Technical Packaging Specification

Item Code:	D8378268	**Version:**	2.0
Item Description:	TRIG,MLP,4X240MM,SCR,SP,1,3CC	**Status:**	Published
Project Name:	Screw-on BCP	**Project Number:**	
Component Group:	Triggers	**Predecessor Code:**	
Component Class:	TRIGGER	**Component Material:**	Composite - Plastic Only
Supply Region(s):	Southern Europe Eastern Europe	**Manufacturing Site(s):**	Mira Poland Copackers
Document Sub-Type:	Standard Specification		

Group Packaging Specification: D0000023

Description

1.3cc Spray/Spray Screw-on Trigger Z-Z

Dimensions

Dimensions

	Value	Tolerances	U.O.M	Acceptance Criteria
Drawing Reference:	D-LM0796 rev A0			
Shroud - Major axis at base:			mm	Major
Shroud - Minor axis at base:			mm	Major
Shroud - Maximum major axis:	91.6	± 1.5	mm	Major
Shroud - Maximum minor axis:	31.6	± 1.0	mm	Major
Shroud - Overall height:	35.9	± 1.0	mm	Major
Trigger - seal diameter at flange:	25.3	± 0.3	mm	Critical
Trigger - Internal chassis height (base to seal):	15.5	± 0.5	mm	Major
Trigger - Internal chassis diameter (at base):	28.0	± 0.3	mm	Major
Trigger - Internal chassis diameter (at location lugs):	n/a		mm	
Dip Tube length (FBOC):	240	±2	mm	Major
Dip Tube curvature (maximum):		±	mm	Major
Output per stroke:	1.35	± 15%	ml	Major
Total Weight (shroud included):	21.6	±15%	g	Major

Extra Dimensions

	Value	Tolerance	U.O.M.	Acceptance Criteria
Crest to crest internal	25.3	±0.3	mm	crititал
thread diameter	32.2	±0.3	mm	major
External Closure	22.1	±0.3	mm	major

Diameter (at base)
Closure height

Supplier CoA must include test results for all 'Critical' and 'Major' parameters

Trigger with no foaming apparatus - direct spray
240mm FBOG straight diptube

Material

Material

Component	Drawing Ref.	Material	Approved Grades
Dip tube	approx. weight 1.72g	LDPE	Sinopec Q281
Closure	approx. weight 3.42g	PP	Sinopec T30S H5300
Gasket	approx. weight 0.13g	PE	Sinopec 8008+218W
Cap Scall Ring	approx. weight 0.71g	PP	Sinopec T30S H5300
Plastic Ball	approx. weight 0.04g	POM	AsahiKASEI 4520 M270
Shroud	approx. weight 4.78g	PP	Sinopec T30S H5300
Inner Body	approx. weight 5.01g	PP	Sinopec T30S H5300
Piston	approx. weight 1.55g	HDPE+LDPE	Sinopec 8008+218W
Spring	approx. weight 1.68g	POM	AsahiKASEI 4520 M270
Pitman	approx. weight 0.69g	PP	Sinopec T30S H5300
Sealing Bushing	approx. weight 0.04g	EVA	Sinopec 5110+7470 5110+800
Nozzle	approx. weight 1.45g	PP	Sinopec M800E
Spray Valve	approx. weight 0.22g	LDPE+LLDPE	Sinopec N210+218W
Trigger	approx. weight 2.30g	PP	Sinopec T30S H5300

Each component part should be entered into the **Component** field each on a separate line.

- Only qualified materials should be used in every production run. Any change in terms of material composition and/or significant process conditions should be aligned with RB technical representative.
- Supplier has report on Heavy Metals (Pb, Cd, Hg, Cr (VI)) concentration in packaging
- Supplier has declaration of Masterbatch producers regarding Heavy Metals (Pb, Cd, Hg, Cr (VI)) concentration in the masterbatch
- Supplier has report on Heavy Metals (Pb, Cd, Hg, Cr (VI)) concentration in masterbatches
- There are no any other dangerous substances with N-symbol assigned present in packaging
- Suggested method of recovery: Material recycling EN 13430: latest version

Directive on Packaging and Packaging Waste (94/62/EC), (CONEG) -
- Heavy Metals if present in packaging or packaging components, must contain less than 100 ppm cumulative of Mercury + Lead + Cadmium + Hexavalent Chromium

Refer to GPS 'STATUTORY' Section for other compliance requirements

Performance

Performance

Test	Values	UOM	Frequency	Test Method	Test Method Code
Spray Pattern Diameter at 20 cm (with water)	255 +/- 40	mm	during development, for each material change, or tool change, in case of issue	PKG-TRIGGER OR PUMP-TESTS AND VALIDATION	D0038074
Dosage	1,3 +/- 0,2	ml	during development, for each material change, or tool change, in case of issue	PKG-TRIGGER OR PUMP-TESTS AND VALIDATION	D0038074
Dribbling	max 0.30	ml	during development,	DATP test 1	*

			in case of iussue		
Dip Tube Bending	max 45% of DT lenght	mm	each batch	PKG-TRIGGER OR PUMP-TESTS AND VALIDATION	D0038074
Spray Frequency	min 15	full actuations/10 seconds	during development	DATP 2	*
Durability / 5000 strokes	0 defects observed	Attribute	One time during qualification (each tool / material modification)	PKG-TRIGGER OR PUMP-TESTS AND VALIDATION	D0038074
Priming (each individual trigger)	max 7	strokes	each batch	PKG-TRIGGER OR PUMP-TESTS AND VALIDATION	D0038074
Priming (average for samples population)	less than 5	strokes	each batch	PKG-TRIGGER OR PUMP-TESTS AND VALIDATION	D0038074
Dip tube retention force (fresh trigger)	min 10	N	each batch	PKG-TRIGGER OR PUMP-TESTS AND VALIDATION	D0038074
Actuation force	max 30	N	One time during qualification (each tool / material modification)	PKG-TRIGGER OR PUMP-TESTS AND VALIDATION	D0038074
Readability of "ON / OFF" selector	ON/OFF position must be clearly recognizable by consumers	*	during development	PA	*
Nozzle Twist Torque	10-60	N*cm	One time during qualification / in case of issues	Place the trigger on torque meter in such a way that nozzle will be on the top. Fix trigger from movement. Switch the nozzle from OFF to ON position. Record max. torque.	*
Removal Torque	min 100	N*cm	Reference Value	PKG-TRIGGER OR PUMP-TESTS AND VALIDATION	D0038074
Atomization (amount of particles smaller than 10um)	less than 2	%	during development	PKG-TRIGGER OR PUMP-TESTS AND VALIDATION	D0038074
Product Residue (bottle evacuation test)	max 3	% of nominal fill	during development	PKG-TRIGGER OR PUMP-TESTS AND VALIDATION	D0038074
Environmental Stress Cracking Resistance (ESCR) Conditions: 50°C + 50N per each bottle / 2 weeks TO BE TESTED BY RB	0 defects observed	Attribute	One time during qualification (each tool / material modification)	PKG-ESCR-SHORT AND LONG TERM TEST METHOD-PLASTICS	D0002258
Drop Test from 0,8m (cracked or disconected shrouds are acceptable as long as trigger is functional) TO BE TESTED BY RB	0 defects observed	attribute	during development or material / construction change / incase of issue	PKG-DROP TEST-PLASTIC CONTAINERS	D0002262

Express Leak test / static sealing (Low tension water or dedicated product, 1 hour in horisontal position)	0 defects observed	Attribute	Each production batch	PKG-TRIGGER OR PUMP-TESTS AND VALIDATION	D0038074
Leak test / static sealing (Low tension water or dedicated product, 72 hours in horisontal position) TO BE TESTED BY RB	0 defects observed	Attribute	One time during validation (each tool/material change). + One random batch once a week.	PKG-TRIGGER OR PUMP-TESTS AND VALIDATION	D0038074
Leak test / dynamic sealing (Low tension water or dedicated product)	0 defects observed	Attribute	Each production batch	PKG-TRIGGER OR PUMP-TESTS AND VALIDATION	D0038074
Compatibility test (Conditions: 1) RT 23°C / 12 weeks; 2) 4-5°C / 12 weeks; 3) 40°C, 75%RH / 12 weeks; 4) 50°C / 6 weeks TO BE TESTED BY RB	0 defects observed	Attribute	One time during qualification (each tool / material modification)	PKG-COMPATIBILITY-PRIMARY PACKAGING-NON AEROSOL	D0254015
Long term dispensing performance TO BE TESTED BY RB	0 defects observed	Attribute	One time during qualification (each tool / material modification)	PKG-TRIGGER OR PUMP-TESTS AND VALIDATION	D0038074
Venting TO BE TESTED BY RB	0 defects observed	Attribute	One time during qualification (each tool / material modification)	The trigger bottle should not be deformed after 20 strokes at triggering speed of 60 strokes/minute (screw the trigger on standard bottle with standard application torque)	*
Appearance @ 0.5 meters length (amount of defective samples in line with AQL)	0 defects observed	*	Each production batch	Visual check for any noticeable deviation of trigger color or overall shape vs. approved sample. Check if there are no marks, scratches, inclusions or anything which is not intended to be there.	*

General Notes:
In case if sampling plan is not defined by Test Method indicated in table above, please refer to ISO 3951 for variables and ISO 2859 for attributes. Special Inspection level S3 @ AQL 0.15% for critical parameters, AQL 1% for major parameters, AQL 4% for minor parameters.
Critical parameters: Drop Test, Leak tests, ESCR, Compatibility test, Priming, Atomization / amount of particles less than 10 microns,
Major parameters: Dip tube removal force,Actuation force, Long term dispensing performance, Durability
Minor parameters: Nozzle twist torque, Appearance, Atomization / rest parameters (apart from amount of particles less than 10 microns), Bottle evacuation test

Delivery Conditions

Delivery Conditions

General: Triggers to be delivered in such a way that they arrive in good conditions at the filling location. Precaution is to be taken that triggers do not get scratched, pick up dust or any foreign material during transport and storage.
Secondary packaging and paletization: Triggers should be packed in corrugated boxes.

Parameter	

Box dimensions, mm	500x400x400
Amount of triggers / box *	400 pcs
Pallet size, mm	1200x1000
Maximum pallet height, mm	2150
Amount of boxes per pallet	30
Amount of triggers per pallet	12000 pcs

* Amount of triggers indicated for standard tube size.
Labelling Information: Every box with triggers should contain label (or printing on case or combination) with information per table below. Each pallet should have label on each side of the load with information below.

Information on box	Information on pallet
• Batch number • Production date • Expiry date • RB's product code • Z-Z`s product code • Delivery address • Quantity per box • RB`s Description	• Batch number • Production date • RB's product code • Z-Z`s product code • Delivery address • Quantity per pallet • Amount of boxes per pallet • RB`s Description

Storage and handling conditions: Store triggers in dry and clean warehouse with temperatures from +5°C to +35°C (40°F to 95°F) and relative humidity between 30 and 70%, at least 1 meter (3,3 feet) from heating devices. Triggers should be protected from moisture, high UV radiation and direct sun rays. It is recommended triggers will pass minimum 12 hrs acclimatization before using it in production. Make sure application is happening in temperatures equal or greater than +17°C (63°F).
Best before - 24 months from date of triggers production, indicated at supplier's label.

Certificate of Analysis (CoA): All deliveries must come with CoA. All critical & major parameters must be check in line with frequency listed in Performance Section or if not specified, for each production lot.

Environmental Data

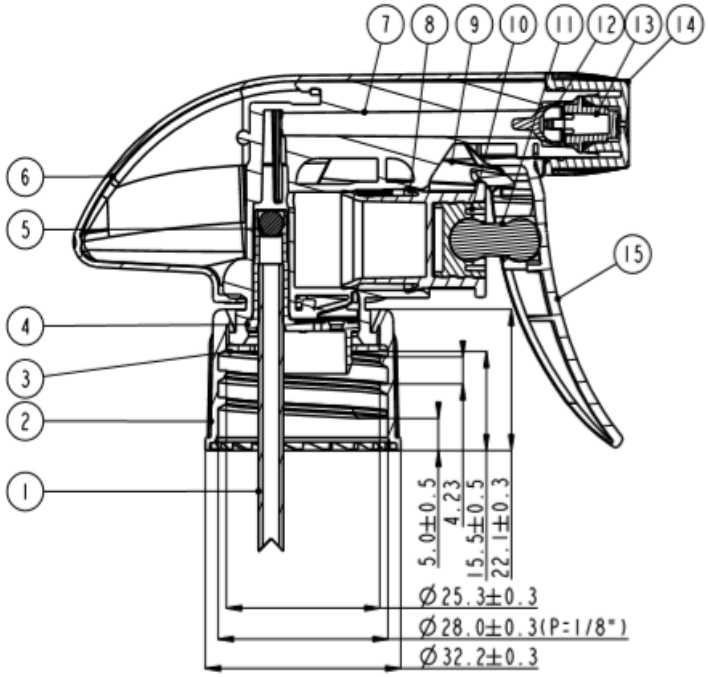
Environmental Data

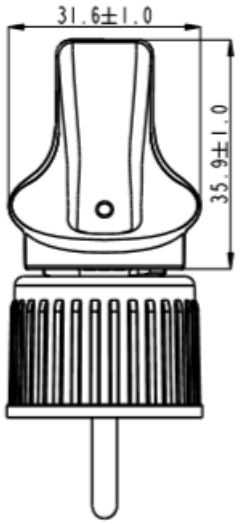
Material	Weight	UOM	%PCR
Composite - Plastic Only	23.7	GM	0

Packaging Type: Primary

Picture

Picture

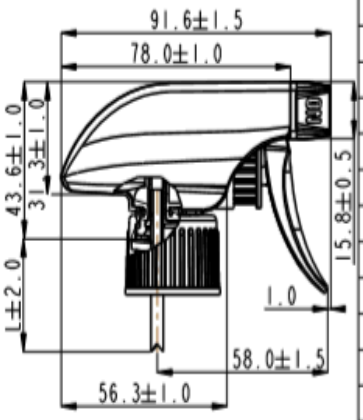




Scale 1.000

Output per stroke:1.35±15%

Total weight:21.6g±15%



No.	Component	Material	Specification	Part No.	QTY	Remark
15	Trigger	PP	Color for order form	300010313001	1	
14	Nozzle	PP	Color for order form	300010308002	1	
13	Spray Valve	LDPE	Natural	300010111004	1	
12	Sealing Bushing	EVA	Natural	300010118001	1	
11	Pitman	PP	Color for order form	300010312002	1	
10	Pitman	PP	Color for order form	300010306002	1	
9	Spring	POM	Color for order form	300010323001	1	
8	Piston	PE	Natural	300010303001	1	
7	Inner Body	PP	Color for order form	300010301001	1	
6	Shroud	PP	Color for order form	300010207002	1	
5	Plastic Ball	POM	Ø4.0	300010397001	1	
4	Cap Scall Ring	PP	Natural	300010206001	1	
3	Gasket	PE	Ø25.2*Ø16.0*1.0mm	300010298001	1	
2	Closure	PP	Color for order form	300010205001	1	
1	Dip Tube	PP	Ø4.1*0.7thickness	300010295001	1	

APPROVED:	UNIT: mm	浙江正庄实业有限公司 ZHEJIANG Z&Z INDUSTRIAL CO.,LTD.		1
CENSOR:	MODEL NAME: 00103	TITLE: 00103B-28/410 Assemble		
CHECKED:	SCALE: 1:1	VISUAL ANGLE	Q'TY: 1/1	REV: A0
DRAFTER: 施立枫 2020/07/28	PART NO. 100010300003		FILE NO. D-LM0796	

- LM-103B 24-410 for RB 2020.07.28 (002).pdf

REACh Data

REACh Data	
Article Classification:	This item is classified as an Article for EU REACh
SVHC/SIR Content:	Level of SVHCs is below 0.1% and there are no SIRs present

Additional Information

Additional Information

Source Details:
ZHEJIANG Z&Z Industrial CO., LTD
42 Shunke Rd,
Yuyao, Ningbo,
Zhejiang, China

- This Technical Packaging Specification is a property of RB. Not to be changed without written agreement and proper validation when required.
- In case of conflict between this specification and any other linked technical document, please contact your RB technical representative for clarification.

Particle size distribution report

- Report ZZ ENG.pdf

Nozzle for triggers produced for RB to be from mould “D” (cavities 1 to 64) only

The specification has been prepared relying on Declaration of Conformity issued by suppliers.

The concentration level of: Pb, Cd, Hg, Cr (VI): – below 100 ppm /CR 13695-1:2002, CR 13695-2:2002/	
YES	X
NO	☐
Report on heavy metals (Pb Cd, Hg, Cr VI) concentration in the packaging (closure, bottle, etc.)*	
YES	☐
NO	X
Declaration of masterbatch producer on fulfilling the requirements regarding the concentration of heavy metals: Pb, Cd, Hg, Cr (VI)*	
YES	X
NO	☐
Report on heavy metals (Pb Cd, Hg, Cr VI) concentration in the masterbatch	
YES	☐
NO	X
Presence of other dangerous substances with the N symbol assigned	
YES	☐
NO	X
Reusability /EN 13429:2005/	
YES	☐
NO	X
Suggested method of recovery	
Material recycling /EN 13430:2002/	X
Burning with energy recovery /EN 13431:2002/	☐ - Minimal inferior calorific energy / calorific gain in MJ/kg/……
Composting /EN 13432:2002/	☐
Biodegrability /EN 13432:2002	☐

This specification must be approved & signed by the supplier prior to first production.
At the same time, this should mean approval of D0000023 which is a part of each Trigger specification and AQL References from RB Global Product Quality Manual V3.0 / 28 June 2010.

- Report ZZ ENG.pdf

Source Details

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History

Document History (Ver. 2.0)		
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