22-00075-CP-PRG-02 OKB Sp. z o.o., Poland SAF42, SAF43



Test report No.: 22-00075-CP-PRG-02

Test of a type of a vehicle with regard to UN Regulation No. **14.00** taking into consideration amendment No. **14.09**, **Supplement 3**, **corrigendum 1** Approval subject: **Strength of safety belt anchorages**

And

Test of a type of a vehicle with regard to UN Regulation No. **145.00** taking into consideration amendment No. **145.00**, **Supplement 3**, **corrigendum 1** Approval subject: **Uniform provisions concerning the approval of vehicles with regard to ISOFIX anchorages systems ISOFIX top tether anchorages and i-Size seating posi**tions

Approval status			
	Granting of a type approval	N/A	
	Extension/correction to type approval no.	N/A	

Test report only



- 0. Reasons to extension:
 - update of vehicles types table
 - update of installation instructions
 - addition of dynamic tests
 - editorial changes
- I. General

MakeMOBIFRAMEType:SAF42, SAF43Category of vehicle:M1, N1, M2, N2Name and address of manufacturerOKB SP. Z O.O.
ul. Szkolna 9, Bukowiec
95-006, Brójce
Poland

Reference number of information folder: MOBIF	RAME/07/2022- 02
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Date of issue of information folder: 03.02.2025



II. Test results

Refer to the Annex

III. Enclosures

Information Folder

IV. Statement of conformity

The mentioned information folder and the type described therein are in accordance with the test basis mentioned above. Sampling plan or method result from the requirements of the test basis. The worst-case configuration was selected in accordance with process description "Requirements for Test Reports (AS-PB-T-02)". Valid decision rule in accordance with ILAC G8:2019, 4.2.1: in question of meeting the limits the measurement uncertainty was ignored.

The manufacturer is responsible for the information (III.) and the test specimens provided by him. The test results relate only to the test specimens as received and mentioned (II.). The test specimens are representative for the type described (III.).

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TÜV SÜD Auto Service GmbH is designated as Technical Service by:

Genehmigungsbehörde Approval authority	Land Country	Registriernummer Registration number
Kraftfahrt-Bundesamt (KBA)	Deutschland Germany	KBA-P 00100-10
Vehicle Certification Agency (VCA)	Vereinigtes Königreich United Kingdom	VCA-TS-006
Approval Authority of the Netherlands (RDW)	Niederlande The Netherlands	RDWT-082-xx
National Standards Authority of Ireland (NSAI)	Irland Ireland	Technical Service Number: 49
Vehicle Safety Certification Center (VSCC)	Taiwan/Taiwan	DE04-06-2
Société Nationale de Certification et d'Homologation s.à r.l.	Luxemburg Luxembourg	13/B(g)
Swedish Transport Agency (STA)	Schweden Sweden	TT 0024

Munich, 17.02.2025



 \mathbb{X}

Ing. Vít Bursík Authorized signatory



Annex

Test report

1. Technical data of the test sample

- 1.1 Make:
- 1.2 Type:
- 1.2.1. Variant/Version:

MOBIFRAME

SAF42, SAF43

SAF42_???_ - 2-seating positions SAF43_???_ - 3-seating positions

SAF??_SLM_?_??? – slim version of seat cushion

SAF??_??_L_??? – fixation to the floor via quick release system

SAF42_???__097 – bench width 97 cm SAF42_???__100 – bench width 100 cm SAF42_???__112 – bench width 112 cm SAF43_???__118 – bench width 118 cm SAF43_???__120 – bench width 120 cm SAF43_???__126 – bench width 126 cm SAF43_???__150 – bench width 150 cm

1.3 Commercial description(s):

SAF42, SAF43

1.3.1. Remark

Detailed drawings and description of benches (SAF42, SAF43) and their fixation solutions in vehicles are included in Information Document MOBIFRAME/07/2022-02 attached to this test report.

Test results and comparison of SAF42 and SAF43 anchorage points geometry and its influence on the vehicle's floor are presented in section "3. Test results" of this report.

- 1.4 Category of vehicle:
- 1.5 Test object:

M1, N1, M2, N2

Seat bench type SAF42 and SAF43 mounted in representative vehicle bodies (VW T6 and MB Sprinter) and on rigid test bench).

For details see manufacturer's information folder.



1.6. Table of vehicle types for which is seat bench intended to use:

Manufacturer Commercial description / Type or model desig- nation		Wheelbase
	Sprinter 906, 907 (906BB_ e.g. 906BB35, 906BB50, 906BB35/4x4, 906BB50/4x4)	3250, 3665, 4325
Daimler / Mer- cedes-Benz	Sprinter, e-Sprinter 910 (e.g. FL3A4, FL3A5, KL3A4, KL3A5)	3259, 3924
	Vito/Viano/V-klasse, e-Vito (639, 639/2, 639/4, 639/5)	3200, 3430
	Crafter (2E, 3E)	3250, 3665, 4325
	Crafter, e-Crafter (SYN_, SYM_ e.g. SYN1E, SYM1E, SYN2E, SYM2E, SYN2Z, SYM2Z)	3640, 4490
VVV	T5 (7H_, 7E_, 7J_)	3000, 3400
	T6, T6.1, e-Transporter (7H_, 7E_, 7J_)	3000, 3400
	Transporter VII, T7	3100, 3500
	Jumper, e-Jumper (Y, CY)	3000, 3450, 4035
	Jumpy (G9/X, V)	3000, 3122
Citroen	Jumpy, e-Jumpy (G9/X, V)	2925, 3275
	SpaceTourer, E-SpaceTourer (V)	2925, 3275
	Berlingo, E-Berlingo	2785, 2975
	Boxer, e-Boxer (Y)	3000, 3450, 4035
	Expert (VF3_)	3000, 3122
Peugeot	Expert, e-Expert (G9/X, V)	2925, 3275
	Traveller, e-Traveller (V)	2925, 3275
	Rifter, e-Rifter	2785, 2975
	Ducato, e-Ducato (250)	3000, 3450, 4035
Fiet	Scudo (270)	3000, 3122
Fiat	Scudo (2022)	2925, 3275
	Talento (FJL, FFL)	3098, 3498
	Movano (MR, MS, MW, MT)	3182, 3682, 4332
	Movano, Movano-e (Y)	3000, 3450, 4035
Opel	Vivaro (F7)	3098, 3498
Орсі	Vivaro, Vivaro-e, Vivaro e-Kombi, Vivaro Life, Zafira Life (V)	2925, 3275
	Combo Life, Combo-e Life	2785, 2975
	Master, Master E-Tech (FV, MA, MC, ML, MW, MR, MT, VA)	3182, 3682, 4332
Renault	Master (XDD, e.g. RDA, TDA)	3585, 4215
	Trafic (FL, EL, L)	3098, 3498
	Trafic 2014 (JL, L)	3098, 3498
Renault Trucks	Master (MA, MB, MF, MG, VA, VB, VF, VG)	3182, 3682, 4332



1.6. Table of vehicle types for which is seat bench intended to use:

Manufacturer	Commercial description / Type or model desig- nation	Wheelbase
	Transit, (FA_, FD_, FS_, FZ_, FN_, FM_)	2933, 3300, 3750
	Transit, e-Transit (FC_)	3300, 3750, 3954
Ford	Transit Custom, Turneo Custom (FA_, FB_, FC_, FD_, FE_, FF_)	2933, 3300
	Transit Connect (PU2)	2662, 3062
	Transit/Tourneo Custom 2 (V710 e.g. NXN, NRN)	3100, 3500
lveco	Daily, Daily Electric (ISe.g. IS35SC2AA, IS56CI2DA, IS56AC2DA, IS70CI2BA, IS72CI2DA, IS35W2DA; IG??????(?) e.g. IG110EW2BA, IG120E2BA, IG150EW2CA; 35C??(?), 50C??(?), 60C??(?), 65C??(?), 70C??(?), 72C??(?), IS40C, IS52C, IDN02, 55W)	3000, 3300, 3520, 3950, 4100, 4750
	NV200	2725
Nissan	NV300, Primastar (4)	3098, 3498
	NV400 (M1)	3182, 3682, 4332
Toyota	Pro Ace (2013-2016)	3000, 3122
TOyota	Pro Ace, Pro Ace Verso, Pro Ace Electric (X, V)	2925, 3275
MAN	TGE, eTGE (SYN_, SYM_ e.g. SYN1E, SYM1E, SYM1E, SYN2E, SYM2E, SYN2Z, SYM2Z)	3640, 4490
	V80, Maxus (SV6C)	3100, 3850
MAXUS (LDV)	V90, Deliver 9, E-Deliver 9	3000, 3366, 3760
	Deliver 3, E Deliver 3	2910, 3285
Hyundai	H350 (EU(V))	3435, 3670
RAM	ProMaster	3000, 3450, 4035
Freightliner/Dodge	Sprinter	3250, 3665, 4325

- Type of bodywork using the codes set out AC, AF, BB, BX, CA, SA, SG, SH in Part C of Annex II of Directive 2007/46/EC and/or in Part C of Annex I of Regulation (EU) 2018/858:
- 1.8. Mass of seats:

SAF42 – 115 kg – mass of the heaviest configuration

SAF43 – 135 kg – mass of the heaviest configuration

Note: Testing laboratory does not bear any responsibility for possibly incorrect values of masses, and dimensions provided by the manufacturer and for test results found out based on these values.



2. Test conditions

2.1. UN Regulation No. 14.09

2.1.1. Instrumentation:

- Digital ballance
- Electrohydraulic test device and respective fixtures
- Force measuring chain with load cells
- Interface 1210AF
- Tape rule

2.1.2. Ambient conditions:

Normal laboratory conditions, not directly limited in Regulation

2.2. UN Regulation No. 145.00

2.2.1. Instrumentation:

- Electro-hydraulic test equipment and control unit
- Force measuring chain
- Data acquisition unit
- Traction devices
- 3D H-point measurement device
- Tape measure

2.2.2. Ambient conditions:

Normal laboratory conditions, not directly limited in Regulation



3. Test results

3.1 Test procedures used (UN Regulation 14):

Strength test of safety belt anchorages according to UN Regulation 14.09 concerning to strength of seat bench to vehicle floor.

Floor system strength including seat to vehicle attachment and legs strength:

MOBIFRAME composite floor type FL

See test report No. 22-00051-CP-PRG-00 (UN R. No. 14.09)

For seat bench

Make/ (*) Brand name of products	Seat type	Mass of the heavi- est configuration (seat + legs/base)	Fulfilling of requirements
MOBIFRAME	SAF42 (SAF42 with 2 seat positions)	115 kg	See point 3.2.1, 3.2.2.,
MOBIFRAME	SAF43 (SAF43 with 3 seat positions)	135 kg	See point 3.2.3., 3.2.4.

(*) if stated, otherwise only the manufacturer

Note: A higher configuration for these seats is not allowed.

The below mentioned test results cover all variants including the maximum mass stated in the enclosed information document (seat bench, seat-to-vehicle anchorages, seat bench arrangement, removable elements and floor to vehicle attachment). Geometrical requirements are fulfilled; all the seat belts anchorages are provided on- seat.



- 3.2. Forward facing seats for M1/N1 vehicles:
- 3.2.1. Seat bench type SAF42 (with 2 seats) mounted on representative vehicle body structure (VW T6 representative of small Vans).

Mass of the heaviest possible seat configuration covered by the test $m_s = 115$ kg. Additional force applied to seat base:

 $F_z = 20 \text{ x ms x g}$ (N) as relevant for M1 vehicle category.

Seat	Left	Right	
Safety belt	Ar	Ar	
Upper belt anchorage	Seat structure	Seat structure	
Lower belt anchorages	Seat structure	Seat structure	
Required force in shoulder belt portion	13 500 ± 200 N	13 500 ± 200 N	
Required force lap belt portion	13 500 ± 200 N	13 500 ± 200 N	
Required force inertia	23 000 N		
Force in the shoulder belt	13 650 N / > 0,2 s	13 500 N / > 0,2 s	
Force in the lap belt	13 700 N / > 0,2 s	13 700 N / > 0,2 s	
Inertia force in the seat base	24 000 1	N / > 0,2 s	
Displacement of upper anchorage point of seat bench	nt 184 mm		
Remark: No ruptures occurred. Additional force is added to seat base. Upper anchorage points were in tolerance.			

3.2.2. Seat bench type SAF42 (with 2 seats) mounted on representative vehicle body structure (Mercedes Sprinter - representative of big Vans).

Mass of the heaviest possible seat configuration covered by the test $m_s = 115$ kg. Additional force applied to seat base:

 $F_z = 20 \text{ x ms x g}$ (N) as relevant for M1 vehicle category.

Seat	Left	Right	
Safety belt	Ar	Ar	
Upper belt anchorage	Seat structure	Seat structure	
Lower belt anchorages	Seat structure	Seat structure	
Required force in shoulder belt portion	13 500 ± 200 N	13 500 ± 200 N	
Required force lap belt portion	13 500 ± 200 N	13 500 ± 200 N	
Required force inertia	23 000 N		
Force in the shoulder belt	13 650 N / > 0,2 s	13 550 N / > 0,2 s	
Force in the lap belt	13 750 N / > 0,2 s	13 700 N / > 0,2 s	
Inertia force in the seat base	nertia force in the seat base 24 000 N / > 0,2 s		
Displacement of upper anchorage point 176 mm			
Remark: No ruptures occurred. Additional force is added to seat base. Upper anchorage points were in tolerance.			



3.2.3. Seat bench type SAF43 (with 3 seats) mounted on representative vehicle body structure (VW T6 representative of small Vans).

Mass of the heaviest possible seat configuration covered by the test $m_s = 135$ kg. Additional force applied to seat base:

 $F_z = 20 \text{ x ms x g}$ (N) as relevant for M1 vehicle category.

Seat	Left	Central	Right	
Safety belt	Ar	Ar	Ar	
Upper belt anchorage	Seat structure	Seat structure	Seat structure	
Lower belt anchorages	Seat structure	Seat structure	Seat structure	
Required force in shoulder belt por- tion	13 500 ± 200 N	13 500 ± 200 N	13 500 ± 200 N	
Required force lap belt portion	14 500 ± 200 N*	14 500 ± 200 N*	14 500 ± 200 N*	
Required force inertia	24 500 N			
Force in the shoulder belt	13 600 N / > 0,2 s	13 400 N / > 0,2 s	13 800 N / > 0,2 s	
Force in the lap belt	14 550 N / > 0,2 s*	14 400 N / > 0,2 s*	14 700 N / > 0,2 s*	
Inertia force in the seat base		24 900 N / > 0,2 s		
Displacement of upper anchorage point	170 mm	214 mm	214 mm	
Remark: No ruptures occurred. Additional force is added to seat base and lap belt portion too*.				

Upper anchorage points were in tolerance.

3.2.4. Seat bench type SAF43 (with 3 seats) mounted on representative vehicle body structure (Mercedes Sprinter - representative of big Vans).

Mass of the heaviest possible seat configuration covered by the test $m_s = 135$ kg. Additional force applied to seat base:

 $F_z = 20 \text{ x ms x g}$ (N) as relevant for M1 vehicle category.

Seat	Left	Central	Right	
Safety belt	Ar	Ar	Ar	
Upper belt anchorage	Seat structure	Seat structure	Seat structure	
Lower belt anchorages	Seat structure	Seat structure	Seat structure	
Required force in shoulder belt portion	13 500 ± 200 N	13 500 ± 200 N	13 500 ± 200 N	
Required force lap belt portion	14 500 ± 200 N*	14 500 ± 200 N*	14 500 ± 200 N*	
Required force inertia	24 500 N			
Force in the shoulder belt	13 900 N / > 0,2 s	13 700 N / > 0,2 s	13 850 N / > 0,2 s	
Force in the lap belt	14 600 N / > 0,2 s*	14 600 N / > 0,2 s*	14 650 N / > 0,2 s*	
Inertia force in the seat base		24 800 N / > 0,2 s		
Displacement of upper anchorage point	170 mm	177 mm	177 mm	
Remark:				

No ruptures occurred. Additional force is added to seat base and lap belt portion too*. Upper anchorage points were in tolerance.



3.3. Test procedures used (UN Regulation R145):

Test of 2 seat bench type SAF42 and SAF43 - strength of ISOFIX and Top-tether anchorages according to UN Regulation 145.00.

The below mentioned test results cover all variants including the maximum mass stated in the enclosed information document

(seat, seat-to-vehicle anchorages, seat arrangement).

Make/ (*) Brand name of products	Name	Vehicle category	Direction of test forces	Fulfilling of requirements
	SAF43 with TOP TETHER	M1, N1, M2, N2	Forward	See point 3.3.1.
MOBIFRAME	SAF43 without TOP TETHER	M1, N1, M2, N2	Forward	See point 3.3.2.
	SAF43 without TOP TETHER	M1, N1, M2, N2	Oblique	See point 3.3.3.

(*) if stated, otherwise only the manufacturer

- Note: For M1 category minimum 2 seats with ISOFIX anchorage systems and their ISOFIX top tether anchorages shall be mounted. At least one of them shall be in 2nd row of seats.
- 3.3.1. Seat bench type SAF43 ISOFIX with Top Tether forward direction

Seat bench SAF43	Left seat	Right seat
Required force	8 000 ± 250 N	8 000 ± 250 N
Max. measured force	7 950 N	8 000 N
Displacement of X point SFAD device (max 125 mm)	65 mm	65 mm
Result	Without failure	Without failure



3.3.2. Seat bench type SAF43 - ISOFIX without Top Tether – forward direction

Seat bench SAF43	Left seat	Right seat	
Required force	8 000 ± 250 N	8 000 ± 250 N	
Max. measured force	7 850 N	8 000 N	
Displacement of X point SFAD device (max 125 mm)	66 mm	62 mm	
Result	Without failure	Without failure	

3.3.3. Seat bench type SAF43 - ISOFIX without Top Tether – oblique direction

Seat bench SAF43	Left seat	Right seat
Required force	5 000 ± 250 N 5 000 ± 250	
Max. measured force	4 900 N	4 900 N
Displacement of X point SFAD device (max 125 mm)	91 mm	49 mm
Result	Without failure	Without failure

Note:

Test results of ISOFIX system of seat bench type SAF43 valid for seat bench type SAF42 too.

3.4. Final assessment:

Presented test results prove, that seat benches SAF42 and SAF43 meet the requirements of UN Regulation 14-09 and UN Regulation 145-00 and can be used in the M1, N1, M2 and N2 vehicles, if they are fixed as presented in Information Document MOBIF-RAME/07/2022-**02**).

22-00075-CP-PRG-02 OKB Sp. z o.o., Poland SAF42, SAF43



3.6. Test records

3.6.1. Graphs:

3.2.1. Seat bench type SAF42 installed in VW T6 vehicle body



22-00075-CP-PRG-02 OKB Sp. z o.o., Poland SAF42, SAF43





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22-00075-CP-PRG-02 OKB Sp. z o.o., Poland SAF42, SAF43





22-00075-CP-PRG-02 OKB Sp. z o.o., Poland SAF42, SAF43





3.2.2. - Seat bench type SAF42 installed in Mercedes Sprinter vehicle body

22-00075-CP-PRG-02 OKB Sp. z o.o., Poland SAF42, SAF43



22-00075-CP-PRG-02 OKB Sp. z o.o., Poland SAF42, SAF43





22-00075-CP-PRG-02 OKB Sp. z o.o., Poland SAF42, SAF43





3.2.3. Seat bench type SAF43 installed in VW T6 vehicle body (3 seats)

22-00075-CP-PRG-02 OKB Sp. z o.o., Poland SAF42, SAF43





3.2.3.1. Left seat of seat bench type SAF43

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22-00075-CP-PRG-02 OKB Sp. z o.o., Poland SAF42, SAF43





3.2.3.3. Right seat of seat bench type SAF43

22-00075-CP-PRG-02 OKB Sp. z o.o., Poland SAF42, SAF43





3.2.4. Seat bench type SAF43 installed in Mercedes Sprinter vehicle body (3 seats)

22-00075-CP-PRG-02 OKB Sp. z o.o., Poland SAF42, SAF43





3.2.4.1. Left seat of seat bench type SAF43

22-00075-CP-PRG-02 OKB Sp. z o.o., Poland SAF42, SAF43





3.2.4.3. Right seat of seat bench type SAF43





22-00075-CP-PRG-02 OKB Sp. z o.o., Poland SAF42, SAF43



3.3.1. Seat bench type SAF43 – ISOFIX with TOP TETHER – forward direction 08.12.2022 Date: Test of ISOFIX anchorages systems and ISOFIX top tether Test number: 2022_12_08_01 anchorage - SAF43 with TOP TETHER 900 200 850 Required value of force 800±25 daŃ 800 175 Range 0.2s 750 Measured force on left seat (ISOFIX with TOP TETHER) 700 150 Measured force of right seat (ISOFIX with TOP TETHER) 650 600 Maximum permissible ¹²⁵ displacement [mm] 550 Displacement - left seat [mm] 500 Nep 450 100 U Displacement - right seat [mm] Force Displace 400 Direction of test forces: 350 75 Forward 300 250 Displacement of point 50 X of SFAD (left seat): 200 65 mm 150 25 100 Displacement of point X of SFAD (right seat): 50 65 mm 0 0 2 2,5 3 3,5 0.5 15 4 4,5 5 5,5 ġ 95 10 10.5 11 11.5 1 6 6.5 7 7.5 8.5 12 0 8 time [s] 3.3.2. Seat bench type SAF43 - ISOFIX without TOP TETHER - forward direction Date: 08.12.2022 Test of ISOFIX anchorages systems and ISOFIX top tether Test number: 2022_12_08_02 anchorage - SAF43 without TOP TETHER 900 200 850 Required value of force 800±25 daN 800 175 Range 0,2s 750 Measured force on left seat (ISOFIX without TOP TETHER) 700 150 650 Measured force of right seat (ISOFIX without TOP TETHER) 600 Maximum permissible ¹²⁵ displacement [mm] 550 Displacement - left seat (mm) Nep 500 450 ment Displacement - right seat [mm] 450 100 500 400 Direction of test forces: Dis 350 75 Forward 300 250 Displacement of point 50 X of SFAD (left seat): 200 66 mm 150 25 100 Displacement of point X of SFAD (right seat): 50 62 mm 0 0 3 3,5 5 ż 7,5 Ó 0.5 1,5 2 2,5 4 4,5 5.5 6 6,5 8 8,5 ģ 9.5 10 time [s]

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22-00075-CP-PRG-02 OKB Sp. z o.o., Poland SAF42, SAF43





3.3.3. Seat bench type SAF43 - ISOFIX without TOP TETHER – oblique direction

22-00075-CP-PRG-02 OKB Sp. z o.o., Poland SAF42, SAF43



3.6.2. PhotosForward facing seat3.2.1. – Seat bench type SAF42 installed in VW T6 vehicle bodyBefore test



After test



3.2.2. - Seat bench type SAF42 installed in Mercedes Sprinter vehicle body Before test After test



22-00075-CP-PRG-02 OKB Sp. z o.o., Poland SAF42, SAF43



After test

Seat bench type SAF43 installed in VW T6 vehicle body 3.2.3.

3.2.4. Seat bench type SAF43 installed in Mercedes Sprinter vehicle body







22-00075-CP-PRG-02 OKB Sp. z o.o., Poland SAF42, SAF43



3.3.1. Seat bench type SAF43 – ISOFIX with TOP TETHER – forward direction





3.3.2. Seat bench type SAF43 – ISOFIX without TOP TETHER – forward direction

Before test





22-00075-CP-PRG-02 OKB Sp. z o.o., Poland SAF42, SAF43



3.3.3. Seat bench type SAF43 - ISOFIX without TOP TETHER – oblique direction

After test



4. Place and date of testing

As before and 03.02.2025 OKB Laboratory, Bukowiec, Poland

23-00015-CP-PRG-01 OKB SP. Z O.O., Poland SAF42, SAF43



Test report No.: 23-00015-CP-PRG-01

Test of a seat bench with regard to UN Regulation No. **16.00** taking into consideration amendment No. **16.08, Supplement 5** Approval subject: **Safety belts and their installation and child restraint systems**

Approval status			
Granting of a type approval	N/A		
Extension/correction to type approval no.	N/A		

Test report only.



0. Reasons to extension:

- update of vehicles types table
- update of installation instructions
- addition of dynamic tests
- editorial changes

I. General

Poland
Poland
MOBIFRAME/07/2022- 02
5 5 5 5 7 7 8 7 7

II. Test results

Refer to the Annex

III. Enclosures

Information Folder

IV. Statement of conformity



The mentioned information folder and the type described therein are in accordance with the test basis mentioned above. Sampling plan or method result from the requirements of the test basis. The worst-case configuration was selected in accordance with process description "Requirements for Test Reports (AS-PB-T-02)". Valid decision rule in accordance with ILAC G8:2019, 4.2.1: in question of meeting the limits the measurement uncertainty was ignored.

The manufacturer is responsible for the information (III.) and the test specimens provided by him. The test results relate only to the test specimens as received and mentioned (II.). The test specimens are representative for the type described (III.).

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Genehmigungsbehörde Approval authority	Land <i>Country</i>	Registriernummer Registration number
Kraftfahrt-Bundesamt (KBA)	Deutschland Germany	KBA-P 00100-10
Vehicle Certification Agency (VCA)	Vereinigtes Königreich United Kingdom	VCA-TS-006
Approval Authority of the Netherlands (RDW)	Niederlande The Netherlands	RDWT-082-xx
National Standards Authority of Ireland (NSAI)	Irland Ireland	Technical Service Number: 49
Vehicle Safety Certification Center (VSCC)	Taiwan/Taiwan	DE04-06-2
Société Nationale de Certification et d'Homologation s.à r.l.	Luxemburg Luxembourg	13/B(g)
Swedish Transport Agency (STA)	Schweden <i>Sweden</i>	TT 0024

TÜV SÜD Auto Service GmbH is designated as Technical Service by:

Munich, 17.02.2025



Ing. Vít Bursík Authorized signatory

23-00015-CP-PRG-01 OKB SP. Z O.O., Poland SAF42, SAF43



Annex

1. Technical data of the test sample

- 1.1 Make:
- 1.2 Type:
- 1.2.1. Variant-version:

MOBIFRAME SAF42, SAF43 SAF42_???_?_? – 2-seating positions SAF43_???_- 3-seating positions

SAF??_SLM_?_?? - slim version of seat cushion

SAF??_??_L_??? – fixation to the floor via quick release system

SAF42_???_?_097 – bench width 97 cm SAF42_???_?_100 – bench width 100 cm SAF42_???_?_112 – bench width 112 cm SAF43_???_?_118 – bench width 118 cm SAF43_???_?_120 – bench width 120 cm SAF43_???_?_126 – bench width 126 cm SAF43_???_?_150 – bench width 150 cm

1.3	Category of vehicle:	M1, N1, M2, N2
1.4	Test object:	Seat bench SAF43_SLM_L_150 as a worst case representative, intended for use in other than front rows of vehicle.
		For details see manufacturer's information folder.
1.4.1.	Vehicle types for which is device intended to use:	see manufacturer's information document Enclosure 1

Note: Testing laboratory does not bear any responsibility for possibly incorrect values of masses, and dimensions provided by the manufacturer and for test results found out based on these values.



2. Test conditions

2.1. Instrumentation:

- Test fixtures ZZ-347, ZZ-430/1, /2, /3
- Force measurement device PM-1876
- Digital level gauge PM-2407
- Tape measure PM-3129

2.2. Ambient conditions:

Normal laboratory conditions, not directly limited in Regulation

3. Test results

3.1 Test procedures used (UN R16):

Test of 3 seat bench MOBIFRAME type SAF43 according to UN R. No. 16.08, par. 8 and Annex 17 concerning to check of installation of safety belts and child restraint systems. The below mentioned test results cover all variants stated in the enclosed information document.

3.2 Forward facing rear row of seats for M1/N1 vehicles MOBIFRAME type SAF43

(Numbering according to UN Regulation No.16.08, marked italic)

- 3.2.1 General
- 8.1. All the seats are equipped with 3-point safety belts with automatically or emergency locking retractor. The seat belts fulfilling the requirements of this regulation, component certificates are in hand.
- *8.1.1.* Tab Number and position of safety belts and restraint systems and seats on which they can be used.

Number and position of safety belts and restrain systems and seats on which they can be used: (L = left, R = right, C = centre)

		Complete EC type-approval mark	Variant (if applicable)	Belt adjustment device for height
	L	N/A	N/A	N/A
First row	C ¹	N/A	N/A	N/A
	R ¹	N/A	N/A	N/A
	L			
Other rows	C ¹	Ar4m E8 07 16878	N/A	N/A
	R			

*-If present


- 8.2. Seatbelts are fixed to the seatbelt anchorages fulfilling the requirements of UN R. No. 14 (see Test Report No. 22-00075-CP-PRG-02), Seatbelts are designed so that they are readily to use, work properly and minimize the risk of injury during impact.
- 8.3. Rigid parts do not increase the risk of injury; the releasing buckle is visible and easily accessible. All safety belts are equipped with retractor with emergency locking.
- 8.3.5 Compliance with Annex 17 was confirmed. Instruction manual contains information about transport of children in vehicle and instruction for installation of child restraint systems (CRS).
 All seats intended for installation of CRS comply with requirements of Annex 17 of this Regulation.
- 8.4. Safety-belt reminder equipment
- 8.4.1. Requirements per specific seating position and exemptions
- 8.4.1.3. The safety-belt reminder is not compulsory on motor-caravans, vehicles for transport of disabled persons. Safety belts reminders are not compulsory for rear removable seats in all vehicle types (applicable for extensions of approvals forst granted before 1 september 2022).

(SAF??_???_L_???)

- 3.2.2 General CRS installation requirements
- *8.2.2.5.* The possible slack in the belt does not prevent the correct installation of child restraint system recommended by manufacturer.

In the case of three-point belts, a tension of at least 50 N can be established in the lap section of the belt by external application of tension in the diagonal section of the belt.

- 8.3.5. In order to inform the vehicle user(s) of the provision made for the transport of children, the requirements of Annex 17 are met, see 3.2.3. and 3.2.4.
- 8.3.6 i-Size position

All i-Size seating position allow the installation of the ISOFIX child restraint fixtures "ISO/F2X" (B1), "ISO/R2" (D) and the support leg installation assessment volume as defined in Appendix 2 to Annex 17.



3.2.3 Compatibility test of "universal" category child restraint system – outboard seating positions only

(Numbering according to Annex 17 - Appendix 1 of the Regulation (marked italic))

	Test condition	Required	Measured
2.1.	Adjust the seat	To be in its full rearward and lowest position	No adjustment
2.2.	Adjust the seat- back angle	To be in designed position, if not given be at 25° degree	No adjustment
2.3.	Adjust upper belt anchorage	To be in its lowest position	No adjustment
2.9	Application of horizontal force	Push force of $100 \text{ N} \pm 10 \text{N}$ applied in the middle front part of fixture parallel with fixture base.	Rear outboard seat: 105 N
2.10	Application of vertical force	Push force of $100 \text{ N} \pm 10 \text{N}$ applied in the middle of upper surface of fixture vertically.	Rear outboard seat: 99 N
3.1.		Base of fixture shall be in contact with both the forward and the rearward seat cushion surface	Pass rear outboard seat
3.2.	With the belt arranged around	Lap portion of belt shall be in touch with the fixture on both sides	Pass rear outboard seat
3.3.		If requirements are not fulfilled while seat set acc. to 2.1., 2.2., 2.3, different location of the seat stated by the manufacturer is possible (vehicle handbook)	N/A



3.2.4 Compatibility test of ISOFIX child restraint system and i Size child restraint system – outboard seating positions only

(Numbering according to Annex 17- Appendix 2 of the Regulation (marked italic))

	Test condition	Required	Measured	
2.1.	Adjust the seat	To be in its full rearward and lowest position	No adjustment	
2.2.	Adjust the seat-back angle	To be in designed position, if not given be at 25 degree	No adjustment	
2.5.	Application of force	Push force of 100 N ±10N in the middle between ISOFIX anchorages parallel with fixture base.	Fixture ISO/F2X: Pass Fixture ISO/R2: Pass	
3.1.		Fixture shall not be in interference with vehicle interior. Fixture base pitch angle shall be 15°±10° above the horizontal plane passing through the ISOFIX anchorages.	Fixture ISO/F2X: 9,1° Fixture ISO/R2: 7,8°	
3.2.	With the fixture accommodate on seat	The ISOFIX top tether anchorage shall remain accessible.	Pass	
3.3.		Front passenger seat adjusted to the position stated by manufacturer in vehicle handbook: rearmost and lowest, seat- back in design position	Pass including space for support leg	

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3.3. Photos: Space for support leg (i-Size)



Fixture ISO/F2X



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Fixture ISO/R2





Fixture "universal" CRS - outboard seat



23-00015-CP-PRG-01 OKB SP. Z O.O., Poland SAF42, SAF43



Fixture "universal" CRS - outboard seat



4. Place and date of testing

TÜV SÜD Czech s.r.o., Bezděčín, Czech Republic 13.02.2023 OKB Laboratory, Bukowiec, Poland 03.02.2025

23-00016-CP-PRG-01 OKB Sp. z o.o., Poland SAF42, SAF43



Test report No.: 23-00016-CP-PRG-01

Test of a seat bench with regard to UN Regulation No. **17.00** taking into consideration amendment No. **17.09, Supplement 1, corrigendum 1** Approval subject: **Strength of seats and their anchorages and head restraints**

Approval status					
Granting of a type approval	N/A				
Extension/correction to type approval no.	N/A				

Test report only



0. Reasons to extension:

- update of vehicles types table
- update of installation instructions
- addition of dynamic tests
- editorial changes

I. General

MakeMOBIFRAMEType:SAF42, SAF43Category of vehicle:M1, N1, M2, N2Name and address of manufacturerOKB SP. Z O.O.
ul. Szkolna 9, Bukowiec
95-006, Brójce
Poland

Reference number of information folder: MOBIFRAME/07/2022-02

Date of issue of information folder:

03.02.2025



II. Test results

Refer to the Annex

III. Enclosures

Information Folder

IV. Statement of conformity

The mentioned type described therein is in accordance with the test basis mentioned above. Sampling plan or method result from the requirements of the test basis. The worst-case configuration was selected in accordance with process description "Requirements for Test Reports (AS-PB-T-02)". Valid decision rule in accordance with ILAC G8:2019, 4.2.1: in question of meeting the limits the measurement uncertainty was ignored.

The manufacturer is responsible for the information (III.) and the test specimens provided by him. The test results relate only to the test specimens as received and mentioned (II.). The test specimens are representative for the type described (III.).

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Genehmigungsbehörde Approval authority	Land Country	Registriernummer Registration number
Kraftfahrt-Bundesamt (KBA)	Deutschland Germany	KBA-P 00100-10
Vehicle Certification Agency (VCA)	Vereinigtes Königreich United Kingdom	VCA-TS-006
Approval Authority of the Netherlands (RDW)	Niederlande The Netherlands	RDWT-082-xx
National Standards Authority of Ireland (NSAI)	Irland Ireland	Technical Service Number: 49
Vehicle Safety Certification Center (VSCC)	Taiwan/Taiwan	DE04-06-2
Société Nationale de Certification et d'Homologation s.à r.l.	Luxemburg Luxembourg	13/B(g)
Swedish Transport Agency (STA)	Schweden Sweden	TT 0024

Munich, 17.02.2025



Ing. Vít Bursík Authorized signatory



Annex

Test report

1. Technical data of the test sample

- 1.1 Make:
- 1.2 Type:
- 1.2.1. Variant/Version:

MOBIFRAME

SAF42, SAF43

SAF42_???_ - 2-seating positions SAF43_???_ - 3-seating positions

SAF??_SLM_?_??? – slim version of seat cushion

SAF??_??_L_??? – fixation to the floor via quick release system

SAF42_???__097 – bench width 97 cm SAF42_???__100 – bench width 100 cm SAF42_???__112 – bench width 112 cm SAF43_???__118 – bench width 118 cm SAF43_???__120 – bench width 120 cm SAF43_???__126 – bench width 126 cm SAF43_???__150 – bench width 150 cm

1.3 Commercial description(s):

SAF42, SAF43

1.3.1. Remark

Detailed drawings and description of benches (SAF42, SAF43) and their fixation solutions in vehicles are included in Information Document MOBIFRAME/07/2022-**02** attached to this test report.

1.4	Category of vehicle:	M1, N1, M2, N2
1.5	Test object:	Seat bench type SAF42 and SAF43 mounted on MOBIFRAME floor with rails and on rigid test bench).
		For details see manufacturer's information folder.
1.6.	Mass of seat benches:	SAF42 – 115 kg – mass of the heaviest con- figuration SAF43 – 135 kg – mass of the heaviest con- figuration



1.7. Number of seating positions:

SAF42 – 2 SAF43 – 3

1.8. Table of vehicle types for which is seat bench intended to use:

Manufacturer	Commercial description / Type or model desig- nation	Wheelbase
	Sprinter 906, 907 (906BB e.g. 906BB35, 906BB50, 906BB35/4x4, 906BB50/4x4)	3250, 3665, 4325
Daimler / Mer- cedes-Benz	Sprinter, e-Sprinter 910 (e.g. FL3A4, FL3A5, KL3A4, KL3A5)	3259, 3924
	Vito/Viano/V-klasse, e-Vito (639, 639/2, 639/4, 639/5)	3200, 3430
	Crafter (2E, 3E)	3250, 3665, 4325
	Crafter, e-Crafter (SYN_, SYM_ e.g. SYN1E, SYM1E, SYN2E, SYM2E, SYN2Z, SYM2Z)	3640, 4490
VVV	T5 (7H_, 7E_, 7J_)	3000, 3400
	T6, T6.1, e-Transporter (7H_, 7E_, 7J_)	3000, 3400
	Transporter VII, T7	3100, 3500
	Jumper, e-Jumper (Y, CY)	3000, 3450, 4035
	Jumpy (G9/X, V)	3000, 3122
Citroen	Jumpy, e-Jumpy (G9/X, V)	2925, 3275
	SpaceTourer, E-SpaceTourer (V)	2925, 3275
	Berlingo, E-Berlingo	2785, 2975
	Boxer, e-Boxer (Y)	3000, 3450, 4035
	Expert (VF3)	3000, 3122
Peugeot	Expert, e-Expert (G9/X, V)	2925, 3275
_	Traveller, e-Traveller (V)	2925, 3275
	Rifter, e-Rifter	2785, 2975
	Ducato, e-Ducato (250)	3000, 3450, 4035
First	Scudo (270)	3000, 3122
Flat	Scudo (2022)	2925, 3275
	Talento (FJL, FFL)	3098, 3498
	Movano (MR, MS, MW, MT)	3182, 3682, 4332
	Movano, Movano-e (Y)	3000, 3450, 4035
Opol	Vivaro (F7)	3098, 3498
Oper	Vivaro, Vivaro-e, Vivaro e-Kombi, Vivaro Life, Zafira Life (V)	2925, 3275
	Combo Life, Combo-e Life	2785, 2975
	Master, Master E-Tech (FV, MA, MC, ML, MW, MR, MT, VA)	3182, 3682, 4332
Renault	Master (XDD, e.g. RDA, TDA)	3585, 4215
	Trafic (FL, EL, L)	3098, 3498
	Trafic 2014 (JL, L)	3098, 3498
Renault Trucks	Master (MA, MB, MF, MG, VA, VB, VF, VG)	3182, 3682, 4332



1.8. Table of vehicle types for which is seat bench intended to use:

Manufacturer	Manufacturer Commercial description / Type or model desig- nation			
	Transit, (FA_, FD_, FS_, FZ_, FN_, FM_)	2933, 3300, 3750		
	Transit, e-Transit (FC_)	3300, 3750, 3954		
Ford	Transit Custom, Turneo Custom (FA_, FB_, FC_, FD_, FE_, FF_)	2933, 3300		
	Transit Connect (PU2)	2662, 3062		
	Transit/Tourneo Custom 2 (V710 e.g. NXN, NRN)	3100, 3500		
lveco	Daily, Daily Electric (ISe.g. IS35SC2AA, IS56CI2DA, IS56AC2DA, IS70CI2BA, IS72CI2DA, IS35W2DA; IG??????(?) e.g. IG110EW2BA, IG120E2BA, IG150EW2CA; 35C??(?), 50C??(?), 60C??(?), 65C??(?), 70C??(?), 72C??(?), IS40C, IS52C, IDN02, 55W)	3000, 3300, 3520, 3950, 4100, 4750		
	NV200	2725		
Nissan	NV300, Primastar (4)	3098, 3498		
	NV400 (M1)	3182, 3682, 4332		
Toyota	Pro Ace (2013-2016)	3000, 3122		
TOyota	Pro Ace, Pro Ace Verso, Pro Ace Electric (X, V)	2925, 3275		
MAN	TGE, eTGE (SYN_, SYM_ e.g. SYN1E, SYM1E, SYM1E, SYN2E, SYM2E, SYN2Z, SYM2Z)	3640, 4490		
	V80, Maxus (SV6C)	3100, 3850		
MAXUS (LDV)	V90, Deliver 9, E-Deliver 9	3000, 3366, 3760		
	Deliver 3, E Deliver 3	2910, 3285		
Hyundai	H350 (EU(V))	3435, 3670		
RAM	ProMaster	3000, 3450, 4035		
Freightliner/Dodge	Sprinter	3250, 3665, 4325		

- 1.9. Type of bodywork using the codes set out AC, AF, BB, BX, CA, SA, SG, SH in Part C of Annex II of Directive 2007/46/EC and/or in Part C of Annex I of Regulation (EU) 2018/858:
- Note: Testing laboratory does not bear any responsibility for possibly incorrect values of masses, and dimensions provided by the manufacturer and for test results found out based on these values.



2. Test conditions

2.1. Instrumentation:

- Digital ballance
- Dynamic sled test rig
- Accelerometre
- High speed camera

- Head restraint performance test device
- Linear impactor
- 3DH-point measurement device
- Caliper
- Measurement 2D frame

2.2. Ambient conditions:

Normal laboratory conditions, not directly limited in Regulation

3. Test results

3.1. Test procedures used (UN Regulation No.17):

Static, dynamic and energy dissipation test of strength of seat anchorages, adjustment and displacement mechanisms and head restraints according to UN Regulation No. 17.09

The below mentioned test results cover all versions including the maximum mass stated in the enclosed information document.

(seat, seat-to-vehicle anchorages, seat arrangement).

Head restraint positioning 2nd row – uppermost position (lowest position in case of energy dissipation test)

3.2 Strength test of seats and head restrains and energy absorption tests according UN Regulation No. 17.09 – See point 3.2.2.

3.2.2. Head restraint/seat back performance

Static tests:

H point measuring:

Test No. 62022-23_01, 02 See Table 1

Table 1: H-point coordinates

LL Deint neei	Seat position	Left seat	Center seat	Right seat		
H-Point posi-	Coordinate X	110,00	110,00	110,00		
(from monu	Coordinate Z	179,00	179,00	179,00		
(ITOITI ITIATIu- facturer)	relatively to	lower seat belt outside anchorage point				
lacturer)	Torso angle	21°				
	Seat position	Left seat	Center seat	Right seat		
H-Point posi-	Coordinate X	-104,71	-104,71	-104,71		
tion	Coordinate Z	168,33	168,33	168,33		
(measured)	relatively to	lower seat belt outside anchorage point				
(Torso angle	17,9°				



Head restraint/seat back performance

Definition and requirement	Pa	aragraph	Measured values
Deminion and requirement	Requirement	Test procedure	Rear seats
No side facing seats in vehicles of the class M1, N1	5.1.	N/A	No side facing seats installed.
Adjusting and displacement auto- matic locking systems	5.2.1 – 5.2.2.	N/A	Adjustment and locking sys- tem lock automatically in the position for use.
Energy absorption of the rear parts of the seats, the decelera- tion of the headform ≤ 80 g con- tinuously for more than 3 ms un- der the impact	5.2.3	6.8.1.1, Annex 6	N/A
Roughness or sharp edges of the rear seat parts - radii 2,5 mm in area 1 - radii 2,5 mm in area 2 - radii 3,2 mm in area 3	5.2.4	6.8.1	N/A
No seat ruptures after tests	5.2.5	6.2	No ruptures occurred.

Head restraint/seat back performance

Requirements for vehicles of category N, M_2 and M_3	5.3.		PASS
Installation of the head restraints (min. front outboard seats)	5.4.	N/A	Bench is equipped with head re- straint
No additional cause of danger to oc- cupants of the vehicle by the head restraint; energy absorption - the de- celeration of the headform ≤ 80 g continuously for more than 3 ms under the impact*	5.5.	6.8.1.1.3, Annex 6	Front head restraint surface: a _{max} =66,78 g a3ms=22,81 g v=23,97 km/h
Highest distance of the head re- straint top from R point: H \ge 750 mm for <u>rear</u> seats	5.6.3.1	6.5	818 mm
Min. height in any position for use H \ge 750 mm for <u>rear outboard</u> seat H \ge 700 mm for <u>rear middle</u> seats	5.6.3.2 (5.6.5.)	6.5	758 mm



Height of the head restraint effective area $h \ge 100 \text{ mm}$	5.7.1	6.5	> 100 mm
Gap between head restraint and seat-back m ≤ 25 mm	5.8	6.7	0 mm
Integral head restraints	5.9	6.7, 6.4.3.3.2	N/A
Head restraints with gaps	5.10	6.7	N/A (no gaps)
Width of head restraint 65 mm below its top $L \ge 170 \text{ mm}$	5.11	6.6	197 mm
Head rearward displacement X < 102 mm when loaded to moment 373 Nm around R point	5.12	6.4	54,9 mm (left seat) 57,0 mm (centre seat) 58,6 mm (right seat)
Loading force for head restraint F \ge 890 N	5.13	6.4.3.6.	894,5 N without rupture (left seat) 894,2 N without rupture (centre seat) 894,3 N without rupture (right seat)
Raise the head restraint beyond the operational height	5.14	N/A	Only with deliberate action
Strength of the seat back under the load of 530 Nm per seating position	5.2.7, 5.15	6.2	Passed without ruptures
Luggage displacement retention re- quirements	5.16	Annex 9	Pass without ruptures

3.3. Dynamic tests

3.3.1. Rear Impact

Requirement acc. to 5.2.5, 5.2.6. test according to paragraph 6.3 Test pulse: Annex 9 (corridor) – see point 3.4.

For details see test report BLB.071.23B

3.3.1.1 Test speed and achieved deceleration

	Requirement	Measured
Impact speed v ₀	50 ⁺⁰ ₋₂ km/h	OK
Acceleration	corridor	OK

3.3.1.2 Results

Paragraph of the regulation UN Reg. No. 17.09 marked in *italics*

5.2.5 There was no failure of the seat frame or seat anchorage, adjustment and displacement systems or their locking devices during the test



5.2.6 There was no release of the locking systems during the tests

3.3.2 Frontal impact Requirement acc. to 5.2.5, 5.2.6. test according to paragraph 6.3 Test pulse: Annex 9 (corridor) – see point 3.4.

For details see test report **BLB.071.23B**

3.3.2.1 Test speed and achieved deceleration

	Requirement	Measured
Impact speed v ₀	50 ⁺⁰ ₋₂ km/h	OK
Acceleration	corridor	OK

3.3.2.2 Results

Paragraph of the regulation UN Reg. No. 17.09 marked in *italics*

- **5.2.5** There was no failure of the seat frame or seat anchorage, adjustment and displacement systems or their locking devices during the test
- **5.2.6** There was no release of the locking systems during the tests

General note:

- 5.3.1. Bench seats are firmly anchored to the vehicle floor.
- 5.3.2. Bench seats are automatically lockable in all the positions provided.
- 5.3.3. Adjustable seat-backs are lockable in all the positions provided (if applicable)
- 5.3.4. All Bench seats which can be tipped forward or have fold-on backs and folding seats are lock automatically in the position of use by occupants.

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150 160 Test Time (s)

CS Seatback Torque (Nm) ----- CS Headrest Position (nm) ----- CS Headrest Force (N) ------ CS Headrest Torque (Nm)

200 210 220 230 240 250 260 270 200 290

3.4 Test records – diagrams (graphs):

10 20 30 40 50 60 70 80 90 100 110 120 130 140

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RS Headrest Position (mm) ----- RS Headrest Force (N)

TÜV SÜD Auto Service GmbH, Westendstraße 199, D-80686 München

23-00016-CP-PRG-01 OKB Sp. z o.o., Poland SAF42, SAF43





Dynamic tests





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Dynamic tests





Graph 3. Deceleration of the test sled during test concerning protection of the occupants against displacement of luggage



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3.5. Test records – photos:

H-Point, torso angle and head restraint measuring



Head restraint performance

Pre





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Post





Energy dissipation

Pre



23-00016-CP-PRG-01 OKB Sp. z o.o., Poland SAF42, SAF43



Post



4. Place and date of testing

TÜV SÜD Czech, Bezděčín, Czech Republic, as before and 13.02.2023, PIMOT, Warszawa, Poland 17.05.2023, OKB Laboratory, Bukowiec, Poland 03.02.2025

INFORMATION FOLDER / DOCUMENT: MOBIFRAME/07/2022-02

PURSUANT TO UN/ECE REGULATIONS No. 14-09 "UNIFORM PROVISIONS CONCERNING THE APPROVAL OF VEHICLES WITH REGARD TO SAFETY-BELT ANCHORAGES" (as last amended)

No. 16-08

"UNIFORM PROVISIONS CONCERNING THE APPROVAL OF: SAFETY-BELTS, RESTRAINT SYSTEMS, CHILD RESTRAINT SYSTEMS AND ISOFIX CHILD RESTRAINT SYSTEMS FOR OCCUPANTS OF POWER-DRIVEN VEHICLES EQUIPPED WITH SAFETY-BELTS, SAFETY-BELT REMINDER, RESTRAINT SYSTEMS. CHILD RESTRAINT SYSTEMS AND ISOFIX CHILD RESTRAINT SYSTEMS" (as last amended)

No. 17-09 "UNIFORM PROVISIONS CONCERNING THE APPROVAL OF VEHICLES WITH REGARD TO THE SEATS, THEIR ANCHORAGES AND ANY HEAD RESTRAINTS" (as last amended)

No. 145-00 **"UNIFORM PROVISIONS CONCERNING THE APPROVAL OF VEHICLES WITH REGARD** TO ISOFIX ANCHORAGE SYSTEMS ISOFIX TOP TETHER ANCHORAGES AND I-SIZE SEATING POSITIONS" (as last amended)

> FOR THE SEAT MOBIFRAME TYPE SAF42, SAF43

Reasons to extension:

- update of vehicles types table -
- update of installation instructions
- addition of dynamic tests
- editorial changes

Damian Goliński Vice President

Total number of pages:	100
Date of issue: 03.02.202	25



MOBIFRAME/07/2022-02

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Date: 03.02.202

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List of documentation and supplements

Cor	nfirmation	3
0.	General	4
1.	General construction characteristics of the vehicle	5
9.	Bodywork	5

List of enclosures

Table of vehicles types	Enclosure 1
Drawings of seats, seat belt anchorages, ISOFIX anchorage systems	
and ISOFIX Top Tether anchorages, head restraints,	
displacement and locking systems	Enclosure 2
Seat anchorages and floor details	Enclosure 3



Confirmation

We hereby declare that the vehicle specimens submitted for this approval test have been manufactured and assembled on conditions of ordinary mass production and that they are compatible with the enclosed documentation.

Date of issue: 3rd February 2025

J. yel

Damian Goliński Vice President



0.	GENERAL	
0.1	Make (trade name of manufacturer):	MOBIFRAME
0.2	Туре:	SAF42, SAF43
		Variant/Version:
		SAF42_???_?_?? – 2-seating positions SAF43_???_?_?? – 3-seating positions
		SAF??_SLM_?_??? – slim version of seat cushion
		SAF??_??_L_??? – fixation to the floor via quick release system
		SAF42_???_?_097 – bench width 97 cm
		SAF42_???_100 - bench width 100 cm
		SAF42_???_?_112 – bench width 112 cm
		SAF43_???_?_118 – bench width 118 cm
		SAF43_???_?_120 - bench width 120 cm
		SAF43_??? 2 150 - bench width 150 cm
0.2.1	Commercial name(s) (if available):	SAF42, SAF43
0.2.2	Dedicated for vehicle(s):	See Enclosure 1
0.4	Category of vehicle:	M1, N1, M2, N2
0.5	Name and address of manufacturer:	OKB SP. Z O.O.
		Szkolna 9, Bukowiec
		95-006 Brójce

Poland

1.	GENERAL CONS	TRUCTION CHARACTERISTICS OF THE VEHICLE		
1.1	Photographs and/ representative vel	or drawings of a nicle:	See base vehicle vehicles in Enclo	e type approvals of osure 1
9.	BODYWORK			
9.1	Type of bodywor set out in Part C Directive 2007/4 Annex I to Regu 2018/858:	k using the codes of Annex II of 6/EC or in Part C of lation (EU)	AC, AF, BB, BX,	, CA, SA, SG, SH
9.10	Interior arrangen	nent		
9.10.3	Seats			
9.10.3.1	Number of seati	ng positions:	No restrictions (over the second seco	depending only on the and vehicle size)
9.10.3.1.1	Location and arr	angement:	Anywhere on the	e floor
9.10.3.2	Seat(s) designat when the vehicle	ed for use only is stationary:	N/A	
9.10.3.3	Mass:		SAF42 – 115 kg configuration	 mass of the heaviest
			SAF43 – 135 kg configuration	 mass of the heaviest
9.10.3.4	Characteristics: approved as con description and (for seats not type- nponents, drawings of	-	
9.10.3.4.1	The seats and th	eir anchorages:	See Enclosures	
9.10.3.4.2	The adjustment	system:	See Enclosures	
9.10.3.4.3	The displacement systems:	The displacement and locking systems:		
9.10.3.4.4	The seat-belt an (if incorporated i	chorages n the seat structure):	See Enclosures	
9.10.3.4.5	The parts of the anchorages:	vehicle used as	See Enclosures	
9.10.3.5	Coordinates or c	Irawing of the R-point		
9.10.3.5.1	Driver's seat:		N/A	
9.10.3.5.2	All other seating	positions:	See Enclosures	
9.10.3.6	Design torso ano	gle		aischer D.
9.10.3.6.1	Driver's seat:		N/A	
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9.10.3.6.2	All other seating positions:	See Enclosures
9.10.3.7	Range of seat adjustment	
9.10.3.7.1	Driver's seat:	N/A
9.10.3.7.2	All other seating positions:	See Enclosures

- 9.10.4. Head restraints
- 9.10.4.1. Type(s) of head restraints:
- 9.10.4.2. Type-approval number(s), if available: N/A
- 9.10.4.3. For head restraints not yet approved See Enclosures
- 9.12. Safety belts and/or other restraint systems
- 9.12.1. Number and position of safety belts and restraint systems and seats on which they can be used:

(L = left, R = right, C = centre)

		Complete EC type- approval mark	Variant (if applicable)	Belt adjustment device for height
	L	N/A	N/A	N/A
First row	C ¹	N/A	N/A	N/A
	R ¹	N/A	N/A	N/A
	L			
Other rows	C¹	Ar4m E8 07 16878	N/A	N/A
	R			

detachable

¹-If present

- 9.12.2. Nature and position of supplementary restraint system:
- ISOFIX anchorages mounted in 2 seating positions (concerns ECE Regulation No. 145)
- 9.12.3. Nature and position of safety belt Se anchorages and proof of compliance with ECE R 14 or Directive 76/115/EEC:

See paragraphs in this document



9.12.4.	Brief description of the electrical/ electronic components (if any):	No safety belt reminder or other electronic components. Safety belt reminders not required in motor-caravans and wheelchair accessible vehicles. Additionally, safety belt reminders are not compulsory for rear removable seats in all vehicle types (applicable for extensions of approvals first granted before 1 September 2022)
9.13	Safety belt anchorages	

- 9.13.1 Photographs and/or drawings of the bodywork showing the position and dimensions of the actual and effective anchorages including the R-points:
- 9.13.2 Drawings of the belt anchorages and parts of the vehicle structure where they are attached (with the material indication):
- 9.13.3 Designation of the types of safety belt authorised for fitting to the anchorages with which the vehicle is equipped:

Seatbelt anchorages and ISOFIX anchorages systems and ISOFIX top tether anchorages - see Enclosures

nd 52

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See Enclosures

			Anchorage	location
			Vehicle structure	Seat structure
F	First row of seats		No changes in 2 nd stage of production	No changes i 2 nd stage of production
Casanda	ad/ar athar rowa af a	a ata	Anchorage	location
Second al	na/or other rows of s	eals	Vehicle structure	Seat structur
		outboard		Ar
Left-hand seat	Lower anchorages	inboard		Ar
	Upper anchorages	Upper anchorages		Ar
	Lower anchorages	outboard		Ar
Central seat ¹		inboard		Ar
	Upper anchorages			Ar
		outboard		Ar
Right-hand seat	Lower anchorages	inboard		Ar
	Jpper anchorages			Ar
¹ - if applica	ble			
Child restraint syst applicable). They a and SAF43)	ems are not allowed to are allowed only for ou	b be installed tboard seatin	in central seating po g positions (left and	sition (ifner a)
	I		- TCV	
IFRAME			Date: 03.02	.2025

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9.13.4	Description of a particular type of safety belt where an anchorage is located in the seat backrest or incorporates an energy dissipating device:	Ar4m
9.13.5	Drawings and/or photographs of the ISOFIX anchorages systems, of the top tether anchorages if any, and of the vehicle structure	
9.13.5.1	Number:	
9.13.5.1.1	Of the low ISOFIX anchorages	See Enclosures
9.13.5.1.2	Of the ISOFIX top tether anchorages	See Enclosures
9.13.5.1.3	Of the integrated " built in" child restraint system(s) of mass groups 0, or 0+, or 1:	N/A
9.13.5.2	Convertible vehicle, as defined in annex 7, paragraph 8.1 of the Consolidated Resolution on the Construction of Vehicles (R.E.3)	N/A
9.13.5.3	Photographs and/or drawings of the bodywork showing the position and dimensions of the anchorages	See Enclosures
9.13.5.4	Drawing and/or photographs of the ISOFIX anchorages systems, of the ISOFIX top tether anchorages	See Enclosures
9.13.5.5	Drawing and/or photographs of the position and the form of the symbols of the ISOFIX anchorages system, if necessary	Label with the word "ISOFIX" complies with requirements of ECE R145 - near ISOFIX system – see Enclosure 2



Enclosure 1: TABLE OF VEHICLES TYPES

Manufacturer Commercial description / Type or model	Wheelbase					
designation Sprinter 906, 907 (906BBe.g. 906BB35,	3250, 3665, 4325					
Daimler / Sprinter, e-Sprinter 910 (e.g. FL3A4, FL3A5, Maraadaa Baaz KL 3A4, KL 3A5)	3259, 3924					
Vito/Viano/V-klasse, e-Vito (639, 639/2, 639/4, 639/5)	3200, 3430					
Crafter (2E, 3E)	3250, 3665, 4325					
Crafter, e-Crafter (SYN_, SYM_ e.g. SYN1E, SYM1E, SYN2E, SYM2E, SYN2Z, SYM2Z)	3640, 4490					
VW T5 (7H_, 7E_, 7J_)	3000, 3400					
T6, T6.1, e-Transporter (7H_, 7E_, 7J_)	3000, 3400					
Transporter VII, T7	3100, 3500					
Jumper, e-Jumper (Y, CY)	3000, 3450, 4035					
Jumpy (G9/X, V)	3000, 3122					
Citroen Jumpy, e-Jumpy (G9/X, V)	2925, 3275					
SpaceTourer, E-SpaceTourer (V)	2925, 3275					
Berlingo, E-Berlingo	2785, 2975					
Boxer e-Boxer (Y)	3000 3450 4035					
Expert (VF3)	3000 3122					
Pouroot Expert e-Expert (G9/X V)	2025 3275					
	2925, 3275					
Piftor o Piftor	2925, 3275					
	2700, 2970					
	3000, 3450, 4035					
Fiat Scudo (270)	3000, 3122					
Scudo (2022)	2925, 3275					
l alento (FJL, FFL)	3098, 3498					
Movano (MR, MS, MW, MT)	3182, 3682, 4332					
Movano, Movano-e (Y)	3000, 3450, 4035					
Opel Vivaro (F7)	3098, 3498					
Vivaro, Vivaro-e, Vivaro e-Kombi, Vivaro Life, Zafira Life (V)	2925, 3275					
Combo Life, Combo-e Life	2785, 2975					
Master, Master E-Tech (FV, MA, MC, ML, MW, MR, MT, VA)	3182, 3682, 4332					
Renault Master (XDD, e.g. RDA, TDA)	3585, 4215					
Trafic (FL, EL, L)	3098, 3498					
Trafic 2014 (JL, L)	3098, 3498					
Renault Trucks Master (MA, MB, MF, MG, VA, VB, VF, VG)	3182, 3682, 4332					
Transit, (FA_, FD_, FS_, FZ_, FN_, FM_)	2933, 3300, 3750					
Transit, e-Transit (FC_)	3300, 3750, 3954					
Ford Transit Custom, Turneo Custom (FA_, FB_, FC_, FD_, FE_, FF_)	2933, 3300					
Transit Connect (PU2)	2662 3062 al Se 0					
Transit/Tourneo Custom 2 (V710 e.g. NXN, NRN)	3,00, \$500					
	- 08.02.2025					

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lveco	Daily, Daily Electric (IS e.g. IS35SC2AA, IS56CI2DA, IS56AC2DA, IS70CI2BA, IS72CI2DA, IS35W2DA; IG??????(?) e.g. IG110EW2BA, IG120E2BA, IG150EW2CA; 35C??(?), 50C??(?), 60C??(?), 65C??(?), 70C??(?), 72C??(?), IS40C, IS52C, IDN02, 55W)	3000, 3300, 3520, 3950, 4100, 4750
	NV200	2725
Nissan	NV300, Primastar (4)	3098, 3498
	NV400 (M1)	3182, 3682, 4332
Toyota	Pro Ace (2013-2016)	3000, 3122
Toyota	Pro Ace, Pro Ace Verso, Pro Ace Electric (X, V)	2925, 3275
MAN	TGE, eTGE (SYN_, SYM_ e.g. SYN1E, SYM1E, SYN2E, SYM2E, SYN2Z, SYM2Z)	3640, 4490
	V80, Maxus (SV6C)	3100, 3850
MAXUS (LDV)	V90, Deliver 9, E-Deliver 9	3000, 3366, 3760
	Deliver 3, E Deliver 3	2910, 3285
Hyundai	H350 (EU(V))	3435, 3670
RAM	ProMaster	3000, 3450, 4035
Freightliner/Dodge	Sprinter	3250, 3665, 4325



Enclosure 2: DRAWINGS OF SEATS, SEAT BELT ANCHORAGES, ISOFIX ANCHORAGE SYSTEMS AND ISOFIX TOP TETHER ANCHORAGES SAF42 (Slim) – width: 97/100 cm and 112 cm



SAF42_SLM_L_100	LEFT SEAT RIGHT SEAT	Rx100mm Rx200mm	Rx1 0 mm Rx2 0 mm	Ry1 0 mm Ry2 0 mm	Rz1 0 mm Rz2 0 mm	Pillar loop 1 Pillar loop 2	Pillar loop 1 Pillar loop 2	Ax1 323 mm Ax2 323 mm		Ay1 181 mm Ay2 -183 mm	Az1 466 mm Az2 466 mm	Buckle 1 Buckle 2	Bx1 110 mm Bx2 110 mm	By1 -241 mm By2 239 mm	Bz1 -179 mm Bz2 -179 mm	a1 58 dea a2 58 dea	End bracket 1 End bracket 2	Cx1 237 mm Cx2 237 mm	Cv1 184 mm Cv2 -181 mm	Cz1 -146 mm Cz2 -146 mm	rd 30 dan r0 30 dan	Retractor 1 Retractor 2		Dv1 184 mm Dv2 259 mm	Dz1 -17 mm Dz2 -17 mm								Kresili / Dan by Dala / Dale I. R. Hritkowska 27. Nov 27	P. Odziemek 2/2/2/2/2/2/2/2/2/2/2/2/2/2/2/2/2/2/2/	General design	
	AT	0 mm	0 mm	0 mm	0 mm	2	2	 323 mm		163 mm	466 mm		110 mm	239 mm	179 mm	58 deg	et 2	237 mm	181 mm	146 mm	32 den	0	200 mm	181 mm	-17 mm		M-E-100			±10 mm						
L_97	RIGHT SEAT	R Point 2 Rx2 0 mm	Rx2 0 mm	Ry2 0 mm	Rz2 0 mm	Pillar loop 2	Pillar loop 2	Ax2 323 mm	A. O. 102 mm	Ayz -163 mm	Az2 466 mm	Buckle 2	Bx2 110 mm	By2 239 mm	Bz2 -179 mm	a2 58 deg	End bracket 2	Cx2 237 mm	Cv2 -181 mm	Cz2 -146 mm	20 den	Retractor 2		DV2	Dz2 -17 mm		SAF42-SLM-L-100	33 mm	19 mm	1000±10 mm)±10 mm					
SAF42_SLM_L_97	EAT RIGHT SEAT	t 1 R Point 2 0 mm Rx2 0 mm	0 mm Rx2 0 mm	0 mm Ry2 0 mm	0 mm Rz2 0 mm	201 Pillar loop 2	op 1 Pillar loop 2	323 mm Ax2 323 mm	101 mm 102 mm	181 mm Ayz -163 mm	466 mm Az2 466 mm	Buckle 2	110 mm Bx2 110 mm	-241 mm By2 239 mm	-179 mm Bz2 -179 mm	58 deg α2 58 deg	ket 1 End bracket 2	237 mm Cx2 237 mm	184 mm Cv2 -181 mm	-146 mm Cz2 -146 mm	30 dan n2 30 dan	or degrader 2		223 IIIII DXZ 223 IIIII 184 mm Dv2 -181 mm	-17 mm Dz2 -17 mm		DAF42-DLM-L-9/ DAF42-DLM-L-100	463 mm	319 mm	970±10 mm 1000±10 mm	1020±10 mm					

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Right SEAT R/2 0mm R/2 0mm R/2 0mm R/2 0mm R/2 221 mm A/2 221 mm A/2 221 mm A/2 221 mm A/2 221 mm B/2 266 mm B/2 110 mm B/2 266 mm C/2 139 mm C/2 139 mm C/2 149 mm D/2 17 mm D/2 17 mm		RIG	HT SEAT
R2 0 mm R2 23 mm N A/2 R2 23 mm N A/2 R2 25 mm N A/2 R0 2/2 R0 2/2 </th <th></th> <th>r</th> <th></th>		r	
m Ry2 0 mm m R22 0 mm mm A2 23 mm mm B2 110 mm mm B2 219 mm mm Cy2 23 mm mm Cy2 219 mm mm Cy2 219 mm mm Cy2 219 mm mm Cy2 23 mm mm Dy2 21 mm mm Dy2 21 mm		Rx2	0 mm
m R22 0 mm m A/2 221 mm m A/2 221 mm m A/2 221 mm m A/2 221 mm m A/2 21 mm m A/2 21 mm m B/2 146 mm m B/2 147 mm m B/2 146 mm m C/2 219 mm m C/2 219 mm m D/2 219 mm m D/2 17 mm		Ry2	0 mm
Image Pillar (nog) 2 Image A22 323 rum Image A22 323 rum Image A22 466 rum Image B22 110 rum Image B22 117 rum Image B22 117 rum Image B22 118 rum Image B22 118 rum Image C22 218 rum Image C22 218 rum Image C22 219 rum Image C22 219 rum Image D22 219 rum Image D2 219 rum Image D2 219 rum	Ē	Rz2	0 mm
3mm Ar2 323 mm 1mm Ar2 221 mm m Ar2 221 mm m Ar2 221 mm m Ar2 221 mm m Br2 110 mm m Br2 130 mm m Br2 136 mm m Br2 136 mm fm S2 36 mm fm Cr2 237 mm fm Cr2 146 mm fm Cr2 32 dag fm Cr2 237 mm fm Cr2 216 mm fm Dr2 219 mm fm Dr2 210 mm fm Dr2 210 mm		Pill	ar loop 2
Imm Ag2 221 mm 5mm Ac2 466 mm 5mm Ba2 110 mm 6mm Bg2 261 mm 6mm Bg2 58 4gg 6mm Bg2 58 4gg 6mm Bg2 119 mm 6g cd 37 mm 7mm Cy2 219 mm 6mm Dy2 219 mm 7mm Dy2 219 mm 7mm Dy2 219 mm 7mm Dy2 219 mm 7mm Dy2 219 mm	E	m Ax2	323 mm
5mm A2 466 mm nmm B/2 110 mm 5mm B/2 179 mm 6mm B/2 179 mm 6mm B/2 566 mm 0.mm B/2 58 deg 0.mm B/2 58 deg 0.mm B/2 58 deg 0.mm C/2 519 mm 0.mm C/2 219 mm 0.mm C/2 146 mm 0.mm C/2 146 mm 0.mm C/2 219 mm 0.mm C/2 219 mm 0.mm D/2 210 mm	3	m Ay2	-221 mm
Buckle 2 Dimm Bx2 110 mm Biz 110 mm Biz 117 mm Cieg u2 58 deg Cimm Bu2 129 mm Cieg u2 58 deg I End bracket 2 Imm Zimm Cu2 146 mm 6m cu2 136 mm 6m Cu2 146 mm 6m Du2 239 mm 1 Retractor 2 1 1 Du2 117 mm	E g	m Az2	466 mm
Imm Brz 110 mm 5mm Brz 256 mm 3mm Brz 2179 mm 3mm Cz 198 mm 4mm Cz 237 mm 7mm Cr2 219 mm 7mm Dr2 219 mm 7mm Dr2 219 mm 7mm Dr2 219 mm 7mm Dr2 217 mm		B	uckle 2
imm By2 265 mm imm Bz2 -179 mm deg a2 58 deg mm Cx2 58 deg mm Cx2 -19 mm mm Cy2 -219 mm mm Cy2 -219 mm mm Cy2 -219 mm mm Cy2 -219 mm deg a2 -32 deg mm Cy2 -219 mm deg -22 mm m mm Dy2 -219 mm mm Dy2 -117 mm	E	n Bx2	110 mm
0mm B22 179mm deg d2 58 deg r End bracket 2 237 mm rmm Cx2 237 mm rmm Cx2 198 mm deg d2 32 deg rmm Cx2 198 mm deg d2 32 deg rmm Dx2 29 mm mm Dx2 29 mm rmm Dy2 -17 mm rmm Dy2 -17 mm	5 m	m By2	265 mm
Ide a2 58 deg 7mm Cx2 237 mm 7mm Cx2 214 mm 6mm Cx2 146 mm 6mm Cx2 148 mm 6mm Cx2 148 mm 6mm Cx2 148 mm 6mm Dy2 219 mm 1 Retractor 2 29 mm 1 Dy2 219 mm 1 Dy2 219 mm 1 Dy2 219 mm 1 Dy2 219 mm	6 m	m Bz2	-179 mm
1 End bracket 2 7mm Cx2 237 mm 2mm Cy2 237 mm 2mm Cy2 -219 mm 6mm Cx2 -146 mm 6mm Cx2 -146 mm 1 Retractor 2	g de	3 α2	58 deg
37 mm Cx2 237 mm 22 mm Cy2 219 mm 46 mm Cx2 -146 mm 46 mm Cx2 -130 mm 2 deg cx2 -33 deg 2 mm Dy2 -319 mm 9 mm Dy2 -17 mm 17 mm Dy2 -17 mm	-	End	bracket 2
22 mm 22 -146 mm 46 mm C22 -146 mm 22 deg 32 deg 1 Retractor 2 28 mm Dy2 -219 mm 17 mm Dy2 -17 mm	37 m	n Cx2	237 mm
46 mm C.2 -146 mm 22 deg a2 32 deg 1 Retractor 2 - 28 mm Dy2 -219 mm 22 mm Dy2 -219 mm 17 mm Dz2 -17 mm	22 m	T CV2	-219 mm
22 deg α2 32 deg 1 Retractor 2 29 mm Dx2 229 mm 21 mm Dy2 -219 mm 22 mm Dy2 -31 mm 22 mm Dy2 -11 mm 17 mm Dz2 -11 mm	46 m	m Cz2	-146 mm
or orgy or or orgy 1 Retractor 2 29 mm D/2 22 mm D/2 22 mm D/2 17 mm D/2 17 mm D/2 17 mm D/2 17 mm D/2	22 40	C 20	32 400
Image: state of the state o	32 de	g uz	tractor 2
22 mm Dy2 -219 mm 17 mm Du2 -17 mm 17 mm Du2 -17 mm	29 m	n Dx2	229 mm
17 mm Dz2 -17 mm	22 m	n Dy2	-219 mm
Regulation of the second	17 m	, C+O	-17 mm
Regulation of the second		770	111111 / 1 -
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KARAN FRAME Lakation transformed			
Restit Draw by J. Ruthowska			
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ACTORIZED AND A CONTRACT AND A CONTR			
General design			

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SAF43 (Slim) - width: 118/120 cm

	T SEAT	oint 3	0 mm	0 mm	0 mm	loop 3	323 mm	-141 mm	466 mm	kle 3	110 mm	196 mm	-179 mm	58 deg	racket 3	237 mm	-168 mm	-146 mm	32 deg	actor 3	229 mm	-141 mm	-17 mm						Data / Date 23-Nov-22	Arkusz / Sheet 2/2		
	RIGH	Ч	Rx3	Ry3	Rz3	Pillar	Ax3	Ay3	Az3	Buc	Bx3	By3	Bz3	α3	End b	Cx3	Cy3	Cz3	α3	Retr	Dx3	Dy3	Dz3						awn by WSKa	z/ Approved by emek		??-01
_M_L_120	R SEAT	int 2	0 mm	0 mm	0 mm	oop 2	323 mm	141 mm	466 mm	de 2	273 mm	-162 mm	-149 mm	32 deg	acket 2	237 mm	162 mm	-146 mm	32 deg	ctor 2	229 mm	141 mm	-17 mm						Kreślił / Dr J. Rutko	Zatwierdzony prze P.OdZi	eneral design	F43-SLM-L-?
SAF43_SI	CENTE	R Po	Rx2	Ry2	Rz2	Pillar I	Ax2	Ay2	Az2	Buch	Bx2	By2	Bz2	α2	End bra	Cx2	Cy2	Cz2	α2	Retra	Dx2	Dy2	Dz2								Ğ	14-01-SA
	SEAT	int 1	0 mm	0 mm	0 mm	oop 1	323 mm	141 mm	466 mm	de 1	110 mm	-196 mm	-179 mm	58 deg	acket 1	237 mm	168 mm	-146 mm	32 deg	ctor 1	229 mm	141 mm	-17 mm	-								
	LEFT	R po	Rx1	Ry1	Rz1	Pillar I	Ax1	Ay1	Az1	Buck	Bx1	By1	Bz1	α1	End bra	Cx1	Cy1	Cz1	α1	Retrac	Dx1	Dy1	Dz1	-								
							1			1]								
	SEAT	oint 3	0 mm	0 mm	0 mm	loop 3	323 mm	-141 mm	466 mm	kle 3	110 mm	196 mm	-179 mm	58 deg	acket 3	237 mm	-168 mm	-146 mm	32 deg	ictor 3	229 mm	-141 mm	-17 mm									
	RIGHT	R pc	Rx3	Ry3	Rz3	Pillar	Ax3	Ay3	Az3	Buc	Bx3	By3	Bz3	α3	End br	Cx3	Cy3	Cz3	α3	Retra	Dx3	Dy3	Dz3									
M_L_118	R SEAT	nt 2	0 mm	0 mm	0 mm	oop 2	323 mm	141 mm	466 mm	le 2	273 mm	-162 mm	-149 mm	32 deg	icket 2	237 mm	162 mm	-146 mm	32 deg	tor 2	229 mm	141 mm	-17 mm	120			E					
SAF43_SL	CENTER	R Poi	Rx2	Ry2	Rz2	Pillar lo	Ax2	Ay2	Az2	Buck	Bx2	By2	Bz2	α2	End bra	Cx2	Cy2	Cz2	α2	Retrac	Dx2	Dy2	Dz2	SAF43_SLM_L_	E	E	1200 ±10 mr	ш				
	SEAT	nt 1	0 mm	0 mm	0 mm	oop 1	323 mm	141 mm	466 mm	e 1	110 mm	-196 mm	-179 mm	58 deg	cket 1	237 mm	168 mm	-146 mm	32 deg	tor 1	229 mm	141 mm	-17 mm	SLM_L_118	380 m	319 m	±10 mm	1020±10				
	LEFT	R poi	Rx1	Ry1	Rz1	Pillar lo	Ax1	Ay1	Az1	Buck	Bx1	By1	Bz1	α1	End bra	Cx1	Cy1	Cz1	α1	Retrac	Dx1	Dy1	Dz1	SAF43_	ш	_	K 1180					
																											Date		orning onning 025			Dieru

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SAF43 (Slim) - width: 126 cm and 150 cm

																										Data / Date 23-Nov-22	Arkusz / Sheet 2/2		
																										Kreślił / Drawn by J. Rutkowska	Zatwierdzony przez/ Approved by P. Odziemek	eneral design	AF43-SLM-L-126-01
																											2MHH710UH	Ō	14-01-S/
SEAT	ot 3	0 mm	0 mm	0 mm	op 3	323 mm	-154 mm	466 mm	e 3	110 mm	208 mm	-179 mm	58 deg	cket 3	237 mm	-154 mm	-146 mm	32 deg	tor 3	229 mm	-154 mm	-17 mm							
RIGHT	R poir	Rx3	Ry3	Rz3	Pillar lo	Ax3	Ay3	Az3	Buck	Bx3	By3	Bz3	α3	End bra	Cx3	Cy3	Cz3	α3	Retract	Dx3	Dy3	Dz3	-						
M_L_126	nt 2	0 mm	0 mm	0 mm	op 2	323 mm	154 mm	466 mm	e 2	273 mm	-189 mm	-149 mm	32 deg	cket 2	237 mm	155 mm	-146 mm	32 deg	tor 2	229 mm	154 mm	-17 mm	-						
SAF43_SL	R Poi	Rx2	Ry2	Rz2	Pillar lo	Ax2	Ay2	Az2	Buck	Bx2	By2	Bz2	α2	End bra	Cx2	Cy2	Cz2	α2	Retrac	Dx2	Dy2	Dz2	-						
SEAT	nt 1	0 mm	0 mm	0 mm	op 1	323 mm	154 mm	466 mm	e 1	110 mm	-209 mm	-179 mm	58 deg	cket 1	237 mm	142 mm	-146 mm	32 deg	tor 1	229 mm	154 mm	-17 mm	-						
I FFT 9	R DOI	Rx1	Ry1	Rz1	Pillar lo	Ax1	Ay1	Az1	Buckl	Bx1	By1	Bz1	α1	End bra	Cx1	Cy1	Cz1	α1	Retrac	Dx1	Dy1	Dz1	-						
		7	- /	74	7	- /			7	5														Date:	1003.02.2	echn 2025			Dicer
	C							71	7.4					_	М	OF	SIF	RA	MР	=/07	7/2	022	2- 02	Page	/ pages	26/	100	52	

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	mm	mm	E		c	E	E		_	-	E			F	٤	E					
13	0	0	0 m	op 3	323 mn	-292 mi	466 mr	e 3	110 mm	246 mn	-179 mr	58 deg	cket 3	237 mn	-191 mr	-146 mr	32 deg	tor 3	229 mm	-191 mn	-17 mm
R point 3	Rx3 01	Ry3 01	Rz3 0 m	Pillar loop 3	Ax3 323 mn	Ay3 -292 mi	Az3 466 mr	Buckle 3	Bx3 110 mm	By3 246 mn	Bz3 -179 mr	α3 58 deg	End bracket 3	Cx3 237 mn	Cy3 -191 mr	Cz3 -146 mr	a3 32 deg	Retractor 3	Dx3 229 mm	Dy3 -191 mm	Dz3 -17 mm
int 2 R point 3	0 mm Rx3 01	0 mm Ry3 0 i	0 mm Rz3 0 mi	oop 2 Pillar loop 3	323 mm Ax3 323 mn	191 mm Ay3 -292 mi	466 mm Az3 466 mr	le 2 Buckle 3	273 mm Bx3 110 mm	-191 mm By3 246 mn	-145 mm Bz3 -179 mr	32 deg α3 58 deg	cket 2 End bracket 3	237 mm Cx3 237 mn	191 mm Cy3 -191 mr	-146 mm Cz3 -146 mr	32 deg α3 32 deg	tor 2 Retractor 3	229 mm Dx3 229 mm	191 mm Dy3 -191 mm	-17 mm Dz3 -17 mm
R Point 2 R point 3	Rx2 0 mm Rx3 01	Ry2 0 mm Ry3 0 i	Rz2 0 mm Rz3 0 m	Pillar loop 2 Pillar loop 3	Ax2 323 mm Ax3 323 mn	Ay2 191 mm Ay3 -292 mi	Az2 466 mm Az3 466 mr	Buckle 2 Buckle 3	Bx2 273 mm Bx3 110 mr	By2 -191 mm By3 246 mn	Bz2 -145 mm Bz3 -179 mr	α2 32 deg α3 58 deg	End bracket 2 End bracket 3	Cx2 237 mm Cx3 237 mn	Cy2 191 mm Cy3 -191 mr	Cz2 -146 mm Cz3 -146 mr	α2 32 deg α3 32 deg	Retractor 2 Retractor 3	Dx2 229 mm Dx3 229 mm	Dy2 191 mm Dy3 -191 mm	Dz2 -17 mm Dz3 -17 mm
nt 1 R Point 2 R point 3	0 mm Rx2 0 mm Rx3 01	0 mm Ry2 0 mm Ry3 0 1	0 mm Rz2 0 mm Rz3 0 m	Dop 1 Pillar loop 2 Pillar loop 3	323 mm Ax2 323 mm Ax3 323 mr	191 mm Ay2 191 mm Ay3 -292 mi	466 mm Az2 466 mm Az3 466 mr	le 1 Buckle 2 Buckle 3	110 mm Bx2 273 mm Bx3 110 mm	-246 mm By2 -191 mm By3 246 mn	-179 mm Bz2 -145 mm Bz3 -179 mr	58 deg α2 32 deg α3 58 deg	cket 1 End bracket 2 End bracket 3	237 mm Cx2 237 mm Cx3 237 mn	191 mm Cy2 191 mm Cy3 -191 mr	-146 mm Cz2 -146 mm Cz3 -146 mr	32 deg α2 32 deg α3 32 deg	tor 1 Retractor 2 Retractor 3	229 mm Dx2 229 mm Dx3 229 mm	191 mm Dy2 191 mm Dy3 -191 mm	-17 mm Dz2 -17 mm Dz3 -17 mm

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Position and the form of the symbols of the ISOFIX anchorages system

















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Installation of composite floor to the vehicle









Underfloor reinforcements for composite floor with aluminum rails (FLM or FLA)



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Installation instructions of floor type FLM or FLA (Betamate adhesive)

List of parts required for installation of composite floor:

- Betaclean 3350
- Betaprime 5061
- Betamate 7120
- M10 bolts
- Underfloor reinforcements type WZP-01/WZP-20/UWP-01
- Pad kit (optional)
- Rubber blanking plugs
- Jigs (optional)

Step 1. Preparation of the vehicle body and composite floor

Clean vehicle floor before installation. Surface must be clean, dry and free from all traces of grease, oil and dust. Use Betaclean (cleaner) to degrease the vehicle's floor and the bottom side of the composite floor.



Step 2. Support pads

Fill the big gaps on the vehicle floor with plywood pads to eliminate height differences. Pads layout depends on the type of vehicle and composite floor project.



Example pads layout

Step 3. Primmering

Apply Betaprime onto the vehicle's floor and also onto the bottom side of the composite floor. Primer can be applied with a brush or roller. Contact surfaces (of vehicle floor and composite floor) must be covered by Betaprime. Primer can be applied between the 10-40°C. Primer drying time min. 10 minutes. For more details see the technical data sheet of product.



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Step 4. Gluing

Don't walk on the primered surfaces. Use a piece of carton for protection. Apply Betamate glue on the high spots of vehicle floor. Primer should be dry. The adhesive must be applied on the surfaces coated previously by Betaprime. Glue can be applied between the 10-40°C. For more details see the technical data sheet of product.

Recommended glue bead





MOBIFRAME composite floor has preinstalled support pads on the bottom. This ensures that the floor remains flat and you can achieve the proper amount of glue layer.		
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Step 5. Jigs

If floor works with any sliding systems, it is highly recommended to use jigs fixed to the rails. Jigs ensure the flatness the floor and proper working sliding systems. Jigs are mounted to the rails across the floor, at the end, front and in the middle. Jigs can be designed and produced on request .





Step 6. Dropping the floor

Place and drop in the composite floor on the glue. You can either use a forklift and optional equipment (belts, auxiliary elements etc.) as shown or put the floor on its side manually. After the floor is inside the vehicle you must press down to ensure the glue is pressed down. You can do this by walking across the floor. Leave the floor for at least 24 h. Don't walk on the floor and don't move the vehicle.



Installation with forklift



Manually installation



Step 7. Underfloor reinforcements

48 h after gluing, drill the vehicle floor according existing holes in composite floor. Use ϕ 11 drill. There is one hole/reinforcement per rail.

Example layout of holes

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Tight the underfloor reinforcements. Tightening torque 30 Nm. Use the liquid anaerobic glue to secure the bolts.





Step 8. Blanking plugs



Put the rubber blank plugs into the installation holes.



Datasheets



Technical Data Sheet

Aftermarket Division

BETACLEAN 3350

Description / Application:

BETACLEAN 3350 is a cleaner for removing dirt and grease from plastics, paints, metals and glass

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The use of the product other than approved application have to be released in written form by the Technical Service of Dow Automotive.

Technical Data:

Basis	Heptane
Colour	Colourless, transparent
Density	0,68 g/cm³ at 23°C
Flash point	See health and safety data sheet.
Instructions for use	Wipe contaminated surface with BETACLEAN 3350 saturated, binder-free tissues or cloths. Preliminary trials carried out by our technical service department are recommended.
Shelf life	24 months in unopened containers
Containers	100, 1000ml aluminium containers
Protection measures	See health and safety data sheet.

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Dow Automotive, Techn. Datasheet, BETACLEAN, Status terminated, Issue 04, 03.08.98, D-7/La, Page 13





Technical Datasheet

BETAPRIME 5061

Description / Application:

One-Step adhesion promoter for glass, ceramic serigraphy in combination with BETASEAL and BETAMATE PUR Adhesives. A prior cleaning of the bonding surface with BETACLEAN 3300 is necessary.

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The use of the product other than approved application have to be released in written form by the Technical Service of Dow Automotive.

Technical Data:		
Basis	Silane modified polymers	
Colour	black	
Pigments	carbon black	
Density	approx. 0.97 g/cm ³ bei 23°C	
Viscosity (DIN-cup 4)	< 14 s bei 23°C	
Flash Point	See health and safety data sheet.	
Processing temperature	ideal 10 - 40°C	
Tack free time	50 - 150 sec @ 23°C / 50 % r.h.	
Evaporation time	min. 10 min @ 23°C / 50 % r.h., max. 8h Reactivation with BP 5061 or BW 4001, 4002 possible.	
Instruction for use	Shake container well before opening. Continue to shake for at least 60s after steel balls inside the container are released. Caution! The product is extremely hygroscopic! Close container immediately after use to preserve remaining contents. Use up remainder within a few days.	
Bonding surface preparation	Clean bonding areas with the BETACLEAN 3300. Verify compatibility or consult our technical service department.	
Cleaning	Clean Equipment with BETACLEAN 3000	
Shelf life	9 months in unopened containers (see "use before" date printed on the container)	

Dow Automotive, Techn. Datasheet, BETAPRIME, Status terminated, Issue 04, 15.01.2001, Sie/D-3, Page 1



Storage once opened	- applicator: single use, do not store - 100 ml bottle: 5 days in original container
Storage	Temperature: 5°C to 25°C Short term up to 40°C
Containers	Single use applicator,
Protection measures	100 ml aluminium bottle
	See health and safety data sheet

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Environment: All sites of Dow Automotive are conforming to ISO 14001:2004.

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BETAPRIME™ 5500

Short Description

Adhesion promoting primer for laminated glass with enamel layer inside and enamel substrates. To be used in combination with Dow Automotive Systems PUR-Adhesive/sealants.

Properties

One-step primer which can be used without silane wipe pretreatment. Primer with short open time.

Application

All Dow Automotive products are primarily developed in co-operation with the automobile manufacturers, according to their needs and their specifications, they are approved for the specific applications as defined by the customer. The use of the product other than approved appliction have to be released in written form by the Technical Service of Dow Automotive.

Technical Data

Unless specified otherwise test are conducted at 23°C/50% relative humidity.

Basis	Polyisocyanates
Colour	black
Pigments	Carbon black
Density	0.901 - 1.001 g/cm³
Solid contents	35 - 40%
Viscosity DIN-cup 4mm after 3d 40°C	10.5 - 13 s
Minimum open time	3 minutes / felt application
Maximum opentime	3 days / felt application
Reactivation:	One time reactivation possible with: BETAWIPE™ VP04604 (wipe-on / wipe off) maximum open time 15 minutes.
Processing temperature	10 - 40°C
Processing instructions	Primer bottle needs to be shaken for at least one minute before opening, to release the steel balls within the container. In case steel balls are not dislodged, then it is recommended to strike the top of the container against a hard surface so that the steel balls are audible within the container. This is essential in order to disperse any possible sediment within the primer.
Caution	The product is extremely sensitive to humidity. It is imperative that container should be closed immediatly after use, in order to extend durability of the remaining primer contents.
Shelf life	6 months at + 5°C - +25°C in unopened containers.
Shelf life after opening	Depending on ambient conditions and working method: Use following test method to monitor if primer can be furter used for one day or if it is non-conformous and has to be dispode of. Daily measurement of viscosity DIN 4 cup: must not exceed 17 seconds.
Bonding Surface Preparation	All bonding surfaces must be free of impurities (dirt, dust, water, oil, grease, release agent and similar contaminants). Verify compatibility before use, or consult our Technical Service for more information.
Processing equipment	Primer applicator, primer application device (flask with primer applicator head and felt) or automatic primer application system.
Cleaning	Clean equipment with BETACLEAN™ 3000
Containers	Aluminium bottles

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Technical Datasheet

Health and Safety

The use of bonding agent (primer) is generally harmless and as long as the basic rules for safe handling of chemicals are applied. However, the direct contact of uncured primer to food and food containers shall be avoided. Mandatory are protective measures in order to prevent direct skin contact as well as to avoid solvent inhalation. Proper ventilation should apply when using primers with high volatile content. If any primer is applied in the means of spraying technique, special care should apply in relation to respiration and personal protection in order to prevent aerosol inhalation. Suitable solvent resistant rubber gloves, conventional eye protection as well as appropriate type of respirator mask are essential. In case of direct contact with any primers the skin must be rinsed first with warm water and then cleaned thoroughly with conventional soap. Solvents shall be avoided. For detailed protective measures refer to the material safety data sheets.

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BETAMATE[™] 7120

Short Description

One component, moisture curing adhesive with excellent sag and bead stability based on polyurethane chemistry. The adhesive cures with environmental moisture and skin formation and curing is dependent on humidity, temperature and application dimensions.

Properties

Cold processable, medium viscosity, low modulus adhesive with excellent UV stability attributes. It is primerless to paint on automotive paints.

Application

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Technical Data

Unless specified otherwise test are conducted at 23°C/50% relative humidity.

Basis	Polvurethane prepolvmers
Colour	black
Density	1.22 - 1.26 g/cm ³
Solid contents	min 98%
Viscosity Extrusion, Ballan at 23°C, 4mm nozzle / 4bar	12 - 20 g/min
Processing temperature	10 - 40°C
Skinning time	25 - 45 min
Cure rate after 48h	min 3.5 mm
Sagging, on vertical wall tilting	max 30°
Hardness Shore A (DIN 53 505)	55 - 65
Lap shear strength (DIN EN 1465)	min 5.0 MPa after 7d
Tensile strength (DIN 53 504)	9 MPa
Elongation at break (DIN 53504)	> 500%
G-Modulus	1.0 - 1.5 MPa
Specific electrical volume resistivity	10 ⁶ Ωcm
Temperature stability	-40°C to 100°C
Resistance to chemicals	Highly resistant to aqueous chemicals, petrol, alcohol and mineral oils; conditionally to esters, ketones, aromatics and chlorinated hydrocarbons.
Bonding surface preparation	All bonding surfaces must be free of dirt, dust, water, oil and grease. In general surfaces should be primed. Verify compatibility or consult our technical service department.
Cleaning	Uncured adhesive residues can easily be removed with BETACLEAN 3500. Hardened adhesive residues can only be removed mechanically. Immerse equipment in BETACLEAN 3000.
Shelf life	Short time storage temperatures: 0°C to 40°C. 6 months at +5°C to +25°C in unopened containers.
Containers	Cartridges / Pails / Drums

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Technical Datasheet

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Health and Safety

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The use of polyurethane adhesives is generally harmless and as long as the basic rules for safe handling of chemicals are applied. However, the direct contact of uncured adhesive with food and food containers should be avoided. It is mandatory to use protective measures in order to prevent direct skin contact. Suitable gloves and eye protection are essential. Should the skin come into contact with uncured adhesive, it must be rinsed first with warm water and then cleaned thoroughly with conventional soap. Cleaning skin with solvents must be avoided. It is essential to ensure good ventilation. For detailed protective measures refer to the Material Safety Data Sheets.

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Installation instructions of floor type FLM or FLA (Forgeway adhesive)

List of parts required for installation of composite floor:

- Formoa surface activator _
- Formoa 095
- M10 bolts _
- Underfloor reinforcements type WZP-01/WZP-20/UWP-01 _
- Pad kit (optional) _
- Rubber blanking plugs _
- Jigs (optional) _
- Tools 600 ml cartridge gun, brush or roller, wipe clothes, Allen wrench 8, Loctite _

Step 1. Preparation of the vehicle body and composite floor

Clean vehicle floor before installation. Surface must be clean, dry and free from all traces of grease, oil and dust. Grind the vehicle's floor - use scotch brite. Apply on the composite and vehicle floor activator before installation.









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Step 2. Support pads

Fill the big gaps on the vehicle floor with aluminium/steel or plywood pads to eliminate height differences. Pads layout depends on the type of vehicle and composite floor project.



Example pads layout

Step 3. Gluing

Don't walk on the cleaned surfaces. Use a piece of carton for protection. Apply Formoa 095 glue on the high spots of vehicle floor. Glue can be applied between the 10-40°C. For more details see the technical data sheet of product.









Step 4. Jigs

If floor works with any sliding systems, it is highly recommended to use jigs fixed to the rails. Jigs ensure the flatness the floor and proper working sliding systems. Jigs are mounted to the rails across the floor, at the end, front and in the middle. Jigs can be designed and produced on request .





Stap 5. Dropping the floor

Place and drop in the composite floor on the glue. You can either use a forklift as shown or put the floor on its side manually. After the floor is inside the vehicle you must press down to ensure the glue is pressed down. You can do this by walking across the floor. Leave the floor for at least 48 h. Don't walk on the floor and don't move the vehicle.









Manually installation



Step 6. Underfloor reinforcements

72 h after gluing, drill the vehicle floor according existing holes in composite floor. Use φ 11 drill. There is one hole/reinforcement per rail.



Example layout of holes


Tight the underfloor reinforcements. Tightening torque 15 Nm. Use the liquid anaerobic glue to secure the bolts.



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Example reinforcement layout



Step 7. Blanking plugs

Put the rubber blank plugs into the installation holes.





Datasheets



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GB

Safety data sheet according to 1907/2006/EC, Article 31 Printing date 27.09.2017 Version number 2 Revision: 10.02.2017 SECTION 1: Identification of the substance/mixture and of the company/ undertaking 1.1 Product identifier · Trade name: FORMOA SURFACE ACTIVATOR 1.2 Relevant identified uses of the substance or mixture and uses advised against Surface cleaner and activator for removing surface contaminants from non porous substrates and to improve adhesion prior to using FORMOA adhesives Application of the substance / the mixture Applied via lint free wiper to substrates - apply and allow to flash off 1.3 Details of the supplier of the safety data sheet Manufacturer/Supplier: Forgeway Collet Way, Brunel Road Ind Estate Newton Abbot, Devon **TQ12 4PH** Further information obtainable from: Product safety department. glen.buckley@forgeway.com • 1.4 Emergency telephone number: +44 (0)203 394 9871 (24 hours, UK number, English) For technical and commercial enquiries call +44 (0)1626 367070 during office hours (0700 - 1630 UK Time) SECTION 2: Hazards identification 2.1 Classification of the substance or mixture Classification according to Regulation (EC) No 1272/2008 GHS02 flame Flam. Liq. 2 H225 Highly flammable liquid and vapour. GHS07 Eye Irrit. 2 H319 Causes serious eye irritation. STOT SE 3 H336 May cause drowsiness or dizziness. 2.2 Label elements Labelling according to Regulation (EC) No 1272/2008 The product is classified and labelled according to the CLP regulation. (Contd. on page 2)



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Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 27.09.2017 Version number 2 Revision: 10.02.2017 Trade name: FORMOA SURFACE ACTIVATOR (Contd. of page 1) · Hazard pictograms GHS02 GHS07 Signal word Danger · Hazard-determining components of labelling: propan-2-0 Hazard statements H225 Highly flammable liquid and vapour. H319 Causes serious eye irritation. H336 May cause drowsiness or dizziness. Precautionary statements P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. P241 Use explosion-proof electrical/ventilating/lighting equipment. P303+P361+P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower. P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. P405 Store locked up. P501 Dispose of contents/container in accordance with local/regional/national/ international regulations. 2.3 Other hazards Results of PBT and vPvB assessment PBT: Not applicable. vPvB: Not applicable. SECTION 3: Composition/information on ingredients 3.2 Chemical characterisation: Mixtures Description: Mixture of substances listed below with nonhazardous additions. Dangerous components: CAS: 67-63-0 propan-2-ol 50-100% EINECS: 200-661-7 🐼 Flam. Liq. 2, H225; 🚯 Eye Irrit. 2, H319; STOT SE 3, H336 CAS: 546-68-9 2.5-10% titanium tetraisopropanolate EINECS: 208-909-6 🚸 Flam. Liq. 3, H226; 🚯 Eye Irrit. 2, H319 Additional information: For the wording of the listed hazard phrases refer to section 16. SECTION 4: First aid measures 4.1 Description of first aid measures After inhalation: Supply fresh air; consult doctor in case of complaints. After skin contact: Generally the product does not irritate the skin. After eye contact: Rinse opened eye for several minutes under running water. If symptoms persist, consult a doctor. After swallowing: If symptoms persist consult doctor. 4.2 Most important symptoms and effects, both acute and delayed No further relevant information available 4.3 Indication of any immediate medical attention and special treatment needed

No further relevant information available.

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SECTION 5: Firefighting measures

5.1 Extinguishing media

Suitable extinguishing agents:

CO2, powder or water spray. Fight larger fires with water spray or alcohol resistant foam. For safety reasons unsuitable extinguishing agents: Water with full jet

- 5.2 Special hazards arising from the substance or mixture
- No further relevant information available.
- 5.3 Advice for firefighters

· Protective equipment: No special measures required.

SECTION 6: Accidental release measures

- 6.1 Personal precautions, protective equipment and emergency procedures
- Wear protective equipment. Keep unprotected persons away.
- 6.2 Environmental precautions: Do not allow to enter sewers/ surface or ground water.
- 6.3 Methods and material for containment and cleaning up:
- Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).
- 6.4 Reference to other sections
- See Section 7 for information on safe handling.
- See Section 8 for information on personal protection equipment.
- See Section 13 for disposal information.

SECTION 7: Handling and storage

- 7.1 Precautions for safe handling No special precautions are necessary if used correctly.
 Information about fire and explosion protection: Keep ignition sources away - Do not smoke.
- Protect against electrostatic charges.
- · 7.2 Conditions for safe storage, including any incompatibilities
- Storage:
- Requirements to be met by storerooms and receptacles: Store in a cool location.
- Information about storage in one common storage facility: Not required.
- Further information about storage conditions:
- Keep container tightly sealed.
- Store in cool, dry conditions in well sealed receptacles.
- 7.3 Specific end use(s) No further relevant information available.

SECTION 8: Exposure controls/personal protection

• Additional information about design of technical facilities: No further data; see item 7.

· 8.1 Control parameters

- · Ingredients with limit values that require monitoring at the workplace:
- 67-63-0 propan-2-ol
- WEL Short-term value: 1250 mg/m³, 500 ppm
 - Long-term value: 999 mg/m³, 400 ppm

Additional information: The lists valid during the making were used as basis.

- 8.2 Exposure controls
- Personal protective equipment:
- General protective and hygienic measures:
- Keep away from foodstuffs, beverages and feed. Immediately remove all soiled and contaminated clothing
- Wash hands before breaks and at the end of work.

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Avoid contact with the eyes. Avoid contact with the eyes and skin.

- Respiratory protection: Not required.
- Protection of hands:

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The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.

Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.

Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

Material of gloves

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.

Penetration time of glove material

The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

Eye protection:



Tightly sealed goggles

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and c	hemical properties
· General Information · Appearance:	
Form:	Liquid
Colour:	Colourless
· Odour: · Odour threshold:	Not determined.
pH-value:	Not determined.
Change in condition	
Melting point/freezing point: Initial boiling point and boiling range:	Undetermined. 82 °C
· Flash point:	12 °C
· Flammability (solid, gas):	Not applicable.
Ignition temperature:	425 °C
Decomposition temperature:	Not determined.
· Auto-ignition temperature:	Product is not selfigniting.
• Explosive properties:	Product is not explosive. However, formation of explosive air/vapour mixtures are possible.
Explosion limits:	
Lower: Upper:	2.0 Vol % 12.0 Vol %
· Vapour pressure at 20 °C:	43 hPa
Density at 20 °C:	0.8035 g/cm³
Relative density	Not determined.
· vapour density	Not determined.
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Trade name: FORMOA SURFACE ACTIVATOR		
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· Evaporation rate	Not determined.	
 Solubility in / Miscibility with water: 	Not miscible or difficult to mix.	
· Partition coefficient: n-octanol/water:	Not determined.	
· Viscosity: Dynamic: Kinematic:	Not determined. Not determined.	
Solvent content: Organic solvents: VOC (EC) 9.2 Other information	90.0 % 90.00 % No further relevant information available.	

SECTION 10: Stability and reactivity

· 10.1 Reactivity No further relevant information available.

10.2 Chemical stability

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Thermal decomposition / conditions to be avoided:

No decomposition if used according to specifications.

- 10.3 Possibility of hazardous reactions No dangerous reactions known.
- 10.4 Conditions to avoid No further relevant information available.
- 10.5 Incompatible materials: No further relevant information available.
- · 10.6 Hazardous decomposition products: No dangerous decomposition products known.

SECTION 11: Toxicological information

· 11.1 Information on toxicological effects

· Acute toxicity Based on available data, the classification criteria are not met.

· LD/LC50 values relevant for classification:		
67-63-0 p	ropan-2-o	1
Oral	LD50	5000 mg/kg (rat)
Dermal	LD50	12800 mg/kg (rabbit)
Inhalative LC50/4 h 39.3 mg/l (rat)		
 Primary irritant effect:		

- Skin corrosion/irritation Based on available data, the classification criteria are not met.
- Serious eye damage/irritation
- Causes serious eye irritation.
- Respiratory or skin sensitisation Based on available data, the classification criteria are not met.
- CMR effects (carcinogenity, mutagenicity and toxicity for reproduction) Germ cell mutagenicity Based on available data, the classification criteria are not met.

- Carcinopenicity Based on available data, the classification criteria are not met. Reproductive toxicity Based on available data, the classification criteria are not met.
- STOT-single exposure
- May cause drowsiness or dizziness.
- STOT-repeated exposure Based on available data, the classification criteria are not met.

Aspiration hazard Based on available data, the classification criteria are not met.

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12.11 TOXIONY	
Aquatic toxicity:	
67-63-0 propan-2-o	1
Inhalative LC50/96	n 9604 mg/l (fish)
EC50/24	h >1000 mg/l (algae)
	5102 mg/l (daphnia)
EC50/72	h > 2000 mg/l (algae)
12.2 Persistence ar	d degradability No further relevant information available.
Additional ecologic General notes: Water hazard class : Do not allow product Danger to drinking w 12.5 Results of PB PBT: Not applicable vPvB: Not applicable 12.6 Other adverse	al information: al information: (German Regulation) (Self-assessment): hazardous for water to reach ground water, water course or sewage system. ater if even small quantities leak into the ground. and vPvB assessment e. effects No further relevant information available. sposal considerations
13.1 Waste treatme Recommendation Must not be dispose system. Uncleaned packagi	nt methods d together with household garbage. Do not allow product to reach sewage ng:
13.1 Waste treatme Recommendation Must not be dispose system. Uncleaned packagi Recommendation: SECTION 14: Tr	nt methods d together with household garbage. Do not allow product to reach sewage ng: Disposal must be made according to official regulations. ansport information
13.1 Waste treatme Recommendation Must not be dispose system. Uncleaned packagi Recommendation: SECTION 14: Tr 14.1 UN-Number ADR, IMDG, IATA	nt methods d together with household garbage. Do not allow product to reach sewage ng: Disposal must be made according to official regulations. ansport information UN1219
13.1 Waste treatme Recommendation Must not be dispose system. Uncleaned packagi Recommendation: SECTION 14: Tr 14.1 UN-Number ADR, IMDG, IATA 14.2 UN proper shij ADR IMDG, IATA	nt methods d together with household garbage. Do not allow product to reach sewage ng: Disposal must be made according to official regulations. ansport information UN1219 Dispong name 1219 ISOPROPANOL (ISOPROPYL ALCOHOL) ISOPROPANOL (ISOPROPYL ALCOHOL)
13.1 Waste treatme Recommendation Must not be dispose system. Uncleaned packagi Recommendation: SECTION 14: Tr 14.1 UN-Number ADR, IMDG, IATA 14.2 UN proper shi ADR IMDG, IATA 14.3 Transport haza	nt methods d together with household garbage. Do not allow product to reach sewage ng: Disposal must be made according to official regulations. ansport information UN1219 Diping name 1219 ISOPROPANOL (ISOPROPYL ALCOHOL, ISOPROPANOL (ISOPROPYL ALCOHOL) ard class(es)
13.1 Waste treatme Recommendation Must not be dispose system. Uncleaned packagi Recommendation: SECTION 14: Tr 14.1 UN-Number ADR, IMDG, IATA 14.2 UN proper shi ADR IMDG, IATA 14.3 Transport haza ADR, IMDG, IATA	nt methods d together with household garbage. Do not allow product to reach sewage ng: Disposal must be made according to official regulations. ansport information UN1219 UN1219 pping name 1219 ISOPROPANOL (ISOPROPYL ALCOHOL, ISOPROPANOL (ISOPROPYL ALCOHOL) ard class(es)
13.1 Waste treatme Recommendation Must not be dispose system. Uncleaned packagi Recommendation: SECTION 14: Tr 14.1 UN-Number ADR, IMDG, IATA 14.2 UN proper shi ADR IMDG, IATA 14.3 Transport haza ADR, IMDG, IATA	nt methods d together with household garbage. Do not allow product to reach sewage ng: Disposal must be made according to official regulations. ansport information UN1219 Dping name 1219 ISOPROPANOL (ISOPROPYL ALCOHOL, ISOPROPANOL (ISOPROPYL ALCOHOL) ard class(es)
13.1 Waste treatme Recommendation Must not be dispose system. Uncleaned packagi Recommendation: SECTION 14: Tr 14.1 UN-Number ADR, IMDG, IATA 14.2 UN proper shi ADR IMDG, IATA 14.3 Transport haza ADR, IMDG, IATA	nt methods d together with household garbage. Do not allow product to reach sewage ng: Disposal must be made according to official regulations. ansport information UN1219 oping name 1219 ISOPROPANOL (ISOPROPYL ALCOHOL, ISOPROPANOL (ISOPROPYL ALCOHOL) ard class(es) 3 Flammable liquids. 3
13.1 Waste treatme Recommendation Must not be dispose system. Uncleaned packagi Recommendation: SECTION 14: Tr 14.1 UN-Number ADR, IMDG, IATA 14.2 UN proper shi ADR IMDG, IATA 14.3 Transport haza ADR, IMDG, IATA Class Label 14.4 Packing group ADR, IMDG, IATA	nt methods d together with household garbage. Do not allow product to reach sewage ng: Disposal must be made according to official regulations. ansport information UN1219 oping name 1219 ISOPROPANOL (ISOPROPYL ALCOHOL, ISOPROPANOL (ISOPROPYL ALCOHOL) ard class(es) 3 Flammable liquids. 3



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 14.6 Special precautions for user Danger code (Kemler): EMS Number: Stowage Category 	Warning: Flammable liquids. 33 F-E,S-D B	
 14.7 Transport in bulk according to Annex of Marpol and the IBC Code 	II Not applicable.	
· Transport/Additional information:		
ADR Limited quantities (LQ) Excepted quantities (EQ) Transport category Tunnel restriction code	1L Code: E2 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 500 ml 2 D/E	
· IMDG · Limited quantities (LQ) · Excepted quantities (EQ)	1L Code: E2 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 500 ml	
· UN "Model Regulation":	UN 1219 ISOPROPANOL (ISOPROPYL ALCOHOL), 3, II	

SECTION 15: Regulatory information

- 15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture
- Directive 2012/18/EU

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- Named dangerous substances ANNEX I None of the ingredients is listed.
- Seveso category P5c FLAMMABLE LIQUIDS
- Qualifying quantity (tonnes) for the application of lower-tier requirements 5,000 t
- Qualifying quantity (tonnes) for the application of upper-tier requirements 50,000 t
- REGULATION (EC) No 1907/2006 ANNEX XVII Conditions of restriction: 3
- · 15.2 Chemical safety assessment: A Chemical Safety Assessment has not been carried out.

SECTION 16: Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

Relevant phrases

- H225 Highly flammable liquid and vapour.
- H226 Flammable liquid and vapour.
- H319 Causes serious eye irritation.
- H336 May cause drowsiness or dizziness.
- · Department issuing SDS: Product safety department.
- Contact: Mr. Buckley

Contact: Mr. Buckley Abbreviations and acronyms: RID: Règlement international concernant le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail) IATA-DGR: Dangerous Goods Regulations by the "International Air Transport Association" (IATA) ICAO: International Civil Aviation Organisation ICAO-TI: Technical Instructions by the "International Civil Aviation Organisation" (ICAO) ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road) MDG: International Maritime Code for Dangerous Goods

IMDG: International Maritime Code for Dangerous Goods

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IATA: International Air Transport Association GHS: Globally Harmonised System of Classification and Labelling of Chemicals EINECS: European Inventory of Existing Commercial Chemical Substances ELINCS: European List of Notified Chemical Substances CAS: Chemical Abstracts Service (division of the American Chemical Society) VOC: Volatile Organic Compounds (USA, EU) LCS0: Lethal concentration, 50 percent LD50: Lethal dose, 50 percent PBT: Persistent, Bioaccumulative and Toxic vPvB: verst ent, Bioaccumulative and Toxic Flam. Liq. 2: Flammable liquids – Category 2 Flam. Liq. 3: Flammable liquids – Category 2 Flam. Liz : Serious eve damage/eye irritation – Category 2 STOT SE 3: Specific target organ toxicity (single exposure) – Category 3	(Contd. of page 7)	
	IATA: International Air Transport Association GHS: Globally Harmonised System of Classification and Labelling of Chemicals EINECS: European Inventory of Existing Commercial Chemical Substances ELINCS: European List of Notified Chemical Substances CAS: Chemical Abstracts Service (division of the American Chemical Society) VOC: Volatile Organic Compounds (USA, EU) LC50: Lethal concentration, 50 percent D50: Lethal concentration, 50 percent PBT: Persistent, Bioaccumulative and Toxic vPvB: very Persistent and very Bioaccumulative Flam. Liq. 3: Flammable liquids – Category 2 Flam. Liq. 3: Flammable liquids – Category 3 Eye Irrit. 2: Serious eye damage/eye irritation – Category 2 STOT SE 3: Specific target organ toxicity (single exposure) – Category 3	(Contd. of page 7) IATA: International Air Transport Association GHS: Globally Harmonised System of Classification and Labelling of Chemicals EINECS: European Inventory of Existing Commercial Chemical Substances ELINCS: European List of Notified Chemical Substances CAS: Chemical Abstracts Service (division of the American Chemical Society) VOC: Volatile Organic Compounds (USA, EU) LC50: Lethal concentration, 50 percent DJ50: Lethal concentration, 50 percent PBT: Persistent, Bioaccumulative and Toxic vPvB: very Persistent and very Bioaccumulative Flam. Liq. 3: Flammable liquids – Category 2 Flam. Liq. 3: Flammable liquids – Category 3 Eye Irrit. 2: Serious eye damage/eye irritation – Category 2 STOT SE 3: Specific target organ toxicity (single exposure) – Category 3 GB





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	according to 1907/2000/LC, Article 5	
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SECTION 1: Identifi undertaking	ication of the substance/mixture ar	nd of the company/
1.1 Product identifier		
Trade name: <u>FORMOA</u> 1.2 Relevant identified No further relevant inform Application of the subs	<u>095 WHITE</u> uses of the substance or mixture and use nation available. ttance / the mixture Adhesive/Sealant	es advised against
1.3 Details of the supple Manufacturer/Supplier: Forgeway Collet Way, Brunel Road Newton Abbot, Devon TQ12 4PH	ier of the safety data sheet Ind Estate	
 Further information obter Product safety department glen.buckley@forgeway. 1.4 Emergency telephonet +44 (0)203 394 9871 (24 For technical and comment UK Time) 	tainable from: nt. com ne number: hours, UK number, English) ercial enquiries call +44 (0)1626 367070 durir	ng office hours (0700 - 1630
SECTION 2: Hazard 2.1 Classification of the Classification accordin The product is not classif	Is identification e substance or mixture g to Regulation (EC) No 1272/2008 fied according to the CLP regulation.	
 2.2 Label elements Labelling according to Hazard pictograms Void Signal word Void Hazard statements Void Additional information: EUH208 Contains N-(3-(i EUH210 Safety data she 2.3 Other hazards Results of PBT and vPv PBT: Not applicable. vPvB: Not applicable. 	Regulation (EC) No 1272/2008 Void d trimethoxysilyl)propyl)ethylenediamine. May j et available on request. /B assessment	produce an allergic reaction.
SECTION 3: Compo	osition/information on ingredients	
• 3.2 Chemical character • Description: Mixture of s	isation: Mixtures substances listed below with nonhazardous a	additions. (Contd. on page 2) GB



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Printing date 27.09.2017 Version number 2 Revision: 27.09.2017 Trade name: FORMOA 095 WHITE (Contd. of page 1) Dangerous components: *≤2.5%* EC number: 907-495-0 Amide wax rheology modifier Aquatic Chronic 3. H412 Additional information: For the wording of the listed hazard phrases refer to section 16. SECTION 4: First aid measures 4.1 Description of first aid measures General information: No special measures required. After inhalation: Supply fresh air; consult doctor in case of complaints. After skin contact: Generally the product does not irritate the skin. After eye contact: Rinse opened eye for several minutes under running water. After swallowing: If symptoms persist consult doctor. 4.2 Most important symptoms and effects, both acute and delayed No further relevant information available. 4.3 Indication of any immediate medical attention and special treatment needed No further relevant information available. **SECTION 5: Firefighting measures** 5.1 Extinguishing media Suitable extinguishing agents: Use fire extinguishing methods suitable to surrounding conditions. 5.2 Special hazards arising from the substance or mixture No further relevant information available. 5.3 Advice for firefighters · Protective equipment: No special measures required. SECTION 6: Accidental release measures 6.1 Personal precautions, protective equipment and emergency procedures Not required. · 6.2 Environmental precautions: Do not allow to enter sewers/ surface or ground water. - 6.3 Methods and material for containment and cleaning up: Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust). 6.4 Reference to other sections See Section 7 for information on safe handling. See Section 8 for information on personal protection equipment. See Section 13 for disposal information. SECTION 7: Handling and storage · 7.1 Precautions for safe handling No special measures required. Information about fire - and explosion protection: No special measures required. 7.2 Conditions for safe storage, including any incompatibilities Storage: Requirements to be met by storerooms and receptacles: No special requirements. Information about storage in one common storage facility: Not required. Further information about storage conditions: None. 7.3 Specific end use(s) No further relevant information available. SECTION 8: Exposure controls/personal protection · Additional information about design of technical facilities: No further data; see item 7. (Contd. on page 3)



according to 1907/2006/EC, Article 31 Printing date 27.09.2017 Version number 2 Revision: 27.09.2017 Trade name: FORMOA 095 WHITE (Contd. of page 2) 8.1 Control parameters Ingredients with limit values that require monitoring at the workplace: The product does not contain any relevant quantities of materials with critical values that have to be monitored at the workplace. Additional information: The lists valid during the making were used as basis. 8.2 Exposure controls Personal protective equipment: General protective and hygienic measures: The usual precautionary measures are to be adhered to when handling chemicals. Respiratory protection: Not required. Protection of hands: The glove material has to be impermeable and resistant to the product/ the substance/ the preparation. Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture. Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation Material of gloves The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application. Penetration time of glove material The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed. Eye protection: Goggles recommended during refilling SECTION 9: Physical and chemical properties 9.1 Information on basic physical and chemical properties General Information Appearance: Form: Pastv Colour: White Odour: Odourless Odour threshold: Not determined. pH-value: Not determined · Change in condition Melting point/freezing point: Undetermined. Initial boiling point and boiling range: Undetermined. Not applicable. · Flash point: · Flammability (solid, gas): Not applicable. Ignition temperature: 305 °C Decomposition temperature: Not determined. Auto-ignition temperature: Product is not selfigniting. Explosive properties: Product does not present an explosion hazard. Explosion limits: Not determined. Lower: Not determined Upper: Vapour pressure: Not determined Density at 20 °C: 1.49 g/cm3

MOBIFRAME

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 • Relative density
 Not determined.

 • Vapour density
 Not determined.

 • Evaporation rate
 Not determined.

 • Solubility in / Miscibility with water:
 Not miscible or difficult to mix.

 • Partition coefficient: n-octanol/water:
 Not determined.

· Viscosity:	
Dynamic:	Not determined.
Kinematic:	Not determined.
Solvent content:	
Organic solvents:	0.0 %
VÕC (EC)	0.01 %
9.2 Other information	No further relevant information available.
 Solvent content: Organic solvents: VOC (EC) 9.2 Other information 	0.0 % 0.01 % No further relevant information available.

SECTION 10: Stability and reactivity

· 10.1 Reactivity No further relevant information available.

10.2 Chemical stability

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- Thermal decomposition / conditions to be avoided:
- No decomposition if used according to specifications.
- 10.3 Possibility of hazardous reactions No dangerous reactions known.
- 10.4 Conditions to avoid No further relevant information available.
- · 10.5 Incompatible materials: No further relevant information available.
- 10.6 Hazardous decomposition products: No dangerous decomposition products known.

SECTION 11: Toxicological information

- · 11.1 Information on toxicological effects
- · Acute toxicity Based on available data, the classification criteria are not met.
- Primary irritant effect:
- Skin corrosion/irritation Based on available data, the classification criteria are not met.
- Serious eye damage/irritation Based on available data, the classification criteria are not met.
- Respiratory or skin sensitisation Based on available data, the classification criteria are not met.
- CMR effects (carcinogenity, mutagenicity and toxicity for reproduction)
- Germ cell mutagenicity Based on available data, the classification criteria are not met.
- Carcinogenicity Based on available data, the classification criteria are not met.
- Reproductive toxicity Based on available data, the classification criteria are not met.
- **STOT-single exposure** Based on available data, the classification criteria are not met.
- STOT-repeated exposure Based on available data, the classification criteria are not met.
- Aspiration hazard Based on available data, the classification criteria are not met.

SECTION 12: Ecological information

- 12.1 Toxicity
- Aquatic toxicity: No further relevant information available.
- 12.2 Persistence and degradability No further relevant information available.
- 12.3 Bioaccumulative potential No further relevant information available.
- 12.4 Mobility in soil No further relevant information available.
- · Additional ecological information:
- General notes:

Water hazard class 1 (German Regulation) (Self-assessment): slightly hazardous for water Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.

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- 12.5 Results of PBT and vPvB assessment
- · PBT: Not applicable. vPvB: Not applicable.

· 12.6 Other adverse effects No further relevant information available.

SECTION 13: Disposal considerations

· 13.1 Waste treatment methods

- Recommendation Smaller quantities can be disposed of with household waste.
- Uncleaned packaging:
- · Recommendation: Disposal must be made according to official regulations.

SECTION 14: Transport information	n
· 14.1 UN-Number · ADR, ADN, IMDG, IATA	Void
 14.2 UN proper shipping name ADR, ADN, IMDG, IATA 	Void
 14.3 Transport hazard class(es) 	
· ADR, ADN, IMDG, IATA · Class	Void
 14.4 Packing group ADR, IMDG, IATA 	Void
· 14.5 Environmental hazards:	Not applicable.
 14.6 Special precautions for user 	Not applicable.
 14.7 Transport in bulk according to Annex of Marpol and the IBC Code 	r II Not applicable.
UN "Model Regulation":	Void

SECTION 15: Regulatory information

- 15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture
- · Directive 2012/18/EU
- Named dangerous substances ANNEX I None of the ingredients is listed.
- 15.2 Chemical safety assessment: A Chemical Safety Assessment has not been carried out.

SECTION 16: Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

· Relevant phrases

- H412 Harmful to aquatic life with long lasting effects.
- · Department issuing SDS: Product safety department.
- · Contact: Mr. Buckley
- Abbreviations and acronyms:
- ADDREVIATIONS and acronyms: ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road) IMDG: International Maritime Code for Dangerous Goods IATA: International Air Transport Association

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Safety data sheet according to 1907/2006/EC, Article 31

Version number 2

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Trade name: FORMOA 095 WHITE	
	(Contra of page 5)
GHS: Globally Harmonised System of Classification and Labelling of Chemicals EINECS: European Inventory of Existing Commercial Chemical Substances ELINCS: European List of Notified Chemical Substances CAS: Chemical Abstracts Service (division of the American Chemical Society) VOC: Volatile Organic Compounds (USA, EU) PBT: Persistent, Bioaccumulative and Toxic vPvB: very Persistent and very Bioaccumulative Aquatic Chronic 3: Hazardous to the aquatic environment - long-term aquatic hazard – Category 3	(Conto. of page 5)
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