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TEST REPORT

REPORT NO: E8779/E8780/E8781-A

(This report replaces report E8779/E8780/E8781 dated 2009-11-29)

2009-12-10

Much Asphalt (Pty) Ltd
 P.O.Box 15287
 Bellair
 4006

Attention: Mr. Timothy Gradwell

Dear Sir,

Warm Asphalt Trials Leicester Road

With reference to the samples submitted for testing.

Date Received :	2009-06-15
Date Tested :	2009-06-18 to 2009-07-01
Material Description :	Various Asphalt Samples as listed.
Order Number	-
Deviation/Irregularity from test method:	N/A
Subcontracted to (*) as indicated :	CSIR Report No. JR 4778
Total number of pages :	6
Tests carried out :	Test Methods:
Hamnburg Wheel Tracking Test	(*)
RSST-CH	(*)
Manufacture of Specimens	Troxler Superpave Gyrotory Compactor, reheating to 125°C, for the modified binders, and 145°C for the control mix, before compaction, 1.25° Angle of gyration, 600 kPa loading, 30 gyr/min TMH1 C3, C4a.

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The data on the samples sent to the CSIR for testing are as follows:

Original Report No	E8779	E8780	E8781
Laboratory Number	B6081	B6083	B6085
Sample Number	P2652	P2664	P2673
Mix Type	Type "D" + 10% RAP		
Hydrated Lime Content (%)	-	1.0	1.0
Base Bitumen	40/50		
Modifier	Rediset	Sasobit	None
Modifier Content (%)	2.0	1.5	None
Void Content of Briquettes (%)	6.5	6.8	7.1

Attached, please find the CSIR Report JR4778.

We wish to thank you for your valued support and if you require any further information please feel free to contact us.

Yours faithfully



C.H. Loots
Branch Manager

Everything possible is done to ensure that tests are representative and are performed accurately, and that reports and conclusions are quoted correctly. SRT or its officials can in no way be held liable for consequential damage or loss due to any error made in carrying out the tests, nor for any erroneous statement or opinion contained in a report based on such tests. If a test report is published or reproduced by the client, it will be done in full, without any omission. This report relates only to the samples received. If the report is referred to as an INTERIM REPORT it is not fit for publication.

**ROAD MATERIALS TESTING LABORATORY
BUILT ENVIRONMENT UNIT
P O BOX 395, PRETORIA, 0001**



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**TEST REPORT
NO: JR4778**

Status: Final

Date of Issue: 20/11/2009

Client Details

Client/Requestor	Reference	Address	Contact details
CH Loots SRT	Order No: E 2254	PO Box 15324 Westmead 3608	Tel: 031 7004510 Fax: 031 7003165 Cell: 082 4632598 Email:

Sample Details

Sample description	Asphalt briquettes
Sample no. (CSIR)	
Sample no's. (client)	
Date samples received	E8779; E8780; E8781
Sample condition	Good
Client requirement	Hamburg; RSST-CH
Sample preparation	Na
Comments	

SIGNED:

Dave FC Ventura

SIGNED:

Group Leader

Date: 20/11/2009

This report relates only to the samples actually supplied to CSIR Built Environment. This certificate shall not be reproduced except in full without the written approval of the Director of CSIR Built Environment.

1. Test Results (RSST-CH)

Figure 1 shows the test results for the RSST-CH tests.

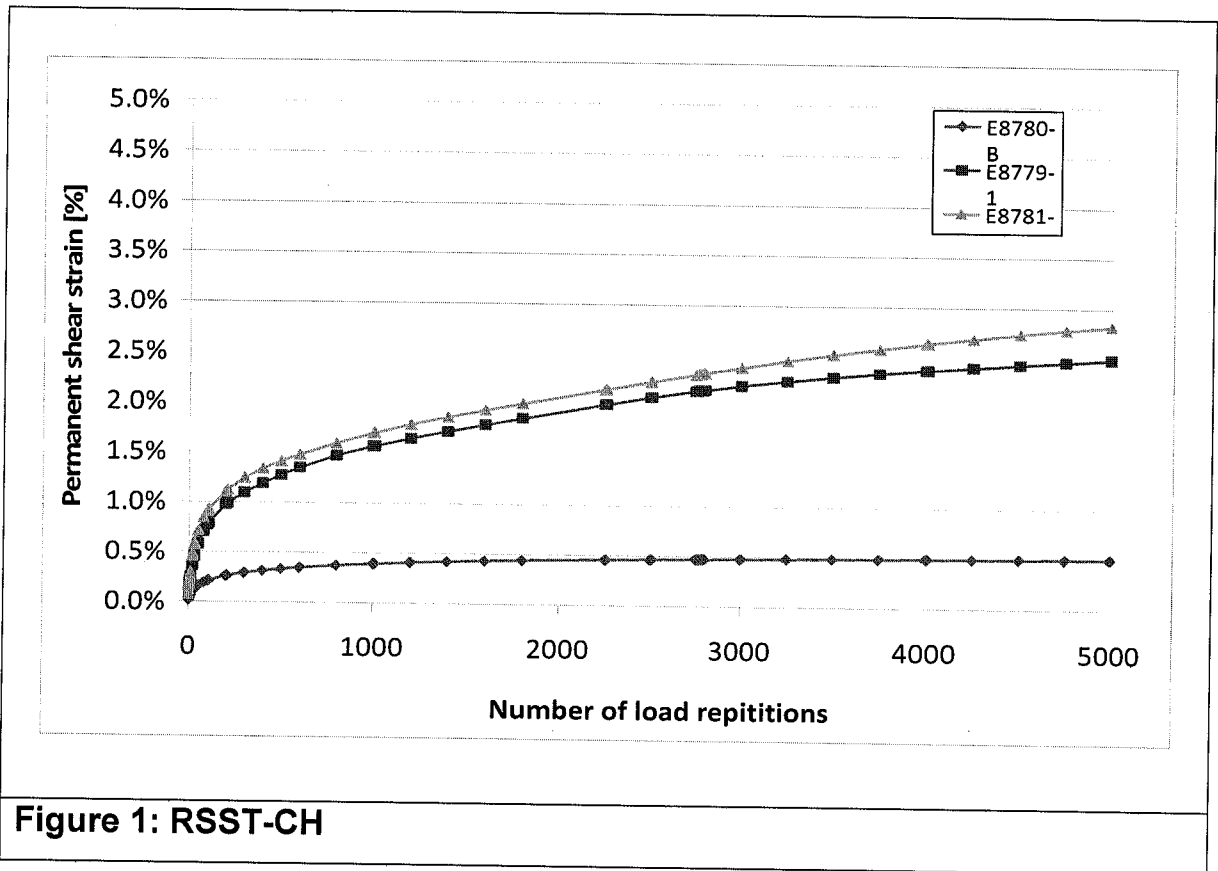


Figure 1: RSST-CH

2. Hamburg wheel-tracking test (HWTT) results

The briquettes were compacted by SRT, where the material characteristics, such as: BRD; MTRD and Voids, were determined.

The Hamburg test data is shown in Table 1. The results are graphically depicted in Figure 2. Hamburg tests were done according to AASHTO test method T 324-04 and the test temperature was 50 °C.

The Texas, Department of Transport considers failure where a rut exceeds 12.7 mm before or at 20 000 passes and specifies minimum number of passes for different binder types before this figure is reached.

Table 1: Hamburg Test Data

Sample Number (SRT)	Sample Number (BE Labs)	Test Temp (°C)	Maximum Rut (mm)	Stripping inflection point (Passes)	Creep Rate (mm/pass)	Stripping Rate (mm/pass)	Number of passes (total)
E8779	JR4778-2	50	10.9	9 500	3.1×10^{-4}	5.8×10^{-4}	20 000
E8780	JR4778-3	50	3.2	No stripping	1.02×10^{-4}	-	20 000
E8781	JR4778-1	50	22.4	7100	3.7×10^{-4}	1.3×10^{-3}	20000

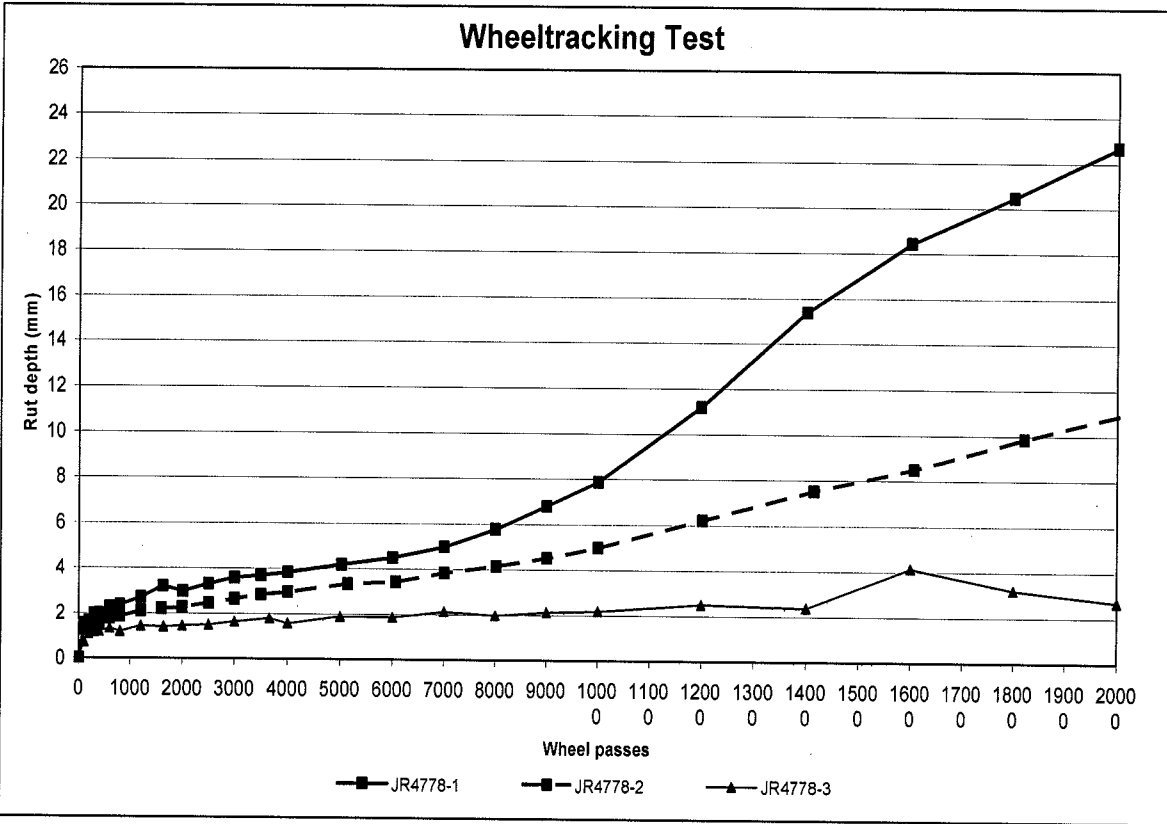


Figure 2: Hamburg Rutting