CERTIFICATE OF COMPLIANCE

Declarations of Compliance:

Our Klipspringer range of hygiene and production brushes and plastics utensils and buckets fulfil all the requirements for the BRC Global and IFS standards. All products meant for direct food contact are included in a Declaration of Compliance (DoC) and can be downloaded directly from our website, www.klipspringer.com.

Bristle Types

(See Table 1 for more information on chemical resistance)

Polypropylene: This filament has good abrasion resistance and excellent chemical resistance to both acid and alkali solutions, the bristles have an inferior bend recovery to polyester. Autoclave suitable to 100°C.

Polyester PBT (Polybutylene Terephthalate): Excellent in wet conditions. Excellent bend recovery. High water resistance. Autoclave suitable to 134°C. Resistant to all cleaning agents.

Detectable Bristles: This is only applicable to the bristles, the brush bodies themselves are not detectable. Manufactured for a unique formulation involving additives that conform to food contact regulations. This material allows bristles* to be detected via standard in line metal detection. Tested on a Safeline R-series 300 KHz, Ø0.90mm Fe = 18mm longitudinal/ 33mm transverse. *Before use please calibrate equipment for own safety. We would always recommend that a site checks their detectors to ascertain the min piece size that can be detected and via different orientations through the detector head.

Resin Set: The resin-Set range is a range of brushes with bristle set in a flexible resin compound for bristle retention. The resin is not suitable for contact with food and these tools are intended for hygiene purposes only. Heat resistant bristles: Heat resistant to 250°C.

Squeegee Types

One-piece: Extremely effective action when both pushing and pulling. Moves water effortlessly from smooth surfaces, along with condensation. Item suitable for contact with food.

Two-piece with black or white rubber: Durable sponge rubber white or black dual squeegee blades. Blades not suitable for direct food contact.

Handle Types

Aluminum – Alloy 5449: Made from seam welded 1.5mm wall top grade aluminum tube for strength, anodised for better resistance.

Ergonomic handles: Ergonomic design for easier handling during use.

Standard grip handles: Good design but not quite as ergonomic when using the handle for long periods.

Ergonomic one-piece handles: Anti-fatigue grip. Nylon reinforced PP for longevity of use. Food contact suitable.

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Water-fed handles: Suitable for use with water-fed handle to make cleaning easier. Suitable for food contact.

Fibreglass: FDA approved, lightweight one-piece molded handle. Very hygienic and easy to clean. Made with Glasfibre. Can be used with acid and Chlorine containing agents from pH 2-10.5.

Telescopic: Allowing the handle to be used at different lengths, with strong lock.

Flexible rods: Twisted stainless steel wire, looped coil at the working end avoid damage from abrasive cut ends of wire core.

Production and Hygiene Plastics

Produced from Polypropylene. The non-polar nature of PP results in PP being exceptionally chemically resistant to many agents. Only a few concentrated acids and oxidants attack PP at high temperatures. Slight swelling can occur in the presence of halogenated aliphatic and aromatic hydrocarbons. Whenever products are made using Dow Polypropylene for situations where the applications are exposed to chemicals it is necessary to establish their performance under real life conditions. See tables 2 & 3 for more information.

Brush Types

Rubber edged: Colour coded rubber edges boned to brush body to protect delicate surfaces from damage whilst water brushing also gives a better grip.

Detectable. Only the bristles are detectable, not the brush body.

Waterfed: Allow water to pass through the brush for ease of cleaning to provide a superior finish.

Detection Testing

Date: 21-01-2014
Location: ‘s-Hertongenbosch (NL)

Company: Mettler-Toledo Product Inspection B.V.

The reason of this visit was to test two of our compounds on detectability. We want to know what’s the minimal size which is still detectable. At Mettler-Toledo they have a testline for X-ray detection and a line for metal detection.

X-ray detection line:

Detector:	Safeline X33 Series Machine
Speed:	30 m/min
Sensibility:	>Ø1.2mm Fe/N-Fe/RVS
Settings:	Prepared for product with relative much contrast, like chocolate biscuits

Metal detection line:

Detector:	Safeline Profile 450x175 SS 300 Khz
Speed:	30 m/min
Sensibility:	>Ø1.2mm Fe, >Ø.5mm en > Ø1.8mm N-Fe/RVS
Settings:	Prepared for “wet” products, like cheese or meat.

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We tested two compounds, PP-2012/077 and our new product PP-2013/308. We made little cubes of this material in different sizes, to see what is the smallest detectable dimension. We put these cubes on a sample product (in this case a pack of biscuits) and tried if the detector can reject this product. In tables below are the results of these tests:

PP-2012/077	X-ray	Metal
2x2x2 mm	No signal	No signal
3x3x3 mm	Detectable	Detectable
4x4x4 mm	Detectable	Detectable

PP-2013/308	X-ray	Metal
2x2x2 mm	No signal	No signal
3x3x3 mm	Detectable	Detectable
4x4x4 mm	Detectable	Detectable

Conclusion: The minimal size to detect is 3mm. It is important to know that it all depends on the detection equipment, speed and which kind of food!

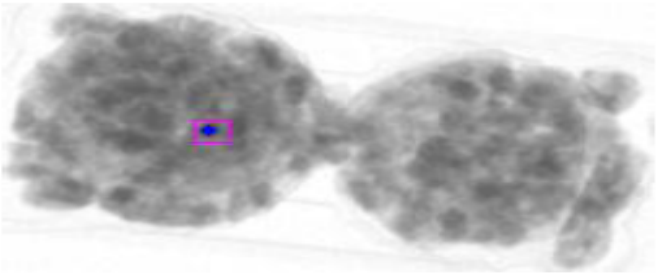

Table 1: General Information on Bristle Chemical Resistance

Chemical	Concentration %	Polyester PBT	Polypropylene	Nylon 66
Acetic acid	100	*	***	*
Acetone	100	***	***	***
Ammonia Liquid		**	***	***
Aniline	100	***	**	*
Benzene	100	***	*	***
Bleaching Solutions Dilute		***	***	*

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Caustic Potash	10	***	***	***
Caustic Potash	50	**	***	***
Chlorine Water Saturated		*	*	*
Chloroform	100	***	**	*
Chromic Acid	10	***	***	**
Citric acid	10	***	***	**
Detergent-soaps		***	***	***
Ethanol	96	***	***	***
Ethyl acetate	100	***	***	***
Formic acid	100	***	**	*
Fuel oil		***	**	***
Glycerine		***	***	***
Hydrochloric acid	30	**	***	*
Lactic Acid	20	***	***	**
Methyl Alcohol	100	***	***	***
Mineral oil		***	***	***
Nitric Acid	50	***	*	*
Oleic Acid	100	***	***	***
Oxalic Acid	10	***	**	*
Petrol		***	**	***
Phosphoric Acid	85	***	***	*
Sea Water	100	***	***	***
Sodium Chloride (salt)		***	***	***
Sodium Hydroxide	10	*	***	***
Sodium Hydroxide	50	*	***	***
Sodium Hypochlorite	10	***	***	*
Stearic Acid	100	***	***	**
Sulphuric Acid	10	***	***	*
Sulphuric acid	96	*	*	*
Tetrachloroethylene		**	*	**
Toluene	100	**	*	***
Trichloroethylene		**	**	***
Turpentine		***	*	***
Vaseline	100	***	***	***
Vegetable Oil		***	***	***

Key:
*** = Excellent, no deterioration or long-term adverse effects
** = Caution; variations in concentration, temperature and exposure could be detrimental.
* = Unsatisfactory; contact will result in permanent deterioration.

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Generally:
PBT Bristle – pH 1-7 Resistant to acids
PP Bristle – pH 1-14 Resistant to acids and alkali's.
Depending on concentration and time in contact.

Note: This information is provided and assumes temperature not exceeding 20ºC, concentration % related to % chemical substance is total mix with water. Information is based on data provided by suppliers of our raw materials, who state "we" believe it to be true and accurate and no warranties are expressed or implied regarding its accuracy or the performance of the product. Testing is recommended for critical application".

Table 2

Assessment Property	Good resistance GR	Medium resistance MR	Poor resistance PR
Swelling	<3%	3-8%	>8%
Weight loss	<0.5%	0.5-5%	`>5%
Elongation at break	Practically unchanged	Loss up to 50%	Loss more than 50%

Table 3

Chemicals	Conc In %	At 20°C			At 60°C			At 100°C		
		GR	MR	PR	GR	MR	PR	GR	MR	PR
Acetaldehyde	40aq	X			X					
Acetaldehyde	100		X							
Acetic acid	10	X			X					
Acetic acid	60	X			X					
Acetic acid	100	X				X				X
Acetic anhydride	100	X				X				X
Acetone	100	X			Xb					
Acetophenone	100	X				X				
Acrylonitrile	100	X								
Allyl alcohol	96	X			X					
Alum	ac	X			X					
Ammonia	ac	X			X					
Ammonium acetate	ac	X			X			X		
Ammonium carbonate	ac	X			X			X		
Ammonium chloride	ac	X			X			X		
Amyl acetate	100		X				X			
Amyl alcohol	100	X			X			X		
Aniline	100	X			X			X		
Anti-freeze (Automobile)		X			X			X		
Aqua regia			X				X			
Automobile gas	100		X				X			
Benzaldehyde	100	X								
Benzene	100		X				X			
Benzoic acid	100	X			X					

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Chemicals	Conc In %	At 20°C			At 60°C			At 100°C		
		GR	MR	PR	GR	MR	PR	GR	MR	PR
Benzyl alcohol	100	X				X				
Benzyl chloride	100		X							
Bitumen		X				X				
Borax	sat	X			X			X		
Brine	ac	X			X			X		
Bromine water	sat			X			X			X
Bromine (Liquid)	100			X						
Butane (gas)	100	X			X					
Butyl acetate	100		X				X			X
Butylene glycol	100	X								
Butyric acid	100	X								
Calcium Carbonate	sat	X			X			X		
Calcium carbonate	sat	X			X			X		
Calcium Hypochlorite	ac	X			X					
Camphor	100	X								
Carbon Tetrachloride	100			X			X			
Carbon Disulfide	100	X								
Chlorine water	sat		X				X			
Chlorine (Liquid & gaseous)	100			X						
Chlorobenzene	100	X								
Chloroethylene	100		X							
Chlorosulfonic acid	100			X			X			X
Chromium salts	sat	X			X					
Citric acid	ac	X			X			X		
Copper salts	sat	X			X					
Cresol	100	X				X				
Crude oil	100	X				X				
Cyclohexane	100	X								
Cyclohexanol	100	X				X				
Cyclohexanone	100		X			X				X
Decalin	100		X			X				
Detergents	100	X			X				X	
Dibutyl phthalate	100	X				X			X	
Dichloroacetic acid	100		X							
Dichlorobenzene	100		X				X			
Dichloroethylene	100			X						
Diethyl ether	100	X								
Dioctyl phthalate	100	X				X				
Dioxane	100		X			X				X

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Chemicals	Conc In %	At 20°C			At 60°C			At 100°C		
		GR	MR	PR	GR	MR	PR	GR	MR	PR
Drinking water	100	X			X			Xb		
Essential oils	100	X			X to	X				
Ethanol	96	X			X			X		
Ethyl acetate	100	X to	X			X to	X			X
Ethyl alcohol	96	X			X			X		
Ethyl Chloride	100		X							
Ethyl acetic ether	100	X				X				
Ethylbenzene	100		X				X			
Ethylene Glycol	100	X			X			X		
Fatty acids higher than C6	100	X			X					
Film Developers		X								
Floor polish	100	X				X				
Fluorine	100			X			X			
Formaldehyde	33aq	X			X					
Formaldehyde	40aq	X			X					
Formic acid	10aq	X			X				X	
Formic acid	80aq	X				X				X
Formic acid	100	X				X			X	
Fruit Juice	100	X			X			X		
Fuel	100	X				X				
Fuel oil	100		X							
Furfuryl alcohol	100	X				X				
Glycerol	100	X			X			X		
Glycol	100	X			X			X		
N-Heptane	100		X				X			
Hexane	100	X				X to	X			
Hydrobromic acid	48	X				X				X
Hydrochloric acid	30	X				X				
Hydrochloric acid	36	X								
Hydrocyanic acid	ac	X			X					
Hydrofluoric acid	40	X				X				
Hydrogen chloride gas (dry and wet)	ac	X			X					
Hydrogen peroxide	10	X			X					
Hydrogen peroxide	30	X				X				
Hydrogen sulphide (dry)	100	X			X					
Iodine tincture		X								
Iron salts	sat	X			X					
Isooctane	100		X			X				X
Isopropanol	100	X			X			X		

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Chemicals	Conc In %	At 20°C			At 60°C			At 100°C		
		GR	MR	PR	GR	MR	PR	GR	MR	PR
Kerosene	100		X							
Lactic acid	10aq	X			X			X		
Lactic acid	90aq	X			X			X		
Lead acetate	sat	X			X					
Linseed oil		X			X			X		
Maleic acid	sat	X			X					
Mercury	100	X			X					
Mercury salts	sat	X			X					
Methanol	100	X			Xb					
Methoxy butyl alcohol	100	X								
Methyl acetate	100	X			Xb					
Methyl bromide	100			X						
Methylene Chloride	100		X			Xb	to X			
Methylethylketone	100	X				X				
Mineral oils	100	X				X				
Mineral water (commercial)	100	X			X					
Monochloroacetic acid	100	X			X					
Nickel salts	sat	X			X					
Nitric acid	50		X				X			
Nitric acid	70			X						
Nitrobenzene	100	X				X				
Nitrogen dioxide gas	conc	X					X			
Oleic acid	100		X			X				X
Oleum	ac			X			X			X
Olive oil		X			X				X	
Oxalic acid	25aq	X			X			X		
Oxalic acid	sat	X				X				X
Oxygen	ac	X				X				
Palmitic acid	100		X				X			
Paraffin	100	X			X					X
Paraffin oil	100		X			X				X
Peanut oil		X			X					
Perchloroethylene	100		X				X			
Petroleum ether	100		X			X				
Phenols	ac	X			X					
Phosphoric acid	80	X			X			X		
Phosphorus oxychloride	100		X			X				
Phthalic acid	50aq	X			X					
Potassium borate	sat	X			X					

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Chemicals	Conc In %	At 20°C			At 60°C			At 100°C		
		GR	MR	PR	GR	MR	PR	GR	MR	PR
Potassium carbonate	sat	X			X					
Potassium chloride	sat	X			X			X		
Potassium dichromate	sat	X			X					
Potassium hydroxide (lye)	50	X			X			X		
Potassium nitrate	sat	X			X					
Potassium permanganate	sat	X			X					
Propane (gaseous)	100	X			X					
Propane (Liquid)	100	X								
Propionic acid	50	X			X					
Propylene glycol	100	X			X					
Pyridine acid	100		X			X				
Sea water	100	X			X			X		
Silicone oil	100	X			X			X		
Sodium acetate	sat	X			X			X		
Sodium benzoate	sat	X			X					
Sodium carbonate	sat	X			X					
Sodium chloride	sat	X			X			X		
Sodium chlorite (Lyes)		X				X				X
Sodium hydrogen carbonate	sat	X			X			X		
Sodium hydroxide (Lye)	50	X			X			X		
Sodium hypochlorite	10aq	X			X					
Sodium hypochlorite	20aq	X				X				
Sodium nitrate	sat	X			X					
Sodium perborate	sat	X			X					
Sodium phosphate	sat	X			X			X		
Sodium silicate	ac	X			X					
Sodium sulphate	sat	X			X			X		
Sodium Sulphide	sat	X			X			X		
Sodium sulphate	sat	X			X					
Sodium thiosulfate	sat	X			X					
Soya oil		X				X				
Starch	100	X			X					
Stearic acid	100	X				X				
Sugar syrups	ac	X			X			X		
Sulfochromic acid				X						
Sulphur	100	X			X			X		
Sulphur dioxide	All	X			X					
Sulfuric acid	50	X			X				X	
Sulfuric acid	98		X				X			

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Chemicals	Conc In %	At 20°C			At 60°C			At 100°C		
		GR	MR	PR	GR	MR	PR	GR	MR	PR
Sulfuryl chloride	100			X						
Tartaric acid	sat	X			X					
Tetrachloroethylene	100		X				X			
Tetrahydrofuran	100		X				X			
Tetralin	100			X			X			
Thionyl chloride	100			X						
Thiophene	100	X				X				
Toluene	100		X				X			
Trichloroacetic acid	100	X			X					
Trichloroethylene	100		X				X			
Tricresylphosphate	100	X				X				
Triethanolamine	100	X								
Turpentine	100			X			X			X
Urea	sat	X			X					
Vaseline		X				X				
Vinegar		X			X					
Vinyl acetate	100	X				X				
Vinyl chloride	100		X							
Wine		X								
Xylene	100			X			X			
Zinc salts	sat	X								

ac: aqueous solutions in all concentrations
b: boiling temperature
sat: aqueous solutions saturated at 20° C
aq: aqueous solutions

Compliance:
Klipspringer articles conform to the best principles of HACCP, are manufactured from FDA compliance materials and are made in accordance with EU regulations 10/2011/EC, 1935/2004/EC, 2023/2006/EC, 579/2011/EC, EU directive 94/43 EEC 2002/72EC, FDA food code 2009. The company works in accordance with the PHB charter issues by FEIBP.

Declaration of compliance – Migration test:
These articles which are intended for direct food contact, migration test have been made according to EU regulation 10/2011/EC.

Suitability for use in Halal operation: These products do not contain animal origin components.

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Professional Hygiene Brushware Charter certificate:

European Brushware Federation

CERTIFICATE

Registration No. # DK-401

FBK
Teknikvej 53
DK-5260 ODENSE S
Denmark

The company FBK has applied and passed all examinations necessary and is entitled to use the PHB logo with

Registration No. # DK-401

for all brushware by the company meeting the requirements of the Professional Hygiene Brushware Charter

This certificate is valid until the end of year 2024
Certificate approved by F.E.I.B.P.
December 2021

Andrew McIlroy
President

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BPA / PFAS Free Statement:

We hereby confirm that the products specified above, to the best of our knowledge, do not contain any BPA or PFAS substances. We recognize the importance of transparency and are committed to providing our customers with safe products.

This certificate was prepared on behalf of Klipspringer Ltd and the information included is to the best of our knowledge correct at the time of writing. Klipspringer offers the information within this document as a guide only, they do not represent any guarantee of the prescribed products in the sense of the legal guaranteed regulations. It is the responsibility of the end user to ensure the items purchased are suitable for the intended application.

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Declaration of compliance in line with Annex 4 10/2011/EC			
Sheena Britton Technical Compliance Manager Klipspringer		Date of Issue	01-10-2023
		Authorised by	S. Britton
		Revision No.	007
		Revised by	H. Smith