

KYDEX® 6200 LTR Properties

For information applicable to KYDEX® FST please refer to 300 series technical briefs.

TB - 124-A

Introduction

KYDEX® 6200 LTR is a proprietary, high performance thermoplastic sheet designed for use on mass transit vehicles such as subways, vans, buses, and trains. KYDEX® 6200 LTR meets the recommended fire safety practices of both the Federal Transit Administration (FTA) and the Federal Rail Administration (FRA) for smoke emission and flammability as tested under ASTM E-662 and ASTM E-162. Additionally it meets the stringent flame-smoke-toxicity (FST) requirements required by the vehicle manufacturers and transit administrations such as SMP 800C.

Property Value Comparison

Low-Toxicity Materials					
Property	Test Method	Unit Standard (Metric)	GRP ₃ (25-45%)	Ultem 1668A	K6200 LTR
PHYSICAL					
Specific Gravity	ASTM D-792	--	1.40-1.90	1.26-1.33	1.57
Density		g/cm ³ (lb/in ³)	1.40-1.9 (0.0506-0.0686)	1.40-1.9 (0.0455-0.048)	1.57 (0.0575)
Rockwell Hardness	ASTM D-785	--	--	--	78
Water Absorptions 24hrs	ASTM D-570	%-24 hrs	--	0.70	0.18
MECHANICAL₁					
Tensile Strength	ASTM D-638	MPa (psi)	76-160 (11-23ksi)	90.4 (13,000)	23.4 (3390)
Tensile Modulus	ASTM D-638	MPa (psi)	5600-12000 (820-1800ksi)	335K (2,312)	328K (2261)
Tensile Elongation	ASTM D-638	%	1-2%	35	3.2
Flexural Strength	ASTM D-790	MPa (psi)	140-260 (20-38ksi)	141 (20,400)	42.6 (6180)
Flexural Modulus	ASTM D-790	MPa (psi)	6900-14000 (1000-2000ksi)	3,174 (460K)	2,710 (393K)
Notched Izod Impact Resistance 23°C - (73°F)	ASTM D-256	J/m (ft-lbs/in)	--	74 (1.4)	106 (2.0)
Gardner Impact (Geometry GE)	ASTM D-5420	J (in-lbs)	--	--	8.1 (72)
THERMAL₁					
Heat Deflection Temperature 1.82MPa, 264psi (annealed)	ASTM D-648	°C (°F)	190-260 (375-500)	189 (373)	66.8 (152)
45MPa, 66psi (annealed)			--	--	82.3 (180)
FLAMMABILITY₁					
FMVSS 302	MVSS 302	--	--	--	Pass
Radiant Panel, FS	ASTM E-162	--	Pass	--	Pass ₂
Smoke Generation, DS @ 4min	ASTM E-662	--	Pass	Pass	Pass ₂
Toxicity	SMP 800-C	--	Pass	Pass	Pass ₂
1 Reported values based on .125" gauge unless noted otherwise 2 Tested by an accredited 3rd party lab 3 GRP Specs Vary widely according to glass% and type of fiber. They are generally fire resistant and have excellent electrical properties.					

SEKISUI SPI

Customer Service

6685 Low St, Bloomsburg, PA 17815 USA
 Phone: 800.325.3133, +1.570.389.5810
 Outside the US: +1.570.389.5814
 Fax: 800.452.0155, +1.570.387.7786
 Email: info@sekisui-spi.com

Technical Service

Phone: 800.682.8758
 Fax: +1.570.387.8722
 Outside the US: +1.570.387.6997
 techservice@sekisui-spi.com

sekisui-spi.com



Curbell Plastics is a proud supplier of SEKISUI SPI materials

KYDEX® 6200 LTR Properties

For information applicable to KYDEX® FST please refer to 300 series technical briefs.

TB - 124-A

Test Results ASTM E 662-03e2

Flaming Mode	Test	#1	#2	#3	Average	Specified Maxima
	Specific Optical Density at 1.5 minutes	12	12	11	12	100
	Specific Optical Density at 4.0 minutes	101	81	76	86	200
	Maximum Specific Optical Density	504	447	413	455	-
	Maximum Corrected Optical Density	492	429	394	438	-

Non-Flaming Mode	Test	#1	#2	#3	Average	Specified Maxima
	Specific Optical Density at 1.5 minutes	0	1	0	0	100
	Specific Optical Density at 4.0 minutes	54	35	52	47	200
	Maximum Specific Optical Density	386	382	385	384	-
	Maximum Corrected Optical Density	376	375	375	375	-

Test Results According to SMP 800-C

Report Number 06-02-036(B)

Accreditation:

- Standards Council of Canada, Registration #1

Registration:

- ISO 9001:2000, registered by QMI, Registration #001109

Specifications of Order:

- Determine rate of smoke generation according to ASTM E 662 and toxic gas production according to Bombardier SMP 800-C

Identification:

- Thermoplastic material. approx. 3.2 mm in thickness, identified as "KYDEX® 6200 LTR (Lot No. RB9-72-2)" (BMTc sample identification number 05-02-S0039-2)

SEKISUI SPI

Customer Service

6685 Low St, Bloomsburg, PA 17815 USA
 Phone: 800.325.3133, +1.570.389.5810
 Outside the US: +1.570.389.5814
 Fax: 800.452.0155, +1.570.387.7786
 Email: info@sekisui-spi.com

Technical Service

Phone: 800.682.8758
 Fax: +1.570.387.8722
 Outside the US: +1.570.387.6997
 techservice@sekisui-spi.com

[sekisui-spi.com](http://www.sekisui-spi.com)

KYDEX® 6200 LTR Properties

For information applicable to KYDEX® FST please refer to 300 series technical briefs.

TB - 124-A

**Bombardier
SMP 800-C**

Toxic Gas Generation			
	Flaming Mode	Non-Flaming Mode	Specified Maxima
Carbon Monoxide (CO ppm)			
at 1.5 minutes	30	<10	-
at 4.0 minutes	375	<10	-
at maximum	2003	653	3500
Carbon Dioxide (CO₂ ppm)			
at 1.5 minutes	1350	<50	-
at 4.0 minutes	6750	<50	-
at maximum	29100	5050	90000
Nitrogen Oxides (as NO ₂ ppm)	5	6	100
Sulfur Dioxide (SO ₂ ppm)	<1	<1	100
Hydrogen Chloride (HCl ppm)	210	270	500
Hydrogen Fluoride (HF ppm)	6	4	100
Hydrogen Bromide (HBr ppm)	2	3	100
Hydrogen Cyanide (HCN ppm)	<1	<1	100
Original Weight (g)	28.5	29.6	-
Final Weight (g)	11.1	14.3	-
Weight Loss (g)	17.4	15.3	-
Weight Loss (%)	61.01	51.77	-
Time to Ignition (s)	7	Did not ignite	-
Burning Duration (s)	Not Determinable	-	-

Toxic Gas Generation:

- Gases produced for analysis are generated in a specified, calibrated smoke chamber during standard rate of smoke generation testing (ASTM E 662), in both flaming combustion and non-flaming pyrolytic decomposition test modes.

Conclusions:

- The thermoplastic material identified in this report, when tested at an approximate thickness of 3.2mm, meets The Federal Railroad Administration requirements as they pertain to rate of smoke generation (ASTM E 662).

The thermoplastic meets Bombardier SMP 800-C requirements as they pertain to toxic gas production (Bombardier SMP 800-C).

Because we cannot anticipate or control the many different conditions under which this information and our products may be used, we do not guarantee the applicability of the accuracy of this information or the suitability of our products in any given situation. Users should conduct their own tests to determine the suitability of each product for their particular purposes. Data in the physical property table represents typical values and are to serve only as a guide for engineering design. Results are obtained from specimens under ideal laboratory conditions. Right to change physical properties as a result of technical progress is reserved. THE PRODUCTS DISCUSSED ARE SOLD WITHOUT WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR USE, EITHER EXPRESSED OR IMPLIED, EXCEPT AS PROVIDED IN OUR STANDARD TERMS AND CONDITIONS OF SALE. Buyer assumes all responsibility for loss or damage arising from the handling and use of our products, whether done in accordance with directions or not. In no event shall the supplier or the manufacturer be liable for incidental or consequential damages. Also, statements concerning the possible use of our products are not intended as recommendations to use our products in the infringement of any patent. Consult local code and regulatory agencies for specific requirements regarding code compliance, transporting, processing, recycling and disposal of our product. Product not intended for use as a heat resistant surface. Texture, product grade and other conditions may cause variations in appearance.

This information supersedes all previously published data.

SEKISUI SPI

Customer Service

6685 Low St, Bloomsburg, PA 17815 USA
Phone: 800.325.3133, +1.570.389.5810
Outside the US: +1.570.389.5814
Fax: 800.452.0155, +1.570.387.7786
Email: info@sekisui-spi.com

Technical Service

Phone: 800.682.8758
Fax: +1.570.387.8722
Outside the US: +1.570.387.6997
techservice@sekisui-spi.com

[sekisui-spi.com](http://www.sekisui-spi.com)