

# NFRC Product Line Summary (2001 Std)

Simulation Report # R04042

Manufacturer Name: **Fleetwood Windows & Doors**

Product Line ID: FLE-A-038

Simulation Report Date: 7/14/2004

Series/Model: **Glenwood 510 Fixed**

Simulation Revision Date:

Operator Type: Fixed-4-Sided

Model Sizes: 1200mm x 1500mm

Recertification: No

Frame Type: Aluminum (Non-thermal) (AL)

Frame Absorptance: 0.3

Simulation Lab Code: SWWWW

Note: If options in this matrix are grouped (i.e. there are group ID numbers), the option numbers will not match the NFRC database option numbers

Opt#	Grp#	Description/Code	Glass Thicknesses	Gap Width(s)	Gas	Emissivity(sfc)	Spacer/Seal	Divider	U-Factor	CR	Tint	No Dividers		Dividers < 1"		Dividers ≥ 1"	
												SHGC	VT	SHGC	VT	SHGC	VT
001		Clear/Air 3mm	0.118, 0.118	0.768	AIR		A1-D	N,G	<b>0.60</b>	<b>10</b>	CL	<b>0.66</b>	0.71	<b>0.60</b>	0.63	<b>0.54</b>	0.56
	101	Clear/Air 5mm	0.197, 0.197	0.632	AIR		A1-D	N,G	<b>0.60</b>	<b>10</b>	CL	<b>0.61</b>	0.69	<b>0.55</b>	0.61	<b>0.50</b>	0.55
	102	Clear/Air 6mm/5mm	0.236, 0.197	0.593	AIR		A1-D	N,G	<b>0.60</b>	<b>10</b>	CL	<b>0.61</b>	0.69	<b>0.55</b>	0.61	<b>0.50</b>	0.55
	103	Clear/Air 6mm	0.236, 0.236	0.554	AIR		A1-D	N,G	<b>0.60</b>	<b>10</b>	CL	<b>0.61</b>	0.69	<b>0.55</b>	0.61	<b>0.50</b>	0.55
002		SB60/Air 3mm	0.118, 0.118	0.768	AIR	0.043(2)	A1-D	N,G	<b>0.46</b>	<b>11</b>	CL	<b>0.34</b>	0.61	<b>0.31</b>	0.55	<b>0.28</b>	0.49
	201	SB60/Air 5mm	0.197, 0.197	0.632	AIR	0.043(2)	A1-D	N,G	<b>0.46</b>	<b>11</b>	CL	<b>0.34</b>	0.60	<b>0.31</b>	0.54	<b>0.28</b>	0.48
	202	SB60/Air 6mm/5mm	0.236, 0.197	0.593	AIR	0.043(2)	A1-D	N,G	<b>0.46</b>	<b>11</b>	CL	<b>0.34</b>	0.60	<b>0.31</b>	0.54	<b>0.28</b>	0.48
	203	SB60/Air 6mm	0.236, 0.236	0.565	AIR	0.043(2)	A1-D	N,G	<b>0.46</b>	<b>11</b>	CL	<b>0.34</b>	0.60	<b>0.31</b>	0.54	<b>0.28</b>	0.48
003		SB60/Arg 3mm	0.118, 0.118	0.768	ARG	0.043(2)	A1-D	N,G	<b>0.42</b>	<b>11</b>	CL	<b>0.34</b>	0.61	<b>0.31</b>	0.55	<b>0.28</b>	0.49
	301	SB60/Arg 5mm	0.197, 0.197	0.632	ARG	0.043(2)	A1-D	N,G	<b>0.42</b>	<b>11</b>	CL	<b>0.33</b>	0.60	<b>0.30</b>	0.54	<b>0.27</b>	0.48
	302	SB60/Arg 6mm/5mm	0.236, 0.197	0.593	ARG	0.043(2)	A1-D	N,G	<b>0.42</b>	<b>11</b>	CL	<b>0.33</b>	0.60	<b>0.30</b>	0.54	<b>0.27</b>	0.48
	303	SB60/Arg 6mm	0.236, 0.236	0.565	ARG	0.043(2)	A1-D	N,G	<b>0.42</b>	<b>11</b>	CL	<b>0.33</b>	0.60	<b>0.30</b>	0.54	<b>0.27</b>	0.48
004		Clear/TC88 3mm	0.118, 0.003, 0.118	0.375, 0.375	AIR	0.109(4)	S1-S	N	<b>0.38</b>	<b>11</b>	CL	<b>0.44</b>	0.56				
005		Clear/TC88 Arg 3mm	0.118, 0.003, 0.118	0.375, 0.375	ARG	0.109(4)	S1-S	N	<b>0.34</b>	<b>11</b>	CL	<b>0.44</b>	0.56				
006		Clear/TC88 5mm	0.197, 0.003, 0.197	0.313, 0.313	AIR	0.109(4)	S1-S	N	<b>0.40</b>	<b>11</b>	CL	<b>0.42</b>	0.55				
007		Clear/TC88 Arg 5mm	0.197, 0.003, 0.197	0.313, 0.313	ARG	0.109(4)	S1-S	N	<b>0.36</b>	<b>11</b>	CL	<b>0.42</b>	0.55				
008		Clear/TC88 6mm	0.236, 0.003, 0.236	0.281, 0.281	AIR	0.109(4)	S1-S	N	<b>0.41</b>	<b>11</b>	CL	<b>0.42</b>	0.55				
009		Clear/TC88 Arg 6mm	0.236, 0.003, 0.236	0.281, 0.281	ARG	0.109(4)	S1-S	N	<b>0.37</b>	<b>11</b>	CL	<b>0.42</b>	0.55				

This simulation method does not include procedures to determine the Condensation Resistance due to either air movement through the specimen or solar radiation effects. As a consequence, the Condensation Resistance results obtained do not reflect performance which may be expected from field installations because they do not account for solar radiation, air leakage effects, and the thermal bridge effects that may occur due to the specific design and construction of the fenestration system opening. Therefore, it should be recognized that the Condensation Resistance results obtained from this simulation method are for controlled laboratory conditions and should only be used for fenestration product comparisons and as input to condensation resistance performance analyses, which also include solar, air leakage and thermal bridge effects.

**WESTLab**Window Testing and Simulation  
Accredited Simulation Laboratory**NFRC 100/200/500-2001  
Simulation Test Report****Manufacturer: Fleetwood Windows & Doors****Contact: Joe Zammit****Address:** 2485 Railroad  
Corona, CA 91720**Phone:** (909) 279-1070**Model/Series: Glenwood 510 Fixed****Frame Type:** Aluminum (Non-thermal) (AL)**Operator Type:** Fixed-4-Sided**Glazing System:** 1" Overall with 3mm, 5mm & 6mm glass**Baseline Product for U-Factor Validation Testing:****Description:** IG: 3mm Clear, 0.375" air-filled gap, Heat-mirror TC88 (e=0.127 sfc#3 & 0.109 sfc#4), 0.375" air-filled gap, clear 3mm glass with twin galvanized single-seal spacers (Matrix option #004).**Simulated U-factor: 0.38****Test Size:** 47.5" x 59.5"**Physical Test Tolerance:** 0.34 to 0.42**Report Number: R04042****Database File:** Rept Gen 2001**Report Date: 7/14/04****Revision(s):****Expiration (est): 7/14/08****Recertification:** No**IA Code:** FLE-A-038**NFRC Standard Size: Yes***Note: if the test product is not an NFRC standard size, see the W5 mdb file for U-factor calculation.***Notes:** *Manufacturer must have the product described above tested by an accredited physical testing laboratory. Physical test window U-factor results must be within the tolerance range listed above. The baseline product simulated U-factor is within 20% or 0.10 of the lowest simulated U-factor listed in the matrix (as allowed by NFRC 100-2001) unless otherwise noted in the "Other Notes and Comments" section.***Signature of Simulator  
In-Responsible-Charge:****Disclaimers/Notes:***The window U-factors and SHGC values presented in this report were determined using the Therm 5.2 and Window 5.2 computer programs in full compliance with NFRC 100-2001 and 200-2001, and from information supplied by the manufacturer. This report does not constitute certification of this product and only relates to the fenestration products simulated. Authorized use of any U-factor, SHGC and Visible Transmittance ratings may only be granted by the Certification Program Administrator.**WESTLab does not imply or claim that the product simulated in this report will perform as stated in actual use conditions. This report is the property of WESTLab and the client, and must not be reproduced, except in full, without written approval from WESTLab and the client.**Ratings values included in this report are for submittal to an NFRC-licensed IA are not meant to be used directly for labeling purposes. Only those values identified on a valid Certification Authorization Report (CAR) by an NFRC accredited Inspection Agency (IA) are to be used for labeling purposes. Rounding of values in this report is per NFRC unit conversion and rounding policy.*

Ken Nittler: 1721 Arroyo Drive, Auburn, CA 95603. Phone: (530) 885-9891, Fax: 885-9892 e-mail: ken@westlab.net

Ross DePaola: 907 W. Dean Avenue, Madison, WI 53716-2001. Phone: (608) 221-9510, Fax: 221-9510 e-mail: Ross@westlab.net

Jeff Baker: 341 Lake Street, St. Catharines Ontario, Canada L2N4H5. Phone: (905) 935-1653, Fax: (416) 352-7510 e-mail: jeff@westlab.net