

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- approval withdrawn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' and/or 'adhesion performance on wet surfaces' and/or 'rolling resistance' pursuant to UN Regulation number 117.

Approval number ⁽²⁾: E4*117R02/10*10077*03

Suffix(es) ⁽³⁾: 02S2WR2

1.	Manufacturer's name and address	 LLIT (THAILAND) CO., LTD. 911/9 Moo 5, Khaokhansong, Sriracha, Chonburi 20110, Thailand
2.	If applicable, name and address of manufacturer's representative	: N/A
3.	'Tyre class' and 'category of use' of the type of tyre	: Class C1 / Class C2 / Class C3 ⁽¹⁾ normal / snow / special ⁽¹⁾
3.1.	Snow tyre for use in severe snow conditions	: yes/ no ⁽¹⁾
3.2.	Traction tyre	: yes/ no ⁽¹⁾
4.	Tyre type designation	:
4.1.	Brand name(s)/trademark(s) of the type of tyre	: LINGLONG, SHANLING, LEAO, Infinity, BARKLEY, BENCHMARK, CROSSWIND, GREEN MAX, SUMO FIRENZA, <u>HUBTRAC</u>

 P.O. Box 777
 Tel. + 31 79 345 83 02

 2700 AT Zoetermeer
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 The Netherlands
 www.rdw.nl

Type-approval Department



Approval number: E4*117R02/10*10077*03

Appro	var number. E4 11/R02/10 100// 05	
4.2.	Trade description(s)/Commercial name(s) of the type of tyre	: ETD100, BL831, GRD802, CWD10E, DRIVUS- D, <u>HIGHWAY D11</u>
5.	Technical service and, where applicable, test laboratory approved for purposes of approval or of verification of conformity tests	 IDIADA Automotive Technology, S.A. L'Albornar, P.O. Box 20 43710 Santa Oliva (Tarragona), SPAIN
6.	Performance(s) approved	: sound level at (stage 1/stage 2) ⁽¹⁾ , wet adhesion level, rolling resistance level (stage 1/stage 2) ⁽¹⁾
6.1.		ze, see Paragraph 2.5. of Regulation number 117, as ndix 1 to Annex 3: 74 dB(A) at reference speed of
6.2.		e tyre size, see Paragraph 2.5. of Regulation number he appendix to Annex 5: 1.09 (G) using the vehicle
6.3.		ative tyre size, see paragraph 2.5. of Regulation port in the appendix 3 to Annex 6: 6.42 N/kN.
6.4.		re size, see paragraph 2.5. of Regulation No. 117, as ndix ⁽⁴⁾ to Annex 7: 2.03 (Snow grip index) using the method ⁽¹⁾ or acceleration method ⁽¹⁾ .
7.	Number of report issued by that service	: <u>Technical report CV20090099</u> , Noise test report CT117-A0-180026, Wet grip test report CT117- A0-180027, Rolling Resistance test report CT117-A0-180025, Snow Performance test report TW-TL18-LL116-E117SP C1
8.	Date of report issued by that service	: <u>Technical report 03/09/2020</u> , Noise test 27/10/2017, Wet grip test 28/03/2017, Rolling Resistance test 10/03/2017, Snow Performance test 25/06/2018
9.	Reason(s) of extension (if applicable)	: Addition of new brand names Addition of new trade descriptions
10.	Any remarks	: Update from supplement 09 to supplement 10



Approval number: E4*117R02/10*10077*03

- 11. Place
- 12. Date

: Zoetermeer

: 16 October 2020

13. Signature

Uwe Löbig

- 14. Annexed to this communication are:
- 14.1. A list of documents in the approval file deposited at the Type Approval Authorities having delivered the approval and which can be obtained upon request ⁽⁵⁾.

:

14.2. A list of tyre size designations: Specify for each brand name/trademark and/or each trade description/Commercial name the list of tyre size designations, adding in case of Class C1 tyres the mark 'reinforced' (or 'extra load') or the speed symbol of snow tyres or in the case of tyres of Classes C2 and C3, the mark 'traction', if so required by paragraph 3.1. of this Regulation.

(4) Appendix 2 for C1 and C2 tyres. Appendix 3 for C3 tyres.

⁽¹⁾ Strike out what does not apply.

⁽²⁾ According to Schedule 4 to Revision 3 of the 1958 Agreement.

⁽³⁾ According to paragraphs 5.2.2. and 5.3.1.2. of this Regulation.

⁽⁵⁾ In the case of 'snow tyre for use in severe snow conditions' a test report according to Appendix 2 of Annex 7 shall be submitted.

Statement manufacturer and authorization regarding application

¹ EC & UNECE type-approval number : E4*117R02/10*10077*03

2	🛛 Manufacturer/ 🗆 M	anufacturer's representative (1)								
3		LLIT (THAILAND) CO., LTD.								
4	Name authorized person :	-								
5	ob title : Certification Manager									
6		: yue_peng@linglong.cn								
7		: 911/9 Moo 5, Khaokhansong, Sriracha, Chonburi 20110, Thailand								
8	Country :	Thailand								
9	Statement									
10	-	Yue Peng	,							
11	declares on behalf of									
		LLIT (THAILAND) CO., LTD.	,							
12	for the application with									
		E4*117R02/10*10077*03	,							
13	the following:									
14	-	ot applied for an EC & UNECE type-approval for								
15	-	approval authority granted the manufacturer s	such an approval;							
15 16		as refused to grant type-approval of that type;								
16 17		as withdrawn type-approval of that type;	fthattung							
17	a) the manufacturer has h	ot revoked an application for a type-approval o	n that type.							
18	Authorization regarding ha	andling of this application (if applicable) ⁽²⁾								
19	Company name :	IDIADA Automotive Technology, S.A.								
20	E-mail address :	QualityHomologations@idiada.com								
21	Address :	L'Albornar, P.O. Box 20, 43710 Santa Oliva (Ta	rragona) Spain							
22	Country :	Spain								
23	Authorization									
24	By means of this									
	declaration, I :	Yue Peng	,							
25	on behalf of :	LLIT (THAILAND) CO., LTD.	,							
26	authorizes :	IDIADA Automotive Technology, S.A.	,							
27	to respectively apply for a	type-approval with type-approval number: E4*117R02/10*10077*03								
28	handle all communication	concerning this application and receive the type	e-approval certificate.							
29	Date	Place	Name:							
30	05/10/2020	Chonburi, Thailand	LLIT (THAILAND) CO., LTD.							
31		On their behalf, signature :	The							
32		Name :	Yue Peng							

 $^{{}^{\}scriptscriptstyle (1)}$ Mark the specific checkbox.

⁽²⁾ This authorization only concerns the application procedure and all activities that are directly or indirectly related to this procedure. If and insofar as other procedures, including the lodging of objections, are deemed necessary, a new authorization must be submitted in respect of that specific procedure.



TECHNICAL DOCUMENTATION

Information folder No.: QG2020-022

Page 1 of 6 RELATING TO ECE TYPE-APPROVAL FOR A TYPE OF TYRE WITH REGARD TO ROLLING SOUND EMISSIONS AND TO ADHESION ON WET SURFACES

(ECE Regulation No. 117. 02) 1. GENERAL	21 SURFACES						
 The performance characteristics to be assed for the tyre type 	: rolling sound level and Rolling resistance level / adhesion performance level on wet surfaces,						
1.2. Manufacturer's name	rolling sound level and rolling resistance level : LLIT(THAILAND)CO.,LTD.						
1.3.Name and address of applicant	: 911/9Moo5,Khaokhansong,Sriracha, Chonburi20110,Thailand						
1.4.Address(es) of manufacturing plant(s)	: the same as the applicant						
1.5.Brand name(s), Trade description(s) or Trade mark(s)	: LINGLONG; SHANLING; LEAO; Infinity; BARKLEY; BENCHMARK; CROSSWIND; GREEN MAX; SUMO FIRENZA; <u>HUBTRAC</u>						
to be used for particular tyre type-approval requested	: ETD100; BL831; GRD802; CWD10E; DRIVUS-D; <u>HIGHWAY D11</u>						
2. TYRE							
2.1 Tyre classification (class C1, C2, C3)	:-Class C1 /-Class C2-/ Class C3						
2.2 Section width range for class C1 tyres	:see attached list of tyre size						
2.3 Tyre structure	: diagonal /-bias-belted /-radial						
2.4 For Class C1 tyres, state whether:							
2.4.1 Reinforced (or extra load) in case of approval with regarding to rolling sound emission level	: not applicable						
2.4.2 Speed category symbol "Q" or below (not inc-	: not applicable						
luding "H") or "R" and above (including "H")							
in case of snow tyres for approval with regar-							
ding to adhesion on wet surfaces							
2.5 Category of use (normal, snow, special)	: normal / snow / special / snow tyre for use in severe snow condition						
2.6 Traction tyre	:Yes/ No						
2.7 A list of tyre designations covered by this application	n : see attached list of tyre size						
2.8 Details of major features, with respect to the effects on tyre performance (i.e. rolling emission level or ad- hesion on wet surfaces, respectively) of the tread pat- tern(s) to be used on the designated range of tyre size This may be by drawing, photograph or description but must be sufficient to allow the type approval auth- ority or technical service to determine whether any s- ubsequent changes to the major features will adverse- ly affect the tyre performance							
	Signatura						
MANUFACTURER'S STAMP	Signature:						
	5 1/200						

THIS APPLICATION IS ACCOMPANIED BY:

- List of tyre size .
- Drawing of tread pattern 0
- The test report

Name: ... Ma Xiaogang...

E4*117R02/09*10077*03

Information folder No.: QG2020-022 List of tyre size

Page 2 of 6

Brand name(s) or Trade mark(s):LINGLONG; SHANLING; LEAO; Infinity; BARKLEY; BENCHMARK; GREEN MAX; CROSSWIND; SUMO FIRENZA;

HUBTRAC

Tread pattern: ETD100; BL831; GRD802; CWD10E; DRIVUS-D; HIGHWAY D11

Tyre size	Approval No.	Limit dB(A)	Wet grip index(G)	Rolling Resistance Coefficient(RRC)
315/80R22.5 154/150M	E4-0041099	76	≥0.715	≤7.5
315/80R22.5 156/150L(154/150M)	E4-0041177	76	≥0.715	≤7.5
315/60R22.5 152/148L	E4-0041296	76	≥0.715	≤7.5
315/70R22.5 154/150L(152/148M)	E4-0041180	76	≥0.715	≤7.5
315/70R22.5 156/150L(154/150M)	E4-0041179	76	≥0.715	≤7.5
295/60R22.5 150/147L	E4-0041185	76	≥0.715	≤7.5
295/80R22.5 152/148M	E4-0034637	76	≥0.715	≤7.5

DIMMUDUI	U LINGLUNG I I KE CU.	
Inform Rolling sound emission test s Because of :	The largest nominal section wi In case of tyres with same nom select the smallest aspect ratio. In case of tyres with same nomi	inal section width
	and aspect ratio select the la	rgest rim diameter.
]	295/60R22.5 150/147L The largest nominal section width. In case of tyres with same nominal s the smallest aspect ratio. In case of tyres with same nominal s aspect ratio select the largest rim di Lowest load index	ection width and
Because of : Any t the m per c	R22.5 154/150L(152/148M) tyre size can represent the whole tyr inimum required wet grip value is r ent (10%) or more above this minin	met by ten
	95/60R22.5 150/147L	
Because of : TI	he smallest nominal section width.	

Information folder No.: QG2020-022 Page 4 of 6 Drawing of the tread pattern (for measured tyre)

Manufacturer name	LLIT(THAILAND) CO.,LTD
Pattern name Tyre Size	LINGLONG:ETD100 SHANLING: ETD100 LEAO: ETD100 Infinity: ETD100 BENCHMARK: ETD100 BARKLEY:BL831 GREEN MAX:GRD802 CROSSWIND:CWD10E SUMO FIRENZA:DRIVUS-D <u>HUBTRAC:HIGHWAY D11</u> 315/60R22.5 152/148L
Market	EU/US
Pitch number Pitch ratio	60 1.00
Void volume [%]	13.57
Width: main grooves [mm]	6
Depth: center groove [mm]	17
Depth: shoulder groove [mm]	17
Pattern	

Information folder No.: QG2020-022

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CV20090099

-

Drawing of the tread pattern (for measured tyre)

Manufacturer name	LLIT(THAILAND) CO.,LTD					
Pattern name	LINGLONG:ETD100 SHANLING: ETD100 LEAO: ETD100 Infinity: ETD100 BENCHMARK: ETD100 BARKLEY:BL831 GREEN MAX:GRD802 CROSSWIND:CWD10E					
Tyre Size Market	SUMO FIRENZA:DRIVUS-D <u>HUBTRAC:HIGHWAY D11</u> 315/70R22.5 154/50L(152/148M) EU/US					
Pitch number Pitch ratio	60 1.00					
Void volume[%]Width: main grooves[mm]Depth: center groove[mm]Depth: shoulder groove[mm]	13.29 6 17 17					
Pattern						

E4*117R02/09*10077*03

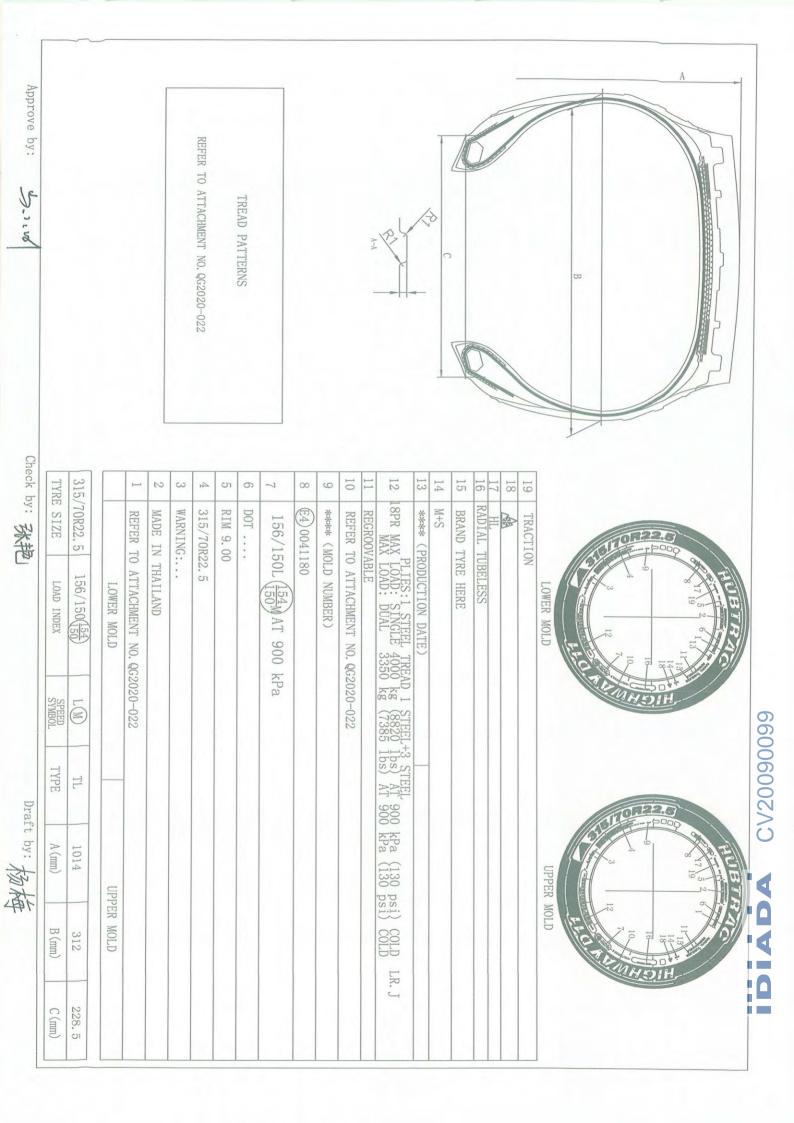
Information folder No.: QG2020-022 Page 6 of 6 Drawing of the tread pattern (for measured tyre)

Manufacturer name	LLIT(THAILAND) CO.,LTD				
Pattern name	LINGLONG:ETD100 SHANLING: ETD100 LEAO: ETD100 Infinity: ETD100 BENCHMARK: ETD100 BARKLEY:BL831 GREEN MAX:GRD802 CROSSWIND:CWD10E SUMO FIRENZA:DRIVUS-D HUBTRAC:HIGHWAY D11				
Tyre Size	295/60R22.5 150/147L				
Market	EU/US				
Pitch number Pitch ratio	60				
	1.00 13.41				
Void volume[%]Width: main grooves[mm]	6				
Depth: center groove [mm]	16.5				
Depth: shoulder groove [mm]	16.5				
Pattern					

CV20090099

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Approve by: Sound					NEFEN IV ALLACHMENI NU. WUZUZU-UZZ	DEEED TO ATTACHMENT NO DODDOD DOD		TREAD PATTERNS					A-A			-						
Check by: 34	TYRE SIZE	315/70R22.5		1 REFER TO	2 MADE IN	3 WARNING:	4 315/70R22.	5 RIM 9.00	6 DOT	7 154/15	8 (E4) 0041180	9 **** (MO	10 REFER TO ATTA	11 REGROOVABLE	12 MAX LOAD: SINGLE 3 MAX LOAD: SINGLE 3	13 **** (PR	14 M+S	15 BRAND TY	16 RADIAL T	17 TRACTION	18	NAME NAME NAME NAME NAME
	LOAD INDEX	$154/150(\frac{152}{148})$	LOWER MOLD	ATTACHMENT NO.	HAILAND	•••	2.5			$'150L \left(\frac{152}{148} \right)$ AT 9	08	**** (MOLD NUMBER)	CHMENT NO.	BLE	STEEL TREAD 1 STEEL+3 STEEL INGLE 3750 kg (8265 Ibs) AT 900 I AL 3350 kg (7385 Ibs) AT 900 I	.ION		TYRE HERE	TUBELESS			AND NAMA AND NAMA 17145 216 16 16 16 16 15 16 16 15 16
	SYMBOL	LM		QG2020-022						900 kPa			QG2020-022		AT 900 kPa (130 AT 900 kPa (130							Secondard Contraction of the second s
Dr	TYPE	TL		-											psi) COLD psi) COLD							CV20090099
Draft by: the	A (mm)	1014	UPF												LR. H							UPPER
491	B (mm)	312	UPPER MOLD																			12 4 15 116
	C (mm)	228. 5																				Provide and a second se





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REPORT No. CV20090099

UN REGULATION No. 117R02/10 RELATED TO ROLLING SOUND EMISSIONS, ADHESION ON WET SURFACES AND ROLLING RESISTANCE

Approval number Approved performances	: E4*117R02/10*10077*03 : S2WR2
Applicant	: LLIT (THAILAND) CO., LTD. 911/9 Moo 5, Khaokhansong, Sriracha, Chonburi 20110, Thailand
Manufacturer	: LLIT (THAILAND) CO., LTD. 911/9 Moo 5, Khaokhansong, Sriracha, Chonburi 20110, Thailand
Tyre class	: C3
Category of use	: Snow (for use in severe snow conditions)
Traction tyre	: Yes
Brand name / Trade mark	: LINGLONG, SHANLING, LEAO, Infinity, BARKLEY, BENCHMARK, CROSSWIND, GREEN MAX, SUMO FIRENZA, <u>HUBTRAC</u>
Trade description/ Commercial name	: ETD100, BL831, GRD802, CWD10E, DRIVUS-D, <u>HIGHWAY D11</u>

Place and date of issue

: L'Albornar, Santa Oliva (Tarragona), 03/09/2020

CONCLUSIONS: The tested samples of the family FULFIL the technical prescriptions with regard to "rolling sound emissions level" and/or "adhesion performance on wet surfaces" and/or "rolling resistance" and/or "snow performance" pursuant to UN REGULATION No. 117R02/10. The modifications introduced in this family, as detailed in page 2 of this report, are considered reason for extension of the type approval CV18080435. The characteristics of the tested samples are detailed in the annexes to the test report.

Performed by:

Nuria Vendrell Ravetllat HOMOLOGATION ENGINEER

Revised by:

Ignacio Lafuente Buil DEPARTMENT MANAGER

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* MEASUREMENT UNCERTAINTY OF THE RESULTS HAS BEEN CALCULATED BY THE LABORATORY.

IDIADA Automotive Technology, S.A. N.I.F. A43581610



REPORT No. CV20090099

SUMMARY

1. Dimensions included in the type of tyre

: See Manufacturer's technical documentation attached

Page 2/2

- 2. Tyre sizes selected for testing
 - 2.1. Tyre size tested for rolling sound emissions : 315/60R22.5 152/148L (widest section width) See first type approval report, Test report CT117-A0-180026, TÜV Nord Mobilität, 27/10/2017
 - 2.2. Tyre size tested for adhesion on wet surfaces: 315/60R22.5 154/150L (meets extra 10%) See first type approval report, Test report CT117-A0-180027, TÜV Nord Mobilität, 28/03/2017
 - 2.3. Tyre tested for rolling resistance : 295/60R22.5 150/147L (lowest load index) See first type approval report, Test report CT117-A0-180025, TÜV Nord Mobilität, 10/03/2017
 - 2.4. Tyre tested for snow performance : 295/60R22.5 150/147L (narrowest section width) See Annex 1, Test report TW-TL18-LL116-E117SP C1, TEST WORLD, 25/06/2018

:

- Reason(s) of extension (if applicable)
 Addition of new brand names
 - Addition of new trade descriptions
 - Update from supplement 09 to supplement 10
- 4. List of Annexes to this report
 - 4.1. Annex 1: Test report according to snow performance.
 - 4.2. Annex: Manufacturer's technical documentation.

Place and date of issue: L'Albornar, Santa Oliva (Tarragona), 03/09/2020

Nuria Vendrell Ravetllat HOMOLOGATION ENGINEER

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^{*} THE PRESENTED RESULTS REFER ONLY TO THE TESTED SAMPLE.



ANNEX 1



TEST REPORT

TW-TL18-LL116-E117SP C1

page 1(3)

Measurements concerning:

Tyre snow performance according to acceleration method of UN / ECE Regulation No. 117

Candidate tyre Make (trade name of manufacturer): Trade description(s): Size description(s): Load Index: DOT: Tyre classification:	LINGLONG GREEN-VAN ETD100 295/60R22.5 150/147L 150 1YC L1RTLL 1018 C3
Standard reference tyre Description: Size: Load Index: DOT:	ASTM-F2870 315/70R22.5 154/150L 154 HAKP 00T X 4315
Customer:	Shandong Linglong Tire Co, Ltd No. 777, Jinlong Road Zhaoyuan City Shandong China

Measured snow index value relative to SRTT:

2.03

Statement of compliance

The measurements HAVE SHOWN the compliance of the candidate described in this Test Report with the requirements according to the UN / ECE Regulation No.117 including supplement 9 to the 02 series of amendments.

The measurements were carried out in accordance with the SFS-EN ISO/IEC 17025.

Ivalo, September 23rd 2020

- ALC

Jukka Antila Technical Director

Markus Hilli Manager - Type Approval Services

Index of Test Report	
Measurements	pages 1-2
Annex A: Pictures of candidate	1 page

Internet link for checking valid scopes for Test World Oy:

http://www.testworld.fi/scopes

This Test Report may only be reproduced in full, except with the prior written permission by the issuing Laboratory.



A MILLBROOK GROUP COMPANY

TEST REPORT

TW-TL18-LL116-E117SP C1

page 2(3)

Measurements

- 1. Date of test: 25.6.2018
- 2. Test track

Test World Ltd., Mellatracks Indoor 1

2.1 Test track conditions

	At the start of test	At the end of test	
Weather			
Ambient temperature	-7.2 °C	-7.1 °C	
Snow temperature	-7.7 °C	-7.7 °C	
CTI index	84.3		

Requirements: Ambient -2 .. -15 'C, Snow -4..-15 'C, CTI 80..90

3. Test vehicle

Ford F250 Regularcab 5.4L 6-speed Manual 2009 VIN: 1FTNF20599EB16406

4.3 Test tyre data:

		Test SRTT - Candidate				
		SR	TT	Candidate		
Tyre dimensions		315/70R22.	5 154/150L	295/60R22.	5 150/147L	
Test rim size		9.00H22.5		9.0x22.5		
Tyre loads rear	kg	L: 905 kg	R: 912 kg	L: 905 kg	R: 912 kg	
	%	24 %	24 %	27 %	27 %	
Tyre pressure	nominal	9.0 bar	9.0 bar	9.0 bar	9.0 bar	
	actual	6.3 bar	6.3 bar	6.3 bar	6.3 bar	

Requirements: load 20-55%, pressure 70% of nominal

5. Test results, average acceleration $[m/s^2]$ (AA):

Initial speed: End speed:	10 km/h 25 km/h			Test sequer Candidate:	nce:	R1-T1-R2 T1	
		R1		Cano	lidate	R	2
		AA	slip %	AA	slip %	AA	slip % 🔾
	1st	0.81	35 %	1.65	27 %	0.82	38 % 2
	2nd	0.81	37 %	1.63	29 %	0.81	39 %
	3rd	0.81	35 %	1.62	35 %	0.80	38 % 🟹
	4th	0.81	39 %	1.61	31 %	0.78	35 % >
	5th	0.81	35 %	1.60	30 %	0.77	38 % 🔾
	6th	0.79	36 %	1.59	33 %	0.75	39 %
	Mean Std-deviation CV [%]	0.81 0.01 0.9 %		1.62 0.02 1.3 %		0.79 0.02 3.0 %	DA.
				wa(SRTT) SRTT valida	ation	0.80 -2.4 %	
				Snow Index	x =	2.03	2

Requirements: CV less than 6%, SRTT validation less than 6%, slip 10-40%



TEST REPORT

TW-TL18-LL116-E117SP C1

Annex A page 3(3)



Tread pattern of candidate

Used Instruments:

Temperature:	Fluke 52-II	ser: 31550028WS
Speed:	VBox 3i	ser: 055004
Weight:	Dini Arego	ser: 0100140252B1…B4
Pressure:	Wika DG10	ser: TW-IPM024
CTI:	CTI Penetrometer	ser: TW-PM003