

## Material Properties

### Chemical resistance:

	PC/ABS	Polyamide	Rubber	Polyethylene	Polystyrene	PBT at 23°C	PBT at 60°C	Stainless steel (V 1.4301)
<b>1. Hydrocarbons</b>								
n-hexane	O	+	-	+	+	+	+	◇
four star petrol, containing aromatic chemicals	-	+	-	+	-	+	O	+
heating oil	O	+	O	+	O	+	+/O	+
gasoline f. cleaning purposes (free of aromatic chemicals)	O	+	O	O	O	+	O	+
benzol	-	+	-	+	-	+	-	+
naphtalene	-	+	-	+	O	+	O	◇
nitro benzol	-	+	-	O	-	O	O	◇
toluol	-	+	-	+	-	+	-	+
<b>2. Alcohols</b>								
ethyl alcohol, 96%	O	O	+	+	O	+	O	+
isopropanol	O	O	+	O	+	+	O	◇
phenol	-	-/Δ	-	+	O	-/Δ	-/Δ	O
glykol	O	O/Δ	+	+	+	O	-	◇
glycerine	O	+	+	+	+	+	+	+
<b>3. Ketones</b>								
acetone	-	+	+	+	-	+	-	+
methyl isobutyl cetone	-	+	-	O	-	+	O	◇
<b>4. Acids (max. concentration)</b>								
hydrochloric acid (20%)	+	-	O	+	+	O	-	-
nitric acid (10%)	+	-	O	O	O	+	O	+
phosphoric acid (30%)	+	-	+	+	+	+	O	+
sulfuric acid (30%)	+	-	+	+	+	O	-	O
citric acid (10%)	+	+	+	+	+	+	O	+
lactic acid (10%)	+	+	+	+	+	+	+	+
acetic acid (10%)	+	O	-	+	+	+	O	+
oleic acid	-	+	-	+	+	+	O	O
<b>5. Bases</b>								
aniline	-	O	-	+	-	O	-	+
sodium hydroxide (10%)	-	+	+	+	+	O	-	◇
ammonia solution, diluted	-	+	+	+	+	O	-	+
<b>6. Halogenes</b>								
bromine	-	-	-	-	-	◇	◇	-
chlorine	-	-	-	+	-	◇	◇	O
iodine	-	-	+	+	O	◇	◇	O
<b>7. Oils, greases</b>								
soybean oil	-	+	-	+	+	+	+	+
olive oil	-	+	-	+	+	+	+	+
lard	-	+	-	+	+	+	+	+
butter	-	+	-	+	+	+	+	+
<b>8. Salt solutions</b>								
potassium carbonate, saturated	-	+	+	O	+	+	O	+
sodium thiosulfate	+	+	+	+	+	+	O	+
sodium hypochloride	+	-	-	O	+	+	+	O
sea water	+	+	+	+/O	+	+	+	+
<b>9. Detergents</b>								
curd soap solution, 2%	+	+	O	+	+	+	+	+
washing powder, e.g. "Persil"	O	+	+	+	+	+	+	+
cleaning agent, e.g. "Dor"	+	+	O	+/O	+	◇	◇	+
<b>10. Other media</b>								
diethyl ether	-	+	-	+	-	+	O	◇
urea	+	O	+	+	+	◇	◇	+
trichloric ethylene	-	O	-	+	-	O	-	+
hydrogen superoxide, 30	+	O	-	O	+	+	O	O

+ = resistant  
 O = resistant to a limited extent  
 - = not resistant  
 Δ = soluble  
 ◇ = no test results available yet

## Protection degrees

IEC/EN 60 529, VDE 0470 T1:

The type of protection is indicated by the IP code.  
 IP = International Protection

Component	Digits or letters IP	Meaning for the protection of operational equipment	Meaning for the protection of persons
Code letters	First digit	Protection against ingress of solid foreign objects	Against access to dangerous parts with:
		0	(not protected)
		1	≥ 50 mm diameter
		2	≥ 12,5 mm diameter
		3	≥ 2,5 mm diameter
		4	≥ 1,0 mm diameter
Second digit	5	dust protected	tool wire
	6	dust proof	wire
	Second digit	Protection against harmful effects due to the ingress of water	
		0	(not protected)
		1	vertically dripping water
		2	dripping (15° angle)
		3	spray water
		4	splash water
5		water jets	
6		powerful water jets	
7	temporary immersion		
8	continuous immersion		

Source: IEC/EN 60 529, VDE 0470 T1

Note:

According to the standard IEC/EN 60 309, CEEtyp plugs and sockets have the following protection degrees:

16 - 63 A: IP 44 and IP 67

125 A: only IP 67