

From: **Quality Assurance HellermannTyton GmbH**

Subject: PPAP Approval signature deadline

Dear customer:

As you are aware the PPAP process is an integral part of our business. With that in mind, we are informing our customers who are requesting a PPAP that there is a 30 day (calendar) deadline to which we are expecting your reply back with a signed copy of the PSW with a disposition regarding it's validity. It is important that we maintain compliance to the current AIAG PPAP manual.

As a part of compliance a signed and approved PSW is essential for our records.

We reserve the right to consider that PPAP valid and complete, if we do not receive a signed copy of the PSW within 30 days (calendar).

Once you have received our PPAP information please e-mail us a copy of your disposition with the appropriate signatures as soon as possible to the following person:

nescha.lohse@HellermannTyton.de

Quality Assistant

phone: +49 (0) 4122 701 5726

Your cooperation is greatly appreciated!

Respecting the procedure as described above, the documentation with HellermannTyton PB-No.:			
99541	with submission date	21.09.2022	will be considered as complete and valid auto-
atically on	21.10.2022	unless otherwise disposed!	

Part Submission Warrant

Part Name SOC13FTOVAL Cust. Part Number DU5T-14E044-NA
 Shown on Drawing No. 13-0597-001-CSG Org. Part Number 15102262
 Engineering Change Level 0 Dated 18.08.2015
 Additional Engineering Changes n/a Dated n/a
 Safety and/or Government Regulation ☐ Yes ☒ No Purchase Order No. 15102262 Weight (kg) 0,0020
 Checking Aid No. n/a Checking Aid Engineering Change Level n/a Dated n/a

ORGANIZATION MANUFACTURING INFORMATION

HellermannTyton GmbH DUNS: 315430892

Organization Name & Supplier/Vendor Code

Großer Moorweg 45

Street Address

Tornesch

25436

Germany

City

Region

Postal Code

Country

CUSTOMER SUBMITTAL INFORMATION

Nursan Kablo Donanimlari

(30471)

Customer Name/Division

Nadiye BARUTÇU

Buyer/Buyer Code

various

Application

MATERIALS REPORTING

Has customer-required Substances of Concern information been reported?

☒ Yes ☐ No ☐ n/a

Submitted by IMDS or other customer format:

487307493

Are polymeric parts identified with appropriate ISO marking codes?

☐ 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

☐ Other - please specify below

REQUESTED SUBMISSION LEVEL (Check one)

☐ Level 1 - Warrant only (and for designated appearance items, an Appearance Approval Report) submitted to customer.

☐ 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 organization's manufacturing location.

SUBMISSION RESULTS

The results for ☒ dimensional measurements

☒ material and functional tests

☐ appearance criteria

☒ statistical process package

These results meet all design record requirements: ☒ Yes ☐ No (If "No" - Explanation Required)

Mold / Cavity / Production Process

injection moulding / serial mold

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 4th Edition Requirements. I further affirm that these samples were produced at the production rate of confidential - pcs / 24 hours.

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:

Is each Customer Tool properly tagged and numbered?

☐ Yes

☐ No

☒ n/a

Organization Authorized Signature i.A.

N. Lohse

Date

21-Sep-22

Print Name i.A. N. Lohse

Phone No.

+49 (0) 4122 701 5726

Fax No.

+49 4122 701 241

Title Quality Assistant

E-mail

nescha.lohse@HellermannTyton.de

FOR CUSTOMER USE ONLY (IF APPLICABLE)

PPAP Warrant Disposition: ☐ Approved ☐ Rejected ☐ Other

Customer Signature

Date

Print Name

Customer Tracking Number (optional)

HellermannTyton

99541

Performance Test Results

Blanket statements of conformance are unacceptable for any test results.

<u>CREATOR</u>	<u>TITLE</u>	<u>DATE</u>
i.A. N. Lohse	Quality Assistant	21-Sep-22

Abnahmeprüfzeugnis/CoA

nach EN 10204-3.1 / according to EN 10204-3.1

AKRO-PLASTIC GmbH

Ein Unternehmen der Feddersen-Gruppe

PROBENIDENTIFIKATION / DESCRIPTION OF PRODUCT:

Nummer / Item number: 02179-O

Bezeichnung / Material: AKROMID A3 1 S3 schwarz (1139)

PRODUKTIONSDATEN / PRODUCTION DATA:

Charge / LOT: POC03 138599

PRÜFERGEBNISSE / TESTRESULTS:

Prüfung Testing	Norm Norm	Prüfbedingung Testing condition	Spezifikation Target Value	Istwert Actual Value	Einheit Unit
Water content Restfeuchte	DIN EN ISO 15512 Verf. B2		$\leq 0,15$	0.08	%
Tensile modulus Zug-E-Modul	DIN EN ISO 527-2/1A	1 mm/min / RT	2550 +/- 300	2420	MPa
Tensile strain at break Bruchdehnung	DIN EN ISO 527-2/1A	50 mm/min / RT	35,0 +/- 15,0	33.4	%
Tensile strain at yield Streckdehnung	DIN EN ISO 527-2/1A	50 mm/min / RT	$\geq 4,0$	8.1	%
Tensile stress at yield Streckspannung	DIN EN ISO 527-2/1A	50 mm/min / RT	64,0 +/- 5,0	59.2	MPa
Charpy notched impact strength Charpy Kerbschlagzähigkeit	DIN EN ISO 179-1/1eA	23°C	15,0 +/- 3,0	14.3	kJ/m ²

Freigabedatum / date of release: 26.07.2022

Zusatzvermerke / remarks:

Niederzissen, 26.07.2022

Gez. Abnahmebeauftragte / Inspection representative: i.V. Ute Bürger

Dieses Dokument wurde elektronisch erstellt und ist ohne Unterschrift gültig.

This document is generated electronically and is valid without signature.

Die in diesem Material eingesetzten Rohstoffe entsprechen der Empfehlung der EU-Richtlinie 2000/53 des europäischen Parlamentes vom 18.09.2000 über Altfahrzeuge. Hiermit wird bestätigt, dass die Lieferung den Vereinbarungen bei der Bestellannahme entspricht. Das Abnahmeprüfzeugnis entbindet den Käufer nicht von der ihm obliegenden gesetzlichen Eingangskontrolle und stellt keine Zusicherung bestimmter Eigenschaften dar.
The raw material used in this material complies with the recommendations of the EU-Guideline 2000/53 of the European Parliament dated 18 September 2000 about old vehicles. It is confirmed herewith that the delivery meets the agreements on receipt of order.

P-FMEA D-FMEA	X	A-00	Project- No Nr projektu	variable	Revision date Data przeglądu	2019.11.25
Group Assignment Grupa produktowa		fastening elements (elementy mocujące)	Drawing number Nr rysunku	variable	Revision by Zaktualizowane przez	M. Krysztofowicz
Part No Nr artykułu		variable	Ind. of Drwg. /date Wydanie / data	variable		
Part Description Nazwa artykułu		variable	Version of FMEA Wersja FMEA	3		
FMEA Core Team Zespół FMEA		A. Kaczmarzyk, D.Bojański (Prod), M.Krysztofowicz, K. Tomaszewska (DJ), M.Handzel (UR)	Original Issue Date Data pierwszego wydania	09.09.2013		
Process Responsibility Zakład produkcyjny		HT - Kotunia			FMEA is electronic generated and administrated. No signature required.	
Prepared by Autor		M. Krysztofowicz			FMEA jest dokumentem generowanym elektronicznie - nie wymaga podpisu.	

Feature / System / Process Etap procesu	Location	Potential failure Potencjalna wada	Potential consequences of failure Potencjalny skutek wady	Klasa	Potential cause Potencjalne przyczyny wad	Current status Stan obecny					Recommended rectifying measures Zalecane działania	Responsible / Date Odpowiedzialny / Data	Improved stage Wyniki podjętych działań				
						Preventive and test measures Obecne środki detekcji / prewencji	SEV (S)	OCC (O)	DET (D)	RPN			Implemented measures Wdrożone działania	SEV (S)	OCC (O)	DET (D)	RPN
Goods receipt	HT PL	no stocks	unable to start manufacture	N	poor stock control	P: SAP - automatic control of stock D: SAP - automatic control of stock	8	3	2	48							0
	HT PL	incorrect goods	use wrong material	N	wrong labeling by incoming	D: production inspection, machine control (setting card)	8	1	3	24							0
Raw material storage	HT PL	incorrect material issued	delayed production	N	Stores error	P: SAP - automatic dedicated location D: production check	3	1	7	21							0
	HT PL	incorrect moisture content	prolonged drying	N	damage of the bag	D: visual control	2	1	7	14							0
	HT PL	material degradation	can't process	N	to long storing time	P: SAP - storage time control (FIFO) D: quality inspection on final product	8	1	3	24							0

Feature / System / Process Etap procesu	Location	Potential failure Potencjalna wada	Potential consequences of failure Potencjalny skutek wady	Klasa	Potential cause Potencjalne przyczyny wad	Current status Stan obecny					Recommended rectifying measures Zalecane działania	Responsible / Date Odpowiedzialny / Data	Improved stage Wyniki podjętych działań				
						Preventive and test measures Obecne środki detekcji / prewencji	SEV (S)	OCC (O)	DET (D)	RPN			Implemented measures Wdrożone działania	SEV (S)	OCC (O)	DET (D)	RPN
	HT PL			N	wrong storing condition	P: storage requirements for each raw material D: quality inspection on final product	8	1	6	48							0
Raw material supply for Injection moulding	HT PL	incorrect raw materials mixture	can't process	N	pick up error	P: Identification labels system, SAP - FIFO control D: operator self check	8	1	3	24							0
	HT PL		no function of the part	N	missing specification	P: SAP master data D: Production specification, on board information	6	1	10	60							0
	HT PL	material contamination	functional degradation	N	machine and accessories not clean enough	P: material mixing instruction D: visual check - PA pos. 9	7	1	7	49							0
	HT PL		process stop	N	granulates of different material	P: material mixing instruction, setting card D: machine self check	7	2	4	56							0
Injection moulding	HT PL	part not fully moulded	functional degradation or missing function	N	improper moulding parameters	P: setting card, master program, 'start-stop' instruction, start-up checklist D: machine self control, visual check - PA pos. 2	8	2	4	64	Set security alert of the injection moulding machine against loading wrong program	T. Maćkowiak / 30.11.2018	Setted security alert of the injection moulding machine against loading wrong program	8	3	3	72
	HT PL		functional degradation or missing function	N	wrong separation of rejected parts (machine construction)	P: checklist of technical acceptance of the machine before first use D: machine self control, visual check - PA pos. 2	8	2	3	48							

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						Preventive and test measures Obecne środki detekcji / prewencji	SEV (S)	OCC (O)	DET (D)			RPN	Implemented measures Wdrożone działania	SEV (S)	OCC (O)	DET (D)	RPN
	HT PL		functional degradation or missing function	N	mould damage	P: setting card, master program, 'start-stop' instruction, sturt-up checklist D: machine self control, visual check - PA pos. 2	8	2	4	64	1. Update quality control instruction, requirement regarding functional chcek to be implemented. 2. Mould maintenance preventing program update - o-rings replacement every planned maintenance.	1. M. Maćkowska / 03.09.2018 2. P. Szukalski / 28.09.2018	1. Quality control instructions updated. 2. Mould maintenance preventing program updated.	8	2	3	48
	HT PL		functional degradation or missing function	N	improper mould venting	P: setting card, master program, 'start-stop' instruction, sturt-up checklist D: machine self control, visual check - PA pos. 2	8	3	4	96							
	HT PL	overmoulding or flash on part	functional degradation or missing function	N	improper moulding parameters, mould damage	P: setting card, master program, 'start-stop' instruction, sturt-up checklist D: machine self control, visual check - PA pos. 3	8	3	3	72							0
	HT PL	mould misalignment	heavy handling/ processing	N	improper sliding bolt	P: mould maintenace, D: visual check - PA pos. 4	4	1	7	28							0
	HT PL		functional degradation	N	mould damage	P: mould maintenace, D: visual check - PA pos. 4	7	2	7	98							0

Feature / System / Process Etap procesu	Location	Potential failure Potencjalna wada	Potential consequences of failure Potencjalny skutek wady	Klasa	Potential cause Potencjalne przyczyny wad	Current status Stan obecny					Recommended rectifying measures Zalecane działania	Responsible / Date Odpowiedzialny / Data	Improved stage Wyniki podjętych działań				
						Preventive and test measures Obecne środki detekcji / prewencji	SEV (S)	OCC (O)	DET (D)	RPN			Implemented measures Wdrożone działania	SEV (S)	OCC (O)	DET (D)	RPN
	HT PL	flow lines, silver marks, air bubble	optical degradation	N	improper mould parameters	P: setting card, master program D: visual check - PA pos. 5, 7	3	2	7	42							0
	HT PL		optical degradation	N	improper mould temperature	P: setting card, master program D: visual check - PA pos. 5, 7	3	2	7	42							0
	HT PL		optical degradation	N	incorrect material moisture content (improper dryer set- up)	P: dryer set-up instruction, D: visual check - PA pos. 5, 7	3	2	7	42							0
	HT PL		optical degradation	N	improper mould venting	P: Production 24h trial D: visual check - PA pos. 5, 7	3	2	7	42							0
	HT PL		functional degradation	N	improper mould venting	P: mould maintenace, setting card, master program D: Individual testing according to PA	7	2	7	98							0
	HT PL	burnings	optical degradation	N	improper mould venting	P: mould maintenace D: visual check - PA pos. 6	3	2	7	42							0
	HT PL		optical degradation	N	improper moulding parameters	P: setting card D: visual check - PA pos. 6	3	2	7	42							0
	HT PL	contamination	optical degradation	N	machine and accessories not clean enough	P: daily machine maintenace D: visual check - PA pos. 7, 9	3	2	7	42							0

Feature / System / Process Etap procesu	Location	Potential failure Potencjalna wada	Potential consequences of failure Potencjalny skutek wady	Klasa	Potential cause Potencjalne przyczyny wad	Current status Stan obecny				Recommended rectifying measures Zalecane działania	Responsible / Date Odpowiedzialny / Data	Improved stage Wyniki podjętych działań				
						Preventive and test measures Obecne środki detekcji / prewencji	SEV (S)	OCC (O)	DET (D)			RPN	Implemented measures Wdrożone działania	SEV (S)	OCC (O)	DET (D)
	HT PL		increased sensitiveness to break	N	material contamination	P: octabins, containers D: visual check - PA pos. 7, 9 Individual testing according to PA	7	1	7	49						
	HT PL			N	Insufficient running reserve at material change	P: Start-up checklist D: visual check - PA pos. 7, 9 Individual testing according to PA	7	1	7	49						
	HT PL	brittleness	no function of the part	N	too long procesing time	P: Start/Stop instruction D: Individual testing according to PA	6	1	7	42						
	HT PL			N	Mould heater damage	P: Mould maintenance D: Individual testing according to PA	6	1	7	42						
	HT PL			N	incorrect material moisture content	P: dryer set-up instruction, D: Individual testing according to PA	6	1	7	42						
	HT PL			N	Incorrect nozzle diameter	P: Start/Stop instruction D: Individual testing according to PA	6	1	7	42						
	HT PL			N	improper mould venting	P: Production 24h trial D: Individual testing according to PA	6	2	7	84						
	HT PL	deformation	optical and functional degradation	N	defective production equipment	P: Start-up checklist D: visual check - PA pos. 8k	7	2	6	84						

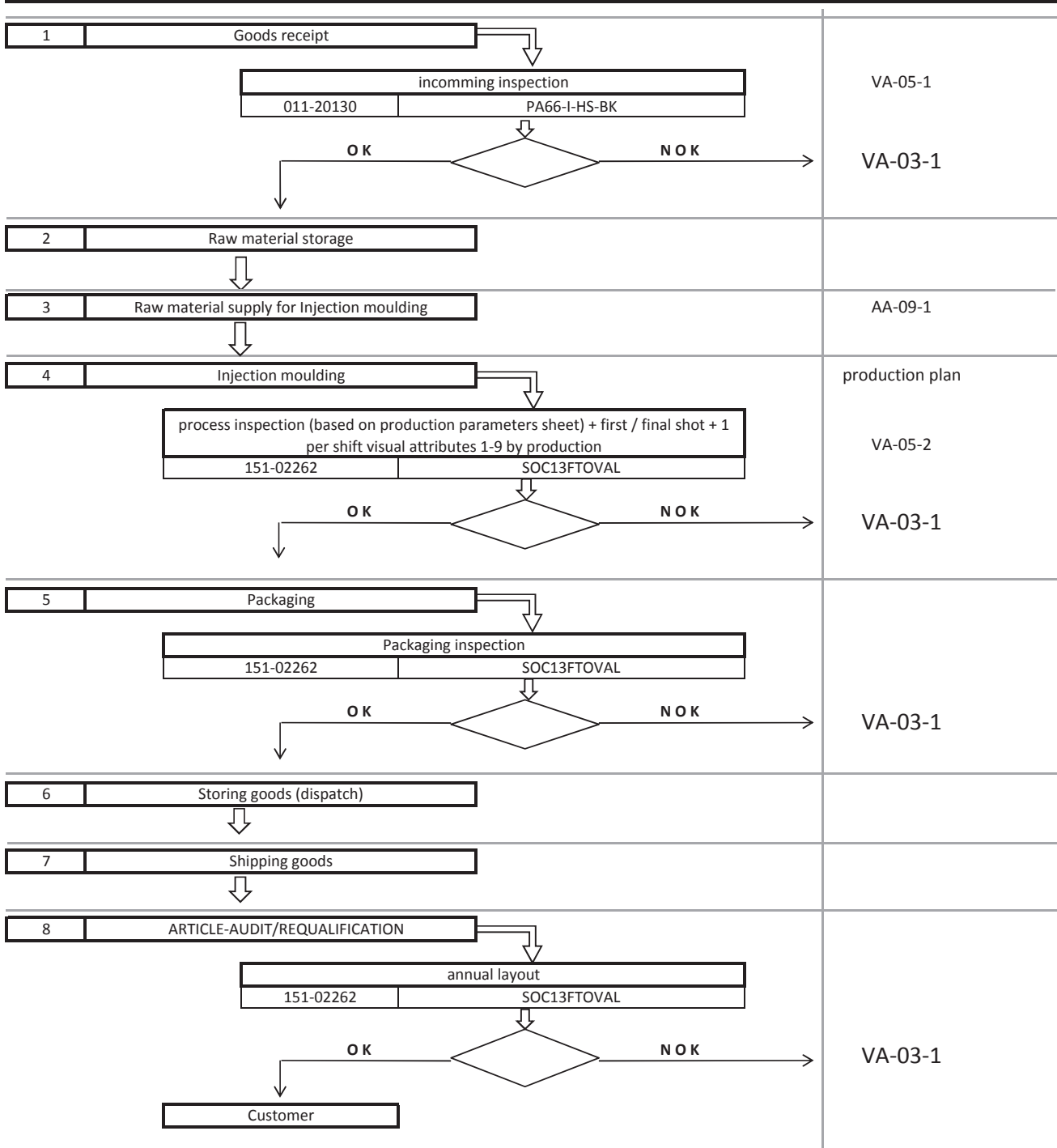
Feature / System / Process Etap procesu	Location	Potential failure Potencjalna wada	Potential consequences of failure Potencjalny skutek wady	Klasa	Potential cause Potencjalne przyczyny wad	Current status Stan obecny					Recommended rectifying measures Zalecane działania	Responsible / Date Odpowiedzialny / Data	Improved stage Wyniki podjętych działań				
						Preventive and test measures Obecne środki detekcji / prewencji	SEV (S)	OCC (O)	DET (D)	RPN			Implemented measures Wdrożone działania	SEV (S)	OCC (O)	DET (D)	RPN
	HT PL			N	improper moulding parameters (deformed by mould - difficulties with release the part)	P: setting card, master program, sturt-up checlist D: machine self control, visual check - PA pos. 2	6	2	7	84							
	HT PL			N	not effective cooling system (deformed by mould - difficulties with release the part)	P: setting card, master program, sturt-up checlist D: machine self control, visual check - PA pos. 2	6	2	7	84							
	HT PL			N	incorrect construction of conveyor belt	P: daily machine maintenance D: visual control	6	2	7	84	Implement new conveyor belt equipment (new belt with additional safety bar)	M. Nowak 06.09.2019	Implemented new conveyor belt equipment (new belt with additional safety bar)	6	1	7	42
	HT PL			N	mould elements damage (difficulties with release the part)	P: daily machine maintenance D: machine self control, visual control	6	2	7	84							

Feature / System / Process Etap procesu	Location	Potential failure Potencjalna wada	Potential consequences of failure Potencjalny skutek wady	Klasa	Potential cause Potencjalne przyczyny wad	Current status Stan obecny					Recommended rectifying measures Zalecane działania	Responsible / Date Odpowiedzialny / Data	Improved stage Wyniki podjętych działań				
						Preventive and test measures Obecne środki detekcji / prewencji	SEV (S)	OCC (O)	DET (D)	RPN			Implemented measures Wdrożone działania	SEV (S)	OCC (O)	DET (D)	RPN
	HT PL	mixed parts caused by various tool insert	missing/ wrong parts at customer side	N	malfunction of robot	P: Start/Stop instruction, setting card D: machine self check	6	6	2	72							0
	HT PL			N	wrong direction of conveyer belt caused by backflow of defective parts	P: Start/Stop instruction D: machine self check	6	2	2	24							0
	HT PL			N	Bad parts taken by conveyer belt from full red box	P: daily machine maintenace D: visual control	6	1	7	42							0
	HT PL			N	wrong tool inserts	P: tool system marking instruction D: visual and functional check - PA, CP	6	2	7	84	1. Implementation of the instruction of the inserts change over 2. Implementation of the new gauge.	1. P. Szukalski 06.02.2019 2. M.Maćkowska 28.01.2019	1. Implemented of the instruction of the inserts change over 2. Implemented new gauge. Updated quality control documents	6	2	5	60
Packaging	HT PL	improper quantity of water	insufficient mechanical features	N	improper dosing equipment	P: packaging specification D: measuring test of the dosing quantity	6	1	7	42							0
	HT PL	improper welding seam	open bags, improper moisture content	N	incorrect adjustment of the equipment	P: packaging instruction, Poka-yoke on heaters D: visual self check by operator	6	1	10	60							0
	HT PL			N	heating device defective	P: maintenance preventive plan D: visual self check by operator	6	1	6	36							0

Feature / System / Process Etap procesu	Location	Potential failure Potencjalna wada	Potential consequences of failure Potencjalny skutek wady	Klasa	Potential cause Potencjalne przyczyny wad	Current status Stan obecny					Recommended rectifying measures Zalecane działania	Responsible / Date Odpowiedzialny / Data	Improved stage Wyniki podjętych działań				
						Preventive and test measures Obecne środki detekcji / prewencji	SEV (S)	OCC (O)	DET (D)	RPN			Implemented measures Wdrożone działania	SEV (S)	OCC (O)	DET (D)	RPN
	HT PL	improper printing/bag stamp	goods wrongly identified	N	defective or incorrectly adjusted stamps, wrong bags or labels	P: packaging specification D: visual check, barcode check by scanner	6	2	4	48							0
	HT PL	no label	goods without identification	N	Human mistake	P: packaging instruction D: operator self check, visual check by dispatcher	3	2	7	42							0
	HT PL	incorrect number of pcs.	delivery of short or excess quantities	N	Wrong set up of weight scale	P: weight scale set up instruction D: operator self check, first bag quantity control (VP)	2	2	7	28							0
	HT PL			N	Weight scale defect	P: measurement equipment preventive calibration D: operator self check	2	2	7	28							0
	HT PL	mixed parts	missing/ wrong parts at customer side	N	disorder in the workplace	P: worplace check list, packaging specification D: operator visual self checks, first bag control by QC (VP)	3	2	7	42							0

Feature / System / Process Etap procesu	Location	Potential failure Potencjalna wada	Potential consequences of failure Potencjalny skutek wady	Klasa	Potential cause Potencjalne przyczyny wad	Current status Stan obecny					Recommended rectifying measures Zalecane działania	Responsible / Date Odpowiedzialny / Data	Improved stage Wyniki podjętych działań				
						Preventive and test measures Obecne środki detekcji / prewencji	SEV (S)	OCC (O)	DET (D)	RPN			Implemented measures Wdrożone działania	SEV (S)	OCC (O)	DET (D)	RPN
Storing goods (dispatch)	HT PL	no storage	no delivery to customer	N	incorrect master-data	P: trial production D: SAP order control status	7	2	2	28							
	HT PL			N	delivery delay	P: safety stock in logistic center D: SAP order control status	7	3	2	42							
	HT PL			N	blocked stock	P: safety stock in logistic center D: SAP order control status	7	3	2	42							
	HT PL	shipment delay	delivery of short quantities	N	damaged packaging	P: packaging instruction D: visual self check by operator and dispatcher	2	4	7	56							
	HT PL	wrong storage location	wrong direction of shipment	N	Human mistake	P: storage location marking D: shiping direction automatic control in SAP	7	1	1	7							
Shipping goods	HT PL	incorrect despatch gate	wrong parts to logistic center	N	mixed shipping documentation	P: shipimng location marking D: visual self check, shipping checklist	7	2	7	98							
	HT PL	Incorrect loading	box damage at logistic center	N	Human mistake	P: box loading standard D: visual self check, shipping checklist	2	2	7	28							
	HT PL		goods damage at logistic center	N	Human mistake	P: box loading standard D: visual self check, shipping checklist	4	1	7	28							

PFC-No: 15102262	Process Flow Chart	
REV: 2017-09-23		
reviewed: 2017-09-23 GPN: 13-0597		
	SOC13FTOVAL	part-no: 151-02262 drw-no: 13-0597-001-CSG PFMEA No: A-00
PROCESS	CONTROLS	PROCEDURE



CONTROL PLAN

☐ Prototyp ☐ Pre-launch ☒ Production

Control Plan No: 15102262			Key Contact / Phone +48 63 2237 322			Date reviewed: 2017-09-23		Date rev. 2017-09-23	
Part No / latest changelev 151-02262 project:			Core Team:			Customer Engineering Approval / date			
Part name/Description: SOC13FTOVAL PGroup: A-00			Supplier / Plant approval date			Customer Quality Approval / Date			
Supplier Plant Kotunia			other approval date / Drawing 13-0597-001-CSG			other Approval / Date			

Part / Process No	Process name / Operation description	Machine	No / Product / Process Characteristics	SC	Part / Process Specification / Tolerance	Sample Size	Frequenz	Evaluation / Measurement Technique Control Method	Department	Reaction Plan
1	Goods receipt - incoming inspection - VA-05-1									VA-03-1
	011-20130 PA66-I-HS-BK		1-0 Part Type		CMR / SD-33-1	100%	Each batch	visual	Warehouse	
			2-0 Quantity		CMR / SD-33-1	100%	Each batch	visual	Warehouse	
			3-0 Visual damages		SD-33-1	100%	Each batch	visual	Warehouse	
			302-0 residual moisture		max 0,15%	1	1 lot	COA	QS	
			304-0 notch impact strength		12 - 18 KJ/m2	1	1 lot	COA	QS	
		305-0 yield stress		59 - 69 Mpa	1	1 lot	COA	QS		
2	Raw material storage									VA-03-1
	011-20130 PA66-I-HS-BK		1-0 Part Number		Ensure all items identify and segregate - labels.	all	Each supply	visual	Warehouse	
3	Raw material supply for Injection moulding									VA-03-1
	011-20130 PA66-I-HS-BK		1-0 Part Type		Box description	100%	Each batch	visual	Production	
					FIFO - AA-09-1	100%	Each batch	visual	Production	
4	Injection moulding - process inspection (based on production parameters sheet) +first / final shot + 1 per shift visual attributes 1-9 by production - VA-05-2									VA-03-1
	151-02262 SOC13FTOVAL		1-0 sink marks		PA-15102262-1	1 shot	1 shift	Master Samples no 50-9733, visual	QS	
			2-0 shortage		PA-15102262-1	1 shot	1 shift	Master Samples no 50-9733, visual	QS	
			3-0 flashes		PA-15102262-1	1 shot	1 shift	Master Samples no 50-9733, visual	QS	
			4-0 mould misalignment		PA-15102262-1	1 shot	1 shift	Master Samples no 50-9733, visual	QS	
			5-0 moulding lines		PA-15102262-1	1 shot	1 shift	Master Samples no 50-9733, visual	QS	
			6-0 burnings		PA-15102262-1	1 shot	1 shift	Master Samples no 50-9733, visual	QS	
			7-0 dirt		PA-15102262-1	1 shot	1 shift	Master Samples no 50-9733, visual	QS	
			8-0 deformation		PA-15102262-1	1 shot	1 shift	Master Samples no 50-9733, visual	QS	
			9-0 inclusions		PA-15102262-1	1 shot	1 shift	Master Samples no 50-9733, visual	QS	
			65-0 shot weight		RK-15102262-1	1 shot	1 shift	SG01 scale counter / manual	QS	
			67-1 brittleness spring cup /fir-tree		CP-15102262-1	1 shot	1 shift	check gauge 08-0242	QS	
			67-2 brittleness spring cup /fir-tree		CP-15102262-1	1 shot	1 shift	check gauge 08-0250	QS	

CONTROL PLAN

Control Plan No: 15102262		Key Contact / Phone +48 63 2237 322		Date reviewed: 2017-09-23		Date rev. 2017-09-23	
Part No / latest changelev 151-02262 project:		Core Team:		Customer Engineering Approval / date			
Part name/Description: SOC13FTOVAL PGroup: A-00		Supplier / Plant approval date		Customer Quality Approval / Date			
Supplier Plant Kotunia		other approval date / Drawing 13-0597-001-CSG		other Approval / Date			

Part / Process No	Process name / Operation description	Machine	No / Product / Process Characteristics	SC	Part / Process Specification / Tolerance	Sample Size	Frequenz	Evaluation / Measurement Technique Control Method	Department	Reaction Plan
5	Packaging inspection									VA-03-1
	151-02262 SOC13FTOVAL		16-0 bag sealing		VP-15102262-1	1 bag	1 start off	manual / visual	QS	
			17-0 label		VP-15102262-1	1 bag	1 start off	manual / visual	QS	
			18-0 quantity		VP-15102262-1	1 bag	1 start off	SG04 scale counter / manual	QS	
			45-0 mixed parts in pack unit		VP-15102262-1	1 bag	1 start off	manual / visual	QS	
6	Storing goods (dispatch)									VA-03-1
	151-02262 SOC13FTOVAL		1-0 Part Number		Ensure all boxes identify and segregate - labels and storage location	1	Each pallet	visual	Warehouse	
7	Shipping goods									VA-03-1
	151-02262 SOC13FTOVAL		1-0 Pre-shipment audit		SD-16-1 - check list	all	Each shipment	visual	Warehouse	
8	ARTICLE-AUDIT/REQUALIFICATION - annual layout									VA-03-1
	151-02262 SOC13FTOVAL		Complete dimensional and functional test acc. Drawing (min. 1 part-No for mentioned part group)		SD-18-01 - product audit	3 shots	12 months	manual / visual	Lab	

i	xi	i	xi	i	xi	i	xi
1	4,06	51	4,06	101	4,06	151	
2	4,06	52	4,06	102	4,06	152	
3	4,06	53	4,06	103	4,06	153	
4	4,06	54	4,06	104	4,06	154	
5	4,06	55	4,06	105	4,06	155	
6	4,06	56	4,06	106	4,07	156	
7	4,06	57	4,06	107	4,06	157	
8	4,06	58	4,06	108	4,06	158	
9	4,06	59	4,07	109	4,06	159	
10	4,06	60	4,06	110	4,06	160	
11	4,06	61	4,06	111	4,06	161	
12	4,06	62	4,06	112	4,06	162	
13	4,06	63	4,06	113	4,06	163	
14	4,06	64	4,06	114	4,06	164	
15	4,06	65	4,06	115	4,06	165	
16	4,06	66	4,06	116	4,06	166	
17	4,06	67	4,06	117	4,06	167	
18	4,06	68	4,06	118	4,06	168	
19	4,06	69	4,06	119	4,06	169	
20	4,06	70	4,06	120	4,06	170	
21	4,06	71	4,06	121	4,06	171	
22	4,06	72	4,06	122	4,06	172	
23	4,06	73	4,06	123	4,06	173	
24	4,06	74	4,06	124	4,06	174	
25	4,06	75	4,06	125	4,06	175	
26	4,06	76	4,06	126		176	
27	4,06	77	4,06	127		177	
28	4,06	78	4,06	128		178	
29	4,06	79	4,06	129		179	
30	4,06	80	4,06	130		180	
31	4,06	81	4,06	131		181	
32	4,06	82	4,06	132		182	
33	4,06	83	4,06	133		183	
34	4,06	84	4,06	134		184	
35	4,06	85	4,06	135		185	
36	4,06	86	4,06	136		186	
37	4,06	87	4,06	137		187	
38	4,06	88	4,06	138		188	
39	4,06	89	4,06	139		189	
40	4,06	90	4,06	140		190	
41	4,06	91	4,06	141		191	
42	4,06	92	4,06	142		192	
43	4,06	93	4,06	143		193	
44	4,06	94	4,06	144		194	
45	4,06	95	4,06	145		195	
46	4,06	96	4,06	146		196	
47	4,06	97	4,06	147		197	
48	4,06	98	4,06	148		198	
49	4,06	99	4,06	149		199	
50	4,06	100	4,06	150		200	

Entries can be changed
Values are calculated (calculation sheet)

article:	SOC13FTOVAL	
articulo.:	15102262	
drawing:	13-0597-001-CSG	
measuring		
equipment:	scale	
characteristic:	shot weight	
unit of	shot weight	
measurement:	Gramm	
	Sollwert μ_{soll} =	4,06
	Unterer Grenzwert UGW =	4,05
	Oberer Grenzwert OGW =	4,08
Anzahl Klassen Histogramm =	11	
$C_{pk<}$	1,33	Prozess nicht fähig
C_{pk}	dazwischen	Prozess bedingt fähig
$C_{pk>}$	1,66	Prozess fähig

Umfang der Stichprobe	125
Mittelwert μ	4,06
Standardabweichung σ	0,0007

Fähigkeitskennwerte	
C_{pu}	6,46
C_{po}	6,46
C_p	6,46
C_{pk}	6,46
Bewertung $cpk \Rightarrow$	Prozess fähig

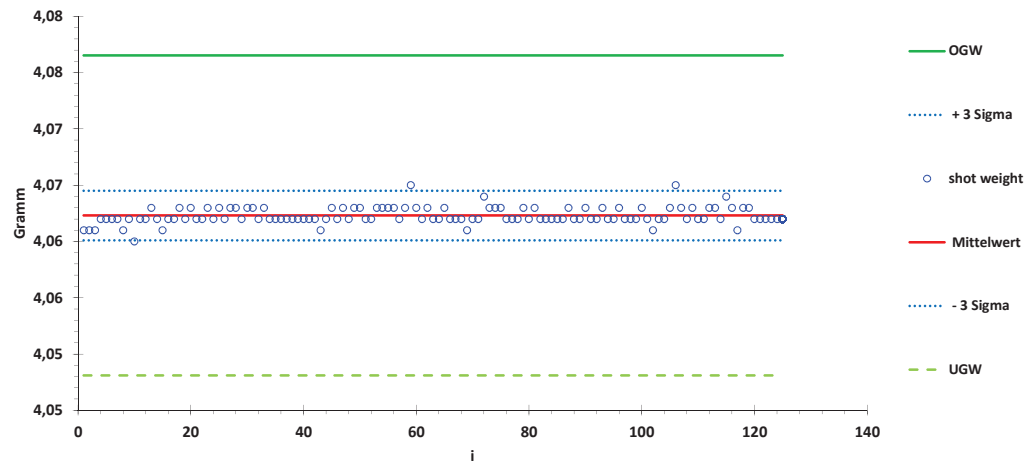
Median ζ	4,06
Spannweite P	0,01
Minimum	4,06
Maximum	4,07

Berechnete Leistung in ppm	
Überschreitungsanteil p_{UGW}	0
Überschreitungsanteil p_{OGW}	0
Überschreitungsanteil p	0

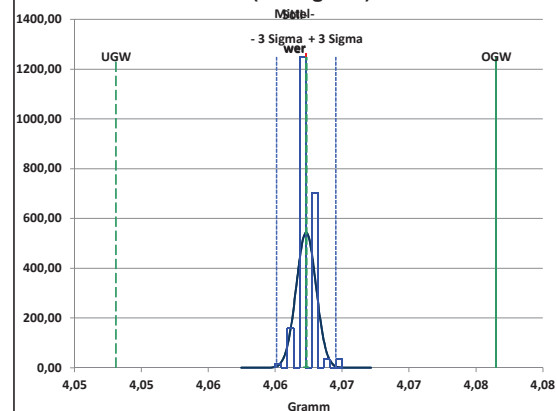
Beobachtete Leistung in ppm	
Überschreitungsanteil p_{UGW}	0
Überschreitungsanteil p_{OGW}	0
Überschreitungsanteil p	0

erlaubte Abweichung $\pm$	3,5	%o
zulässig $\pm$	0,014218092	

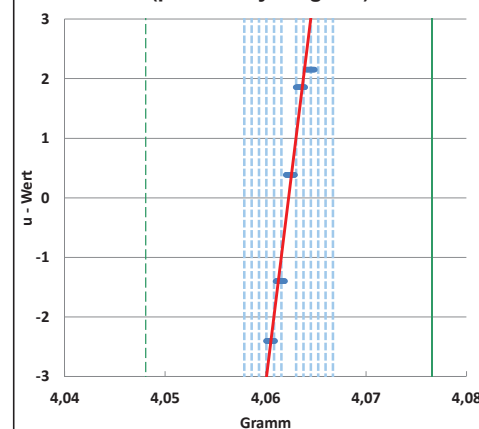
Stichprobe chronologisch
(chronological spot check)



Histogramm
(histogram)



Wahrscheinlichkeitsnetz
(probability diagram)



Bemerkungen:

Durch das Herstellverfahren bedingte Geometrieaenderungen (Anspritzung, Auswerfermarkierungen, etc.) zulaessig. Einzelheiten der Ausfuehrung bleiben dem Hersteller ueberlassen. / The manufacturing-related geometry changes (injection point, ejectors marks, etc.) allowed. Design of the details are left to suppliers discretion.

Revision level Indice Aenderungsstand		Revision Record Désignation Beschreibung der Aenderung	Changed Modifié Geaendert	Date Datum	Approved Approuvé Geprueft	Date Datum
Drawing Dessin Zeichnung	Part Pièce Solid					

Intended For Welded Screw Ø
Pour Goujon Soudé à Filets Couchés Ø
Aufnahme fuer Schweißbolzen Ø

Tensile Force (N)
Tenue au serrage (N)
Schlaufenhaltekraft (N)

Hole Size
Trou Ø
Loch Ø
siehe Montageloch / see Application Hole

Panel Thickness
Épaisseur Support
Blechedicke
0,6 - 4,0 mm

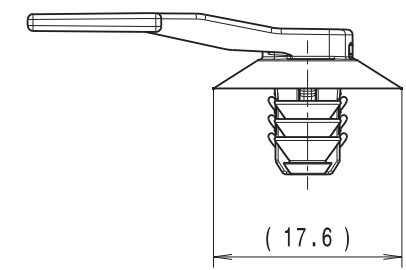
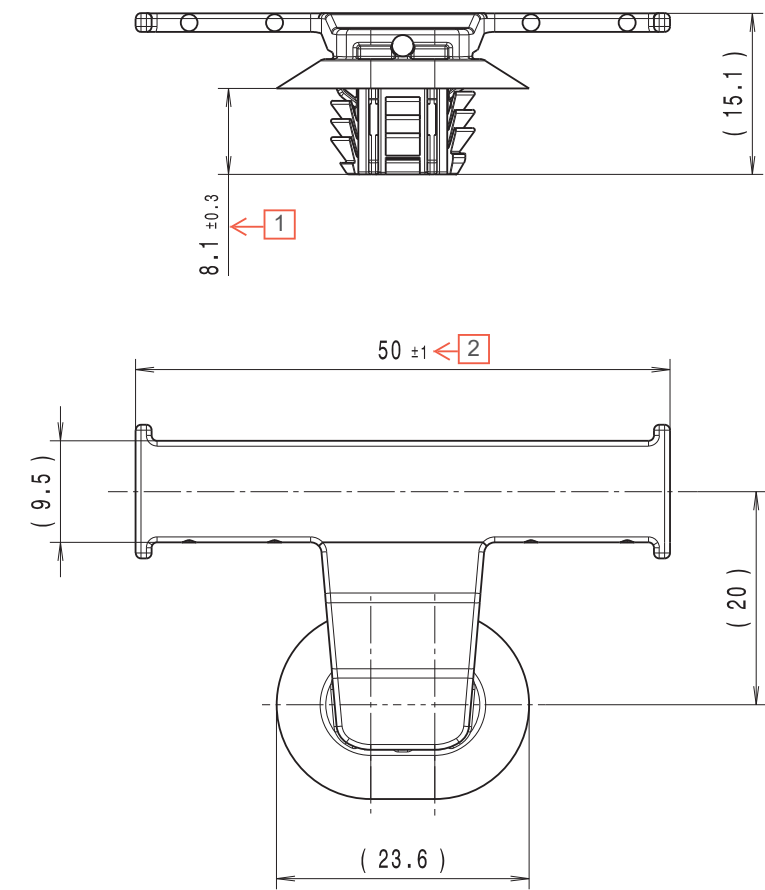
Bundle Ø
Toron Ø
Buendel Ø

Material
Matière
Werkstoff
PA66

Tolerances
Dimension without tolerances:
Tolérances
Cotes sans tolérances:
Toleranzen
Masse ohne
Toleranzangaben :

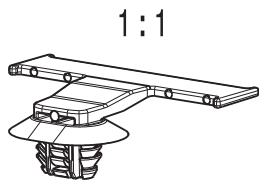
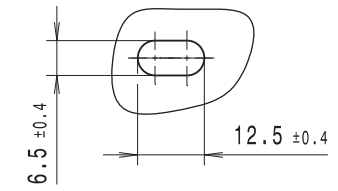
Angle/ Winkel	± 3°
≤ 6	± 0,3
≤ 30	± 0,5
≤ 60	± 0,7
≤ 120	± 1,5
≤ 400	± 5
≤ 1000	± 10

PERFORMANCE SPECIFICATION
AUSFUEHRUNG SPEZIFIKATION



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3 → Montageloch / Application Hole
1:1



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		Approved Approuvé Par Geprueft Wulf	18.08.15	Title Titre Benennung SOC13FTOVAL	
		HellermannTyton Manchester Telephone: +44 (0) 161 945 4181 Facsimile: +44 (0) 161 947 2228 Trappes Téléphone: +33 (0) 1 30 13 80 00 Télécopie: +33 (0) 1 30 13 80 60 Tornesch Telefon: +49 (0) 41 22 / 701 - 1 Telefax: +49 (0) 41 22 / 701 - 400		Drawing-No Plan-No Zeichnungs-Nr 13-0597-001-CSG	Format D.Size A3 Sheet Page Blatt 1 / 1