



LOW TEMPERATURE BRITTLENESS TEST REPORT

Report No. : AT & TC/LTR/74/2014
Date : September 01, 2014
Customer Name : **National Engineering Services Pakistan (Pvt) Limited**
Customer's Reference. : Ref: 3568/EK/LOS/EJ/01
Date : August 18, 2014
Project Name : Dualization of road along drain los Feroze pur road to
Multan road
Part Name : **Elastomeric Expansion Joint**
Quantity : 01 Sample (REJ 70 Inter Buna Spain)



Upper Layer of the Expansion Joint



Tested Sample

TEST PARAMETERS:

Test Standard : ASTM D 736
Temperature : -40 °C
Period of Test : 5 Hours.

TEST RESULT:

- After completion of the test (5 Hrs), No abnormalities such as cracks and break has been observed on the sample.



AKBER JAWED MIR
MANAGER (TECHNICAL)



AT&TC

>The test results contained in this report pertain only to the sample submitted for testing and not necessarily to all similar products.



LOW TEMPERATURE STIFFNESS TEST REPORT

Report No : AT & TC/LTR /88/2014
 Date : September 01, 2014
 Customer Name : National Engineering Services Pakistan (Pvt) Limited
 Customer's Reference : Ref: 3568/EK/LOS/EJ/01
 Date : August 18, 2014
 Project Name : Dualization of road along drain los Feroze pur road to
 Multan road
 Part Name : **Elastomeric Expansion Joint**
 Quantity : 01 Sample (REJ 70 Inter Buna Spain)



Expansion Joint Sample



Dumbbell

TEST PARAMETERS:

Test Standard : ASTM D 797
 Temperature : Young Modulus at 35 °C

TEST RESULTS:

Description	Observed	Specified Max	Remarks
Low Temp. Stiffness	125 Kg/cm ²	350 Kg/cm ²	Within the limit



(Signature)

AKBER JAWED MIR
MANAGER (TECHNICAL)



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OIL RESISTANCE TEST REPORT

Report No : AT & TC/ORTR /85/2014
Date : September 01, 2014
Customer Name : **National Engineering Services Pakistan (Pvt) Limited**
Customer's Reference : Ref: 3568/EK/LOS/EJ/01
Date : August 18, 2014
Project Name : Dualization of road along drain los Feroze pur road to
Multan road
Part Name : **Elastomeric Expansion Joint**
Quantity : 01 Sample (REJ 70 Inter Buna Spain)



Expansion Joint



Tested Sample

TEST PARAMETERS:

Test Standard : ASTM D 471
ASTM Oil No.3
Temperature 100°C
Period: 70 Hrs.

TEST RESULTS:

Description	Observed %	Specified %	Remarks
Volume change	47.65	120Max	Within the Limit




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MANAGER (TECHNICAL)



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OZONE AGING TEST REPORT

Report No : AT & TC/OZN /395/2014
Date : September 01, 2014
Customer Name : National Engineering Services Pakistan (Pvt) Limited
Customer's Reference : Ref: 3568/EK/LOS/EJ/01
Date : August 18, 2014
Project Name : Dualization of road along drain los Feroze pur road to
Multan road
Part Name : Elastomeric Expansion Joint
Quantity : 01 Sample (REJ 70 Inter Buna Spain)



Expansion Joint



Dumbbell

TEST PARAMETERS:

Test Standard : ASTM-D1149
Temperature : 38°C ± 2 °C
Ozone Concentration : 100±5 PPHM
Elongation : 20%
Period of Test : 100 Hours.

TEST RESULTS:

- After completion of the test (100Hrs), No abnormalities such as discoloration and cracks have been observed.




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MANAGER (TECHNICAL)


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TENSILE STRENGTH/ELONGATION & HARDNESS TEST REPORT

Report No. : AT & TC/TSTR/ELOG/HRD-CHG-R /8/2014
Date : September 01, 2014
Customer Name : **National Engineering Services Pakistan (Pvt) Limited**
Customer's Reference. : Ref: 3568/EK/LOS/EJ/01
Date : August 18, 2014
Project Name : Dualization of road along drain los Feroze pur road to
Multan road
Part Name : **Elastomeric Expansion Joint**
Quantity : 01 Sample (REJ 70 Inter Buna Spain)



Expansion Joint



Outer layer samples

Test Standard : **ASTM D412** (Tensile Strength & Elongation)
Test Standard : **ASTM D2240** (Hardness Shore A)

Original Properties

Description	Observed	Specified	Remarks
Hardness Shore A	47to48	45±5	Within the Limit
Tensile Strength Kgf/cm ²	138	127 Min.	Within the Limit
Elongation %	462	400 Min.	Within the Limit




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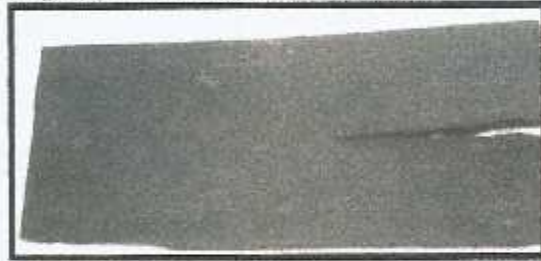


TEAR STRENGTH TEST REPORT

Report No : AT & TC/TSTR /101/2014
Date : September 01, 2014
Customer Name : **National Engineering Services Pakistan (Pvt) Limited**
Customer's Reference : Ref: 3568/EK/LOS/EJ/01
Date : August 18, 2014
Project Name : Dualization of road along drain los Feroze pur road to
Multan road
Part Name : **Elastomeric Expansion Joint**
Quantity : 01 Sample (REJ 70 Inter Buna Spain)



Expansion Joint



Specimen Layer Tested sample

TEST PARAMETERS:

Test Standard : ASTM D 624

TEST RESULTS:

Description	Observed Kgs/cm ²	Specified Kgs/cm ²	Remarks
Tear strength	46	13 (Min)	Within the Limit




AKBER JAWED MIR
MANAGER (TECHNICAL)



NOTES:

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COMPRESSION SET TEST REPORT

Report No : AT & TC/CST/31/2014
Date : September 01, 2014
Customer Name : **National Engineering Services Pakistan (Pvt) Limited**
Customer's Reference. : Ref: 3568/EK/LOS/EJ/01
Date : August 18, 2014
Project Name : Dualization of road along drain los Feroze pur road to
Multan road
Part Name : **Elastomeric Expansion Joint**
Quantity : 01 Sample (REJ 70 Inter Buna Spain)



Expansion Joint Sample



Cross Section Inner layer

TEST PARAMETERS:

Test Standard : ASTM-D395
Temperature : 70 °C
Period of Test : 22 Hours.

TEST RESULTS:

Description	Observed	Specified	Remarks
Compression Set	11.35 %	20 % (Max)	Within the limit



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