DaimlerChrysler Ford GM

Part Submission Warrant

Part Name: PP-BS NW 10 SW CONT. GRA. STR.
Cust. Part Number: ESXU5T-14A099-AA(CG09-08)
Shown on Drawing No.: 19303900-FORD
Org. Part Number: 1931010 (1931510)
Engineering Change Level: L
Dated: 11.05.2021
Additional Engineering Changes:
Dated:
Safety and/or Government Regulation: [ ] Yes [X] No
Purchase Order No. :
Weight (kg): 0,015
Checking Aid No.:
Checking Aid Engineering Change Level:
Dated:

ORGANIZATION MANUFACTURING INFORMATION

Delfingen DE Haßfurt GmbH / 34-320-6862
Organization Name & Supplier/Vendor Code

Philipp-Reis-Straße 18
Street Address

Hassfurt | Region | 97437 | Germany
City | Region | Postal Code | Country

CUSTOMER SUBMITTAL INFORMATION

Nursan Kablo Donanımları San. ve Tic. A.Ş
Customer Name / Division

Nadiye BARUTÇU
Buyer / Buyer Code

Application

MATERIALS REPORTING:

Has customer-required Substances of Concern information been reported? [X] Yes [ ] No [ ] n/a

Submitted by IMDS or other customer format: 123042363

Are polymeric parts identified with appropriate ISO marking codes? [X] Yes [ ] No [ ] n/a

REASON FOR SUBMISSION (Check at least one)

- [ ] Initial submission
- [ ] Engineering Change(s)
- [ ] Tooling: Transfer, Replacement, Refurbishment, or additional
- [ ] Correction of Discrepancy
- [ ] Tooling inactive > than 1 year
- [ ] Change to Optional Construction or Material
- [ ] Supplier or Material Source Change
- [ ] Change in Part Processing
- [ ] Parts produced at Additional Location
- [X] Other - please specify below

Requalification

REQUESTED SUBMISSION LEVEL (Check one)

- [ ] Level 1 - Warrant only (and for designated appearance items, an Appearance Approval Report) submitted to customer.
- [X] Level 2 - Warrant with product samples and limited supporting data submitted to customer.
- [ ] Level 3 - Warrant with product samples and complete supporting data submitted to customer.
- [ ] Level 4 - Warrant and other requirements as defined by customer.
- [ ] Level 5 - Warrant with product samples and complete supporting data reviewed at supplier's manufacturing location.

SUBMISSION RESULTS

The results for [X] dimensional measurements [X] material and functional tests [ ] appearance criteria [ ] statistical process package

These results meet all design record requirements: [X] Yes [ ] No (If 'NO' - Explanation Required)

Mold / Cavity / Production Process: Extrusion

DECLARATION

I affirm that the samples represented by this warrant are representative of our parts, which were made by a process that meets all Production Part Approval Process Manual 4rd Edition Requirements. I further affirm that these samples were produced at the production rate of
I also certify that documented evidence of such compliance is on file and available for review. I have noted any deviations from this declaration below.

EXPLANATION / COMMENTS: Report-No.: H22-1559
(Formerly Schlemmer GmbH, Haßfurt 53-739-7536)

Is each Customer Tool properly tagged and numbered? [ ] Yes [ ] No [X] n/a

Organization Authorized Signature: Florian Hartmann
Specialist Quality Engineering PPAP
DELFINGEN Delfingen DE Hassfurt GmbH Philipp-Reis-Str. 18 97437 Haßfurt/Germany Phone: +49/9521 9428-196 fhartmann@delfingen.com

Dated: 19.09.2022

Print Name: Florian Hartmann
Phone No.: +49 9521 9428-196
Fax no.: -291

Titel: Quality Engineering Hassfurt
E-Mail: fhartmann@delfingen.com

FOR CUSTOMER USE ONLY (IF APPLICABLE)

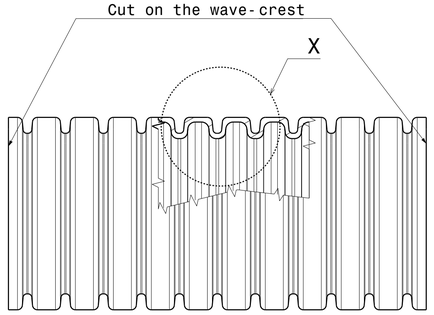
PPAP Warrant Disposition: [ ] Approved [ ] Rejected [ ] Other

Customer Signature:
Dated:

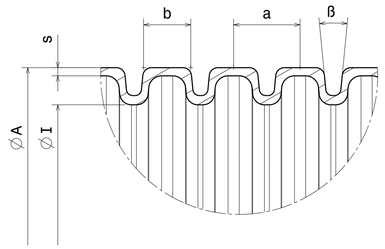
Print Name:
Customer Tracking Number (optional):

DIN 34

Schnitt am Wellenberg
Cut on the wave-crest



Detail X



Container		Ringware / Coil		Nenn-weite Nominal Width NW	ØA mm	ØI mm	a mm	b mm	s mm	ß ±4° Grad Degree	Biege-[2] radius Bending-radius R_B mm	Gewicht ca. Weight Approx. g/m	Liefereinheit / Delivery Unit / m		
													Container		
EDV-Art.-Nr. ungeschlitzt Part- No. Unslit	EDV-Art.-Nr. geschlitzt Part- No. Slit	EDV-Art.-Nr. ungeschlitzt Part- No. Unslit	EDV-Art.-Nr. geschlitzt Part- No. Slit										ungeschlitzt Unslit	geschlitzt Slit	Ring/Coil
1931004	1931104	1931504	1931554	4,5	7,1	5,0	2,2	1,2	0,17 - 0,51	30	12	9	9000	10000	100
1931006	1931106	1931506	1931556	6	9,2	6,0	2,8	1,7	min. 0,17	26	10	14	5000	5000	100
1931007	1931107	1931507	1931557	7,5	9,9	6,9	2,6	1,8	0,17 - 0,51	11	15	12	5000	5000	50
1931008	1931108	1931508	1931558	8,5	11,6	8,5	2,3	1,4	0,17 - 0,51	20	18	13	3300	4000	50
1931010	1931110	1931510	1931560	10	12,7	10,1	2,7	1,8	0,17 - 0,64	20	18	14	3000	3300	50
1931012	1931112	1931512	1931142	12	15,6	12,0	3,1	2,2	min. 0,17	11	20	21	2200	2200	50
1931013	1931113	1931143	1931563	13	15,8	12,9	2,7	1,8	0,17 - 0,51	11	22	23	2000	2200	50
1931014	1931114	1931514	1931144	14	18,3	14,5	3,2	2,3	min. 0,17	11	25	28	1700	1700	50
1931016	1931116	1931516	1931146	16	18,8	15,2	2,5	1,5	min. 0,17	18	25	28	1500	1500	50
1931017	1931117	1931567	1931147	17	21,0	16,8	3,2	2,2	0,17 - 0,51	11	30	30	1100	1300	50
1931019	1931119	1931519	1931149	19	24,0	19,4	3,1	2,2	0,17 - 0,51	11	35	38	800	1000	50
1931022	1931122	1931522	1931152	22	25,5	21,8	3,1	2,2	min. 0,20	11	37	44	700	900	50
1931023	1931123	1931523	1931153	23	28,0	23,7	3,1	2,2	0,20 - 0,77	11	42	53	650	700	50
1931026	1931126	1931526	1931156	26	31,3	26,4	3,1	2,2	min. 0,25	11	47	64	600	500	25
1931029	1931129	1931529	1931579	29	33,9	29,3	3,4	2,3	min. 0,25	11	60	66	450	500	25
1931037	1931137	1931537	1931167	37	42,0	36,7	3,9	2,8	min. 0,30	12	70	98	250	300	25
1931058	1931158	1931509		8,5 AHW	12,9	8,5	3,1	2,1	0,17 - 0,51	18	17	22	3000	3300	50
1931061	1931161	1931511		11 AHW	15,7	11,1	3,1	2,1	0,17 - 0,51	18	22	26	2000	2200	50
1931065	1931165	1931515		15 AHW	21,2	15,0	3,9	2,7	0,17 - 0,51	12	30	39	1100	1300	50
1931069	1931169	1931520		19 AHW	25,7	19,1	4,3	2,9	0,17 - 0,51	12	38	50	700	900	50
1931076	1931176	1931527		26S AHW	31,6	24,9	4,2	2,6	min. 0,30	6	50	70	450	500	25

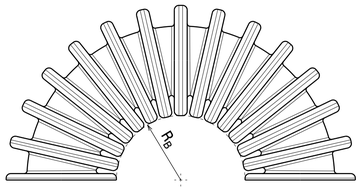
[2] Die angegebenen minimalen Biegeradien beziehen sich auf das ungeschlitzte Wellrohr
The listed smallest bending radii refer to the unslit tube

Kleinster Biegeradius des geschlitzten Wellrohres:
3 x ØI bei Füllgrad 50% bis 75%
The smallest bending radius of the slit tube 3 x ØI provided tube is filled with 50% to 75% of its inner diameter

Toleranzen / Tolerances				
Nennweiten Nominal Widths	ØA	ØI	a	b
4,5 - 16	±0,3	±0,3	±0,10	±0,10
17 - 29	±0,4	±0,4	±0,15	±0,15
37	±0,5	±0,5	±0,20	±0,20
8,5AHW - 11AHW	±0,3	±0,3	±0,10	±0,10
15AHW - 26S AHW	±0,4	±0,4	±0,15	±0,15

Eigenschaften Properties	Prüfvorschrift Test specification	Prüfdauer Test period	Einheit Unit	Wert Value
untere Gebrauchs-temperatur Lower operating temperature		24 h	°C	-40
Dauergebrauchs-temperatur Continuous operating temperature		3000 h	°C	+125
obere Gebrauchs-temperatur, kurzzeitig Upper operating temperature		240 h 500 h	°C °C	+150 +135
Brennbarkeit Inflammability	FMVSS 302 [1]			Selbstverlöschend Self-extinguishing
max. Füllgrad Filling Volume			%	80

[1] in Anlehnung an FMVSS 302
in accordance with FMVSS 302



Kennzeichnung:

Endloser axialer grauer Streifen, alternierend mit Tintenstrahlbedruckung
S.R.S >PP< BS NW xx(AHW) YY
Bezeichnung in Klammer nur wo zutreffennd
Abstand Schriftende zu dem nächsten Schriftanfang: 450 mm ± 50 mm
YY: 2-stelliges Kennzeichen des Herstelllandes nach EN ISO 3166

Marking:

Endless axial grey stripes, alternating print with an ink jet
S.R.S >PP< BS NW xx(AHW) YY
Designation between brackets only for appropriate types
Distance between the end and the beginning of the next print: 450 mm ± 50 mm
YY:Two-letter identification code for the country of manufacture according to EN ISO 3166

Toleranzen für Wellschlauch-Abschnitte:

1% der Gesamtlänge + Teilung [a] (Mitte Wellenberg zu Mitte Wellenberg)
Endsumme auf ganze Zahl aufrunden = + Toleranz.

Tolerances for corrugated tube pieces:

1% of total length + wave-length [a] (mid. crest to mid. crest).
Total rounded up to the next whole number = + tolerance.

Toleranzen/TOLERANCES			i	Changed the name Schlemmer to Delfingen	11.05.21 Chu
-			k	Art.Nr. für ungeschl. Ringware zugefügt	18.09.13 Chu
Oberflaechenguete/SURFACE FINISH			j	U-unit of 1931016 was 1700h/Updated drawing	05.02.13 Chu
			i	Art.Nr.1931146 hinzu/Zeichnung überarbeitet	25.01.10 Chu
Farbe/COLOR schwarz/black			Index	Kurzbeschreibung/SHORT TERM	Datum/DATE Name
Werkstoff/MATERIAL SRS PP 2050 PP BS		Gewicht/WEIGHT / g	Massstab/SCALE /	ISO PROJEKTION: METHODE 1 DIMENSIONS IN MILLIMETERS	Erstellt mit/PRODUCED ON CATIA 5 R10
	Name	Datum	Ersatz fuer/REPLACES DRAWING		
Gezeichnet/DRAWING BY	Stark	26.09.1996	Vom/DATED: -	DELFINGEN	
Geprueft/APPROVED	Schmidt	26.09.2000	Ersatz durch/REPLACED BY - Vom/DATED: -		
Benennung/DESIGNATION: Wellschlauch PP BS / Corrugated Tube PP BS			Zeichnungs-Nr./DRAWING NO.: 19303900-Ford		Format A1 Blatt/PAGE: 01 von/OF: 01

DaimlerChrysler Ford General Motors

Production Part Approval - Dimensional Results

ORGANIZATION: Delfingen DE Haßfurt GmbH	PART NUMBER: 1931010 (1931510)
SUPPLIER/VENDOR CODE: 34-320-6862	PART NAME: PP-BS NW 10 SW CONT. GRA. STR.
INSPECTION FACILITY:	DESIGN RECORD CHANGE LEVEL: L
	ENGINEERING CHANCE DOCUMENTS:

ITEM	DIMENSION / SPECIFICATION	SPECIFICATION / LIMITS	TEST DATE	QTY. TESTED	ORGANIZATION MEASUREMENT RESULTS (DATA)	OK	NOT OK
1	A-Ø	12,7 +/- 0,3 mm	25.08.2022	3 St.	12,68 - 12,78 mm	x	
2	I-Ø	10,1 +/- 0,3 mm	25.08.2022	3 St.	9,96 - 10,04 mm	x	
3	a	2,7 +/- 0,1 mm	25.08.2022	3 St.	2,67 - 2,72 mm	x	
4	b	1,8 +/- 0,1 mm	25.08.2022	3 St.	1,80 - 1,84 mm	x	
5	s	0,17 - 0,64 mm	25.08.2022	3 St.	0,25 - 0,32 mm	x	
6	angle	20° +/- 4°	25.08.2022	3 St.	20° - 22°	x	
7							
8	bending radius	18 mm	25.08.2022	3 St.	≥ 18 mm	x	
	flammability acc. FMVSS 302 selfextinguishing		25.08.2022	3 St.	Typ B	x	
	Material	SRS PP 2050			SRS PP 2050	x	
	marking	acc. drawing			grey text + stripes	x	

Blanket statements of conformance are unacceptable for any test results.

Florian Hartmann
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SIGNATURE	TITLE	DATE
Florian Hartmann	Quality Engineering Hassfurt	19.09.2022

Technical Data Sheet

Material Identification

PPST

several colors available

Properties	Value	Unit	Test Conditions	
General				
Density[1)]	0,91	g/cm3	23 °C	ISO 1183
Melt Flow Rate (MFR)	1,2	g/10min	230 °C / 2.16 kg	ISO 1133
Mechanical				
Tensile Modulus	1250	MPa	1 mm/min	ISO 527-1/-2
Tensile Stress at Yield	23	MPa	50 mm/min	ISO 527-1/-2
Tensile Strain at Yield	5	%	50 mm/min	ISO 527-1/-2
Charpy Notched Impact Strength	80	kJ/m2	23 °C	ISO 179/1eA
	10	kJ/m2	-30 °C	ISO 179/1eA
Thermal				
Temperature of Heat Deflection	55	°C	1.8 MPa	ISO 75
	85	°C	0.45 MPa	ISO 75
Vicat Softening Temperature	148	°C	10 N; 120 °C/h	ISO 306
	68	°C	50 N; 120 °C/h	ISO 306
Flammability				
Burning rate	< 100 mm/min	Type	---	FMVSS 302[1)]
Product specifications [1)]				
Service temperature	-40	°C	1000h	-
	105	°C	3000h	-
Peak temperature	135	°C	350h	-

1) product related - corrugated tube

The stated values fall within the normal range of properties of the base polymer out of the mixed composition unless otherwise noted. They should not be used for setting specific limits or used as a basis for design as the properties are extensively affected by the tool design and processing conditions. Users of this product are responsible for evaluating this product to ensure their own satisfaction that it is suitable for their intended uses. All information is given without warranty or guarantee. Before working with this product, users must read and familiarize themselves with the available health, safety and environmental information that is available regarding product hazards, proper use and handling.