## Kotex/Carbotex Polycarbonate



Grade: K-30CF10 Electrically conductive

Colour: Natural (Black) High viscosity

Mechanical Properties   ASTM D256   Y-notched 1/8"   MPa   118   MPa	Properties	Standards	Test conditions	Units	Typical values	
$ \begin{tabular}{ c c c c c c c } \hline Lood impact strength & ASTM D256 & $V-notched 1/8"$ & $fr^*lbf/in$ & $1.5$ & $fr^*lbf/in$ & $1.5$ & $MPa$ & $118$ & $kgf/cm^2$ & $1200$ & $lbf/in^2$ & $17000$ & $lbf/in^2$ & $1500$ & $lbf/in^2$ & $21800$ & $lbf/in^2$ & $21800$ & $MPa$ & $150$ & $lbf/in^2$ & $21800$ & $MPa$ & $1500$ & $lbf/in^2$ & $21800$ & $lbf/in^2$ & $lb$	Mechanical Properties					
ASTM D256   V-notched 1/8"   kgf' cm'cm   8   ft ·lbf/in   1.5   1.5   MPa   118   kgf'cm²   1200   lbf/in²   17000   lbf/in²   150   kgf/cm²   1530   lbf/in²   lbf	Izod impact strength	ASTM D256		J/m	80	
$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$				kgf•cm/cm	8	
Tensile strength at break         ASTM D638				ft•lbf/in	1.5	
Tensile elongation at break	Tensile strength at break	ASTM D638		MPa	118	
Tensile elongation at break				kgf/cm <sup>2</sup>	1200	
$\begin{tabular}{ c c c c c c c c c c c c c c c c c c c$				lbf/in <sup>2</sup>	17000	
Flexural strength	Tensile elongation at break	ASTM D638		%	118	
$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$	Flexural strength	ASTM D790		MPa	150	
$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$				kgf/cm <sup>2</sup>	1530	
Flexural modulus         ASTM D790					21800	
Thermal Properties           Melt flow rate         ASTM D1238         300°C, 1.2kgf         g/10min            Heat deflection temperature         ASTM D648         18.6 kgf/cm²         °C         147           Heat deflection temperature         ASTM D648         18.6 kgf/cm²         °C         147           Electrical Properties         F         296           Dielectric breakdown strength         ASTM D149         1.6mm         kV/mm            Dielectrical constant         ASTM D150         10 ° Hz             Dissipation factor         ASTM D150         10 ° Hz             Arc resistance         ASTM D495          Sec.         110           Volume resistively         ASTM D257          Ω·cm         10 °           Optical Properties           Light transmittance         ASTM D542              Haze         ASTM D1003         3 mm         %         Opaque           Light refractive         ASTM D570         3 mm         %            Haze         ASTM D570         24 hrs at 23°C         %         ≤ 0.2           Mould s	Flexural modulus	ASTM D790		MPa	5700	
Thermal Properties           Melt flow rate         ASTM D1238         300°C, 1.2kgf         g/10min            Heat deflection temperature         ASTM D648         18.6 kgf/cm²         °C         147           Heat deflection temperature         ASTM D648         18.6 kgf/cm²         °C         147           Electrical Properties         F         296           Dielectric breakdown strength         ASTM D149         1.6mm         kV/mm            Dielectrical constant         ASTM D150         10 ° Hz             Dissipation factor         ASTM D150         10 ° Hz             Arc resistance         ASTM D495          Sec.         110           Volume resistively         ASTM D257          Ω·cm         10 °           Optical Properties           Light transmittance         ASTM D542              Haze         ASTM D1003         3 mm         %         Opaque           Light refractive         ASTM D570         3 mm         %            Haze         ASTM D570         24 hrs at 23°C         %         ≤ 0.2           Mould s				kgf/cm <sup>2</sup>	58200	
Melt flow rate         ASTM D1238         300°C, 1.2kgf         g/10min            Heat deflection temperature         ASTM D648         18.6 kgf/cm²         °C         147           F         296           Electrical Properties           Dielectric breakdown strength         ASTM D149         1.6mm         kV/mm            Dielectrical constant         ASTM D150         10 ° Hz             Dissipation factor         ASTM D150         10 ° Hz             Arc resistance         ASTM D495          Sec.         110           Volume resistively         ASTM D257          Ω · cm         10 ° S           Optical Properties           Light transmittance         ASTM D542              Haze         ASTM D1003         3 mm         %         Opaque           Light refractive         ASTM D502              Haze         ASTM D503         3 mm         %            Other Properties           Specific gravity         ASTM D570         24 hrs at 23°C water immersion         %         ≤ 0.2 <td>lbf/in<sup>2</sup></td> <td>828000</td>				lbf/in <sup>2</sup>	828000	
Heat deflection temperature       ASTM D648       18.6 kgf/cm²       °C       147         Electrical Properties         Dielectric breakdown strength       ASTM D149       1.6mm       kV/mm          Dielectrical constant       ASTM D150       10 $^6$ Hz           Diesipation factor       ASTM D150       10 $^6$ Hz           Arc resistance       ASTM D495        Sec.       110         Volume resistively       ASTM D257        Ω · cm       10 $^5$ Optical Properties         Light transmittance       ASTM D1003       3 mm       %       Opaque         Light refractive       ASTM D542            Haze       ASTM D1003       3 mm       %          Other Properties         Specific gravity       ASTM D792         1.24         Water absorption       ASTM D570       24 hrs at 23 °C water immersion       %       ≤ 0.2         Mould shrinkage       ASTM D955        %       0.3 ~0.5	Thermal Properties					
Heat deflection temperature         ASTM D648         18.6 kgf/cm²         F         296           Electrical Properties           Dielectric breakdown strength         ASTM D149         1.6mm         kV/mm            Dielectrical constant         ASTM D150 $10^6$ Hz             Dissipation factor         ASTM D150 $10^6$ Hz             Arc resistance         ASTM D495          Sec.         110           Volume resistively         ASTM D257 $Ω \cdot$ cm $10^5$ Optical Properties           Light transmittance         ASTM D542              Haze         ASTM D503         3 mm         %         Opaque           Light refractive         ASTM D503         3 mm         %            Haze         ASTM D503         3 mm         %            Other Properties           Specific gravity         ASTM D570         24 hrs at 23 °C water immersion         %         ≤ 0.2           Mould shrinkage         ASTM D955          %         0.3 ~0.5	Melt flow rate	ASTM D1238	300°C, 1.2kgf	g/10min		
F         296           Electrical Properties           Dielectric breakdown strength         ASTM D149         1.6mm         kV/mm            Dielectrical constant         ASTM D150         10 6 Hz             Dissipation factor         ASTM D150         10 6 Hz             Arc resistance         ASTM D495          Sec.         110           Volume resistively         ASTM D257          Ω·cm         10 5           Optical Properties           Light transmittance         ASTM D1003         3 mm         %         Opaque           Light refractive         ASTM D542              Haze         ASTM D1003         3 mm         %            Other Properties           Specific gravity         ASTM D570         24 hrs at 23 °C water immersion         %         ≤ 0.2           Mould shrinkage         ASTM D955          %         0.3 ~0.5	Heat deflection temperature	ASTM D648	18.6 kgf/cm <sup>2</sup>	°C	147	
Dielectric breakdown strength         ASTM D149         1.6mm         kV/mm            Dielectrical constant         ASTM D150 $10^6$ Hz             Dissipation factor         ASTM D150 $10^6$ Hz             Arc resistance         ASTM D495          Sec.         110           Volume resistively         ASTM D257          Ω · cm $10^5$ Optical Properties           Light transmittance         ASTM D1003         3 mm         %         Opaque           Light refractive         ASTM D542              Haze         ASTM D1003         3 mm         %            Other Properties           Specific gravity         ASTM D792           1.24           Water absorption         ASTM D570         24 hrs at 23 °C water immersion         %         ≤ 0.2           Mould shrinkage         ASTM D955          %         0.3 ~0.5				°F	296	
Dielectrical constant         ASTM D150 $10^6$ Hz             Dissipation factor         ASTM D150 $10^6$ Hz             Arc resistance         ASTM D495          Sec.         110           Volume resistively         ASTM D257          Ω · cm $10^5$ Optical Properties           Light transmittance         ASTM D1003         3 mm         %         Opaque           Light refractive         ASTM D542              Haze         ASTM D1003         3 mm         %            Other Properties           Specific gravity         ASTM D792           1.24           Water absorption         ASTM D570         24 hrs at 23 °C water immersion         %         ≤ 0.2           Mould shrinkage         ASTM D955          %         0.3 ~ 0.5	Electrical Properties					
Dissipation factor         ASTM D150 $10^6$ Hz             Arc resistance         ASTM D495          Sec.         110           Volume resistively         ASTM D257 $Ω \cdot cm$ $10^5$ Optical Properties           Light transmittance         ASTM D1003         3 mm         %         Opaque           Light refractive         ASTM D542              Haze         ASTM D1003         3 mm         %            Other Properties           Specific gravity         ASTM D792           1.24           Water absorption         ASTM D570 $\frac{24 \text{ hrs at } 23^{\circ}C}{\text{water immersion}}$ %         ≤ 0.2           Mould shrinkage         ASTM D955          %         0.3~0.5	Dielectric breakdown strength	ASTM D149	1.6mm	kV/mm		
Arc resistance       ASTM D495        Sec.       110         Volume resistively       ASTM D257        Ω · cm $10^5$ Optical Properties         Light transmittance       ASTM D1003       3 mm       %       Opaque         Light refractive       ASTM D542            Haze       ASTM D1003       3 mm       %          Other Properties         Specific gravity       ASTM D792         1.24         Water absorption       ASTM D570       24 hrs at 23 °C water immersion       %       ≤ 0.2         Mould shrinkage       ASTM D955        %       0.3 ~ 0.5	Dielectrical constant	ASTM D150	10 <sup>6</sup> Hz			
Volume resistively         ASTM D257 $\Omega$ • cm         10 5           Optical Properties           Light transmittance         ASTM D1003         3 mm         %         Opaque           Light refractive         ASTM D542              Haze         ASTM D1003         3 mm         %            Other Properties           Specific gravity         ASTM D792           1.24           Water absorption         ASTM D570         24 hrs at 23 °C water immersion         %         ≤ 0.2           Mould shrinkage         ASTM D955          %         0.3 ~ 0.5	Dissipation factor	ASTM D150	10 <sup>6</sup> Hz			
Optical Properties         Light transmittance       ASTM D1003       3 mm       %       Opaque         Light refractive       ASTM D542            Haze       ASTM D1003       3 mm       %          Other Properties         Specific gravity       ASTM D792         1.24         Water absorption       ASTM D570 $\frac{24 \text{ hrs at } 23^{\circ}\text{C}}{\text{water immersion}}$ %       ≤ 0.2         Mould shrinkage       ASTM D955        %       0.3~0.5	Arc resistance	ASTM D495		Sec.	110	
Light transmittance       ASTM D1003       3 mm       %       Opaque         Light refractive       ASTM D542            Haze       ASTM D1003       3 mm       %          Other Properties         Specific gravity       ASTM D792         1.24         Water absorption       ASTM D570       24 hrs at 23 °C water immersion       %       ≤ 0.2         Mould shrinkage       ASTM D955        %       0.3 ~ 0.5	Volume resistively	ASTM D257		Ω•cm	10 5	
Light refractive ASTM D542 Haze ASTM D1003 $3 \text{ mm}$ %  Other Properties  Specific gravity ASTM D792 1.24  Water absorption ASTM D570 $24 \text{ hrs at } 23^{\circ}\text{C}$ water immersion $24 \text{ mass}$ $24 \text{ hrs at } 23^{\circ}\text{C}$ water immersion $24 \text{ mass}$ $24 \text{ hrs at } 23^{\circ}\text{C}$ water immersion $24 \text{ mass}$ $24 \text{ hrs at } 23^{\circ}\text{C}$ water immersion $24 \text{ mass}$ $24 \text{ hrs at } 23^{\circ}\text{C}$ water immersion $24 \text{ mass}$ $24 \text{ hrs at } 23^{\circ}\text{C}$ water immersion $24 \text{ mass}$ $24 \text{ hrs at } 23^{\circ}\text{C}$ water immersion $24 \text{ mass}$ $24 \text{ hrs at } 23^{\circ}\text{C}$ water immersion $24 \text{ mass}$ $24 \text{ hrs at } 23^{\circ}\text{C}$ water immersion $24 \text{ mass}$ $24 \text{ hrs at } 23^{\circ}\text{C}$ water immersion $24 \text{ mass}$ $24 \text{ hrs at } 23^{\circ}\text{C}$ water immersion $24 \text{ mass}$ $24 \text{ hrs at } 23^{\circ}\text{C}$ water immersion $24 \text{ mass}$ $24 \text{ hrs at } 23^{\circ}\text{C}$ water immersion $24 \text{ mass}$ $24 \text{ hrs at } 23^{\circ}\text{C}$ water immersion $24 \text{ mass}$ $24 \text{ hrs at } 23^{\circ}\text{C}$ water immersion $24 \text{ mass}$ $24 \text{ hrs at } 23^{\circ}\text{C}$ water immersion $24 \text{ mass}$ $24 \text{ hrs at } 23^{\circ}\text{C}$ water immersion $24 \text{ mass}$ $24 \text{ hrs at } 23^{\circ}\text{C}$ water immersion $24 \text{ mass}$ $24 \text{ mass}$ $24 \text{ hrs at } 23^{\circ}\text{C}$ water immersion $24 \text{ mass}$ $24 \text{ hrs at } 23^{\circ}\text{C}$ water immersion $24 \text{ mass}$ $24 \text{ hrs at } 23^{\circ}\text{C}$ water immersion $24 \text{ mass}$ $24 \text{ hrs at } 23^{\circ}\text{C}$ water immersion $24 \text{ mass}$ $24 \text{ hrs at } 23^{\circ}\text{C}$ water immersion $24 \text{ mass}$ $24 \text{ hrs at } 23^{\circ}\text{C}$ water immersion $24 \text{ mass}$ $24 \text{ hrs at } 23^{\circ}\text{C}$ water immersion $24 \text{ mass}$ $24 \text{ hrs at } 23^{\circ}\text{C}$ water immersion $24 \text{ mass}$ $24 \text{ hrs at } 23^{\circ}\text{C}$ water immersion $24 \text{ mass}$ $24 \text{ hrs at } 23^{\circ}\text{C}$ water immersion $24 \text{ mass}$ $24 \text{ hrs at } 23^{\circ}\text{C}$ water immersion $24 \text{ mass}$ $24 \text{ hrs at } 23^{\circ}\text{C}$ water immersion $24 \text{ mass}$ $24 \text{ hrs at } 23^{\circ}\text{C}$ water immersion $24 \text{ mass}$ $24 \text{ hrs at } 23^{\circ}\text{C}$ water immersion $24 \text{ mass}$ $24  hr$	Optical Properties					
Haze       ASTM D1003       3 mm       %          Other Properties         Specific gravity       ASTM D792         1.24         Water absorption       ASTM D570	Light transmittance	ASTM D1003	3 mm	%	Opaque	
Other PropertiesSpecific gravityASTM D7921.24Water absorptionASTM D570 $24 \text{ hrs at } 23^{\circ}\text{C}$ water immersion% $\leq 0.2$ Mould shrinkageASTM D955% $0.3 \sim 0.5$	Light refractive	ASTM D542				
Specific gravity ASTM D792 1.24  Water absorption ASTM D570 $24 \text{ hrs at } 23^{\circ}\text{C}$ $\%$ $\leqq 0.2$ Mould shrinkage ASTM D955 $\%$ 0.3~0.5	Haze	ASTM D1003	3 mm	%		
Water absorptionASTM D570 $24 \text{ hrs at } 23^{\circ}\text{C}$ water immersion%≤ 0.2Mould shrinkageASTM D955%0.3~0.5	Other Properties					
Water absorption ASTM D570 water immersion $\%$ $\leqq 0.2$ Mould shrinkage ASTM D955 $\%$ 0.3~0.5	Specific gravity	ASTM D792			1.24	
· · · · · · · · · · · · · · · · · · ·	Water absorption	ASTM D570		%	≦ 0.2	
Flammability UL94 (Equivalent V-2)	Mould shrinkage	ASTM D955		%	0.3~0.5	
	Flammability	UL94			(Equivalent V-2)	

To our best knowledge, the values contained herein are typical of uncoloured PC and given in good faith. They may be affected by colorants, other additives, the design of a mould/die, moulding techniques applied, the size and shape of a moulded article. In view of these factors, the properties do not relieve customers from carrying out their own investigations and tests. It is entirely the customer's responsibility to determine the suitability of material and grade used for their intended application. No warranty, express or implied is made nor is liability accepted in connection with any of the information provided. We reserve the right to make additions, deletions, or modifications to the information at any time without prior notification. Kotec Corporation (27.12.2010)