



SIRIM QAS INTERNATIONAL SDN. BHD. (Company No. 410334-X)  
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## TEST REPORT

REPORT NO : 2007CB0474

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Applicant : BINA PLASTIC INDUSTRIES SDN. BHD.  
Lot 4844, Balakong New Village Industrial Estate,  
43300 Seri Kembangan,  
Selangor Darul Ehsan.

Manufacturer : BINA PLASTIC INDUSTRIES SDN. BHD.  
Lot 158, Jalan Permata 1,  
Arab Malaysia Industrial Park,  
71800 Nilai,  
Negeri Sembilan Darul Khusus.

Product : PE Double Wall Corrugated Pipes For Electrical Installation.

Reference Standard / Method of Test : BS EN 50086-2-4 : 1994  
Specification for  
Conduit systems for electrical installations  
Part 2. Particular requirements  
Section 2.4 : Conduit systems buried underground.

Description of Sample : Two sets of PE Double Wall Corrugated Pipes were received for testing.  
  
Nominal Size :  $\varnothing$  100 mm &  $\varnothing$  150 mm  
Brand : BBB

Date received : 16 / 03 / 2007

Job No./Ref. No. : J20075040360 / SQAS / CBMT / T. REC / PCL / 10

Issued Date : **06 APR 2007**

Approved Signatories

( ABDUL RAZAK MAT JAM )  
Senior Technical Executive



( MOHD. FAUZI ISMAIL )  
Head

Civil & Construction Section  
Product Certification, Inspection & Testing Department

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**TEST RESULT :**

- 1) **Sample** : Double Wall Corrugated Pipes For Electrical Installation.  
**Nominal Size** : Ø 100 mm  
**Classification** : Normal Duty

Clause	Specification	Result
8	<p><b>DIMENSIONS</b>                      Conduit should be preferably according to Table 101</p>	<p>Outside diameter : 119.1 mm                       Min. inside diameter : 101.9 mm</p>
9 9.1	<p><b>CONSTRUCTION</b>                      Within the conduit system there shall be no sharp edges, burrs or surface projections which are likely to damage insulated conductors or cable or inflict injury to the installer or user.</p>	Satisfactory
10  10.2 10.2.1	<p><b>MECHANICAL PROPERTIES</b>   <i>Compression test</i>                      Conduit is subjected to compression test.                      When reaching the deflection of 5%, the applied force shall be 450 N.</p>	<p>1) 464.6 N                      2) 492.1 N                      3) 472.3 N  <b>Average : 476.3 N</b></p>
10.3 10.3.3	<p>After the test, there shall be no crack allowing the ingress of light or water between the inside and the outside.</p> <p><i>Impact test</i>                      After the test, at least in nine of the samples, there shall be no crack allowing the ingress of light or water between the inside and the outside.</p>	<p>No crack allowing the ingress of light or water between the inside and the outside observed.</p> <p>No crack allowing the ingress of light or water between the inside and the outside observed in all twelve samples.</p>



  
**06 APR 2007**



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Clause	Specification	Result
10	<b>MECHANICAL PROPERTIES</b> ( <i>cont'd</i> )	
10.4	<b>Bending test *</b>	
10.4.3	During the test, the sample shall not flatten.  Compliance shall be checked by passing a ball having a diameter equal to (95 +1/ -0)% of the minimum inner diameter of the sample declared by the manufacturer, through the sample whilst it is bent around the apparatus.	No flattening occurred.  The ball passed through the sample whilst it was bent around the apparatus.

- Note : \*
- i) The minimum inner diameter of the sample as declared by Manufacturer : 100 mm.
  - ii) The test was conducted at room temperature only.
  - iii) The sample was bent with bending radius of 1000 mm.



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- 2) Sample : Double Wall Corrugated Pipes For Electrical Installation.  
 Nominal Size : Ø 150 mm  
 Classification : Normal Duty

Clause	Specification	Result
8	<p><b>DIMENSIONS</b>                      Conduit should be preferably according to Table 101</p>	<p>Outside diameter : 174.2 mm                       Min. inside diameter : 152.3 mm</p>
9	<p><b>CONSTRUCTION</b></p>	<p>Satisfactory</p>
9.1	<p>Within the conduit system there shall be no sharp edges, burrs or surface projections which are likely to damage insulated conductors or cable or inflict injury to the installer or user.</p>	
10	<p><b>MECHANICAL PROPERTIES</b></p>	
10.2	<p><i>Compression test</i></p>	
10.2.1	<p>Conduit is subjected to compression test.                      When reaching the deflection of 5%, the applied force shall be 450 N.</p>	<p>1) 486.0 N                      2) 500.5 N                      3) 487.5 N  <b>Average : 491.3 N</b></p>
	<p>After the test, there shall be no crack allowing the ingress of light or water between the inside and the outside.</p>	<p>No crack allowing the ingress of light or water between the inside and the outside observed.</p>
10.3	<p><i>Impact test</i></p>	
10.3.3	<p>After the test, at least in nine of the samples, there shall be no crack allowing the ingress of light or water between the inside and the outside.</p>	<p>No crack allowing the ingress of light or water between the inside and the outside observed in all twelve samples.</p>



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*(Signature)*



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Clause	Specification	Result
10	<b>MECHANICAL PROPERTIES</b> ( <i>cont'd</i> )	
10.4	<b>Bending test *</b>	
10.4.3	During the test, the sample shall not flatten.  Compliance shall be checked by passing a ball having a diameter equal to $(95 +1/ -0)\%$ of the minimum inner diameter of the sample declared by the manufacturer, through the sample whilst it is bent around the apparatus.	No flattening occurred.  The ball passed through the sample whilst it was bent around the apparatus.

- Note : \*
- i) The minimum inner diameter of the sample as declared by Manufacturer : 150 mm.
  - ii) The test was conducted at room temperature only.
  - iii) The sample was bent with bending radius of 1000 mm.



*Amiz*  
06 APR 2007