List of Dielectric Constants

Note: Minimum recommended dielectric constants:
LR01 Free Space Radar ≥1.8 (Direct Mode); ≥1.1 (TBF Mode)
LG01 Guided Wave Radar ≥1.4 (Direct Mode with Coaxial Antenna); ≥1.1 (TBF Mode)

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Substance	Dielectric	Substance	Dielectric	Substance	Dielectric
Acetal (25°C)	3.8	Carbon black	18.8	Ethyl mercaptan	6.9
Acetaldehyde	15	Carbon disulfide	2.6	Ethyl phenyl ether	4.2
Acetamide (77°C)	59.2	Carbon tetrachloride	2.3	Ethylamine	6.9
Acetic acid	6.2	Carbonyl cyanide	10.7	Ethylene chlorhydrin	25
Acetoacetic acid ethyl ester	15	Caustic potash	3.3	Ethylene chloride	10.6
Acetone	21.5	Cellit ®	1.6	Ethylene oxide (-1°C)	13.9
Acetophenone	18	Cellulose	1.2	Ethylenediamine	15
Acetyl acetone	23	Cement	2.2	Fat coal	3.4
Acetyl bromide	16.2	Cement asbestos	3.2	Fatty acid (35°C)	1.7
Acetyl chloride	15.9	Ceramic compound	17	Fenchone	12.8
Acetylene dibromide	7.2	Cetyl alcohol (60°C)	3.6	Ferrite pellets	21
Acetylene tetrabromide	5.6	Chaff	1.5	Ferrosilicon	10
Activated charcoal	12	Chalk	2.1	Ferrozell	18.3
Adipic Acid	1.8	Chamotte	1.8	Fertiliser	4.3
Aerosile ®	1	Charcoal	1.3	Fiber glass powder	1.1
Allyl alcohol	20.6	Chloral	6.7	Fish oil	2.6
Allyl chloride	8.2	Chlorinated lime	2.3	Flax pellets	1.4
Allyl iodide	6.1	Chlorine. liquid	2.1	Flour	2.5
Alum (60°C)	4.2	Chloroacetic acid	33.4	Fluorbenzene	6.4
Aluminium bromide (100°C)	3.4	Chlorobenzene	5.7	Fluorine	1.5
Aluminium foil	10.8	Chloroform (trichlormethane)	4.8	Fly ash	3.3
Aluminium hydroxide	2.5	Chlorohydrin	31	Foam flakes	1.1
Aluminium splinters	7.3	Chocolate powder	2	Formamide	109
Aluminium sulfate	2.6	Clay	2.3	Formic acid	57.9
Ammonia	15	Coal dust	2.5	Furan	3
Ammonia solution (25%)	31.6	Coal. 15 % moisture	4	Furfurol	41.7
Ammonium chloride	4.3	Coconut oil (refined)	2.9	Gas. petrol	2
Amyl amine	4.5	Coffee beans	1.5	Germanium tetrachloride	2.4
Aniline	7	Coke	3	Glass granulate	4
Animal feed grist	2.4	Cola essence	17.3	Glucose (50%)	30
Anisaldehyde	22.3	Concentrated feed	3.2	Glue	2
Anisole	4.5	Copper ore	5.6	Glycerol	13.2
Anthracite	3.2	Cork powder	1.7	Glycerol water	37
Antimony hydride	1.8	Corn	3.6	Glycol	37
Argon	1.5	Corn grist	2.1	Glysantin	25
Arsine	2.1	Corn starch sirup	18.4	Grain grist	3
Arsole	2.3	Cotton fibre flour	3.2	Grain of mustard seed	3.6
Asbestos	10	Cream (skin)	19	Grain of soy	2.9
Ascorbic acid (vitamin C)	2.1	Cresol	11	Granuform	4
Azelaic acid diethyl ester	5	Cresol resin	18.3	Gravel	2.6
Azoxybenzene (36°C)	5.2	Crystalline sugar	2	Green vitriol (80°C)	32.4
Basalt	2.5	Cullet (crushed glass)	2	Guaiacol	11
Bauxite	2.5	Cuminaldehyde	10.7	Guano	2.5
Beet seeds	3.5	Cyanogen	2.5	Gypsum	1.8
Beets cuttings	7.3	Decalin	2.1	Hazelnuts	2
Bentonite	8.1	Degalan	3.1	Heating oil	2.1
Benzalchloride	6.9	Desmodur	10	Heavy fuel oil	2.2
Benzaldehyd	17.6	Diacetone alcohol	18.2	Helium	1.1
Benzene	2.3	Diamyl ether	3	Heptanal	9.1
Benzene	2	Dibenzofuran (100°C)	3	Heptane	1.9
Benzene. heavy	3.2	Dibenzyl (60°C)	2.5	Heptanoic acid (71°C)	2.6
Benzil (Dibenzoyl) (80°C)	10	Diesel fuel	2.1	Heptene	2.1
Benzyl alcohol	13.5	Diethyl amine	3.8	Hexachlorobutadiene	2.6
Benzyl chloride	7	Diethyl carbonate	2.8	Hexane	1.9
Benzylamine	4.6	Diethyl laurate	3.4	Hexanol	12.5
Bitumen	2.8	Diethyl maleate	10	Hexene	2.1
Black liquor	32	Diethyl mercury	2.1	Hibiscus	2.8
Bone fat	2.7	Dimethyl ether (methyl ether)	5	Honey	24
Bone meal	1.7	Diofan	32	Hot glue (150°C)	2.3
Bore oil emulsion	25	Dioxane	2	Hydrazine	58
Bornylacetat	4.6	Diphenyl (75°C)	2.5	Hydrochloric acid	5
Bromine	3.1	Dry yeast	2	Hydrogen	1.2
Butanoic acid	3	Emulphor	4	Hydrogen cyanide	158
Cacao beans	1.8	Epichlorohydrin	23	Hydrogen fluoride (0°C)	83.6
Calcium fluoride	2.5	Ethanol (ethyl alcohol)	16.2	Hydrogen iodide	2.9
Camphene	2.3	Ethayl acetate	6	Hydrogen peroxide (0°C)	84.2
Caproic acid (71°C)	2.6	Ether	4	Hydrogen sulfide	6
Caprylic acid	2.5	Ethyl benzene	2.4	Ice cream (-20°C)	16.5
Carbazole	1.3	Ethyl benzoate	6	Imidazole. pure (100°C)	23

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Substance	Dielectric	Substance	Dielectric	Substance	Dielectric
Iodine	11.1	Octene	2.1	Silicone oil	2.7
Iodobenzene	4.6	Octyl bromide	5	Silicone rubber	2.9
Iron(III) oxide red	1.9	Oil	2	Skimmed milk powder	2.3
Isoamyl acetate	4.8	Oleic acid	2.5	Soap flakes	9.2
Isoamyl alcohol	15.6	Oxalo ethyl acetate	6	Soap pellets	3.5
Isoamyl bromide	6	Oxygen	1.5	Soda	3
Isoamyl chloride	6.1	Palm seed oil	1.8	Sodium chloride	23
Isoamyl ether	2.8	Palm seeds	2.8	Sodium methylate	1.5
Isoamyl iodide	5.6	Palmitic acid	2.3	Sodium perborate	2.2
Isobutanoic acid	2.6	Paper scraps	1.2	Sodium peroxide	2.7
Isobutyl alcohol	18.1	Paraffin	1.6	Sodium silicate	16
Isobutyl amine	4.4	Paraldehyde	15.1	Sodium sulfate	2.7
Isobutyl benzene	2.3	Pasta	1.9	Soft soap	32
Isobutyl bromide	7.2	Peanut expeller	2.4	Solvent	18
Isobutyl chloride	6.5	Peanuts. dried	3.1	Soy flour	4.5
Isobutyl cyanide	18	Pelargon	2.8	Splints	1.1
Isobutyl iodide	6.5	Pentaborane	21	Stearic acid	2.3
Isobutyl nitrate	11.7	Pentachloroethane	3.8	Styrene	2.4
Isobutyl silane	2.5	Pentachlorotoluene	4.8	Sugar	1.8
Isocyanate	6.1	Pentanal (15°C)	11.8	Sulfur	3.5
Isoprene	2.1	Pentane	1.8	Sulfur dioxide	14
Isopropanol	18	Pentanol	14.8	Sulfur trioxide	3.1
Isoquinoline	10.7	Pentene	2	Sulfuric acid	21.9
Isosafrol	3.3	Perchlorate	3.6	Sulfuric acid (15%)	31
Ketchup	24	Perlite	1.7	Sulfuric acid (97%)	8.6
kieselguhr	1.4	PET powder	1.5	Sunflower seeds	2
Lanolin	4.2	Phenol	8	Talcum	1.5
Lard (80°C)	2.1	Phenol resin	7.4	Tankage	1.9
Latex	24	Phosgene	4.3	Tar	4
Laughing gas	1.5	Phosphate	4	Tartaric acid	35.9
Lime	2	Phosphorus salt	4	Tea powder	2
Linoleic acid	2.7	Phosphorus. liquid	3.9	Terephthalic acid	1.5
Malt	2.7	Pinane	2.1	Terpines	2.7
Mandelyl nitrile	18	Piperidine	5.8	Terpinolene	2.3
Marble chippings small (2-3 mm)	2.5	Plastic pellets	1.2	Tetrachlorethylene	2.5
Meat and bone meal	1.9	Polyamide pellets	1.7	Thomaskali® powder dust	3.4
Meat and bone meal	2.2	Polyethylene	1.2	Thujone (0°C)	10.8
Menthol (42°C)	4	Polypropylene	1.6	Tinder	12
Mesityl oxide	15	Polyrol	2.8	Titanium tetrachloride	2.8
Metal powder	6	Polyvinyl acetals	2.8	Tobacco powder	1.8
Methanol (methyl alcohol)	33	Popcorn	1.1	Toluene	2.4
Methyl acetate	8	Potash salt	2	Tooth paste	18.3
Methyl aconitate	6.3	Potato starch	1.7	Transformer oil	2.1
Methyl cellulose	3	Pril	1.2	Trichloroethylene	3.2
Methyl iodide	7.1	Printing ink	4.6	Triethylaluminium	2.9
Methyl nitrate	23.5	Propanoic acid	3.2	Triptan ®	1.9
Methylene bromide	7	Propanol (propyl alcohol)	2.2	Ultrasil	1.4
Methylene chloride	9	Propionaldehyde (15°C)	14.4	Undecane	2
Methylene chloride	9.1	Propylamine	3	Urea	2.9
Metylene iodide	5.3	Propylene chloride	9	Valeric acid	2.7
Molasses	31.3	Propylene. liquid	1.9	Vinegar	24
Monochloromethane	9.8	Propylether	3.3	Viscose	34.5
Morpholine	7.3	PVC powder. pure	1.3	Water	80.3
Mouse feed	2.3	Pyridine	13.2	Water (360°C)	10
Mustard	24	Pyrroles	8	Water. demineralised	29.3
Naphthalene	2.5	Quartz stone meal	2.7	Water. heavy	78.3
Naphthenic acid	2.6	Quinoline	8.8	Water-in-oil-emulsion	24.2
Nitric acid (98%)	19	Rapeseed	3.3	Wax	1.8
Nitro varnish	5.2	Rapeseed grist	2.1	Wheat	4
Nitrobenzene	35	Resin	1.5	Wheat starch	2.5
Nitroethane	29	Rice	3	White spirit	2
Nitroglycerin	19.3	Rock salt (0 - 25 mm)	4.3	Wine	25
Nitroglycol	28.3	Rye	6	Wood chips	2.3
Nitromethane	39	Rye bran	2.2	Wood swarf	1.5
Nitrophoska	5.4	Saccharose solution	20	Wort	25
Nitrosyl bromide (13°C)	15.2	Salt water	32	Xylene	2.3
Nitrosyl chloride	19	Sawdust	1.3	Xylitol	40
Oats	4.9	Silica sand	2	Zinc oxide	1.5
Octane	2	Silicic acid	2	Zinc powder	4.4