



RDW

Vehicle Technology Division

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



**EC TYPE-APPROVAL CERTIFICATE
(tyre/road noise emission)**

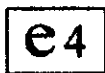
Communication concerning the:

- ~~EC type approval~~
- extension of EC type approval
- ~~refusal of EC type approval~~
- ~~withdrawal of EC type approval~~
- ~~discontinuation of~~

of a type of tyre with regard to Annex V to Directive 92/23/EEC, as last amended by Directive 2001/43/EC, relating to tyre/road noise emission.

EC type-approval number : e4*92/23*2001/43*0225622*01

Approval mark :



0225622-s

SECTION I

0. General

0.1. Manufacturer's name

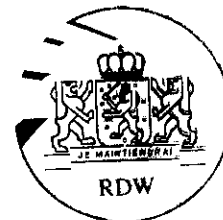
: Hankook Tire Co., Ltd.

0.2. Manufacturer's name and address

: Hankook Tire Co., Ltd.
647-15 Yoksam-dong, Kangnam-gu
Seoul 135-723, Korea

0.3. Address(es) of manufacturing plant(s)

: see information document item I.3

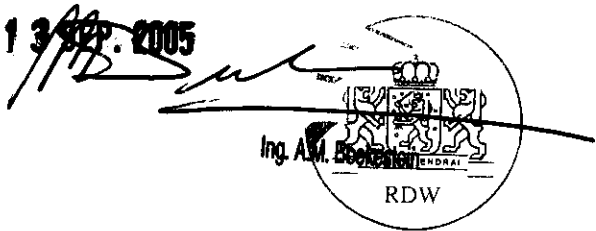


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Vehicle Approval and Information

SECTION II

1. Additional information
- 1.1. Brand name(s) and trade description(s) : Hankook K702
Aurora K702
- 1.2. Tyre classification : class C1/~~class C2~~/class C3
- 1.3. Category of use : ~~normal~~/snow/special
2. Technical service responsible for carrying out the tests : RDW
P.O.Box 777
2700 AT Zoetermeer
The Netherlands
3. Date of test report : November 13, 2003
September 01, 2005
4. Number of test report : K016-A0-1003-0765
K016-A1-0605-0739
5. Grounds for extending EC type-approval (where appropriate) : - addition of tire size (185/70R13 86T, 205/70R15 96T)
6. Comments (if any) :
7. Date and place : Zoetermeer
8. Signature : 13 SEP. 2005

9. The list of documents making up the EC type-approval file lodged with the authority that has granted the approval and which may be obtained on request is attached.
1. Information document number P2005-A06-02
 2. List of tyre sizes
 3. Drawing of the tread pattern
 4. Test report as mentioned in item 4



HANKOOK TIRE CO., LTD.

647-15 Yeoksam-dong, Gangnam-gu, Seoul 135-723 Korea
Phone : 82-2-2222-1000 Facsimile : 82-2-2222-1100

Date: July. 25, 2005

**INFORMATION DOCUMENT No. P2005-A06-02 RELATING TO EC TYPE APPROVAL FOR A TYPE
OF TYRE RELATING TO TYRE/ROAD NOISE EMISSION
(Annex V to Directive 2001/43/EC)**

1. GENERAL

- 1.1 Manufacturer's name : HANKOOK TIRE CO., LTD.
- 1.2 Name and address of applicant : HANKOOK TIRE
#647-15 Yeoksam-dong, Kangnam-ku
Seoul, 135-723, Korea
- 1.3 Address(es) of manufacturing plant(s) : Plant 1
#100 Moksang-dong, Teaduck-Gu,
Daejeon, 306-120, Korea
Plant 2
#433 Myungam-ri, Jewon-Myun, Geumsan-gun,
Chungnam, 312-824, Korea
- 1.4 Brand name(s), Trade description(s) or Trade mark(s) : HANKOOK, AURORA,

2. TYRES

- 2.1 Tyre classification (class C1, C2 or C3) : Class C1
- 2.2 Category of use (normal, snow or temporary use) : snow
- 2.3 Details of the major features, with respect to the effects : K702 – see Drawing No. 200507-PBN-K702
on tyre/road noise emission, of the tread pattern(s) to
be used on the designated range of tyre sizes. This
may be by drawing, photograph or description but must
be sufficient to allow the type approval authority or
technical service to determine whether any subsequent
changes to the major features will adversely affect the
tyre/road noise emission
- 2.3 Tyre structure (Bias, Bias-belted or Radial) : Radial
- 2.5 List of tread-pattern designations : see the attached tyre type list



J. S. Kim

J. S. Kim (G. Manager)
Quality Management Team

Pattern of Tires
K702

SIZE	Limit (dB)
145/70R13 71T	72
155/65R13 73T	73
155/70R13 75T	
155/80R13 79T	
155/80R13 82T	
165/65R14 79T	
165/70R14 85R	
175/65R14 82T	74
175/70R13 82T	
175/70R14 84T	
# 185/70R13 86T	
195/70R14 91T	75
# 205/70R15 96T	

Test Size : 175/65R14 82T

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

Test Size : 205/70R15 96T

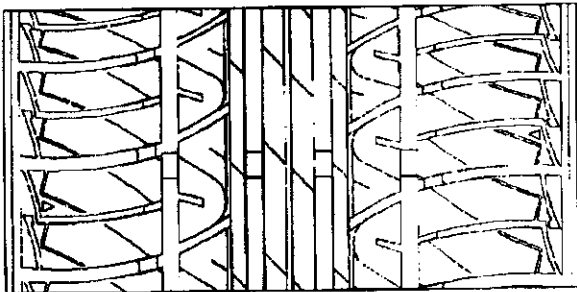
Reason of choice : ~~Widest~~
~~Lowest aspect ratio~~
Biggest rim size



Drawing No.: HK-006

Date : 03-10-14

Drawing of the tread pattern (Measured tire)

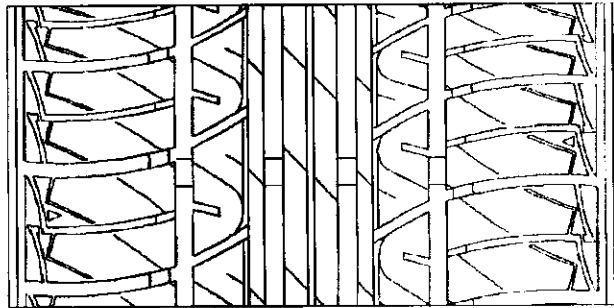
Manufacture's name	HANKOOK TIRE CO., LTD.
Pattern name	K702
Tire size	175/65R14T
Pitch number	60
Pitch ratio (Max./Min.)	1.46
Groove area ratio (%)	30
Width : main grooves (mm)	6
Depth : center grooves (mm)	8.2
Depth : shoulder grooves (mm)	8.2
Pattern	



Drawing No.: 200507-PBN-K702

Date : 2005-07-25

Drawing of the tread pattern (Measured tire)

Manufacture's name	HANKOOK TIRE CO., LTD.
Pattern name	K702
Tire size	205/70R15
Pitch number	66
Pitch ratio (Max./Min.)	38.7/26.7(1.45/1)
Groove area ratio (%)	33%
Width : main grooves (mm)	8
Depth : center grooves (mm)	8.9
Depth : shoulder grooves (mm)	8.9
Pattern	



Inspection report according to the directive of component type approval
92/23/EEC(2001/43/EC) regarding pneumatic tyres for passenger cars

Part1-Report

1. Type approval authority or Technical Service : RDW
2. Name and address of applicant : Hankook Tire Co., Ltd.
647-15 Yoksam-dong, Kangnam-gu
Seoul 135-723, Korea
3. Test report No. : K016-A1-0605-0739
4. Manufacturer and Brand Name or Trade description : Hankook K702
Aurora K702
5. Tyre Class (C1, C2 or C3) : C1
6. Category of use : snow
7. Sound level according to paragraph. 4.2.1. of annex5
at reference speed of 80km/h /
/ Strike out what does not apply. : ~~ECE~~ or Appendix 92/23/EEC (2001/43/EC)
; C1a 72 dB(A), C1b 73 dB(A), C1c 74 dB(A),
C1d 75 dB(A), C1e 76 dB(A)
8. Comments (if any) :
9. Date : September 01, 2005
10. Signature :



Test Inspector
Dipl.-Ing. K. S. Kim



Part2-Test data

1. Date of test: : July 29, 2005
2. Test vehicle (Make, model, year, modifications, etc.) : HYUNDAI New EF Sonata Model 2001
KMHEN41BP1A452076
- 2.1. Test vehicle wheelbase : 2690 mm
3. Location of test track : Hankook Geumsan plant noise track
433, Myungam, Jewon, Geumsan
Chungnam, 312-824, Korea
- 3.1 Date of track certification to ISO 10844:1994 : see attached document
- 3.2. Issued by : RDW CRT/050317b, 83-002-33006966-100
- 3.3. Method of certification : Residual void content, Sound absorption
coefficient, Texture depth

4. Tyre test details

4.1. Tyre size designation/DOT Number : 205/70R15 /T7T8 AMH 2905

4.2. Tyre service description

Load Index : 96

Speed Category : T

Normal or reinforced : normal

4.3. Reference inflation pressure : 250 kPa

4.4. Test data

	Front left	Front right	Rear left	Rear right
Test mass (kg)	545	522	519	546
Tyre load index (%)	77	74	73	77
Inflation pressure (cold)(kPa)	192	192	185	185

4.5. Test rim width code : 6.0J

4.6. Temperature measurement sensor type : Digital Thermometer

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	72.2	one direction	71.4	68.9	31.0	39.0	72.0	69.5	
2	74.4	one direction	70.6	69.2	31.0	39.5	71.2	69.8	
3	76.5	one direction	70.9	69.2	31.5	39.5	71.5	69.8	
4	78.9	one direction	71.3	69.1	31.5	40.0	71.9	69.7	
5	81.2	one direction	72.1	70.8	31.5	41.0	72.7	71.4	
6	84.5	one direction	71.9	70.8	32.0	40.5	72.5	71.4	
7	85.6	one direction	72.4	71.4	32.0	40.0	73.0	72.0	
8	87.1	one direction	72.6	71.7	32.0	40.5	73.2	72.3	

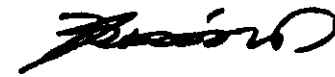
5.1. Regression line slope : $a = 28.1908$

5.2. Sound level after temperature correction according to para.4.3. of annex 5 : 70 dB(A)

Inspection report according to the directive of component type approval
92/23/EEC(2001/43/EC) regarding pneumatic tyres for passenger cars

Part1-Report

1. Type approval authority or Technical Service : RDW
2. Name and address of applicant : Hankook Tire Co., Ltd.
647-15 Yoksam-dong, Kangnam-gu
Seoul 135-723, Korea
3. Test report No. : K016-A1-0605-0739
4. Manufacturer and Brand Name or Trade description : Hankook K702
Aurora K702
5. Tyre Class (C1, C2 or C3) : C1
6. Category of use : normal
7. Sound level according to paragraph 4.2.1. of annex5
at reference speed of 80km/h 1/
1/ Strike out what does not apply. : ECE or Appendix 92/23/EEC (2001/43/EC)
; C1a 72 dB(A), C1b 73 dB(A), C1c 74 dB(A),
C1d 75 dB(A), C1e 76 dB(A)
8. Comments (if any) :
9. Date : September 01, 2005
10. Signature :



Test Inspector
Dipl.-Ing. K. S. Kim



Part2-Test data

1. Date of test: : July 29, 2005
2. Test vehicle (Make, model, year, modifications, etc.) : HYUNDAI Avante XD 2003 Model
KMHDM41AP3U640559
- 2.1. Test vehicle wheelbase : 2600 mm
3. Location of test track : Korea Automobile Testing & Research Institute
625, Samjon-ri, Songsan-myun, Hwasung-gun
Kyeonggi-Do, Korea
- 3.1 Date of track certification to ISO 10844:1994 : see attached document
- 3.2. Issued by : RDW TCL/DB/2003-1, 83-402-33004763-100
- 3.3. Method of certification : Residual void content, Sound absorption
coefficient, Texture depth

4. Tyre test details

4.1. Tyre size designation/DOT Number : 175/65R14 /T7CX AHH 0603

4.2. Tyre service description

Load Index : 82

Speed Category : T

Normal or reinforced : normal

4.3. Reference inflation pressure : 250 kPa

4.4. Test data

	Front left	Front right	Rear left	Rear right
Test mass (kg)	368	368	364	364
Tyre load index (%)	77	77	77	77
Inflation pressure (cold)(kPa)	182	182	180	180

4.5. Test rim width code : 5.0J

4.6. Temperature measurement sensor type : Digital Thermometer

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	71.1	one direction	69.9	68.7	27.7	37.0	70.41	69.21	
2	73.8	one direction	70.2	69.1	28.3	37.0	70.71	69.61	
3	76.4	one direction	70.0	69.4	28.0	37.0	70.51	69.91	
4	79.2	one direction	71.2	69.9	27.0	36.5	71.70	70.40	
5	82.5	one direction	71.6	70.7	26.8	36.0	72.08	71.18	
6	83.9	one direction	71.7	71.0	28.9	37.0	72.21	71.51	
7	85.7	one direction	72.4	70.9	29.8	38.0	72.94	71.44	
8	87.5	one direction	72.5	71.9	30.2	40.0	73.10	72.50	

5.1. Regression line slope : a = 32.34089

5.2. Sound level after temperature correction according to para.4.3. of annex 5 : 70 dB(A)