

Inspection report regarding the tyre/road noise emission of a tyre in accordance with the Council Directive, Annex V to Directive 92/23/EEC, as last amended by Directive 2005/11/EC and ECE Regulation no. 117.

Part1-Report

- | | | | |
|-----|--|---|--|
| 1. | Tyre approval authority or Technical Service | : | RDW |
| 2. | Name and address of applicant | : | Hankook Tire China Regional Headquarters
3F, Xingyuan building, 410 Guiping Road,
200233, Shanghai, China |
| 3. | Test report No. | : | K055-A0-0508-0773 |
| 4. | Manufacturer and Brand Name or Trade description | : | KINGSTAR RA17, HANKOOK RA17 |
| 5. | Tyre Class (C1, C2 or C3) | : | C2 |
| 6. | Category of use | : | normal |
| 7. | Sound level according to paras. 4.4. and 4.5. of Annex 3 of :
ECE R 117 and paras. 4.4. and 4.5. of Annex V appendix1
of the Directive 92/23 EC at reference speed of 70 or
80km/h | : | 68 dB(A) / 80 km/h |
| 8. | Tyre/Road Noise level according to paras. 6.1.1. through
paras 6.1.3. of ECE R 117 and paras.4.2.1 through 4.2.3 of
Annex V of the Directive 92/23 EC at reference speed of
70 or 80km/h (strike out what does not apply) | : | Limit value expressed in dB(A) according to
Regulation & Directive :
C1 category ;
** 145 and lower 72 dB(A), over 145 up to 165 73 dB(A),
over 165 up to 185 74 dB(A), over 185 up
to 215 75 dB(A), over 215 76 dB(A) * C1a 71(72) dB(A),
C1b 72(73) dB(A), C1c 73(74) dB(A),
C1d 75 dB(A), C1e 76 dB(A)
XL/+ 1 dB(A) & Special/+ 2dB(A)
* () means for 92/23/EEC ** () means for ECE R117
C2 category ;
Normal 75 dB(A), Snow 77 dB(A), Special 78 dB(A)
C3 category ;
Normal 76 dB(A), Snow 78 dB(A), Special 79 dB(A) |
| 9. | Comments (if any) | : | The actual test of the tyre was not required and results
of the previous tests are still valid. |
| 10. | Date of test report | : | September 19, 2008 |
| 11. | Signature | : | |




Part2-Test data

- 1. Date of test: : April 30, 2008
- 2. Test vehicle (Make, model, year, modifications, etc.) : HYUNDAI TERACAN
VIN: KMHNN81WP1U002348/2001
- 2.1. Test vehicle wheelbase : 2805 mm
- 3. Location of test track : GTRACK
#433 Myungam-ri, Jewon-Myun, Geumsan-gun, Chungnam, 312-824, Korea
- 3.1 Date of track certification to ISO 10844:1994 : April 13, 2007
- 3.2. Issued by : RDW TCL/DB/2003-1, K038-A1-0306-0208
- 3.3. Method of certification : Residual void content, Sound absorption coefficient, Texture depth
- 4. Tyre test details
- 4.1. Tyre size designation/DOT Number : 195/75R16C / 0808
- 4.2. Tyre service description : Standard / ~~Reinforced~~
- Load Index : 107/105
- Speed Category : Q
- 4.3. Reference inflation pressure : 520 kPa
- 4.4. Test data

	Front left	Front right	Rear left	Rear right
Test mass (kg)	661	661	717	717
Tyre load index (%)	67.8	67.8	73.5	73.5
Inflation pressure (cold)(kPa)	320	320	360	360

- 4.5. Test rim width code : 5.5J x 16
- 4.6. Temperature measurement sensor type : Digital Thermometer(KESTREL K2000)

5. Valid test results

Run No.	Speed km/h	Direction of run	Sound level left 2/ measured dB(A)	Sound level right 2/ measured dB(A)	Air temp. C	Track temp. C	Sound level left 2/ temp.corrected dB(A)	Sound level right 2/ temp.corrected dB(A)	Comments
1	72.9	North-South	67.22	68.03	25.6	42	67.9	68.7	-
2	74.3	North-South	67.83	68.23	26	42	68.5	68.9	-
3	76.1	North-South	67.94	68.7	25.8	42	68.6	69.4	-
4	78.0	North-South	68.78	69.01	26.3	42	69.4	69.7	-
5	82.7	North-South	68.98	70.06	26.8	42	69.6	70.7	-
6	84.4	North-South	70.19	70.67	26.2	42	70.9	71.3	-
7	86.0	North-South	69.71	70.86	26.6	42	70.4	71.5	-
8	88.9	North-South	70.56	71.32	26.1	41	71.2	72.0	-

5.1. Regression line slope : a = -41.50

5.2. Sound level after temperature correction-according to para.4.3 of Annex 3 of ECE R117 and para. 4.3 of Annex V appendix 1 of the Directive 92/23 : 69.78 dB(A)

5.3. The final result of sound level according to para.4.4. of annex 3 of ECE R117 and para. 4.4 of Annex V appendix 1 of the Directive 92/23 : 68 dB(A)

List of modifications

Correction of : - --

Modification of : - --

Addition of : - --

Deletion of : - --

Inspection report regarding the tyre/road noise emission of a tyre in accordance with the Council Directive, Annex V to Directive 92/23/EEC, as last amended by Directive 2005/11/EC and ECE Regulation no. 117.

Part1-Report

- | | | | |
|-----|--|---|--|
| 1. | Tyre approval authority or Technical Service | : | RDW |
| 2. | Name and address of applicant | : | Hankook Tire China Regional Headquarters
3F, Xingyuan building, 410 Guiping Road,
200233, Shanghai, China |
| 3. | Test report No. | : | K055-A0-0508-0773-1 |
| 4. | Manufacturer and Brand Name or Trade description | : | KINGSTAR RA17, HANKOOK RA17 |
| 5. | Tyre Class (C1, C2 or C3) | : | C2 |
| 6. | Category of use | : | normal |
| 7. | Sound level according to paras. 4.4. and 4.5. of Annex 3 of :
ECE R 117 and paras. 4.4. and 4.5. of Annex V appendix1
of the Directive 92/23 EC at reference speed of 70 or
80km/h | : | 72 dB(A) / 80 km/h |
| 8. | Tyre/Road Noise level according to paras. 6.1.1. through
paras 6.1.3. of ECE R 117 and paras.4.2.1 through 4.2.3 of
Annex V of the Directive 92/23 EC at reference speed of
70 or 80km/h (strike out what does not apply) | : | Limit value expressed in dB(A) according to
Regulation & Directive :
C1 category ;
** 145 and lower 72 dB(A), over 145 up to 165 73 dB(A),
over 165 up to 185 74 dB(A), over 185 up
to 215 75 dB(A), over 215 76 dB(A) * C1a 71(72) dB(A),
C1b 72(73) dB(A), C1c 73(74) dB(A),
C1d 75 dB(A), C1e 76 dB(A)
XL/+ 1 dB(A) & Special/+ 2dB(A)
* () means for 92/23/EEC ** () means for ECE R117
C2 category ;
Normal 75 dB(A), Snow 77 dB(A), Special 78 dB(A)
C3 category ;
Normal 76 dB(A), Snow 78 dB(A), Special 79 dB(A) |
| 9. | Comments (if any) | : | The actual test of the tyre was not required and results
of the previous tests are still valid. |
| 10. | Date of test report | : | September 19, 2008 |
| 11. | Signature | : | |




Part2-Test data

- 1. Date of test: : April 30, 2008
- 2. Test vehicle (Make, model, year, modifications, etc.) : HYUNDAI TERACAN
VIN: KMHNN81WP1U002348/2001
- 2.1. Test vehicle wheelbase : 2805 mm
- 3. Location of test track : GTRACK
#433 Myungam-ri, Jewon-Myun, Geumsan-gun, Chungnam, 312-824, Korea
- 3.1 Date of track certification to ISO 10844:1994 : April 13, 2007
- 3.2. Issued by : RDW TCL/DB/2003-1, K038-A1-0306-0208
- 3.3. Method of certification : Residual void content, Sound absorption coefficient, Texture depth
- 4. Tyre test details
- 4.1. Tyre size designation/DOT Number : 225/70R15C / 0308
- 4.2. Tyre service description : Standard / ~~Reinforced~~
 Load Index : 112/110
 Speed Category : R
- 4.3. Reference inflation pressure : 450 kPa
- 4.4. Test data

	Front left	Front right	Rear left	Rear right
Test mass (kg)	689	689	891	891
Tyre load index (%)	61.5	61.5	79.5	79.5
Inflation pressure (cold)(kPa)	260	260	360	360

- 4.5. Test rim width code : 6.5J x 15
- 4.6. Temperature measurement sensor type : Digital Thermometer(KESTREL K2000)

5. Valid test results

Run No.	Speed km/h	Direction of run	Sound level left 2/ measured dB(A)	Sound level right 2/ measured dB(A)	Air temp. C	Track temp. C	Sound level left 2/ temp.corrected dB(A)	Sound level right 2/ temp.corrected dB(A)	Comments
1	70.9	North-South	72	72.22	25.7	39	72.6	72.8	-
2	73.6	North-South	72.57	72.26	25.5	39	73.1	72.8	-
3	75.7	North-South	72.85	72.24	25.4	39	73.4	72.8	-
4	77.4	North-South	72.67	73.35	26.1	39	73.2	73.9	-
5	81.5	North-South	73.07	73.87	25.5	39	73.6	74.4	-
6	83.2	North-South	73.95	73.18	25.8	39	74.5	73.8	-
7	85.2	North-South	74.12	74.35	25.8	39	74.7	74.9	-
8	87.7	North-South	74.38	74.96	25.3	39	75.0	75.5	-

5.1. Regression line slope : a = -56.74

5.2. Sound level after temperature correction-according to para.4.3 of Annex 3 of ECE R117 and para. 4.3 of Annex V appendix 1 of the Directive 92/23 : 73.44 dB(A)

5.3. The final result of sound level according to para.4.4. of annex 3 of ECE R117 and para. 4.4 of Annex V appendix 1 of the Directive 92/23 : 72 dB(A)

List of modifications

Correction of : - --

Modification of : - --

Addition of : - --

Deletion of : - --



RDW

THE NETHERLANDS
(N E D E R L A N D)



COMMUNICATION

Concerning ⁽¹⁾:

- approval granted
- ~~approval extended~~
- ~~approval refused~~
- ~~approval withdrawn~~
- ~~production definitely discontinued~~

of a type of tyre with regard to rolling sound emission level pursuant to Regulation number 117.

Approval number: E4-117R-000489

Extension number: 00

Approval mark:



000489 S

1. Manufacturer's name and address(es) : Hankook Tire China Regional Headquarters
3F, Xingyuan building, 410 Guiping Road,
200233, Shanghai, China
2. If applicable, name and address of
manufacturer's representative : not applicable
3. "Tyre class" and "category of use" of the
type of tyre : C2/ normal
4. Brand(s) name(s) and/or Trade
description(s) of the type of tyre : KINGSTAR RA17, HANKOOK RA17
5. Technical service and, where appropriate,
test laboratory approved for purposes of
approval or of verification of conformity
tests : TÜV NORD Mobilität GmbH & Co. KG
Institut für Fahrzeugtechnik und Mobilität
Adlerstrasse 7, D-45307 Essen
6. Sound level of the representative tyre size, see Paragraph 2.5. of Regulation number 117, as per item
7. of the test report: 68 dB(A) at reference speed of 70/80 km/h ⁽¹⁾.
7. Number of report issued by that service : K055-A0-0508-0773 & K055-A0-0508-0773-1
8. Date of report issued by that service : September 19, 2008
9. Reason(s) of extension (if applicable) : not applicable

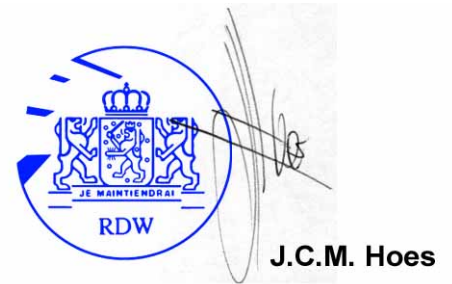


Postbus 777
2700 AT Zoetermeer
The Netherlands

Tel +31 79 345 81 43
Fax +31 79 345 80 33
www.rdw.nl

Vehicle Approval and Information

10. Any remarks :
11. Place : Zoetermeer
12. Date : 29-SEP-2008
13. Signature :



14. Annexed to this communication are: Information folder no; JPQA-08A0305
- 14.1. A list of documents in the approval file deposited at the Administration services having delivered the approval and which can be obtained upon request.
- 14.2. A list of tread-pattern designations: Specify for each trademark or brand name and trade description the list of tyre size designations adding, in the case of Class C1 tyres, the mark "Reinforced" or "Extra Load", if applicable.

⁽¹⁾ Strike out what does not apply.

Pattern of Tires

RA17

N0.	Class	Size	PR	LI/SS	Limit (dB)
1	C2	195/75R16C	8	107/105Q	75
2		185/75R16C	8	104/102Q	
3		175/75R16C	8	101/99Q	
4		195/70R15C	8	104/102R	
5		225/70R15C	8	112/110R	
6		145R12C	6	81/79P	
7		155R12C	6	83/81P	
8		185R14C	6	99/97Q	
9		175R14C	8	99/98Q	
10		185R14C	8	102/100Q	
11		195R14C	8	106/104Q	
12		185R15C	8	103/102Q	

Test Size (1) : 195/75R16C 8PR 107/105Q

Reason of choice : ~~Widest~~
~~Lowest aspect ratio~~
 Biggest rim size

Test Size (2) : 225/70R15C 8PR 112/110R

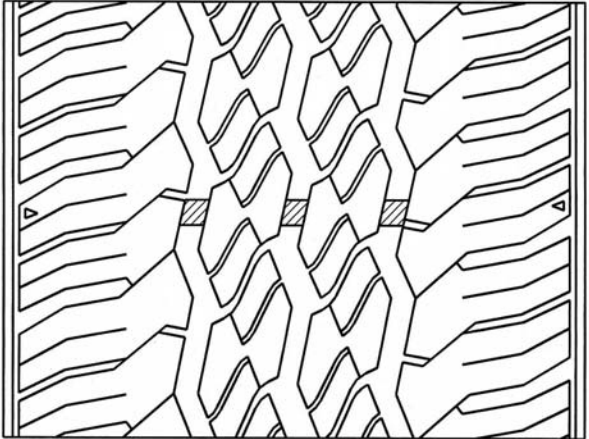
Reason of choice : Widest
 Lowest aspect ratio
~~Biggest rim size~~



Drawing No.: 200805-PBN-RA17

Date : 2008-5-6

Drawing of the tread pattern (Mesured tire)

Manufacure's name	HanKOOK Tire China Regional Headquarters (HanKOOK Tire China Co., Ltd. Shanghai office)
Pattern name	RA17
Tire size	225/70R15C 112/110R
Max. Load	1120 kg / 1060 kg
Pitch number	43
Pitch ratio (Max./Min.)	1.311
Groove area ratio (%)	26.30%
Width : main grooves (mm)	9.5-9.5-9.5
Depth : center grooves (mm)	10
Depth : shoulder grooves (mm)	10
Pattern	



Drawing No.: 200805-PBN-RA17

Date : 2008-5-6

Drawing of the tread pattern (Mesured tire)

Manufacure's name	HanKOOK Tire China Regional Headquarters (HanKOOK Tire China Co., Ltd. Shanghai office)
Pattern name	RA17
Tire size	195/75R16C 107/105Q
Max. Load	975 kg / 925 kg
Pitch number	45
Pitch ratio (Max./Min.)	1.313
Groove area ratio (%)	28.30%
Width : main grooves (mm)	9-9-9
Depth : center grooves (mm)	10.5
Depth : shoulder grooves (mm)	10.5
Pattern	

