

PRECISION TESTING LABORATORIES

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Laboratory Report No. 90932 A
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Mr. Joe Bloomfield
Glow Zone, Inc.
620 Lunar Ave.
Brea, CA 92821

CC: n/a

PO #: n/a

Item: One (1) sample

Identification: AuroraGlo T-Shirt

Purpose: Colorfastness to Crocking; AATCC 8-2007
Colorfastness to Heat: Dry, AATCC 117-2004
Colorfastness: Dye Transfer in Storage; Fabric to Fabric; AATCC 163-2007
Appearance of Apparel & Textile End Products After Repeated Home Laundering; AATCC 143-2006
Colorfastness to Light, AATCC 16-2004, Option 3
Colorfastness to Perspiration, AATCC 15-2009
Colorfastness to Water, AATCC 107-2002
Colorfastness to Chlorinated Pool Water, AATCC 162-2009
Colorfastness to Sea Water, AATCC 106-2009

Test	Unit of Measure	Specimen Results		
Colorfastness to Crocking				
AATCC 8-2007				
average of three technicians		<u>Dry</u>	<u>Wet</u>	
		Class 4-5	Class 5	
Colorfastness to Heat: Dry				
AATCC 117-2004				
		<u>Specimens</u>	<u>Multifiber Cloth</u>	<u>White Cloth</u>
	<u>150° C</u>			
Yellow	Class 5	Class 5	Class 5	
Blue	Class 5			
Green	Class 5			
Purple	Class 5			
Pink	Class 5			
Orange	Class 5			
White	Class 5			
	<u>180° C</u>			
Yellow	Class 5	Class 5	Class 5	
Blue	Class 5			
Green	Class 5			
Purple	Class 5			
Pink	Class 5			
Orange	Class 5			
White	Class 5			

Test	Unit of Measure	Specimen Results				
Colorfastness to Heat; Dry						
AATCC 117-2004						
		<u>Specimens</u>	<u>Multifiber Cloth</u>	<u>White Cloth</u>		
	<u>210° C</u>					
	Yellow	Class 5	Class 5	Class 1-2**		
	Blue	Class 5				
	Green	Class 5				
	Purple	Class 5				
	Pink	Class 5				
	Orange	Class 5				
	White	Class 5				
**- Color transfer due to black print sticking and transferring onto the white test cloth.						
Colorfastness to Dye Transfer in Storage						
AATCC 163-2007						
Option II						
		<u>Specimen</u>		<u>White Cloth</u>		
		Class 5		Class 4-5***		
		<u>Wool</u>	<u>Orlon</u>	<u>Polyester</u>	<u>Nylon</u>	<u>Cotton</u>
		Class 5	Class 5	Class 5	Class 5	Class 5
***-Yellow color transferred onto white test cloth.						
Appearance of Apparel After Repeated Home Laundering						
AATCC 143-2006, Table II (3.II.A.iii)						
<u>5 Cycles</u>						
<u>Evaluate for color change</u>						
	<u>Cycle # 4</u>	No change in color of the client's color spectrum. A slight fuzzing on the black print created a very slight appearance of a color change beginning at cycle # 4.				
Colorfastness to Light						
AATCC 16-2004; Option 3						
40 hours						
Irradiance: 1.10 W/m ² /nm;						
Wavelength: 420 nm						
Filter: Window Glass						
average of three technicians						
			<u>40 hrs.</u>			
	Yellow		Class 3-4			
	Blue		Class 4-5			
	Green		Class 3-4			
	Purple		Class 4			
	Pink		Class 5			
	Orange		No Rating*			
	White		Class 5			
*-The orange color in the spectrum could not be isolated for the specimen that was exposed during testing.						
Q-Sun Model XE-3 -H Xenon apparatus with air-cooled Xenon Arc Lamps was used for this test method.						

Test	Unit of Measure	Specimen Results					
Colorfastness to Perspiration							
AATCC 15-2009							
Average of three technicians							
<u>Acid Solution</u>	<u>Specimen</u>	<u>Wool</u>	<u>Orlon</u>	<u>Polyester</u>	<u>Nylon</u>	<u>Cotton</u>	<u>Acetate</u>
	Class 5	Class 5	Class 5	Class 5	Class 5	Class 5	Class 5
	<u>Yellow</u>	<u>Blue</u>	<u>Green</u>	<u>Purple</u>	<u>Pink</u>	<u>Orange</u>	<u>White</u>
	Class 5	Class 5	Class 5	Class 5	Class 5	Class 5	Class 5
<u>Alkaline Solution</u>	<u>Specimen</u>	<u>Wool</u>	<u>Orlon</u>	<u>Polyester</u>	<u>Nylon</u>	<u>Cotton</u>	<u>Acetate</u>
	Class 5	Class 5	Class 5	Class 5	Class 5	Class 5	Class 5
	<u>Yellow</u>	<u>Blue</u>	<u>Green</u>	<u>Purple</u>	<u>Pink</u>	<u>Orange</u>	<u>White</u>
	Class 5	Class 5	Class 5	Class 5	Class 5	Class 5	Class 5
Colorfastness to Water							
AATCC 107-2007							
	<u>Specimen</u>	<u>Wool</u>	<u>Orlon</u>	<u>Polyester</u>	<u>Nylon</u>	<u>Cotton</u>	<u>Acetate</u>
	Class 5	Class 5	Class 5	Class 5	Class 4*	Class 4-5*	Class 4-5*
	<u>Yellow</u>	<u>Blue</u>	<u>Green</u>	<u>Purple</u>	<u>Pink</u>	<u>Orange</u>	<u>White</u>
	Class 5	Class 5	Class 5	Class 5	Class 5	Class 5	Class 5
*- yellow color transfer							
Colorfastness to Chlorinated Pool Water							
AATCC 162-2009							
	<u>Yellow</u>	<u>Blue</u>	<u>Green</u>	<u>Purple</u>	<u>Pink</u>	<u>Orange</u>	<u>White</u>
	Class 5	Class 5	Class 5	Class 5	Class 5	Class 5	Class 5
	AATCC Test Control Fabric		Class-3				
Colorfastness to Sea Water							
AATCC 106-2009							
	<u>Specimen</u>	<u>Wool</u>	<u>Orlon</u>	<u>Polyester</u>	<u>Nylon</u>	<u>Cotton</u>	<u>Acetate</u>
	Class 5	Class 5	Class 5	Class 5	Class 4-5	Class 5	Class 5
	<u>White Cloth</u>						
	Class 4-5						
	<u>Yellow</u>	<u>Blue</u>	<u>Green</u>	<u>Purple</u>	<u>Pink</u>	<u>Orange</u>	<u>White</u>
	Class 5	Class 5	Class 5	Class 5	Class 5	Class 5	Class 5

Notes:

AATCC "Gray Scale for Color Change" used to evaluate color change specimens.

AATCC "Gray Scale for Staining" used to evaluate crocking squares.

Class 5 = No color change or staining.

Class 4 = Slight color change or staining.


Class 3 = Moderate color change or staining.

Class 2 = Severe color change or staining.

Class 1 = Very severe color change or staining.

I certify that the above tests under my supervision were performed in accordance with the specification test requirements and that the reported results are true, valid and applicable to the samples tested. I further certify that these samples were the only samples tested from the lot of end items identified above.

Signed: 
Suzanne Piispanen, VP Operations

Signed: 
Don G. Roney, Laboratory Manager

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