79-15-0	Sulphur containing organic compound	0.02	9	15	45	No class
Chloroacetic Acid (79wt% saturated)	79-11-8	Organochlorine compound	0.04	>480	>480	>480	6 of 6
Chlorine Gas (99.9wt% 1 atmos.)	7782-50-5	Halogen Gas	0.04	>480	>480	>480	6 of 6
Chlorosulfonic Acid (99.9wt%)	7790-94-5	Inorganic Acid	0.05	>480	>480	>480	6 of 6
Dichloromethane (>99.9wt%) #	75-09-2	Chlorinated Hydrocarbon	0.05	4	7	20	No class
Diethylamine (99.9wt%)	109-89-7	Amine	0.02	>480	>480	>480	6 of 6
Dimethylamine(40wt%)	134-40-3	Amine	0.04	146	237	>480	6 of 6
Ethyl Acetate (99.93 wt%) #	141-78-6	Ester	0.02	165	171	327	5 of 6
Formic Acid (90wt%)	64-18-6	Carboxylic Acid	0.03	324	>480	>480	6 of 6
Glutaraldehyde (50wt%)	111-30-8	Dialdehyde	0.02	>480	>480	>480	6 of 6
Hexamethylenediamine(98wt%)	124-09-4	Organic compound	0.04	>480	>480	>480	6 of 6
Hydrofluoric Acid (60wt%)	7664-39-3	Inorganic Mineral Acid	0.04	>480	>480	>480	6 of 6
Hydrogen Chloride Gas (99wt% 1 atmos.)	7647-01-0	Inorganic Acid Gas	0.02	152	200	>480	6 of 6
Methanol (99.9wt%)	67-56-1	Primary Alcohol	0.05	>480	>480	>480	6 of 6
N,N-Dimethylformamide(99.94wt%)	68-12-2	Organic Amide	0.03	>480	>480	>480	6 of 6
n-Heptane (99.82wt%)	142-82-5	Saturated Hydrocarbon	0.01	>480	>480	>480	6 of 6
Nitric Acid (60wt%)	7697-37-1	Inorganic Mineral Acid	0.03	>480	>480	>480	6 of 6
Nitrobenzene(99.7wt%)	98-95-3	Organic compound	0.02	>480	>480	>480	6 of 6
Phenol- Liquified (89wt%)	108-95-2	Aromatic Organic compound	0.01	>480	>480	>480	6 of 6
Propylene Oxide(99.9wt%)	75-56-9	Organic compound	0.02	167	324	>480	6 of 6
Sodium Hydroxide (50wt%) *	1310-73-2	Inorganic Base	0.03	>480	>480	>480	6 of 6
Sulphuric Acid (96wt%) *	7664-93-9	Inorganic Mineral Acid	0.03	>480	>480	>480	6 of 6
tert-Butyl Methyl Ether(99.9wt%)	1634-04-4	Organic compound	0.02	392	439	>480	6 of 6
Tetrahydrofuran (99.9wt%)	109-99-9	Heterocyclic and Ether compound	0.02	6	6	10	No class
Toluene (99.99wt%)	108-88-3	Aromatic Hydrocarbon	0.01	>480	>480	>480	6 of 6
Xylenes (mixed isomers 99.7wt%)	1330-20-7	Xylenes+ethylbenzene	0.01	175	284	>480	6 of 6

MDPR = Minimum Detectable Permeation Rate

BDT = Breakthrough detection time (first appearance at the minimum detectable permeation rate)

ASTM F739-12

SBT = standardized breakthrough time (at 0.1 ug/cm2/min)

ASTM F739-12

NBT = Normalized breakthrough time (at 1.0 ug/cm2/min)

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The permeation data published have been generated for Alpha Solway Ltd by independent accredited testing laboratories according to the specified test methods. The data is typically the average of three fabric samples tested unless otherwise stated

* Denotes tests also carried out on seam and results equivalent to or greater than material, only, test results

Denotes mean of six measured samples

** Denotes tested conducted to ISO 6529:2013