

***kuraray***

# Introduction of **PARAPET**

***“GH-F-1000” for LGP***

***~ possess highly flowability ~***

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Resin and Optical Devices Marketing & Sales Dept.  
Methacrylate Division

**KURARAY CO., LTD.**

**CONFIDENTIAL**

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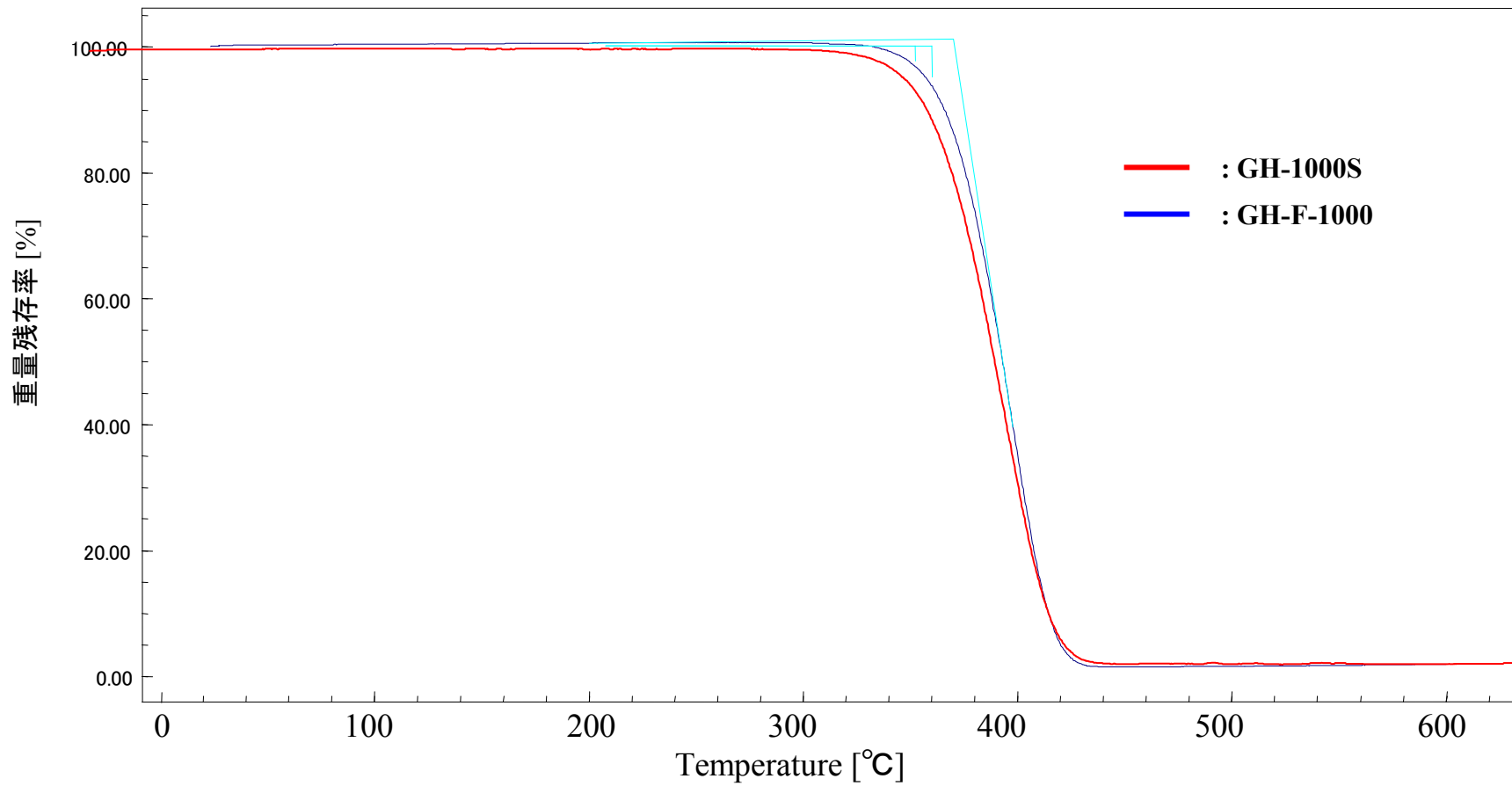
# Physical Properties of “GH-F-1000”

Property	Test Method			Unit	GH-F-1000	GH-1000S	HR-1000S
	ISO No.	Contion	JIS No.		High flowability	Standard	Heat residence
<i>Optical</i>							
Light transmission	ISO 13468-1	3mm	JIS K7361-1	%	92<	92<	92<
Haze	ISO 14782	3mm	JIS K7136	%	0.1	0.1	0.1
Reflective Index Nd	ISO 489		JIS K7142		1.49	1.49	1.49
UV absorption					-	-	add
<i>Mechanical</i>							
Tensile modulus	ISO 527-2	1A/1	JIS K7162	M Pa	3300	3300	3300
Tensile strength at break	ISO 527-2	1A/5	JIS K7162	M Pa	60	62	72
Flexual modulus	ISO 178		JIS K7171	M Pa	3300	3300	3300
Flexural stress at break	ISO 178		JIS K7171	M Pa	88	90	109
<i>Charpy Impact Strength</i>							
unnotched	ISO 179-1eU	1eU	JIS K7111	kJ/m <sup>2</sup>	19	20	22
notched	ISO 179-1eA	1eA	JIS K7111	kJ/m <sup>2</sup>	1.3	1.3	1.4
Rockwell hardness	ISO 2039-2	Scale M	JIS K7202		95	100	103
<i>Thermal</i>							
<i>Specific heat capacity</i>							
			JIS K7123	cal/g°C			
MFR	ISO 1133	230°C 37.3N		g/10min	20	10	2.4
Temperature of deflection under load	ISO 75-2	1.8MPa	JIS K7191	°C	94	95	101
Vicat softing point	ISO 306	B50		°C	100	104	110
<i>Other</i>							
Water absorption at 23°C	ISO 62,method 1	24hrs	-	%	0.3	0.3	0.3
Flammability	UL 94			class	HB	HB	HB

N.B.: Values reported are typical and should not be used for specification purposes.

# Thermo Gravimetry Analyzer

[ Comparison with GH-1000S ]



# Analysis of TGA

		GH-F	GH-S	GH-SN	Company A	Company B
2.5% Loss Temp.	°C	347.7	330.1	330.1	314.9	321.7
5.0% Loss Temp.	°C	356.0	341.0	340.2	331.1	334.5
On Set Temp.	°C	370.1	356.7	356.7	354.7	352.0

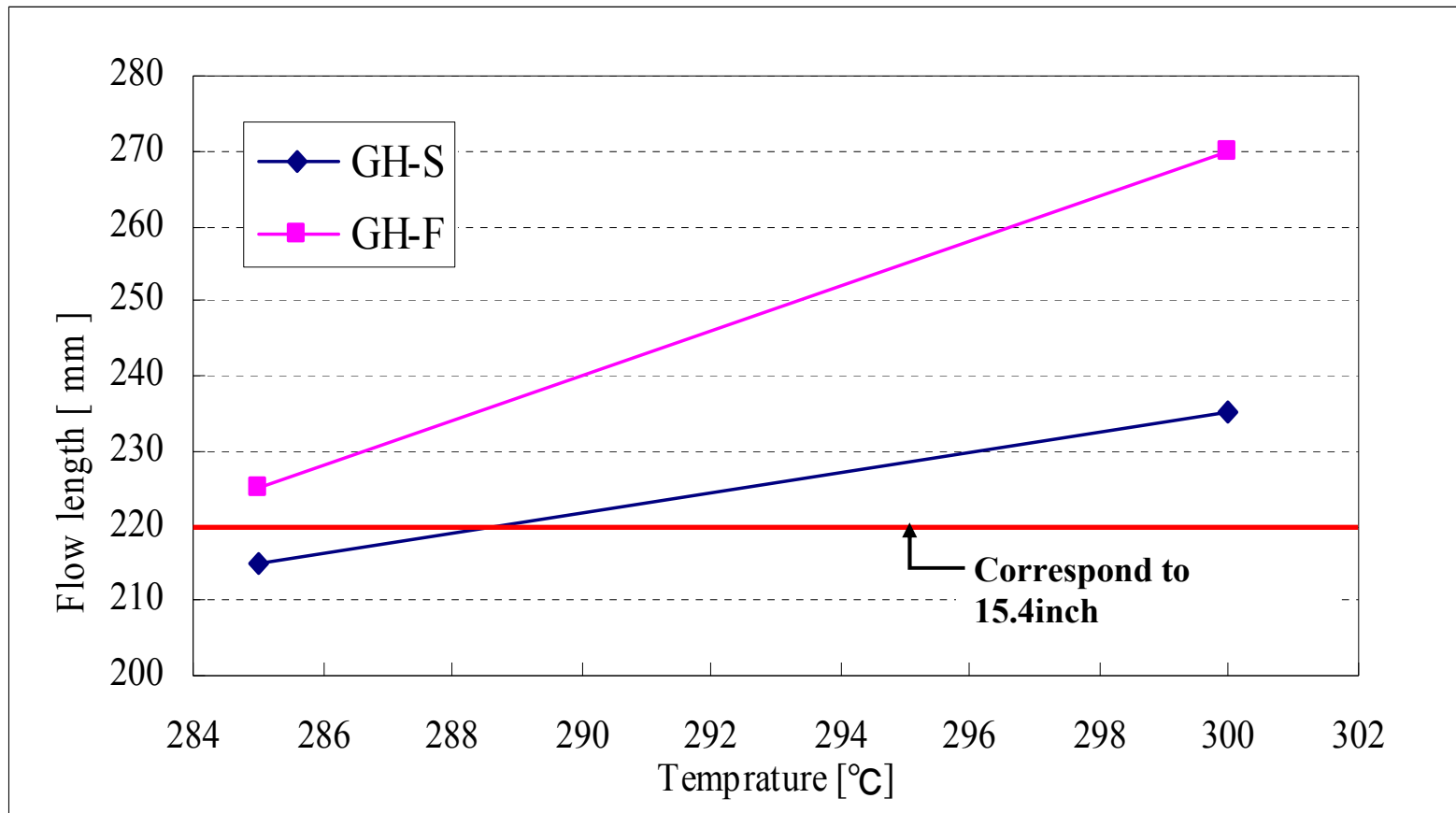
[ NB ] \* Scan speed : 20°C/min

\* Flow of N<sub>2</sub> : 50ml/min for non-GH-F

10ml/min for GH-F, which is much severe condition than those for non-GH-F

✧ *GH-F is resistant to degradation by heat*

# Spiral Flow Test



[ NB ] \* Flow path is 6mm thickness.  
\* Injection speed is 400mm/sec.

*Having injection temperature higher, longer flow length with “GH-F”*



***Thank you very much !***

**For more detailed company and finance information,  
Please visit Kuraray's web site.**

**<http://www.kuraray.co.jp/en/index.html>**