CRT LABORATORIES, INC.	TEST REPORT       PAGE       OF       2         FOR: Christle Limited       18 O'Meara Ind. Estate, Arima, Trinidad WI         PO Box 5020, Trinidad West Indies       Tal: (868) 646-7641	
1680 North Main Street, Orange, CA 92867 (714) 283-2032 • Fax (714) 283-1365	ATTN: Lauren Singh	
www.crtlabs.com • e-mail: crtlabs@crtlabs.com	20166 DATE: Sep. 16, 2016	
ASTM Physical & Mechanical • Chemical-Thermal Analysis • IAPMO Cell Class Geosynthetic Materials • Plumbing & Faucet Assemblies • Resin & Finished Product Testing	LWK NO.: DATE: DATE:	

BACKGROUND: Client submitted one (1) sample of PVC Solvent Cement for testing (ID shown below). The sample was received on 08/19/2016 via customer-supplied courier. Visual inspection was performed on 08/19/2016 and no product defects were noted. Testing in accordance with client email received on 08/15/2016. The following additional information is shown below:
 CRT order entry log date: 08/19/2016 / Report due date: 09/16/2016
 SAMPLE ID: Christle PVC Solvent Cement

PREPARATION:Conditioning – ASTM D618-13, 40 h in a standard laboratory environment<br/>PVC Milling & Machining – CRT/ASTM method (lap-shear coupons)<br/>Specimens - all shear specimens were prepared utilizing previously tested virgin<br/>PVC powder, with coupon dimensions meeting the required ASTM specification<br/>Dissolution Compound – previously acquired PVC base powder stock for PVC<br/>solvent cements<br/>Bond Conditioning – cemented Lap Shear specimens for 2, 16 & 72 hour cure<br/>times prior to compression testing

TEST PROCEDURES:Solvent Cement for PVC Plastic Pipe and Fittings - ASTM D2564-12 (Vol.:<br/>8.04 2016):<br/>Free Flowing – section 4.3, in conjunction with section 5.2<br/>Gelation – section 4.4, in conjunction with section 5.2<br/>Resin Content % – section 5.1, minimum = 10%

**Dissolution** – section 5.2, minimum = 3%

Viscosity – section 5.3, in conjunction with method-B of ASTM D 1084 (10rpm)

Lap Shear Strength (Psi) – section 5.4, (2h, 16h, and 72h cure times)

Hydrostatic Burst Strength (Psi) – section 5.5, minimum = 400 Psi

Markings & Identification – sections 10.1 - 10.1.8.3

**TEST RESULTS:** The results of testing are reported in data table one (1), attached.

**CONCLUSION:** Based on the results of testing, the sample submitted meets all performance requirements prescribed by ASTM D2564-12(Vol. 8:04 2016)...*Complies* 

Specimen Retain Bin: BB (30 day hold only, unless otherwise noted)

# **CRT LABORATORIES, INC.**

IAPMO R&T 🥗 ISO 9001:2008 Certified – Registered / ISO-IEC 17025:2005 Accredited

Ken A. Le Jeune CEO / Laboratory Director

Rav banzalez

Raúl Gonzalez Laboratory Technician

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www.crtlabs.com • e-mail: crtlabs@crtlabs.com ASTM Physical & Mechanical • Chemical-Thermal Analysis • IAPMO Cell Class Geosynthetic Materials • Plumbing & Faucet Assemblies • Resin & Finished Product Testing	LWR NO.: 20166	DATE: Sep. 16, 2016

### TABLE 1

SAMPLE ID: Christle PVC Solvent Cement SPECIFICATION: ASTM D2564-12 (Vol.: 8.04 2016)

## (4.3) FREE FLOWING

Based on initial inspection of the sample, it appears to be very free flowing with no un-dissolved particles noted...*Complies* 

### (4.4 & 5.2) **DISSOLUTION**

Dissolution testing was performed on this sample by weighing 156 grams of the solvent cement sample and adding 5.88 grams of PVC base powder resin (3% ratio base for solvent) and stirring @ a rate of 1,040 RPM for 1 h. The PVC resin completely dissolved and showed no signs of gelation. In addition, the cement was free flowing and had no evidence of lumps, un-dissolved particles, or any foreign matter that would have adverse effect on the quality or performance of the PVC cement...*Complies* 

( <u>5.1) RESIN CONTEN</u> 16.68 / Complies	<u>T %</u> <u>INERT FIL</u> 0.88 / Cor	<u>LER %</u> <u>MIN. RESIN %</u> nplies 10	<ul> <li>(5.3) VISCOSITY</li> <li>787cPs (kinetic) / Complies (min = 500cPs) Medium bodied</li> </ul>
(5.4) Lap Shear	· Bond Str. (250/50	0/900 Psi min)	(5.5) Hydrostatic Burst
2hr Cure	16hr Cure	72hr Cure	<u>(min 400Psi)</u>
(Psi)	<u>(Psi)</u>	<u>(Psi)</u>	
331	704	1,031	640
338	711	1,012	650
286	686	988	620
321	621	966	620
264	721	1,061	<u>640</u>
308 / <i>Complies</i>	689 / Complies	1,012 / Complies	634 / Complies

## (10) MARKINGS & IDENTIFICATION

ASTM D2564 was confirmed on the label with complete verification of the products quality and intended use. In addition, the manufacturers name, trademark, and hazardous information were legibly printed on the can.

The following marks are present: Christle® Solvent Cement for PVC / CPVC Pipes & Fittings (Hot /Cold Water) 500 mL ASTM D2564 Lot#063164 22:03 Barcode 6744004260038...*Complies* 

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