

+135-3858-6433 (GuangDong)
+188-1699-6168 (ShangHai)
+852-6957-5415 (HongKong)

GE Material Solutions for Mobile Phones

GEAM Marketing
Mobile Phone Program
2005/1



塑料数据专家 www.ponci.com.cn/wxb/ +13538586433 +18816996168



Mobile Phone Applications Overview

+135-3858-6433 (GuangDong)
+188-1699-6168 (ShangHai)
+852-6957-5415 (HongKong)

Hinge-LNP LUBRICOMP* UCL-4036A
(wear resistance, high stiffness)

Camera lens barrel
LNP STAT-KON* DC-1004
(dimensional Stability, anti -
static), LNP THERMOCOMP*
UF-1009

Cover- LEXAN* EXL
(Excellent impact)

Keypad -LEXAN

PCB

Antenna -
CYCOLOY MC1300

Lens - XYLEX* (Clarity, Chemical resistance)

B Cover - LEXAN* EXL1414 (Excellent impact)

Light Guide - LEXAN EXRL0090 (High Flow)

LCD Bracket - LNP VERTON* PDX-R-03579
(high stiffness, metal replacement)

A Cover - LEXAN* EXL1414

Shield Cover - LNP VERTON* long glass fiber filled PA66 or PPA
(Metal replacement, high stiffness and impact)

Battery - LEXAN* EXL (excellent impact)
LEXAN* BPL1000 (high flow, FR)

塑料数据专家 www.ponci.com.cn/wxb/ +13538586433 +18816996168



Contents

* Mobile Phone Application Overview

+135-3858-6433 (GuangDong)
+188-1699-6168 (ShangHai)
+852-6957-5415 (HongKong)

Page

4-12

* PC Material Introduction

LEXAN* EXL resin

LEXAN* GF EXL resin

XYLEX* X7300CL resin

LEXAN* Clear EXL resin

CYCOLOY* CX7240 resin

* LNP Material Introduction

LNP VERTON*

LNP LUBRICOMP*/LUBRILOY*

LNP THERMOCOMP* HSG

LNP FARADEx*

•Appendix

EXL Product Portfolio

Page 61-63

LNP Product lines

Page 64

Processing Guide

Page 65-67

塑料数据专家 www.ponci.com.cn/wxb/ +13538586433 +18816996168



GE imagination at work

*LNP VERTON, LUBRICOMP, LUBRILOY, THERMOCOMP and FARADEx are trademarks of the General Electric Company 3 /

*LEXAN, CYCOLOY, XYLEX are trademarks of the General Electric Company

GE /

Jan. 2005

Cover of Mobile Phone – Materials Roadmap

+135-3858-6433 (GuangDong)
+188-1699-6168 (ShangHai)
+852-6957-5415 (HongKong)



Opaque

Lexan For Telecom

PC 141R

+ : Strength
Heat
- : Processibility
Moldin Stress

ML6339

+ : Processibility
Strength
- : Fatigue

EXL1414

+ : Processibility
Strength
Low-temp Impact
Release

New Material

+ : Impact
Flexural Modulus

Transparent



PC 141R

+ : Strength
Heat
- : Processibility
Moldin Strength

EXL1413T

-30°C impact
Med flow

EXL1112T

-20°C impact
High flow

EXL1433T

-30°C impact
Med flow, uv stab

EXL1132T

-20°C impact
High flow, uv stab

EXL1810T

-30°C impact
Very high flow

New Technology

Excellent Chemical Resistance
-20°C impact

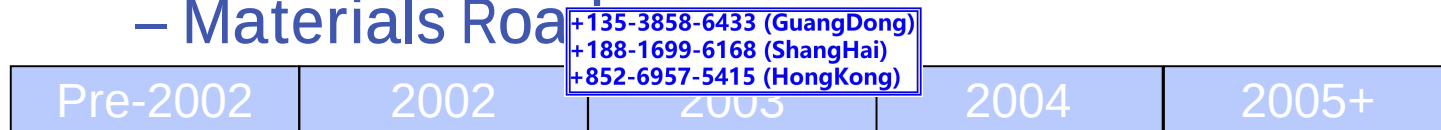
EXRL????

High fatigue

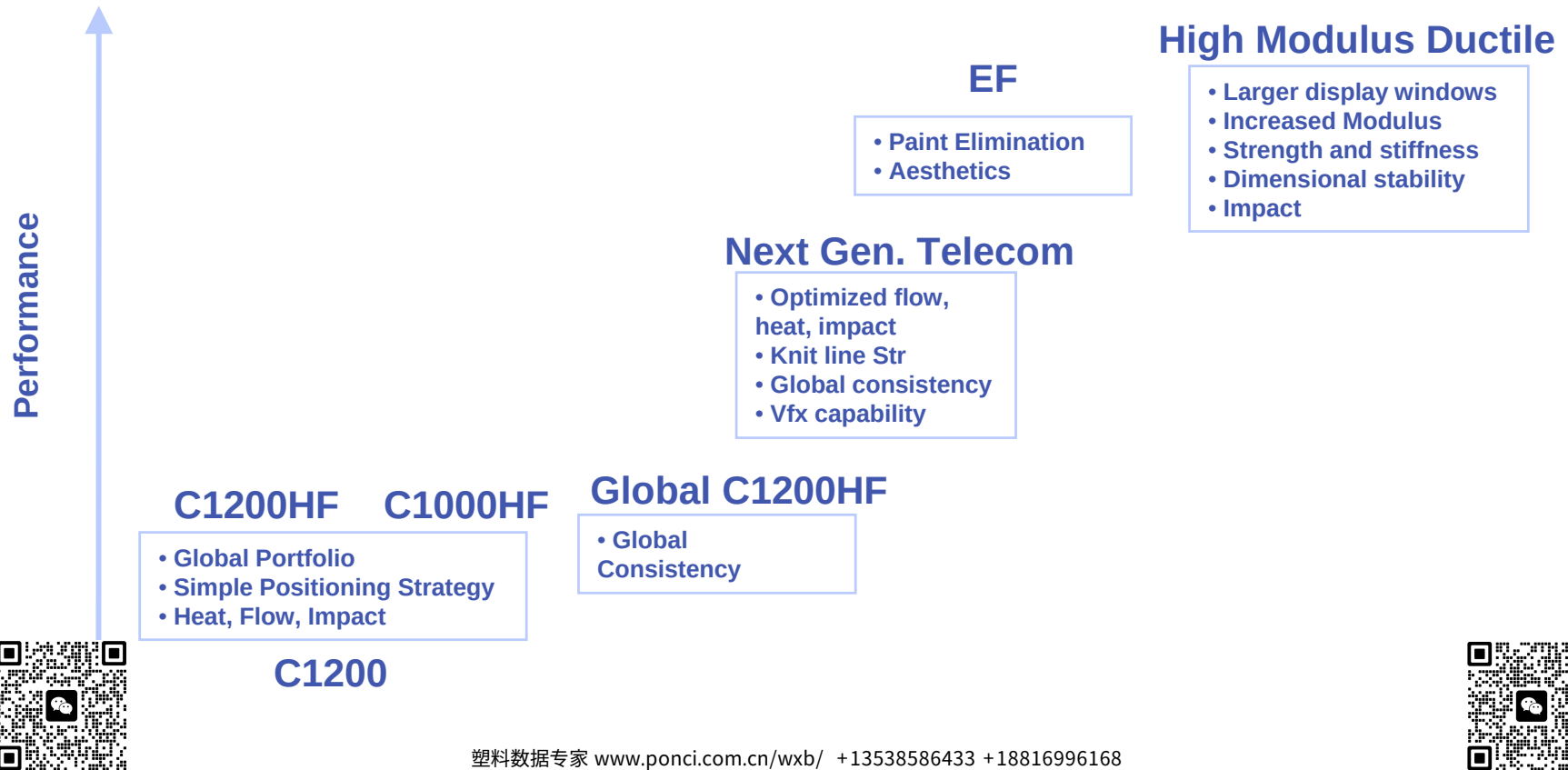


塑料数据专家 www.ponci.com.cn/wxb/ +13538586433 +18816996168

Cover of Mobile Phone – Materials Roadmap



Cycology For Telecom



塑料数据专家 www.ponci.com.cn/wxb/ +13538586433 +18816996168

Cover of Mobile Phone – Materials Comparison

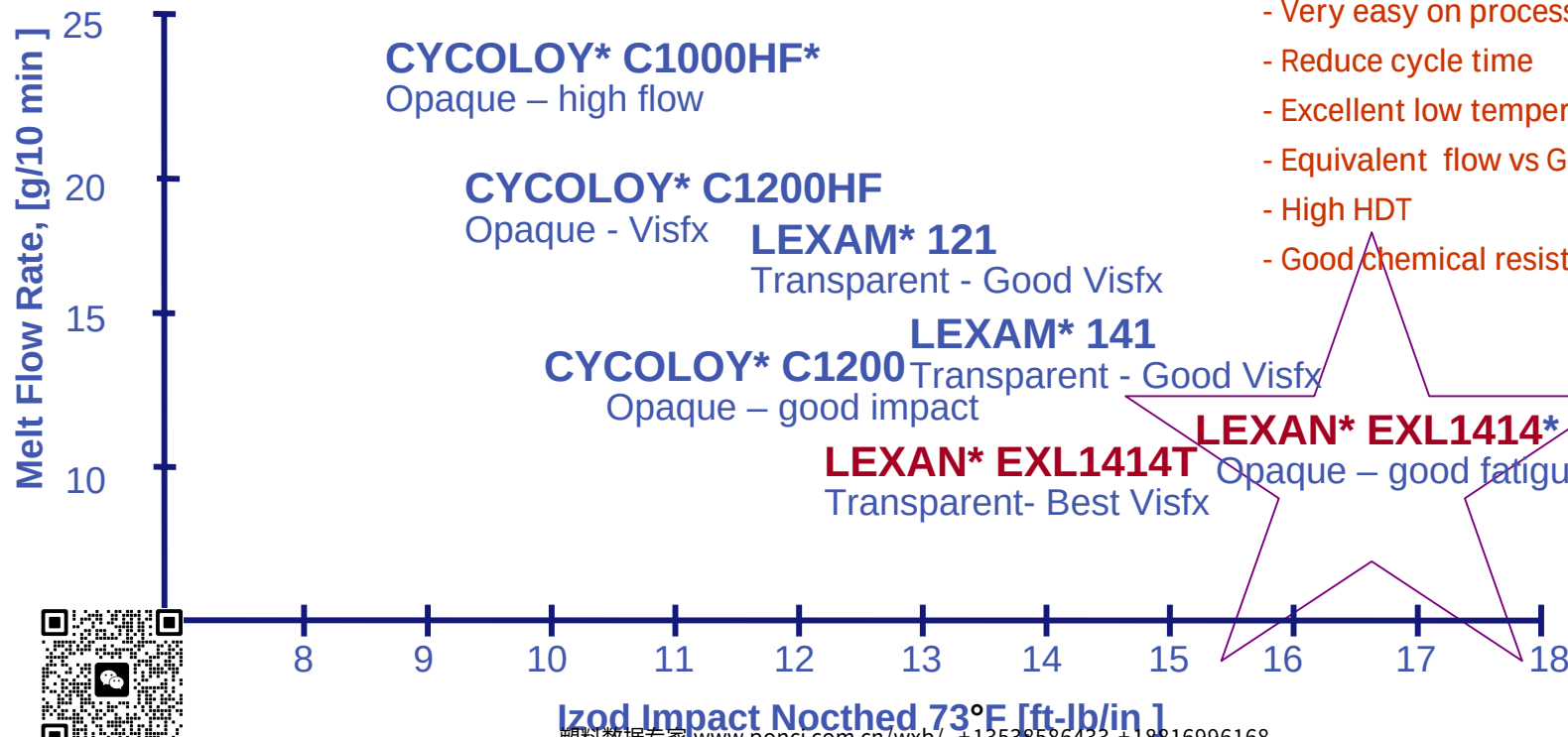
+135-3858-6433 (GuangDong)
+188-1699-6168 (ShangHai)
+852-6957-5415 (HongKong)



Impact, Flow, and Visualfx*

Value Proposition :

- Very good weld line strength
- Very easy on processing
- Reduce cycle time
- Excellent low temperature impact
- Equivalent flow vs GP PC
- High HDT
- Good chemical resistance



塑料数据专家 www.ponci.com.cn/wxb/ +13538586433 +18816996168

* Industry Standard

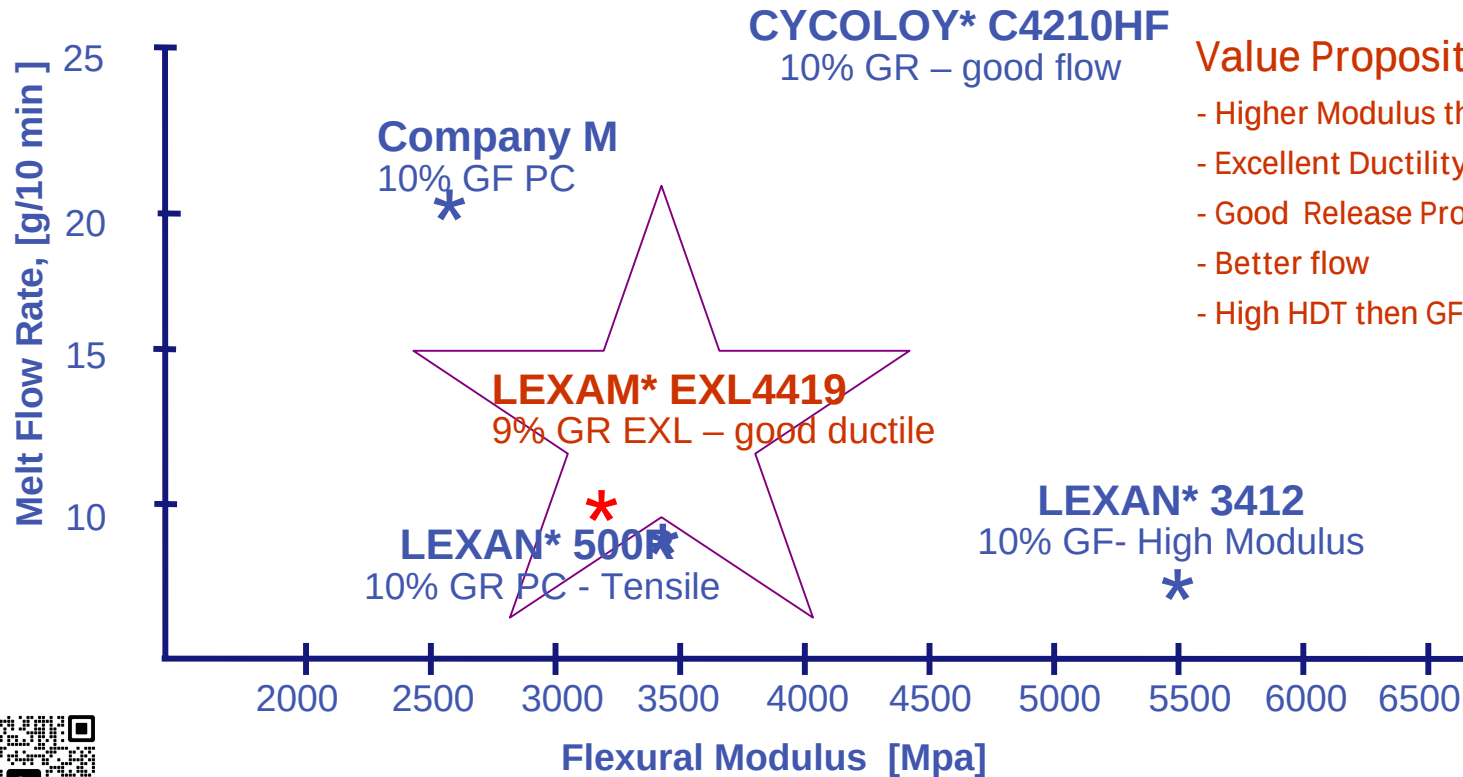
Note: Chart gives indicative product positioning

Frame of Mobile Phone

– Materials Comparison

+135-3858-6433 (GuangDong)
+188-1699-6168 (ShangHai)
+852-6957-5415 (HongKong)

Modulus, Strength and Easy Processing



Value Proposition :

- Higher Modulus then GP PC
- Excellent Ductility vs GF PC
- Good Release Property due to EXL
- Better flow
- High HDT then GF PC



塑料数据专家 www.ponci.com.cn/wxb/ +13538586433 +18816996168



* Industry Standard

Light Guides – Materials Comparison

Clarity, Haze, and Flow

+135-3858-6433 (GuangDong)
+188-1699-6168 (ShangHai)
+852-6957-5415 (HongKong)



LEXAN* EXRL0090

HF PC - Haze 1%

LEXAN* HF1110R*

HF PC - Haze 1%

LEXAN* OQ1030

OQ PC - Haze 0.6%

LEXAN* 121

PC - Haze 1%

LEXAN* 141

PC - Haze 1%

Value Proposition :

- Very high flow and easy processing;
- Better impact vs PC
- Good Release Property
- High HDT then PC
- Very good on water and humidity

Flow Rate, 300C/1.2 kgf (O) [g/10 min]

87

88

89

90

91

92

塑料数据专家 www.ponci.com.cn/wxb/ +13538586433 +18816996168

Light Transmission, 0.100" [%]



GE imagination at work

* Industry Standard

Note: Chart gives indicative product positioning GE /

Jan. 2005

Display Window – Materials Comparison

+135-3858-6433 (GuangDong)
+188-1699-6168 (ShangHai)
+852-6957-5415 (HongKong)

Clarity, Impact, and Flow

XYLEX* X7300CL
PC/PET - Haze 1.5%

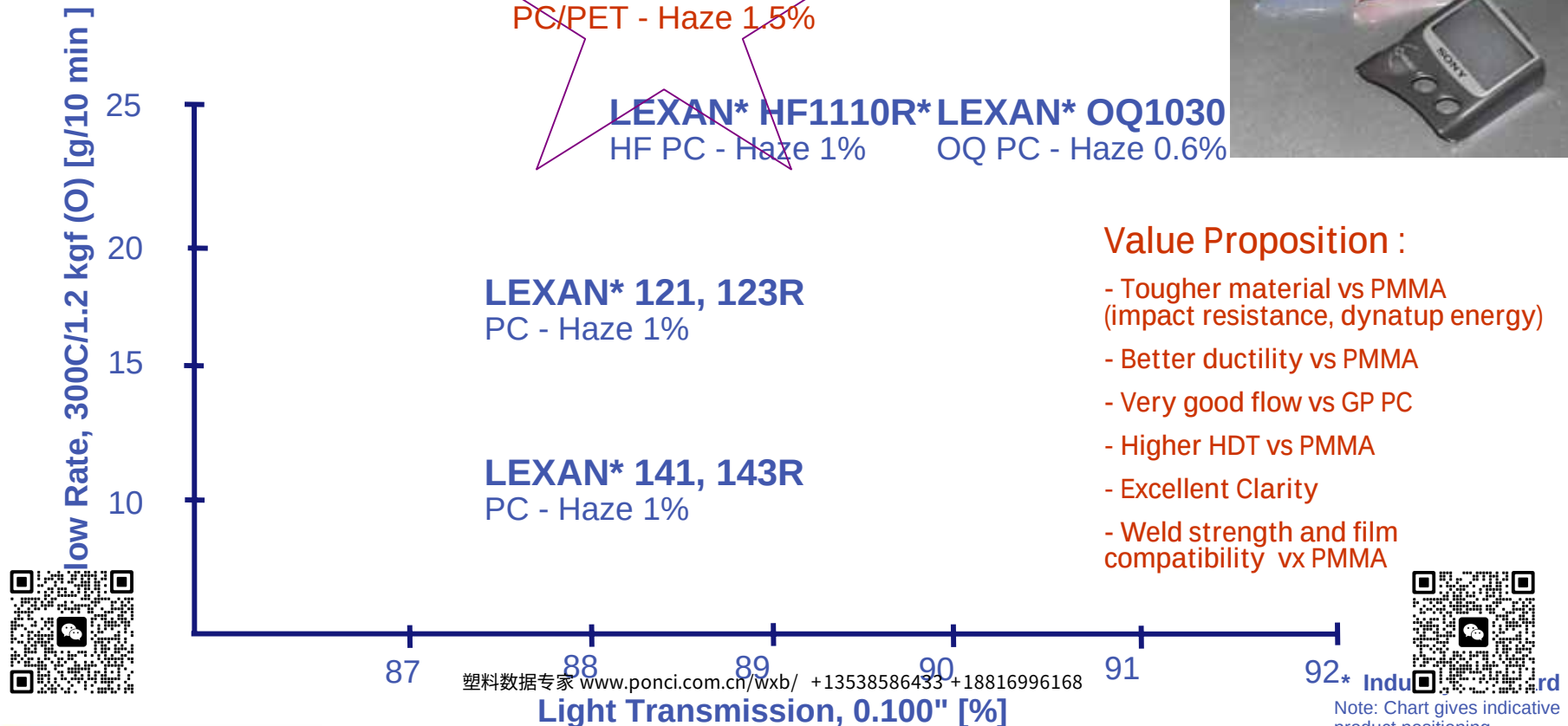
LEXAN* HF1110R* HF PC - Haze 1%
LEXAN* OQ1030 OQ PC - Haze 0.6%

LEXAN* 121, 123R
PC - Haze 1%

LEXAN* 141, 143R
PC - Haze 1%

Value Proposition :

- Tougher material vs PMMA (impact resistance, dynatup energy)
- Better ductility vs PMMA
- Very good flow vs GP PC
- Higher HDT vs PMMA
- Excellent Clarity
- Weld strength and film compatibility vx PMMA

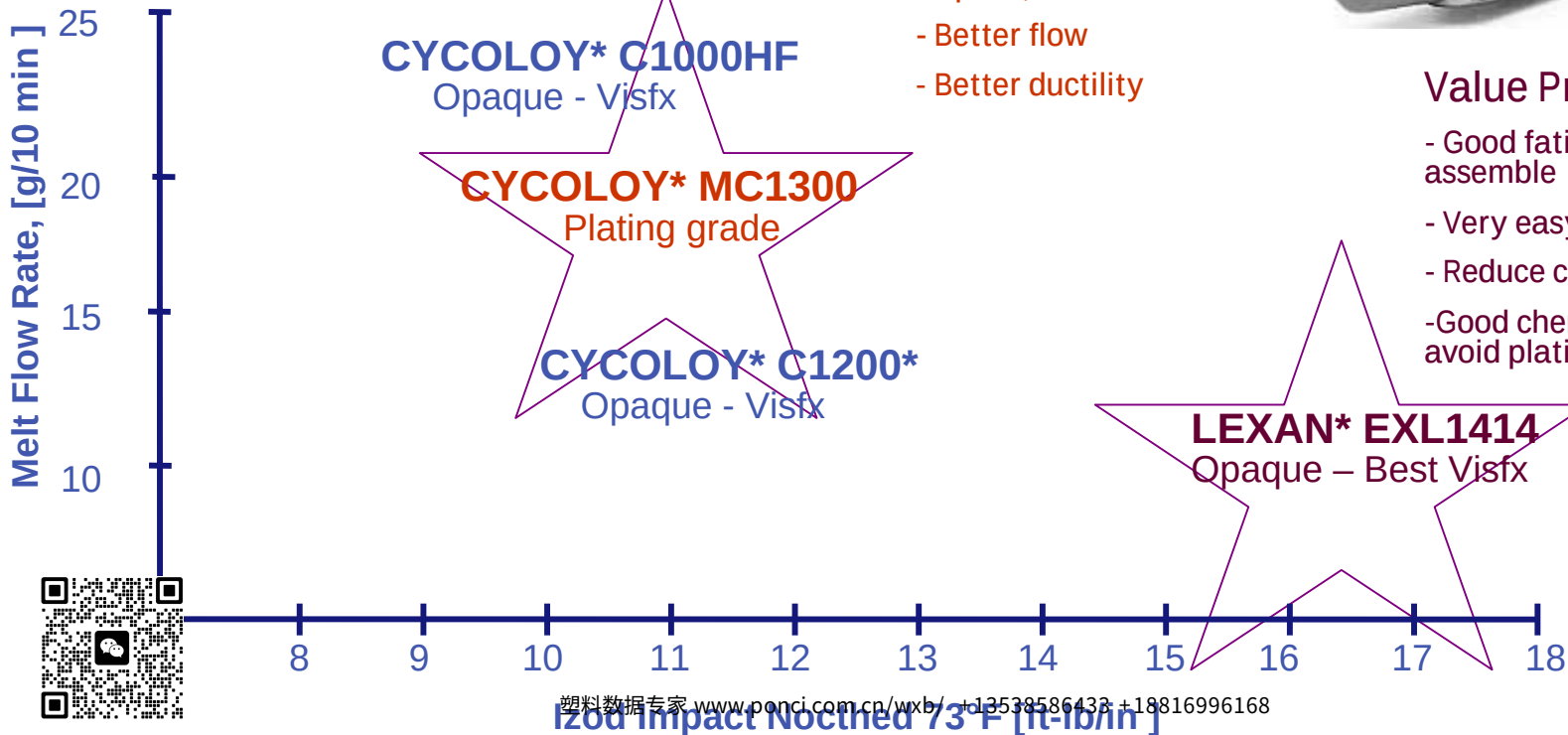


Antenna

– Materials Comparison

+135-3858-6433 (GuangDong)
+188-1699-6168 (ShangHai)
+852-6957-5415 (HongKong)

Impact, Flow, and Visualfx*



Value Proposition :

- Plating grade for shielding request;
- Better flow
- Better ductility



Value Proposition :

- Good fatigue for easy assemble
- Very easy on processing
- Reduce cycle time
- Good chemical resistance to avoid plating

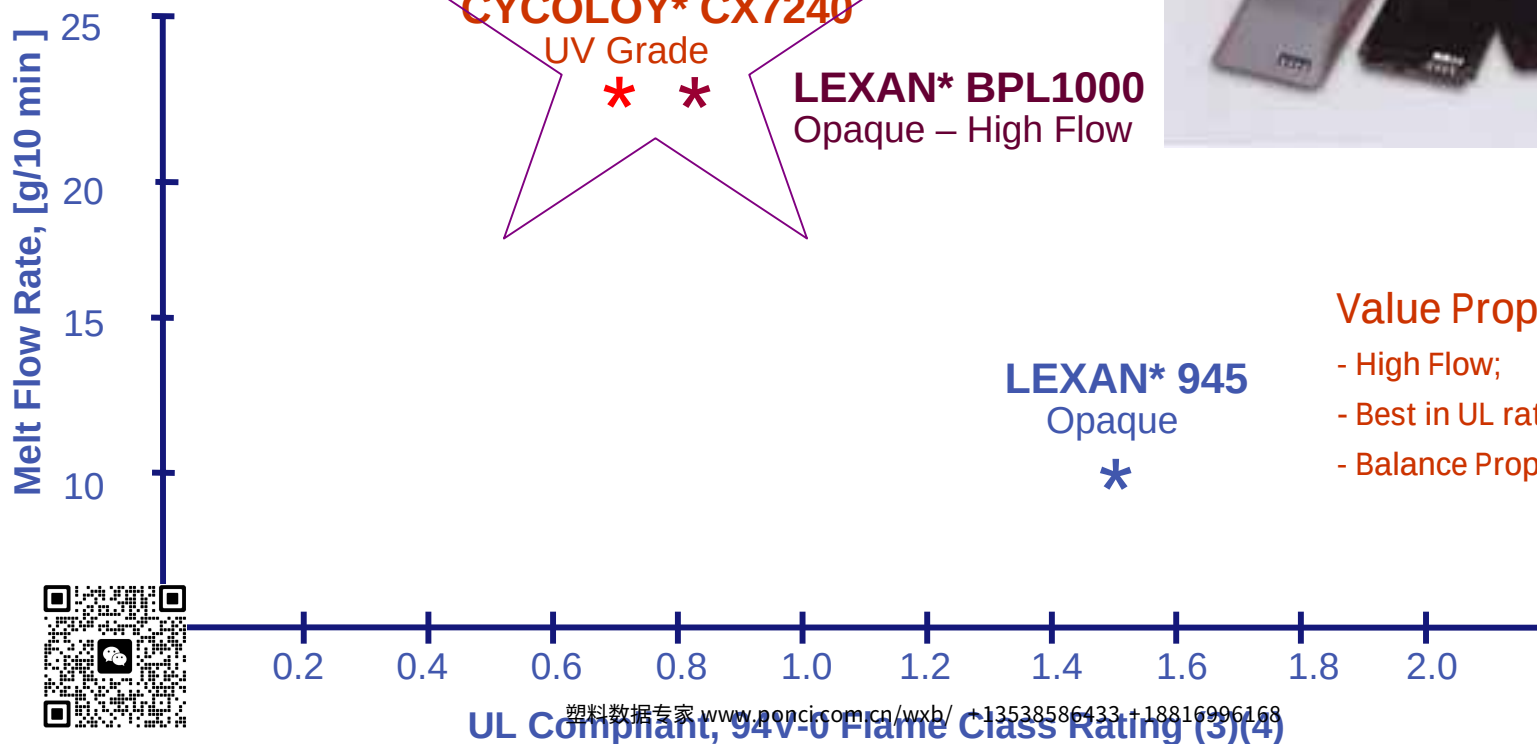
塑料数据专家 www.ponci.com.cn/wxb/ +13538586433 +18816996168

Battery Pack

– Materials Comparison

+135-3858-6433 (GuangDong)
+188-1699-6168 (ShangHai)
+852-6957-5415 (HongKong)

FR, Flow, and Visualfx*



Value Proposition :

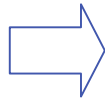
- High Flow;
- Best in UL rating;
- Balance Property

LEXAN* EXL Resin

+135-3858-6433 (GuangDong)
+188-1699-6168 (ShangHai)
+852-6957-5415 (HongKong)

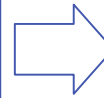
Market Trends

- Reliable to use
- Durable to use
- Easy to care
- Design Freedom
- Cost requirement



Material requirement

Easy Processing
Good weld line strength
Good impact
Good fatigue
Dimensional stability
Paint friendly



GE Material Solution

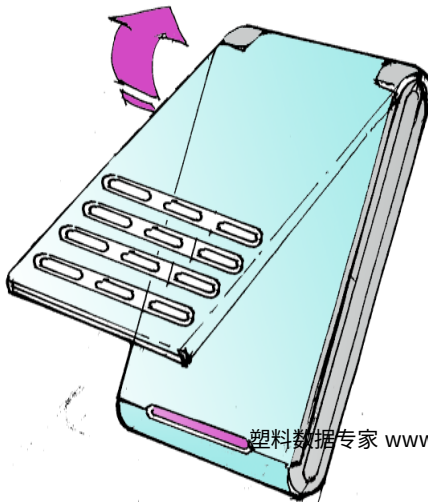
Improved stiffness & impact

LEXAN* EXL1414
LEXAN* EXL9330



Mature Applications

- Cover of Mobile Phone
- Integrated design for Lens & cover
- Battery Package of Mobile Phone
- Antenna of Mobile Phone
- Keypad



塑料数据专家 www.ponci.com.cn/wxb/ +13538586433 +18816996168



LEXAN^{*} EXL Resin

What is LEXAN^{*} EXL resins?

+135-3858-6433 (GuangDong)
+188-1699-6168 (ShangHai)
+852-6957-5415 (HongKong)

The silicone brings

- low temp impact
- weatherability
- release

No liquid additives



The PC brings

- heat
- modulus

Low plate out
No juicing

Why is LEXAN^{*} EXL resins?

A high flow PC

Outstanding processability – shorter cycle time

A high impact PC

A chemically resistant PC

A high knitline strength PC

A PC for heat aging

A weatherable PC

A low friction PC

A R PC



A Unique GE Product



塑料数据专家 www.ponci.com.cn/wxb/ +13538586433 +18816996168

LEXAN^{*} EXL Flow & Processing

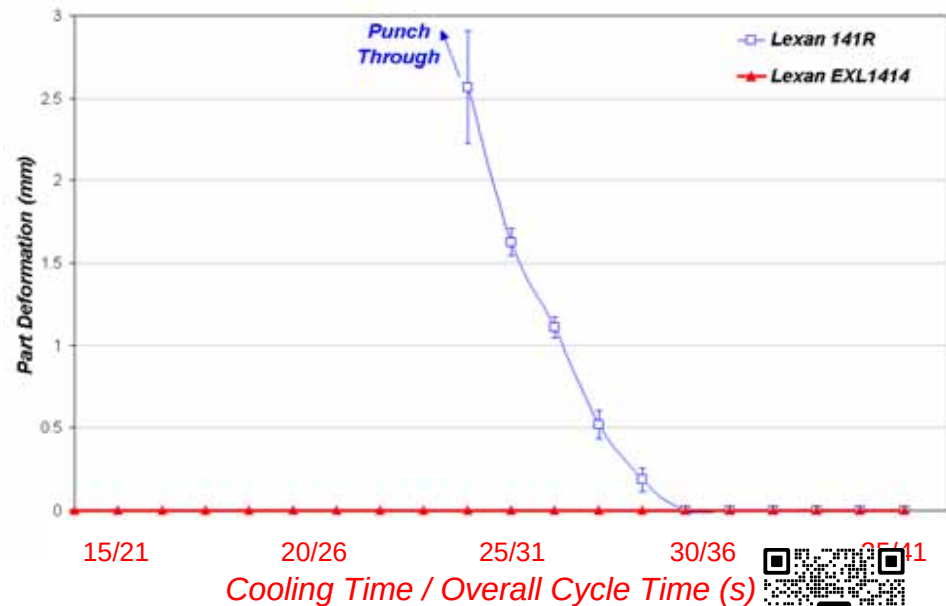
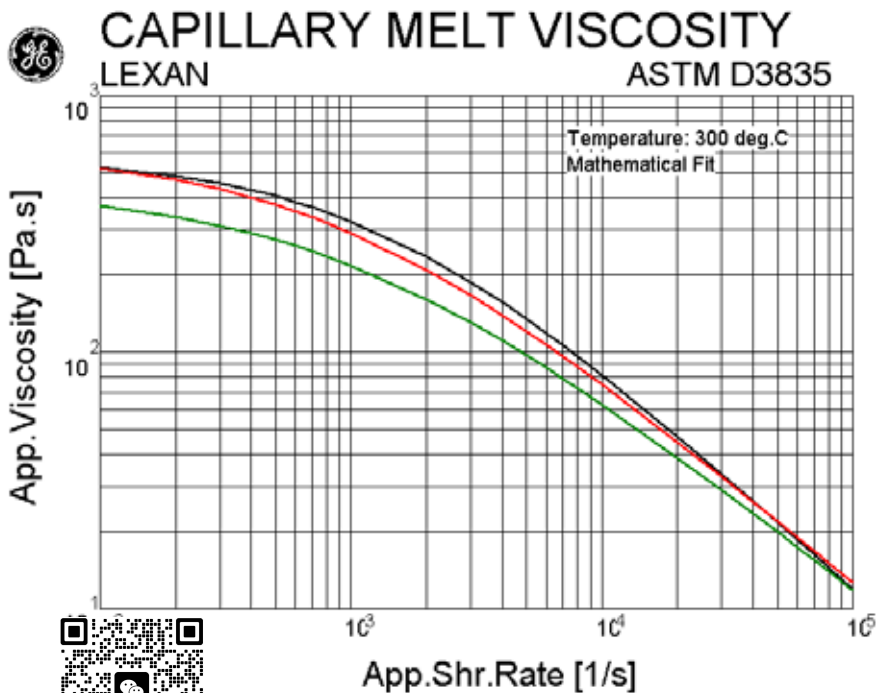
+135-3858-6433 (GuangDong)
+188-1699-6168 (ShangHai)
+852-6957-5415 (HongKong)

✓ A high flow PC

- Upgrade from PC giving higher flow without sacrificing ductility

✓ Outstanding processability – shorter cycle time

- Upgrade for standard grades



塑料数据专家 www.ponci.com.cn/wxb/ +13538586433 +18816996168

**Equivalent Flow, Outstanding Release Properties &
Over 40% Reduction in Cycle Time**

LEXAN^{*} EXL Impact & Chemical Resistance

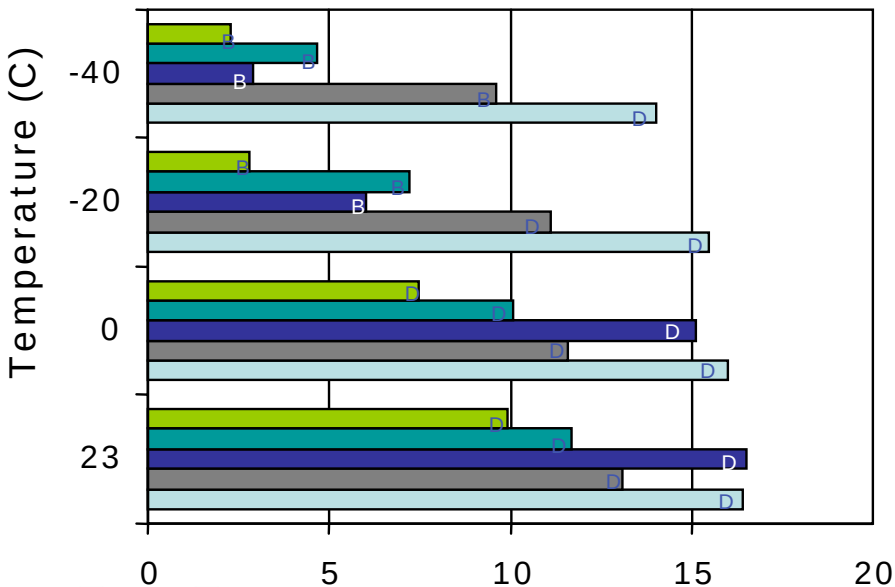
✓ A high impact PC

- Upgrade for PC, PC/ABS, impact modified PC
- Visualfx with impact

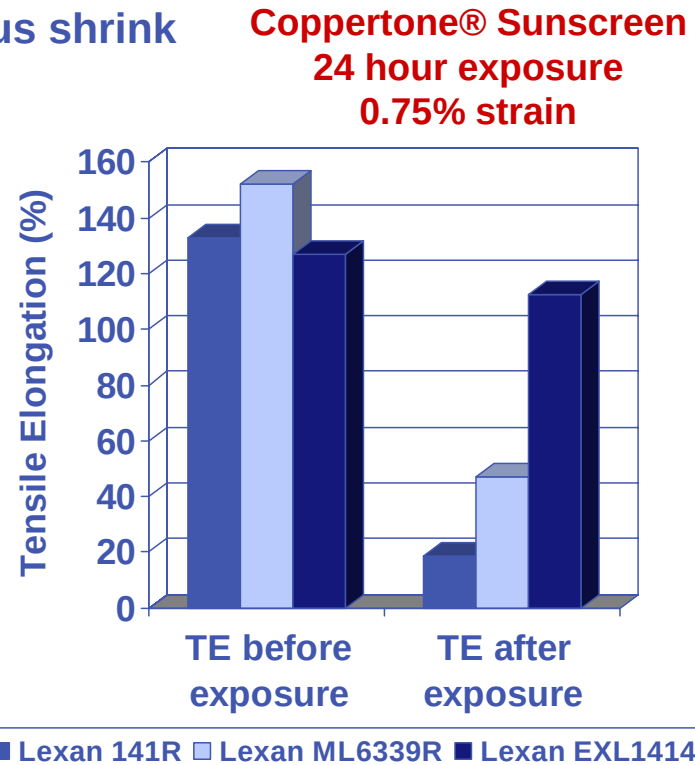
✓ A chemically resistant PC

- Upgrade for PC, with amorphous shrink

+135-3858-6433 (GuangDong)
+188-1699-6168 (ShangHai)
+852-6957-5415 (HongKong)



TM D256 - Notched Izod (ft.lb/in)



塑料数据专家 www.ponci.com.cn/wxb/ +13538586433 +18816996168

-40C Ductility & Superior Chemical Resistance

LEXAN* GF EXL Resin

+135-3858-6433 (GuangDong)
+188-1699-6168 (ShangHai)
+852-6957-5415 (HongKong)

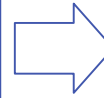
Market Trends

- Bigger Screen
- Smaller & Thinner
- Strength & Ductility
- Design Freedom
- Cost requirement



Material requirement

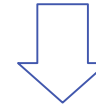
Easy Processing
Increase stiffness
Good impact
Dimensional stability
Paint friendly



GE Material Solution

Improved stiffness & impact

Lexan EXL4419 (9% GF EXL)



Potential Applications

Cover need Stiffer Touch Feeling,
Frame need strength for big screen,
- Lens Frame
- LCD Bracket
- Mobile Phone Cover



塑料数据专家 www.ponci.com.cn/wxb/ +13538586433 +18816996168



LEXAN^{*} EXL GF Resin

+135-3858-6433 (GuangDong)
+188-1699-6168 (ShangHai)
+852-6957-5415 (HongKong)

EXL4419 on MP Housing: 9% GF EXL



Value Proposition:

- High flexural modulus vs GP grade ;
- Good flow vs GF material ;
- High HDT then GF material ;
- Good release property vs GF material ;
- Good impact strength vs GF material ;
- Good performance on painting ;



When to select EXL4419:

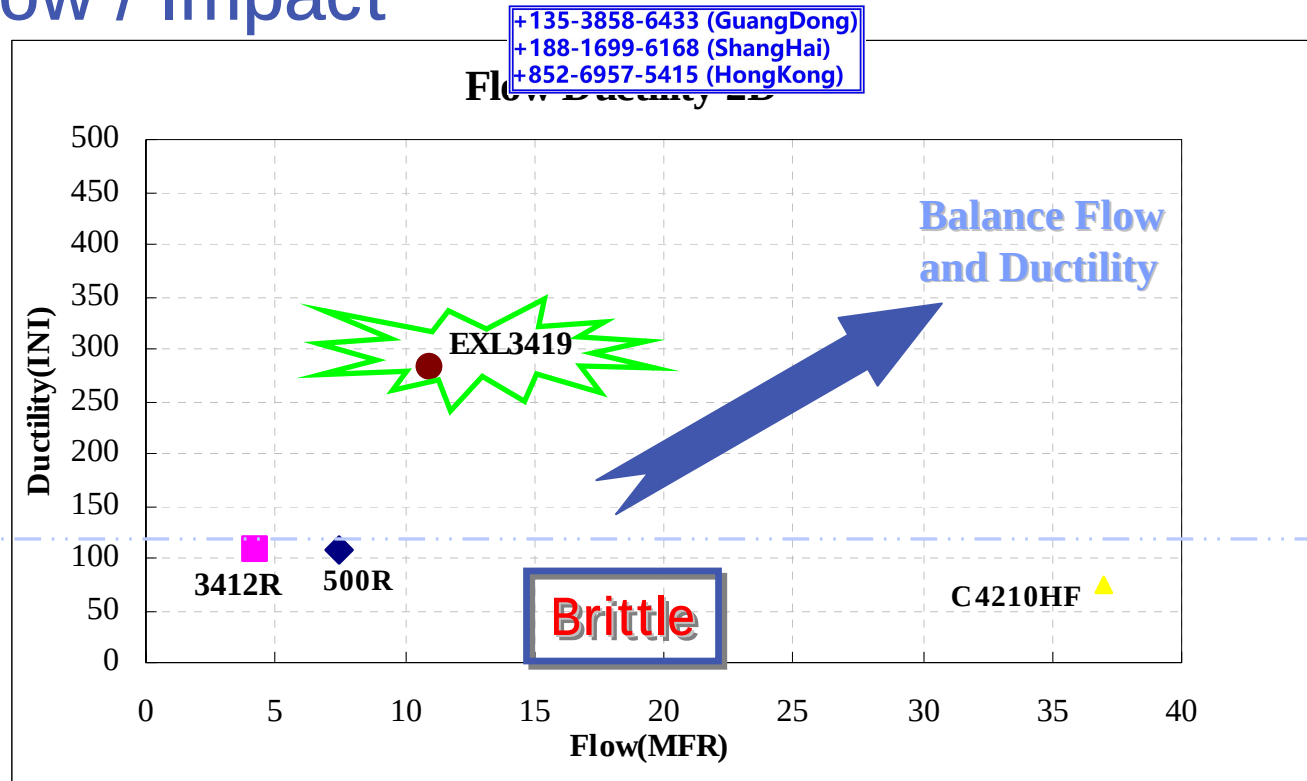
- When product need high stiffness ;
- When LCD screen need strong support ;
- When mineral filled material failed at impact ;
- When snap fits need strong strength ;



塑料数据专家 www.ponci.com.cn/wxb/ +13538586433 +18816996168



LEXAN* EXL4419 Property Contrast Flow / Impact



- 3412R: 20% glass fiber filled Lexan polycarbonate
- 500R: 10% glass fiber filled Lexan polycarbonate
- C4210HF: 10% glass fiber filled Cylcoly polycarbonate/ABS

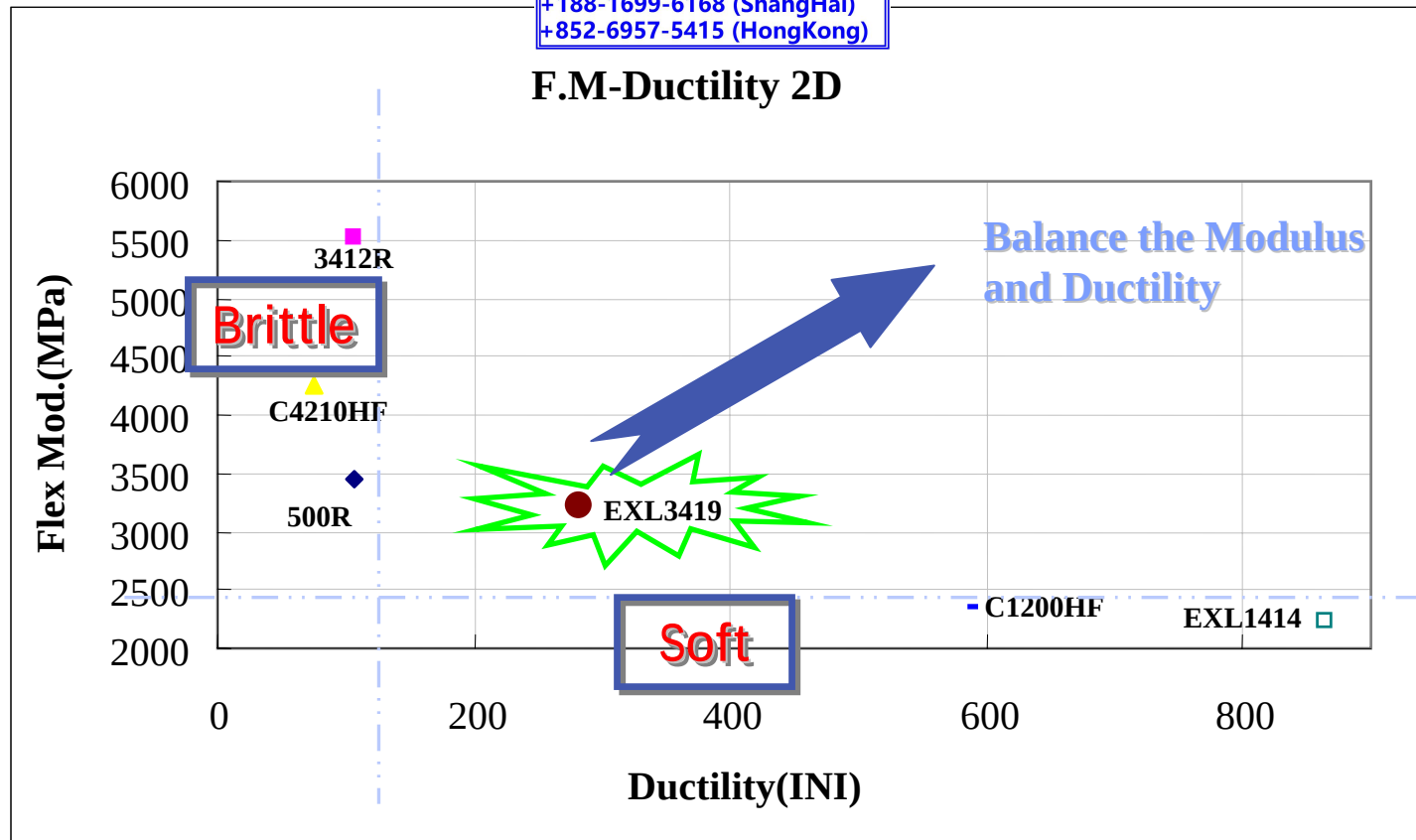
塑料数据专家 www.ponci.com.cn/wxb/ +13538586433 +18816996168

Significantly Improved Impact Performance!



LEXAN* EXL4419 Property Contrast Modulus / Impact

+135-3858-6433 (GuangDong)
+188-1699-6168 (ShangHai)
+852-6957-5415 (HongKong)



- Conventional Filled or Unfilled Materials are either Too Brittle or Too Soft
- Conventional Technology Has the Limitation

塑料数据专家 www.ponci.com.cn/wxb/ +13538586433 +18816996168

New Base Resin of EXL Made the Breakthrough Now!

LEXAN* GF EXL Impact

Property Comparison

CompanyM / EXL4419

+135-3858-6433 (GuangDong)
+188-1699-6168 (ShangHai)
+852-6957-5415 (HongKong)



		Company M		GE	
		GS2010MPH Datasheet	GS2010MPH CTC Test	EXRL0153 Datasheet	EXRL0169
MFR	ISO	21			
	ASTM			7.5	9.8
Charpy Nothced	ISO	10	10.36		23
INI/23C	ISO		9.68	22	20
INI/23C	ASTM		110	345	280
Flex Strength	ISO	85		93	90
Flex Modulus	ISO	2500		3250	3300
Flex Strength	ASTM			98	95
Flex Modulus	ASTM			3350	3320
Tensile Strength	ASTM			55	54.3
Tensile Modulus	ASTM			4400	3300
Tensile Strength	ISO	51		54	55
Tensile Modulus	ISO	2500		3700	3200
GF%		10		9	9

塑料数据网 www.ponci.com.cn/wxb/ +13538586433 +18816996168



GE imagination at work

LEXAN^{*} EXL4419 Datasheet

+135-3858-6433 (GuangDong)
+188-1699-6168 (ShangHai)
+852-6957-5415 (HongKong)

TYPICAL PROPERTIES ¹	TYPICAL VALUE	UNIT	STANDARD
MECHANICAL			
Tensile Stress, yld, Type I, 5 mm/min	53	MPa	ASTM D 638
Tensile Stress, brk, Type I, 5 mm/min	44	MPa	ASTM D 638
Tensile Strain, yld, Type I, 5 mm/min	4.5	%	ASTM D 638
Tensile Strain, brk, Type I, 5 mm/min	20	%	ASTM D 638
Tensile Modulus, 5 mm/min	3300	MPa	ASTM D 638
Flexural Stress, yld, 1.3 mm/min, 50 mm span	95	MPa	ASTM D 790
Flexural Modulus, 1.3 mm/min, 50 mm span	3200	MPa	ASTM D 790
Tensile Stress, yield, 5 mm/min	55	MPa	ISO 527
Tensile Stress, break, 5 mm/min	43	MPa	ISO 527
Tensile Strain, yield, 5 mm/min	4.5	%	ISO 527
Tensile Strain, break, 5 mm/min	12.5	%	ISO 527
Tensile Modulus, 1 mm/min	3300	MPa	ISO 527
Flexural Stress, yield, 2 mm/min	90	MPa	ISO 178
Flexural Modulus, 2 mm/min	3300	MPa	ISO 178
IMPACT			
Izod Impact, notched, 23°C	280	J/m	ASTM D 256
Izod Impact, notched 80*10*4 +23°C	20	kJ/m ²	ISO 180/1A
THERMAL			
HDT, 0.45 MPa, 3.2 mm, unannealed	142	°C	ASTM D 648
Heat Softening Temp, Rate B/120	146	°C	ISO 306
DT/Ae, 1.8 MPa Edgew 120*10*4 sp=100mm	135	°C	ISO 75/Ae
PHYSICAL			
Specific Gravity	1.25		ASTM D 792
Melt Flow Rate, 300°C/1.2 kgf	10	g/10 min	ASTM D 1238
Density	1.25	g/cm ³	ISO 1183

塑料数据专家 www.ponci.com.cn/wxb/ +13538586433 +18816996168



XYLEX* X7300CL Resin

+135-3858-6433 (GuangDong)
+188-1699-6168 (ShangHai)
+852-6957-5415 (HongKong)

Market Trends

- Big Screen
- Varies decoration (IMD..)
- Screen as structure part
- Easy to care
- Lens combine with Camera

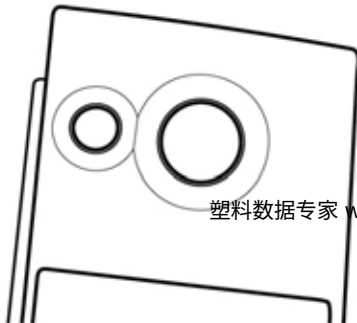
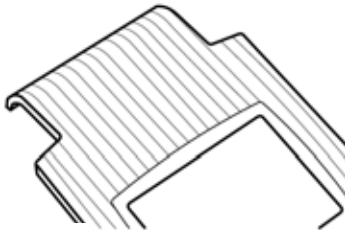
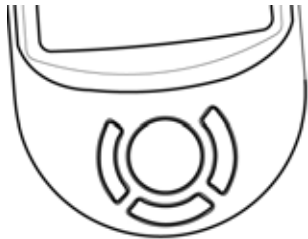
Material requirement

Easy Processing
Protect Printing
Good impact
Good fatigue
Dimensional stability
Paint friendly

GE Material Solution

Improved stiffness & impact

XYLEX* X7300CL



塑料数据专家 www.ponci.com.cn/wxb/ +13538586433 +18816996168

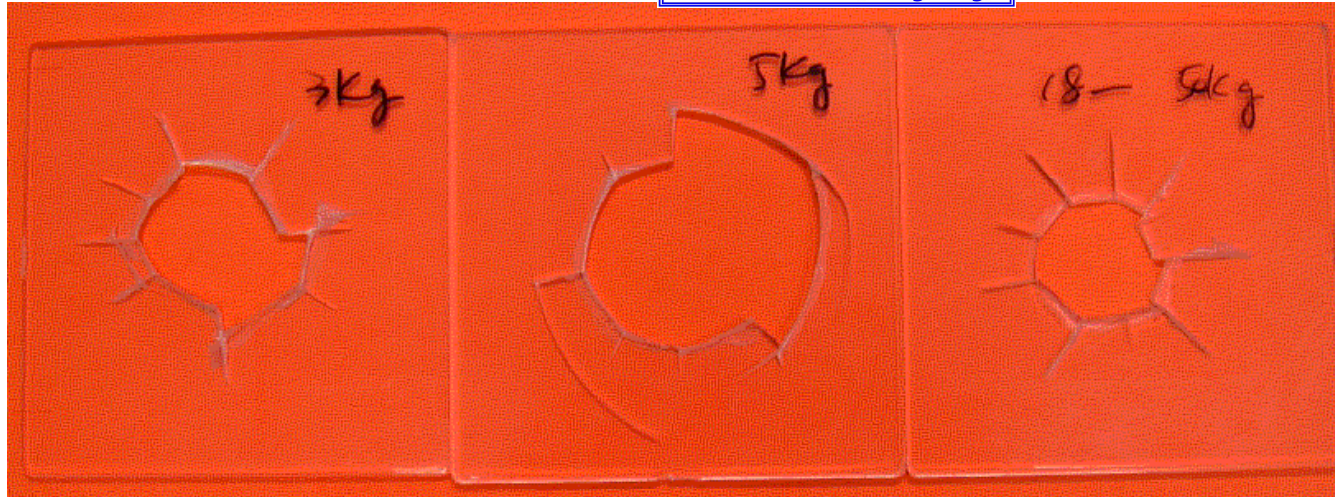
Mature Applications

- When Lens need to be thin and large
- When Lens with snap fixes
- When Lens with thin rib or ring
- When Lens with camera hole
- When Lens has geometric structure
- Lens of Mobile Phone



XYLEX* Impact

+135-3858-6433 (GuangDong)
+188-1699-6168 (ShangHai)
+852-6957-5415 (HongKong)



PMMA



Xylex



塑料数据专家 www.ponci.com.cn/wxb/ +13538586433 +18816996168



XYLEX* is much better on Drop Impact (Dynatup) vs PMMA



GE imagination at work

XYLEX* X7300CL Property

XYLEX™ X7300 LEXAN® OQ1030 LEXAN® HF1110 Plexiglas® ZK5BR

MECHANICAL	Unit	Method	Value			
Tensile Stress, yld, Type I, 50 mm/min	MPa	ASTM D 638	49	62	62	-
			55	60	-	62
Tensile Stress, brk, Type I, 50 mm/min			52	50	66	-
Tensile Strain, brk, Type I, 50 mm/min			150	100	120	-
span	MPa	ASTM D 790	83	93	93	-
Tensile Modulus, 1 mm/min	MPa	ISO 527	1900	2300	-	2400
Flexural Modulus, 1.3 mm/min, 50 mm span	MPa	ASTM D 790	1940	2250	2310	-
IMPACT						
Izod Impact, notched, 23°C	J/m	ASTM D 256	854	550	641	-
Instrumented Impact Total Energy, 23°C	J	ASTM D 3763	95	46	54	-
Charpy impact strength(23°C)	KJ/m2	ISO 179	-	-	-	50
THERMAL						
Vicat Softening Temp, Rate B/50	°C	ISO 306	-	140	-	100
		ASTM D 1525	109	140	-	-
Vicat Softening Temp, Rate B/120	°C	ISO 306	-	-	-	-
sp=100mm	°C	ISO 75/Ae	90	122	-	93
HDT, 0.45 MPa, 3.2 mm, unannealed	°C	ASTM D 648	94	133	-	-
HDT, 1.84 MPa, 3.2mm, unannealed	°C	ASTM D 648	89	120	127	-
PHYSICAL						
Specific Gravity	-	ASTM D 792	1.2	1.2	1.2	-
Density	g/cm³	ISO 1183	1.18	1.19	-	1.17
Mold Shrinkage, flow, 3.2 mm	%	GE Method	0.4 - 0.8	0.6 - 0.8	0.5 - 0.7	-
Melt Flow Rate, 300°C/1.2 kgf	g/10 min	ASTM D 1238	44	12.8	25	-
Melt Volume Rate, MVR at 250°C/1.2 kg	cm³/10 min	ISO 1133	-	13	-	-
Melt Volume Rate, MVR at 230°C/3.8 kg	cm³/10 min	ISO 1133	-	-	-	3.3
OPTICAL						
Light Transmission	%	ASTM D 1003	88	-	88	92
Haze	%	ASTM D 1003	2	-	1	<2
Refractive Index	-	ISO489	-	-	-	1.49
Process Parameter						
Injection Molding						
Drying Temperature	°C	-	65 - 80	120	120	90
Drying Time	hrs	-	3~5	3~4	3~4	2~3
Drying Time (Cumulative)	hrs	-	8	48	48	-
Maximum Moisture Content	%	-	0.02	0.02	0.02	-
Melt Temperature	°C	-	250 - 290	305 - 330	270 - 295	220~260
Nozzle Temperature	°C	-	250 - 290	305 - 330	265 - 290	220~260
Front - Zone 3 Temperature	°C	-	250 - 290	305 - 330	270 - 295	220~260
Middle - Zone 2 Temperature	°C	-	245 - 280	295 - 320	260 - 280	220~260
Rear - Zone 1 Temperature	°C	-	245 - 255	280 - 310	250 - 270	220~260
Mold Temperature	°C	-	45 - 60	65 - 95	70 - 95	50~70
Back Pressure	MPa	-	0.2 - 0.5	0.3 - 0.7	0.3 - 0.7	-
Screw Speed	rpm	-	20 - 100	60 - 200	40 - 70	-
Shot to Cylinder Size	%	-	40 - 80	-	40 - 60	-
Vent Depth	mm	-	0.013 - 0.02	-	0.025 - 0.076	-



XYLEX* X7300cl Value Proposition

+135-3858-6433 (GuangDong)
+188-1699-6168 (ShangHai)
+852-6957-5415 (HongKong)

XYLEX* X7300CL on MP Lens applications:

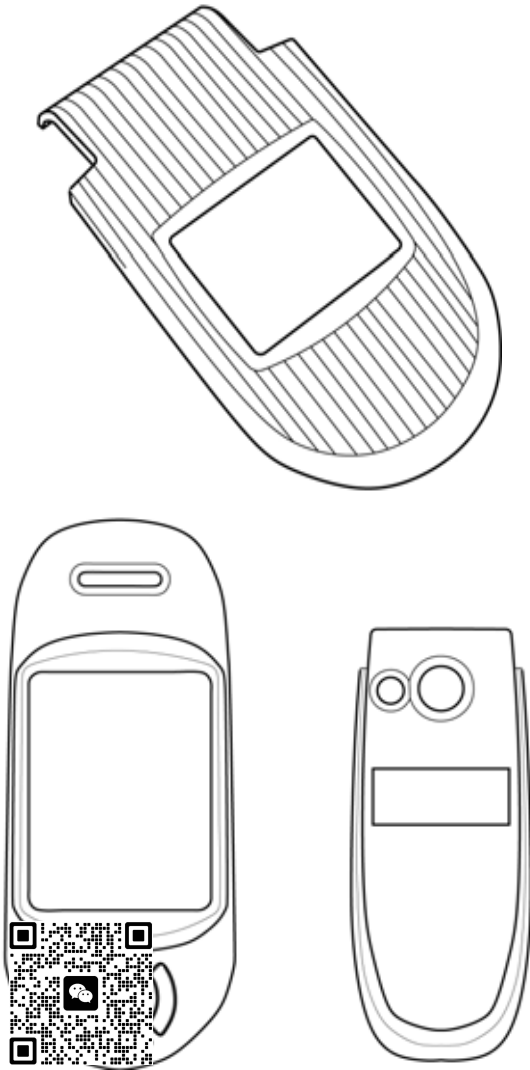
Competitor: PMMA; OQ; HF1030

Value Proposition:

1. Lower Melt Temperature (260C-280C) than PC – Protect IMD film (reduce ink wash out- GE has patent on this technology)
2. Notched Impact property >PC>>PMMA – Structure feature
3. Improved Flow vs. General PC – Thin wall molding (0.8-1.2mm)
4. Superior Chemical resistance – Less Crack issue on Cosmetics, Sweat , grease....
5. PC/Polyester alloy -Better Weld strength and film compatibility with housing made by PC based resin and less warpage due to low mold-in stress

6. High Transparency as OQ:

塑料数据专家 www.porcilcom.cn/web/ +13538586433 +18816996168



LEXAN* Clear EXL Resin

+135-3858-6433 (GuangDong)
+188-1699-6168 (ShangHai)
+852-6957-5415 (HongKong)

Market Trends

- Integrated lens & cover
- Durable to use
- Easy to care
- Design Freedom
- Cost requirement

Material requirement

Good impact
Good chemical resistance
Good hydrability
Easy Processing

GE Material Solution

Improve chemical resistance, impact, water & humidly resistance

Lexan* EXL1414T
Lexan* FXE1414T



Potential Applications

- Integrated design for Lens & cover
- Light Guide
- Keypad need high flow (MFI=32)
- Visualfx based on Clear EX housing

塑料数据专家 www.ponci.com.cn/wxb/ +13538586433 +18816996168



LEXAN^{*} EXL Resin

What is LEXAN^{*} Clear EXL resin?

+135-3858-6433 (GuangDong)
+188-1699-6168 (ShangHai)
+852-6957-5415 (HongKong)

The silicone brings

- low temp impact
- release

The PC brings

- heat
- modulus

>PC-siloxane copolymer

Why is LEXAN^{*} Clear EXL resins?

Excellent low temperature impact

Good ductility material

Excellent weatherability

Excellent processability & cycle time

A high flow clear PC



A unique transparent impact modified product

塑料数据专家 www.ponci.com.cn/wxb/ +13538586433 +18816996168



Heat and Humidity Testing - ASTM

LEXAN 10049

+135-3858-6433 (GuangDong)
+188-1699-6168 (ShangHai)
+852-6957-5415 (HongKong)

EXRL0050

MFI	10	10	10
Impact before 300 hours 85C/ 85% RH – ASTM			
@ -10C	14 ft.lb/in	16 ft.lb/in	15 f.lb/in
% ductility	100	100	100
Impact after 300 hours 85C/ 85% RH - ASTM			
@ -10C	3 ft.lb/in	11 ft.lb/in	11 ft.lb/in
%ductility	0	100	80

Mechanical and Optical

	LEXAN 141R	EXRL0049	EXRL0050
Optical% transmission	89%	84%	84%
% Haze	0.7%	1.4%	1.4%
Mechanical HDT @ 264 psi	132 C	121 C	122 C
Tensile strength	2300 MPa	2100 Mpa	2200 MPa
Impact strength	63 MPa	57 MPa	58 MPa

塑料数据专家 www.ponci.com.cn/wxb/ +13538586433 +18816996168

Good retention of properties



CYCOLOY* CX7240 Resin

+135-3858-6433 (GuangDong)
+188-1699-6168 (ShangHai)
+852-6957-5415 (HongKong)

Market Trends

- Smaller & Thinner
- Flame Retardant
- Safe and Durable
- Design Freedom

Material requirement

Very High Flow
Good impact
Good chemical resistance
FR V0

GE Material Solution

Best FR performance, very high flow
and easy processing

CYCOLOY* CX7240



Mature Applications

- Battery Pack
- Battery Cover



塑料数据专家 www.ponci.com.cn/wxb/ +13538586433 +18816996168



Battery Pack – CX7240 \ EXCY0100

+135-3858-6433 (GuangDong)
+188-1699-6168 (ShangHai)
+852-6957-5415 (HongKong)

Business Case:

- **Product:** Cicoloy EXCY0100
- **Application:** Li-ion battery pack housing for mobile phones (MP) & digital still cameras (DSC)

Customer CTQs :

- FR: V0 @ 0.8mm; V1 @ 0.5mm; V2 @ 0.2mm
- Flow > BPL1000 (MV@260°C, 1500 1/s < 240 pa-s)
- HDT ~ BPL1000, MN3700 (HDT@1.82 Mpa > 83°C)
- Impact > BPL1000/FPR4500 (NII@2mm > 11 ftlb/in)
- Ultrasonic welding capability

Value Proposition:

- B.I.C. Processability
- B.I.C. FR Performance
 - ✓ V0 @ 0.75 mm
 - ✓ V2 @ 0.2 mm
- B.I.C. Impact
- Ultrasonic welding good/better than BPL1000



塑料数据专家 www.ponci.com.cn/wxb/ +13538586433 +18816996168

Unique Performance enables Single Product Strategy

CYCOLOY* CX7240 Resin

+135-3858-6433 (GuangDong)
+188-1699-6168 (ShangHai)
+852-6957-5415 (HongKong)

	GE	Mr.M	Mr.T
	EXCY100	FPR4500	MN3700
UL 94 V2 (mm)	0.2	0.4	0.25
UL 94 V1 (mm)	0.5	-	-
UL 94 V0 (mm)	0.8	0.8	0.8
Viscosity (Pa s)	200	240	200
HDT (deg C)	90	93	83
N.Izod (ft lb/in)	14	11	11
Ultrasonic Weld	Better	Good	Good
Processing	No issues	Does not fill tool	Offgasing



CX7240 offers Best-In-Class FR and Impact Performance for battery pack

塑料数据专家 www.ponci.com.cn/wxb/ +13538586433 +18816996168



+135-3858-6433 (GuangDong)
+188-1699-6168 (ShangHai)
+852-6957-5415 (HongKong)

Appendix

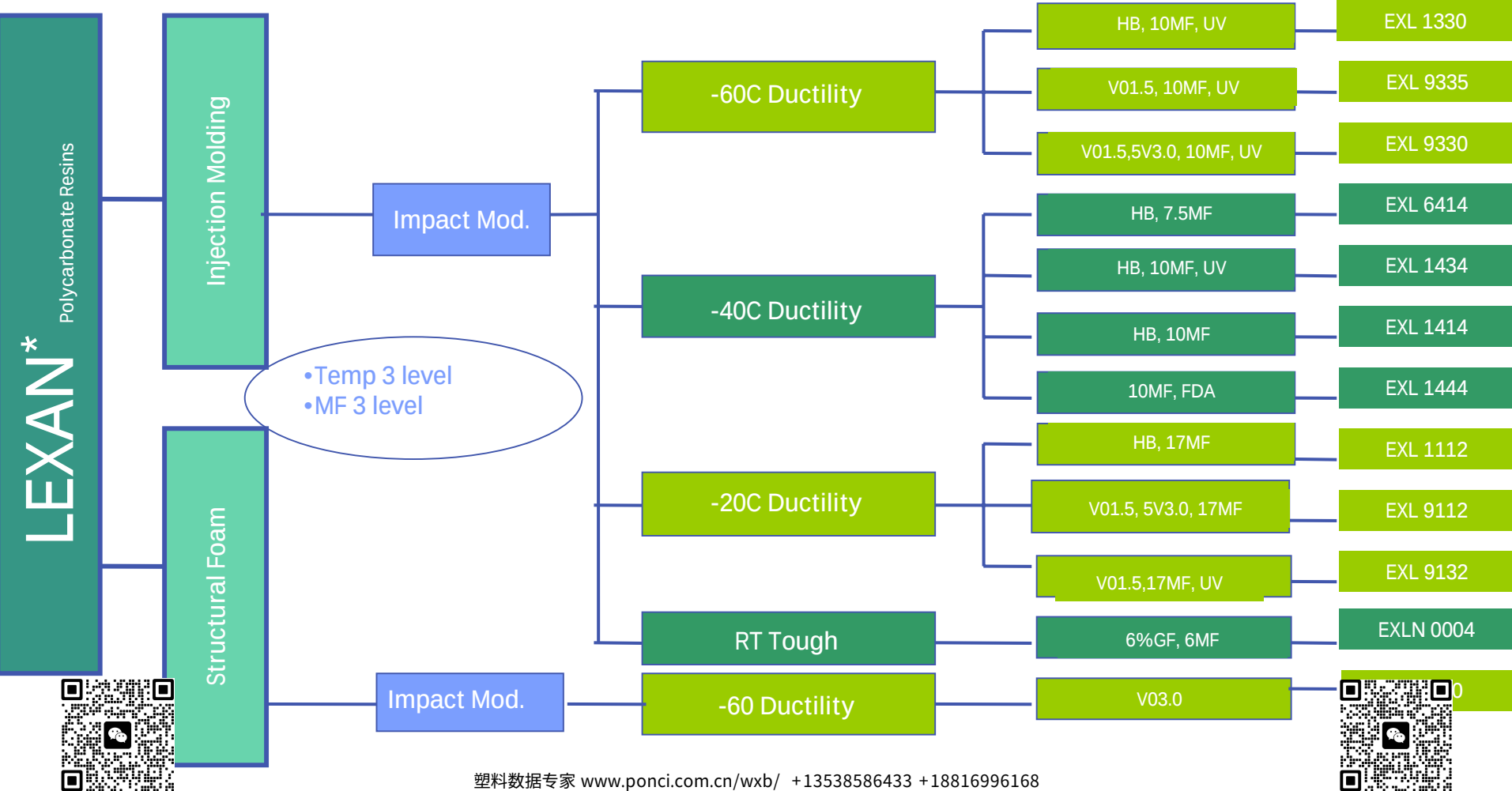


塑料数据专家 www.ponci.com.cn/wxb/ +13538586433 +18816996168



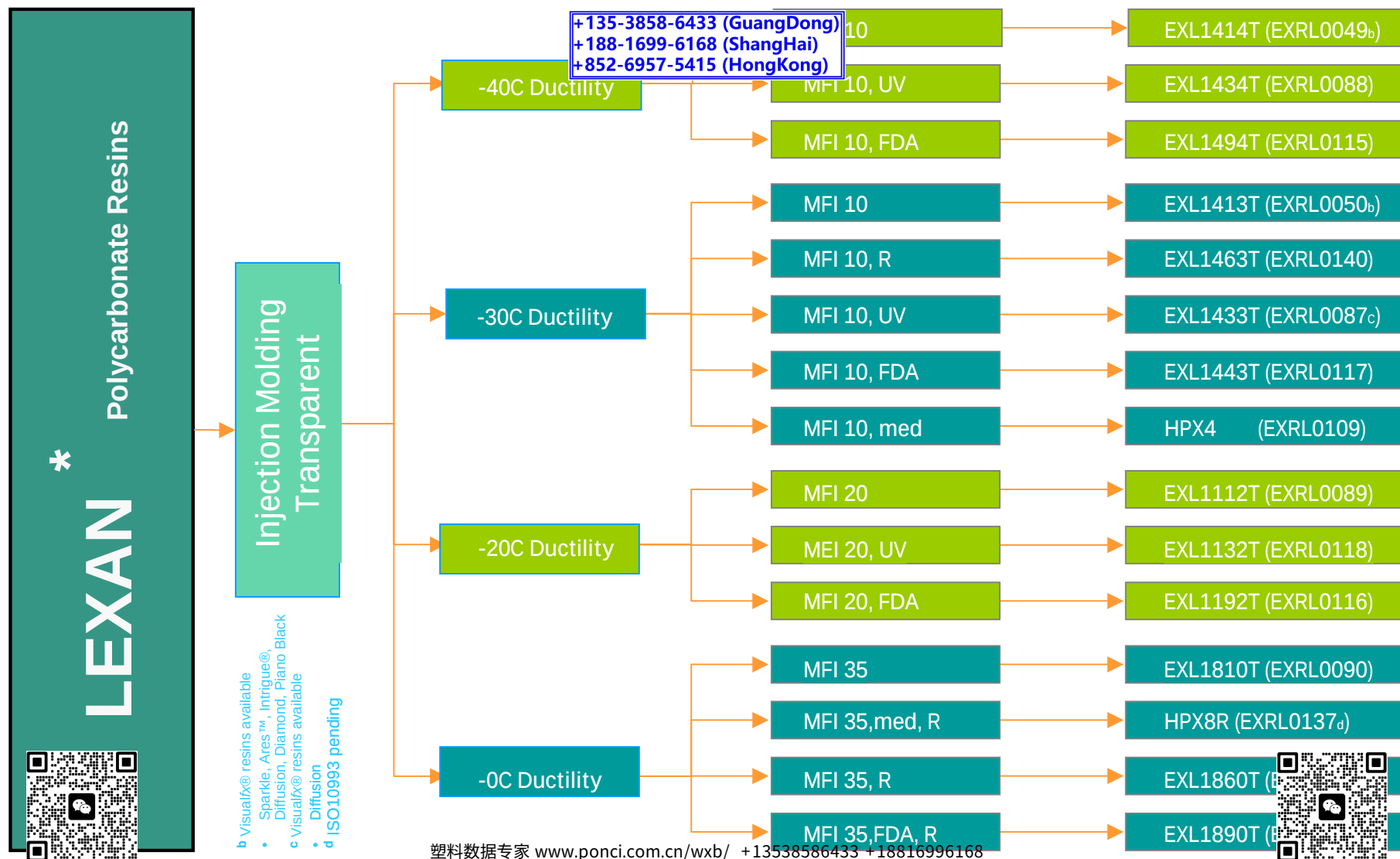
LEXAN* EXL Resin Portfolio

+135-3858-6433 (GuangDong)
+188-1699-6168 (ShangHai)
+852-6957-5415 (HongKong)



塑料数据专家 www.ponci.com.cn/wxb/ +13538586433 +18816996168

LEXAN* Clear EXL Resin Portfolio



塑料数据专家 www.ponci.com.cn/wxb/ +13538586433 +18816996168

* Grade in bracket is development nomenclature

Disclaimer

+135-3858-6433 (GuangDong)
+188-1699-6168 (ShangHai)
+852-6957-5415 (HongKong)

THE MATERIALS AND PRODUCTS OF THE BUSINESSES MAKING UP THE GE PLASTICS UNIT OF GENERAL ELECTRIC COMPANY, ITS SUBSIDIARIES AND AFFILIATES, (“GEP”) ARE SOLD SUBJECT TO GEP’S STANDARD CONDITIONS OF SALE, WHICH ARE INCLUDED IN THE APPLICABLE DISTRIBUTOR OR OTHER SALES AGREEMENT, PRINTED ON THE BACK OF ORDER ACKNOWLEDGMENTS AND INVOICES, AND AVAILABLE UPON REQUEST. ALTHOUGH ANY INFORMATION, RECOMMENDATIONS, OR ADVICE CONTAINED HEREIN IS GIVEN IN GOOD FAITH, GEP MAKES NO WARRANTY OR GUARANTEE, EXPRESS OR IMPLIED, (i) THAT THE RESULTS DESCRIBED HEREIN WILL BE OBTAINED UNDER END-USE CONDITIONS, OR (ii) AS TO THE EFFECTIVENESS OR SAFETY OF ANY DESIGN INCORPORATING GEP MATERIALS, PRODUCTS, RECOMMENDATIONS OR ADVICE. EXCEPT AS PROVIDED IN GEP’S STANDARD CONDITIONS OF SALE, GEP AND ITS REPRESENTATIVES SHALL IN NO EVENT BE RESPONSIBLE FOR ANY LOSS RESULTING FROM ANY USE OF ITS MATERIALS OR PRODUCTS DESCRIBED HEREIN. Each user bears full responsibility for making its own determination as to the suitability of GEP’s materials, products, recommendations, or advice for its own particular use. Each user must identify and perform all tests and analyses necessary to assure that its finished parts incorporating GEP materials or products will be safe and suitable for use under end-use conditions. Nothing in this or any other document, nor any oral recommendation or advice, shall be deemed to alter, vary, supersede, or waive any provision of GEP’s Standard Conditions of Sale or this Disclaimer, unless any such modification is specifically agreed to in a writing signed by GEP. No statement contained herein concerning a possible or suggested use of any material, product or design is intended, or should be construed, to grant any license under any patent or other intellectual property right of General Electric Company or any of its subsidiaries or affiliates covering such use or design, or as a recommendation for the use of such material, product or design in the infringement of any patent or other intellectual property right.



塑料数据专家 www.ponci.com.cn/wxb/ +13538586433 +18816996168

