

LEXANTM RESIN HF1140R

REGION ASIA

DESCRIPTION

LEXAN™ HF1140R resin is a 25 MFR polycarbonate, MVR of 26. Mold release. UL94 V2 rated. This material is food contact compliant in most jurisdictions – exceptions may exist, request a declaration for details.

TYPICAL PROPERTY VALUES

Revision 20250819

RNOPERTIES TYPICAL VALUES UNITS EST METHODS MECHANICAL Tensile Stress, yid., Type 1, 50 mm/min 62 Maya ASTM DG38 Tensile Stress, bir, Type 1, 50 mm/min 120 % ASTM DG38 Tensile Stress, bir, Type 1, 50 mm/min 120 % ASTM DG38 Flexural Modulus, 1, 3 mm/min, 50 mm span 93 Maya ASTM DG38 Flexural Modulus, 1, 3 mm/min, 50 mm span 90 Maya ASTM DG36 MECHAT W W ASTM DG79 MERCAT W W ASTM DG79 MINDACT W ASTM DG76 ASTM DG76 Tensile Impact Strength, Type 5 378 AJM Jm? ASTM DG78 Tensile Impact Strength, Type 5 378 ASTM DG78 ASTM DG78 Tensile Impact Strength, Type 5 378 ASTM DG78 ASTM DG78 Tensile Impact Strength, Type 5 378 ASTM DG78 ASTM DG78 Tensile Impact Strength, Type 5 378 ASTM DG78 ASTM DG78 Tensile Impact Strength, Type 5 378 ASTM DG78 <t< th=""><th></th><th></th><th></th><th></th></t<>				
Tensile Stress, brk, Type I, 50 mm/min 62 MPa ASTM D638 Tensile Stress, brk, Type I, 50 mm/min 65 MPa ASTM D638 Tensile Strain, brk, Type I, 50 mm/min 120 % ASTM D638 Flexural Stress, brk I, 31 mm/min, 50 mm span 33 MPa ASTM D790 IERward Modulus, 1.3 mm/min, 50 mm span 30 MPa ASTM D790 IERward Modulus, 1.3 mm/min, 50 mm span 640 Jm ASTM D618 IERward Strength, Type S 378 Mpm² ASTM D1822 Installe impact Etergy@peak, 23°C 378 Mpm² ASTM D6182 Installe impact Etergy@peak, 23°C 378 Mpm² ASTM D6182 Installe impact Etergy@peak, 23°C 39 C ASTM D648 Relative Temp Index, Mech w/mace 12 C ASTM D648 Relative Temp Index, Mech w/mipact 130 C U, 7468 Relative Temp Index, Mech w/mipact 12 S ASTM D792 Mell ton Strinkage, flow, 3.2 mm 50 2 Mpm² ASTM D1938 Mell Strinkage, flow, 3.2 mm	PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
Ternile Stress, brk. Type I. 50 mm/min 65 MPa ASTM D638 Tensile Stress, ydt. Type I. 50 mm/min 120 % ASTM D638 Reward Stress, ydt. 3 mm/min, 50 mm span 230 MPa ASTM D790 Ibeward Modus, 1.3 mm/min, 50 mm span 2300 MPa ASTM D790 Ibeward Modus, 1.3 mm/min, 50 mm span 2300 MPa ASTM D780 Ibeward Modus, 1.3 mm/min, 50 mm span 200 J/m ASTM D780 Ibeward Modus, 1.3 mm/min, 50 mm span 40 J/m ASTM D586 Ibeward Modus, 1.3 mm/min, 50 mm span 40 J/m ASTM D480 Ibeward Modus, 1.3 mm/min, 50 mm span 40 ASTM D586 ASTM D586 Ibeward Modus, 1.3 mm/min, 50 mm span 42 ASTM D382 ASTM D482 Ibeward Modus, 1.3 mm/min, 50 mm span 12 C ASTM D482 ASTM D482 Relative Temp Index, Mend wij impact 13 C U. 7468 ASTM D483 ASTM D482 Mediative Emp Index, Mech wij impact wis wij impact wis wij impact wis wij impa	MECHANICAL			
Tensile Strain, brk, Yipe I, 50 mm/min 120 % MPa ASTM DG38 Flexural Modulus, 13 mm/min, 50 mm span 93 MPa ASTM D790 Flexural Modulus, 13 mm/min, 50 mm span 40 Jm ASTM D790 MPAPCT V V MSTM D256 Tensile Impact, notched, 23°C 640 J/m ASTM D256 Tensile Impact Strength, Type S 378 J/m² ASTM D1822 Tensile Impact Strength, Type S 378 J/m² ASTM D1822 Tensile Impact Strength, Type S 378 J/m² ASTM D482 Tensile Impact Strength, Type S 378 J/m² ASTM D1822 Tensile Impact Strength, Type S 378 J/m² ASTM D482 Tensile Impact Strength, Type S 378 J/m² ASTM D482 Tensile Impact Strength, Type S 378 ASTM D484 ASTM D484 Tensile Impact Strength, Type S 380 PC Q AC468 Relative Temp Index, Mech w/mipact Densile Strength Mechanisms 19 PC ASTM D492 Molt Shrikkage, Towak Strength, Yee Strength Mechanisms	Tensile Stress, yld, Type I, 50 mm/min	62	MPa	ASTM D638
Flexural Stress, yid, 1.3 mm/min, 50 mm span 93 MPa ASTM D790 Flexural Modulus, 1.3 mm/min, 50 mm span 200 MPa ASTM D790 IMPACT V V STM D256 Teod impact, notched, 23°C 640 J/m ASTM D256 Tensile impact Strength, Type S 378 J/m ASTM D363 THERMAL V ASTM D368 STM D368 THERMAL *** MSTM D488 ASTM D648 Relative Temp Index, Mech w/ impact 130 °C MSTM D648 Relative Temp Index, Mech w/ impact 30 °C U.7 468 Relative Temp Index, Mech w/ impact 12 STM D792 MSTM D792 WIST Y STM D792 MSTM D792 William Males, Flow, 3.2 mm 50 20 Q<	Tensile Stress, brk, Type I, 50 mm/min	65	MPa	ASTM D638
Flexural Modulus, 1.3 mm/min, 50 mm span 300 MFa ASTM D790 IMPACT Impact, notched, 23°C 640 1/m ASTM D256 Tensile Impact Strength, Type S 54 1/m ASTM D3763 Instrumented Dart Impact Energy@peak, 23°C 54 1/m ASTM D3763 THERMAL THERMAL 1 C ASTM D648 Relative Temp Index, Elec 130 °C U.7468 Relative Temp Index, Mech w/mipact 130 °C MSIM D792 Relative Temp Index, Mech w/mipact 130 °C MSIM D792 PSPUSCAL ************************************	Tensile Strain, brk, Type I, 50 mm/min	120	%	ASTM D638
IMPACT Impact, notched, 23°C 640 J/m ASTM D256 Tensile impact Strength. Type S 378 kl/m² ASTM D1822 Instrumented Dart Impact Energy@peak, 23°C 54 J ASTM D648 HEERMAL T C ASTM D648 Relative Temp Index. Beleach Wilmpact 130 °C U.7468 Relative Temp Index, Mech wi/mpact 12 S SMID 092 Med Strinkage, flow, 3.2 mm 5.2 ~ 0.7 \$10 SMID 092 Mel Strinkage, flow, 3.2 mm 8 \$10 ASTM D103 Habez, 2.54 mm 2 X ASTM D103 Habez, 2.54 mm 2 X X Habez, 2.54 mm <	Flexural Stress, yld, 1.3 mm/min, 50 mm span	93	MPa	ASTM D790
ized impact, noticed, 23°C 640 Jm ASTM D526 Tensile impact Strength, Type S 378 Jm² ASTM D1822 Instrumented Dart Impact Energy @ peak, 23°C 54 Jm² ASTM D648 TEREMAL TUREMAL C ASTM D648 Relative Temp Index, Blec 130 °C ASTM D648 Relative Temp Index, Mech w/impact 130 °C U.7468 Relative Temp Index, Mech w/impact 12 °C U.7468 Relative Temp Index, Mech w/impact 12 °C Mech Temp Index WHSIAL V S SMI D792 WHSIAL Y SMI D792 Mech Temp Index WHSIAL Y SMI D103 Mech Temp Index Mech Temp Index Mech Temp Index Mech	Flexural Modulus, 1.3 mm/min, 50 mm span	2300	MPa	ASTM D790
Tensile Impact Strength, Type S 378 Mr/m² ASTM D1822 Instrumented Dart Impact Energy @ peak, 23°C 54 J ASTM D3763 THERMAL HOR, 28 MPa, 3.2mm, unannealed 126 °C ASTM D648 Relative Temp Index, Mech w/impact 130 °C U. 7468 Relative Temp Index, Mech w/impact 130 °C U. 7468 Relative Temp Index, Mech w/impact 130 °C U. 7468 Relative Temp Index, Mech w/impact 130 °C U. 7468 Relative Temp Index, Mech w/impact 130 °C W. 1746 Relative Temp Index, Mech w/impact 130 °C W. 1746 Relative Temp Index, Mech w/impact 12 S S ASTM D193 Relative Temp Index, Mech w/impact 12 S Mod Sh MD P3 ASTM D193 Mel Flow Relative Temp Index, Mech w/impact 12 S Mod Sh MD P3 ASTM D193 ASTM D193 Mod Sh MD P3 ASTM D193 Mod Sh MD P3 Mod Sh	IMPACT			
Instrumented Dart Impact Energy@peak, 23°C 54 J ASTM D3763 THERMAL FURTHERMAL C ASTM D648 Relative Temp Index, Elec 130 °C U.746B Relative Temp Index, Mech w/impact 130 °C Q. U.746B Relative Temp Index, Mech w/impact 12 °C SM TM D192 PUSCAL V SASIM D192 SASIM D192 Mold Shrinkage, flow, 3.2 mm 5.0 - 0.7 % SASIM D192 Mold Shrinkage, flow, 3.2 mm 5.0 - 0.7 % SASIM D192 PUSCAL V SASIM D192 SASIM D192 Bulk Flow Rate, 300°C/1.2 kgf 5 9 ASTM D103 Bulk Flow Rate, 300°C/1.2 kgf 2 1 C.0 code U.7 46A	Izod Impact, notched, 23°C	640	J/m	ASTM D256
THERMAL HDT, 1.82 MPa, 3.2mm, unannealed 126 °C ASTM D648 Relative Temp Index, Elec 130 °C Ul. 746B Relative Temp Index, Mech w/impact 130 °C Ul. 746B Relative Temp Index, Mech w/impact 130 °C Ul. 746B Will 7 Microscopy Will 7 Microscopy Will 7 Microscopy Mold Shrinkage, flow, 3.2 mm 12 S ASTM D792 Mold Shrinkage, flow, 3.2 mm 05 - 0.7 % ASTM D192 Melt Flow Rate, 300°C/1.2 kgf 5 yl min ASTM D193 Microscopy ASTM D103 ASTM D103 Hate, 15 Microscopy Melt Flow Rate, 300°C/1.2 kgf ASTM D103 ASTM D103 Hate, 15 Microscopy S Melt D103 ASTM D103 ASTM D103 Hate, 15 Microscopy Melt G4 Melt G4 Melt G4 Melt G4 Hate, 15 Microscopy Melt G4 Melt G4 Melt G4 Melt G4 Melt G4	Tensile Impact Strength, Type S	378	kJ/m²	ASTM D1822
HDT, 1.82 MPa, 3.2mm, unannealed 26 ASTM D648 Relative Temp Index, Elec 130 ***C U. 7468 Relative Temp Index, Mech w/impact 130 ***C U. 746B Relative Temp Index, Mech w/impact 130 ***C U. 746B PHYSICAL Specific Gravity 5.2 ***STM D792 Mold Shrinkage, flow, 3.2 mm 0.5-0.7 \$**STM D792 Melt Flow Rate, 300°C/1.2 kgf 5.5-0.7 \$**STM D103 BHIST TASK STM D103 Hapt Transmission, 2.54 mm 8 \$**STM D103 Hapt Molifical Flow Hapt Molifical Flow \$**STM D103 \$**STM D103 Hapt Molifical Flow \$**STM D103 \$**STM D103 Hapt Molifical Flow \$**STM D103 \$**STM D103 \$**STM D103 \$**STM D103 \$**STM D103 \$**STM D103 <td>Instrumented Dart Impact Energy @ peak, 23°C</td> <td>54</td> <td>J</td> <td>ASTM D3763</td>	Instrumented Dart Impact Energy @ peak, 23°C	54	J	ASTM D3763
Relative Temp Index, Elec130°CU.7468Relative Temp Index, Mech w/impact130°CU.746BRelative Temp Index, Mech w/o impact130°CU.746BPHYSICALSpecific Gravity1.2SATM D79Mold Shrinkage, flow, 3.2 mm1.23.0SATM D79Molt Flow Rate, 300°C/1.2 kgf5.03.0ASTM D1238BEAGE, 1.2 kgf3.03.0ASTM D1238Haze, 2.54 mm88\$ASTM D1033Haze, 2.54 mm1\$ASTM D1033Haze, 2.54 mm2CO\$Hot Wire Ignition (PLC)2PL CodeU.746AHigh Voltage Arc Track Rate (PLC)2PL CodeU.746AHigh Ampere Arc Ign, surface (PLC)2PL CodeU.746AComparative Tracking Index (UI) (PLC)2PL CodeU.746AComparative Tracking Index (UI) (PLC)2PL CodeU.746ALI RECROIN MOLDINGPL CodeU.746ADying Temperature109mU.94Dying Time (Dumlative)3-4HisHoriging Time (Cumulative)48HisHoriging Time (Cumulative)48HisHoriging Time (Cumulative)48HisHoriging Time (Cumulative)48His	THERMAL			
Relative Temp Index, Mech w/impact 130 °C Ut.746B Relative Temp Index, Mech w/o impact 130 °C Ut.746B PHYSICAL Specific Gravity 1.2 - ASTM D792 Mold Shrinkage, flow, 3.2 mm 0.5 − 0.7 \$0 ASIM D1038 PHYSICAL Use per live Kate, 300°C/1.2 kgf 25 0.7 \$10 min ASTM D1038 OPTICAL Light Transmission, 2.54 mm 88 \$2 ASTM D1003 Haze, 5.4 mm 1 \$2 MC Code ASTM D1003 LIECTRICAL High Voltage Acr Track Rate (PLC) 2 PLC Code U.7 46A High Voltage Acr Track Rate (PLC) 2 PLC Code U.7 46A Using Amper Acr Ign, surface (PLC) 2 PLC Code U.7 46A Comparative Tracking Index (UL) (PLC) 2 PLC Code U.7 46A Comparative Tracking Index (UL) (PLC) 2 PLC Code U.7 46A Light State (Lase) (PLC) PL Code <td>HDT, 1.82 MPa, 3.2mm, unannealed</td> <td>126</td> <td>°C</td> <td>ASTM D648</td>	HDT, 1.82 MPa, 3.2mm, unannealed	126	°C	ASTM D648
Relative Temp Index, Mech w/o impact130°CU. 7468PHYSICALSpecific Gravity1.2-ASTM D792Mold Shrinkage, flow, 3.2 mm0.5 – 0.7\$SABIC methodMelt Flow Rate, 300°C/1.2 kgf25g/J minASTM D1238OPTICALLight Transmission, 2.54 mm88\$ASTM D1003Haze, 2.54 mm12KC CodeUL 746AHigh Voltage Arc Track Rate {PLC}2PLC CodeUL 746AHigh Voltage Arc Track Rate {PLC}2PLC CodeUL 746AOmparative Tracking Index (UL) {PLC}2PLC CodeUL 746AComparative Tracking Index (UL) {PLC}2PLC CodeUL 746AComparative Tracking Index (UL) {PLC}2PLC CodeUL 746AValke Conjucted, 94V-2 Flame Class Rating10mmUL 946AINECTION MOLDINGWUVDrying Temperature10CVDrying Time (Cumulative)3 – 4HISUsing Time (Cumulative)48HIS	Relative Temp Index, Elec	130	°C	UL 746B
PMSICAL Specific Gravity Mold Shrinkage, flow, 3.2 mm Mold Shrinkage, flow, 3.2 mm Molt Flow Rate, 300°C/1.2 kgf Deptication Deptication Light Transmission, 2.54 mm Base, 2.54 mm	Relative Temp Index, Mech w/impact	130	°C	UL 746B
Specific Gravity1.2	Relative Temp Index, Mech w/o impact	130	°C	UL 746B
Mold Shrinkage, flow, 3.2 mm Mold Shrinkage, flow, 3.2 mm Melt Flow Rate, 300°C/1.2 kgf DTICAL Ught Transmission, 2.54 mm Base, 2.54 mm	PHYSICAL			
Melt Flow Rate, 300°C/1.2 kgf OPTICAL Light Transmission, 2.54 mm AREA, 2.54 mm Base, 2.54 m	Specific Gravity	1.2	-	ASTM D792
OPTICAL Light Transmission, 2.54 mm 88 % ASTM D1003 Haze, 2.54 mm 1 % ASTM D1003 ELECTRICAL V VC Code UL 746A High Voltage Arc Track Rate {PLC} 2 PLC Code UL 746A High Ampere Arc Ign, surface {PLC} 1 PLC Code UL 746A Comparative Tracking Index (UL) {PLC} 2 PLC Code UL 746A FLAME CHARACTERISTICS VLC Code UL 746A Male INJECTION MOLDING mm UL 94 Male Injection Time from the Cumulative (UL) {PLC} 120 °C C PLC Code UL 746A C Injection MOLDING mm UL 94 Male	Mold Shrinkage, flow, 3.2 mm	0.5 – 0.7	%	SABIC method
Light Transmission, 2.54 mm88%ASTM D1003Haze, 2.54 mm12COdeUL 746AELECTRICALPLC CodeUL 746AHigh Voltage Arc Track Rate {PLC}2PLC CodeUL 746AHigh Ampere Arc Ign, surface {PLC}1PLC CodeUL 746AComparative Tracking Index (UL) {PLC}2PLC CodeUL 746AComparative Tracking Index (UL) {PLC}2PLC CodeUL 746ALI Recognized, 94V-2 Flame Class Rating1.09mmUL 94INIECTION MOLDINGPCUL 94Drying Temperature120°CUL 94Drying Time (Cumulative)3 − 4HrsUsing Time (Cumulative)48HrsMaximum Moisture Content9.02%	Melt Flow Rate, 300°C/1.2 kgf	25	g/10 min	ASTM D1238
Haze, 2.54 mm 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	OPTICAL			
ELECTRICALHot Wire Ignition {PLC)2PLC CodeU1 746AHigh Voltage Arc Track Rate {PLC}2PLC CodeU1 746AHigh Ampere Arc Ign, surface {PLC}1PLC CodeU1 746AComparative Tracking Index (UL) {PLC}2PLC CodeU1 746AHAME CHARACTERISTICSVVVUR Recognized, 94V-2 Flame Class Rating109mmU1 94INJECTION MOLDINGVVDrying Temperature120°CVDrying Time (Cumulative)3 - 4HrsMaximum Moisture Content9.02%V	Light Transmission, 2.54 mm	88	%	ASTM D1003
Hot Wire Ignition {PLC)2PLC CodeUL 746AHigh Voltage Arc Track Rate {PLC}2PLC CodeUL 746AHigh Ampere Arc Ign, surface {PLC}1PLC CodeUL 746AComparative Tracking Index (UL) {PLC}2PLC CodeUL 746AIL Recognized, 94V-2 Flame Class Rating1.09mmUL 94INJECTION MOLDINGDrying Temperature120℃℃Drying Time3 - 4HrsDrying Time (Cumulative)48HrsMaximum Moisture Content0.02%	Haze, 2.54 mm	1	%	ASTM D1003
High Voltage Arc Track Rate {PLC} Algorithm Ampere Arc Ign, surface {PLC} Comparative Tracking Index (UL) {PLC} Algorithm Ampere Arc Ign, surface {PLC} Algorithm Ampe	ELECTRICAL			
High Ampere Arc Ign, surface {PLC} 12 PLC Code UL 746A Comparative Tracking Index (UL) {PLC} 2 PLC Code UL 746A FLAME CHARACTERISTICS UL Recognized, 94V-2 Flame Class Rating 1.09 mm UL 94 INJECTION MOLDING Drying Temperature 120 °C Drying Time (Cumulative) 48 Hrs Maximum Moisture Content 0.02 %	Hot Wire Ignition {PLC)	2	PLC Code	UL 746A
Comparative Tracking Index (UL) {PLC} 2 PLC Code UL 746A FLAME CHARACTERISTICS UL Recognized, 94V-2 Flame Class Rating 1.09 mm UL 94 INJECTION MOLDING Drying Temperature 120 °C Drying Time (Cumulative) 48 Hrs Maximum Moisture Content 0.02 % PLC Code UL 746A UL 746A UL 746A Hrs Hrs 48 Hrs	High Voltage Arc Track Rate {PLC}	2	PLC Code	UL 746A
FLAME CHARACTERISTICS UL Recognized, 94V-2 Flame Class Rating 1.09 mm UL 94 INJECTION MOLDING Drying Temperature 120 °C Drying Time (Cumulative) 48 Hrs Maximum Moisture Content 0.02 %	High Ampere Arc Ign, surface {PLC}	1	PLC Code	UL 746A
NUL Recognized, 94V-2 Flame Class Rating 1.09 MIDECTION MOLDING Drying Temperature 120 3 - 4 Hrs Drying Time (Cumulative) 48 Maximum Moisture Content 0.02 Maximum Sull 94 MIDECTION MID	Comparative Tracking Index (UL) {PLC}	2	PLC Code	UL 746A
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Drying Temperature120°CDrying Time3 - 4HrsDrying Time (Cumulative)48HrsMaximum Moisture Content0.02%	UL Recognized, 94V-2 Flame Class Rating	1.09	mm	UL 94
Drying Time3 – 4HrsDrying Time (Cumulative)48HrsMaximum Moisture Content0.02%	INJECTION MOLDING			
Drying Time (Cumulative) 48 Hrs Maximum Moisture Content 0.02 %	Drying Temperature	120	°C	
Maximum Moisture Content 0.02 %	Drying Time	3 – 4	Hrs	
	Drying Time (Cumulative)	48	Hrs	
Melt Temperature 270 – 295 °C	Maximum Moisture Content	0.02	%	
	Melt Temperature	270 – 295	°C	



PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
Nozzle Temperature	265 – 290	°C	
Front - Zone 3 Temperature	270 – 295	°C	
Middle - Zone 2 Temperature	260 – 280	°C	
Rear - Zone 1 Temperature	250 – 270	°C	
Mold Temperature	70 – 95	°C	
Back Pressure	0.3 – 0.7	MPa	
Screw Speed	40 – 70	rpm	
Shot to Cylinder Size	40 – 60	%	
Vent Depth	0.025 - 0.076	mm	

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