



Brooks Sports

Restricted Substances List Manual

Version 7.7

March 2016

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Dear Brooks Partner,

Brooks is committed to operate its business in an environmentally sustainable manner to protect consumers, workers, the environment and the brand image. As part of the commitment, we're pleased to release the Brooks Restricted Substances List (RSL)-Version 7.7 (March 2016), effective from March 2016. The manual, including RSL and compliance guidelines, is intended to help users understand and comply with Brooks requirements. Our Chemical Policy is:

- ⦿ Know and disclose product chemistry
- ⦿ Assess and avoid hazards
- ⦿ Commit to continuous improvement
- ⦿ Support public policies and industry standards

The ultimate goals of Brooks RSL program are:

- ⦿ To ensure products comply with the strictest Global legislation
- ⦿ To avoid or limit the use of all targeted substances in the RSL in all Brooks products
- ⦿ To enable sustainable product innovation

The manual must be shared with all suppliers of Brooks products, including Footwear, Apparel and other products. Each source is required to understand and comply with the prohibitions, limitations and other provisions in Brooks RSL.

Thanks for your cooperation in Brooks RSL Compliance!

Sincerely,

Nathan Vaikun
Sr Director of Global Footwear Sourcing

Brooks Finished Product Restricted Substance List

CAS NO.	Restricted Substance	Brooks Limit	Lab MDL	Test Method and Comments
92-67-1 92-87-5 95-69-2 91-59-8 97-56-3 99-55-8 615-05-4 101-77-9 91-94-1 119-90-4 119-93-7 838-88-0 101-14-4 101-80-4 139-65-1 95-80-7 95-53-4 137-17-7 95-68-1 87-62-7 106-47-8 120-71-8 90-04-0 60-09-3	AZO Dyes (24 kinds) 4-Aminodiphenyl Benzidine 4-Chloro-o-toluidine 2-Naphthylamine o-Aminoazotoluene 2-Amino-4-nitrotoluene 2,4-Diaminoanisole 4,4'-Diamino-diphenylmethane 3,3'-Dichlorobenzidine 3,3'-Dimethoxybenzidine 3,3'-Dimethylbenzidine 3,3'-Dimethyl-4,4'-diaminodiphenylmethane 4,4'-Methylene-bis-(2-chloroaniline) 4,4'-Oxydianiline 4,4'-Thiodianiline 2,4-Toluenediamine o-Toluidine 2,4,5-Trimethylaniline 2,4-Xylidine 2,6-Xylidine p-Chloroaniline p-Cresidine o-Anisidine 4-Amino azobenzene	Not Detected	5ppm	Textile: EN 14362-1:2012 for detection of the use of certain azo colorants accessible with and without extracting the fibres. EN 14362-3:2012 for detection of the use of certain azo colorants, which may release 4-aminoazobenzene. Leather: EN ISO 17234-1:2010 for detection of certain aromatic amines derived from azo colorants. EN ISO 17234-2:2011 for determination of 4-aminoazobenzene.
2475-45-8 2475-46-9 3860-63-7 3179-90-6 12222-75-2 12222-97-8 12223-01-7 61951-51-7 23355-64-8 2581-65-2 730-40-5 13301-61-6 85136-74-9	Disperse Dyes (22 kinds) Disperse Blue 1 Disperse Blue 3 Disperse Blue 26 Disperse Blue 7 Disperse Blue 35 Disperse Blue 102 Disperse Blue 106 Disperse Blue 124 Disperse Brown 1 Disperse Orange 1 Disperse Orange 3 Disperse Orange 37/59/76 Disperse Orange 149	5 mg/L	1mg/L	DIN 54231

CAS NO.	Restricted Substance	Brooks Limit	Lab MDL	Test Method
119-15-3 2832-40-8 6373-73-5 6250-23-3 12236-29-2 54824-37-2 2872-52-8 2872-48-2 3179-89-3	Disperse Dyes (continued) Disperse Yellow 1 Disperse Yellow 3 Disperse Yellow 9 Disperse Yellow 23 Disperse Yellow 39 Disperse Yellow 49 Disperse Red 1 Disperse Red 11 Disperse Red 17	5mg/L	1mg/L	
3761-53-3 569-61-9 632-99-5 1937-37-7 2602-46-2 573-58-0 82-28-0	Carcinogenic Dyes (7 kinds) C.I. Acid red 26 C.I. Basic Red 9 C.I. Basic Violet 14 C.I. Direct Black 38 C.I. Direct Blue 6 C.I. Direct Red 28 C.I. Disperse Orange11	5 mg/L	1mg/L	DIN 54231
7439-92-1 7440-43-9 7439-97-6 7440-36-0	Total Metals (4 kinds) Lead Cadmium Mercury Antimony	Pb 60ppm Cd 100ppm Hg 1ppm Sb 200ppm reference only	Pb 5ppm Cd 5ppm Hg 0.1ppm Sb 10ppm	Total Digestion – Microwave digestion, ICP-OES/MS analysis For Metal Items – Hot Plate digestion
7439-92-1 7440-43-9 7439-97-6 7440-36-0 7440-38-2 7440-50-8 7440-47-3 7440-48-4	Extractable Metals (8 kinds) Lead Cadmium Mercury Antimony Arsenic Copper Chromium Cobalt	Lead (Pb) 0.2ppm Cadmium (Cd) 0.1ppm Mercury (Hg) 0.02ppm Antimony (Sb) 5ppm Arsenic (As) 0.2ppm Copper (Cu) 25ppm Chromium (Cr) 1ppm Cobalt (Co) 4ppm	Lead (Pb) 0.1ppm Cadmium (Cd) 0.1ppm Mercury (Hg) 0.005ppm Antimony (Sb) 0.5ppm Arsenic (As) 0.02ppm Copper (Cu) 5ppm Chromium (Cr) 0.1ppm Cobalt (Co) 0.3ppm	Extraction with synthetic perspiration solution according to EN ISO105 E04, determination using ICP or AAS
18540-29-9	Chromium VI	Not Detected	3ppm	EN ISO 17075 (80°C, 24 hours, <5%RH)
7440-02-0	Nickel - Release	0.5 µg/cm2/week	0.1 µg/cm2/week	Nickel release by EN 1811:2011+A1:2015
50-00-0	Formaldehyde	Kids(<12years) 20ppm Others: 75ppm	20ppm	ISO 14184-1 Leather: ISO 17226-1/-2

CAS NO.	Restricted Substance	Brooks Limit	Lab MDL	Test Method
Various	AP (alkylphenols), APEO (alkylphenol ethoxylates) NP (Nonylphenol) NPEO (Nonylphenol ethoxylates) OP (Octylphenol) OPEO (Octylphenol ethoxylates)	50ppm for AP, 100ppm for APEO	10ppm	Analysis is conducted by HPLC-MS and GC-MS
Various	PFOS (Perfluorooctane Sulfonate) and PFOS metallic salt, halogenide, amide and other derivatives	Must not be used	1 µg/m ²	CEN/TS 15968
Various	PFOA (Perfluorooctanoic acid) and its salts and esters	Must not be used	1 µg/m ²	CEN/TS 15968
9002-86-2	Polyvinyl Chloride (PVC)	Must not be used	10% for FTIR test	Beilstein test plus Fourier Transform-Infrared Spectroscopy
80-05-7	Bis-phenol A (BPA)	Not Detected	1ppm	Analysis is conducted by HPLC/MS
101-77-9 (EC.NO 202-974-4)	4,4'- Diaminodiphenylmethane (MDA)	500ppm	50ppm	Analysis is conducted by LC-MS
62-75-9 55-18-5 621-64-7 924-16-3 100-75-4 930-55-2 59-89-2 614-00-6 612-64-2	Nitrosamines (9 kinds) N-nitrosodimethylamine (NDMA) N-nitrosodiethylamine (NDEA) N-nitrosodipropylamine (NDPA) N-nitrosodibutylamine (NDBA) N-nitrosopiperidine (NPIP) N-nitrosopyrrolidine (NPYR) N-nitrosomorpholine (NMOR) N-nitroso N-methyl N-phenylamine (NMPPhA) N-nitroso N-ethyl N-phenylamine (NEPhA)	0.1ppm	0.01ppm	EN 12868: 1999
87-87-5 25167-83-3	Pentachlorophenol (PCP), its salts, esters Tetrachlorophenol (TeCP)	Must not be used	Textile 0.05ppm Leather 0.1ppm	Recommended test method: LFGB § 64 BVL B82.02.8, GC-ECD analysis (textile/leather)

CAS NO.	Restricted Substance	Brooks Limit	Lab MDL	Test Method
1336-36-3 53469-21-9	Halogenated biphenyls, including Polychlorinated Biphenyls (PCBs)	Must not be used	50ppm	US EPA 3550B/8082A
28553-12-0 117-81-7 117-84-0 26761-40-0 85-68-7 84-74-2 84-75-3 84-69-5 68515-42-4 71888-89-6 117-82-8 605-50-5 776297-69-9 84-66-2 131-18-0 84777-06-0 68515-50-4 84-61-7 various	Phthalates (19 kinds) di-isononyl phthalate (DINP) di(ethylhexyl) phthalate (DEHP) di-n-octyl phthalate (DNOP) di-iso-decyl phthalate (DIDP) butyl benzyl phthalate (BBP) dibutyl phthalate (DBP) di-n-hexyl phthalate (DnHP) Diisobutyl Phthalate (DIBP) 1,2-Benzenedicarboxylic acid, di-C7-11-branched and linear alkyl esters (DHNUP) 1,2-Benzenedicarboxylic acid, di-C6-8-branched alkyl esters, C7-rich (DIHP) Bis(2-methoxyethyl) phthalate (DMEP) Diisopentylphthalate (DIPP) N-pentyl-isopentylphthalate Diethyl phthalate Dipentyl phthalate (DPP) 1,2-Benzenedicarboxylic acid, dipentylester, branched and linear 1,2-Benzenedicarboxylic acid, dihexyl ester, branched and linear Dicyclohexyl phthalate 1,2-benzenedicarboxylic acid, di-C6-10-alkyl esters or mixed decyl and hexyl and octyl diesters	Not Detected for DEHP, BBP and DBP 1,000ppm for DHNUP, DIHP, DMEP, DIPP, N-pentyl-isopentylphthalate DEP only for reference Total 500ppm for others	50ppm	GC-MS analysis CPSC-CH-C1001-09
50-00-0 68-12-2 75-09-2 71-43-2 108-95-2 108-88-3 79-01-6 127-18-4 95-48-7 108-39-4 106-44-5	Volatile Organics (16 kinds) Formaldehyde Dimethyl formamide Dichloromethane Benzene Phenol Toluene Trichloroethylene Tetrachloroethylene Cresol (Methylphenole): o-cresol m-cresol, p-cresol	5ppm for Benzene 10ppm for Phenol 1000ppm for others	5ppm	Headspace GC/MS

CAS NO.	Restricted Substance	Brooks Limit	Lab MDL	Test Method
95-47-6 108-38-3 106-42-3 630-20-6 79-34-5	Volatile Organics (continued) Xylene: o-xylene m-xylene, p-xylene Tetrachloroethane 1,1,1,2-Tetrachloroethane 1,1,2,2-Tetrachloroethane			
56573-85-4 200-268-0 668-34-8 1002-53-5 15231-44-4 2273-43-0 various	Organotin Compounds (7 kinds) Tributyltin (TBT) Bis(tributyltin)oxide (TBTO) Triphenyltin (TPhT) Dibutyltin (DBT) Dioctyltin (DOT) Monobutyltin (MBT) All tri-substituted organotin compounds	Not Detected for TBT, TBTO, TPhT 1ppm for DBT, MBT, DOT 500ppm for others	0.1ppm	Performance-based method of ethanol extraction derivation and analysis by GC-MS or LC-MS, referring to ISO 17353
85535-84-8 59536-65-1 25637-99-4 134237-50-6 134237-51-7 134237-52-8 32534-81-9 32536-52-0 126-72-7 5412-25-9 545-55-1 1163-19-5 115-96-8	Flame Retardants (13 kinds) Chlorinated paraffins (C10 – C13) (SCCP) Polybrominated biphenyls (PBBs) Hexabromocyclododecane (HBCDD) and all major diastereoisomers identified: Alpha-hexabromocyclododecane Beta-hexabromocyclododecane Gamma-hexabromocyclododecane Penta-bromodiphenyl ether (pentaBDE) Octa-bromodiphenyl ether (octaBED) Tris (2,3-dibromopropyl) phosphate (TRIS) Bis (2,3-dibromopropyl) phosphate Tris (1-aziridinyl)-phosphine oxide (TEPA) Decabromodiphenyl ether (DecaBDE) Tris (2-chloroethyl) phosphate	Must not be used	SCCP 50PPM Others 5ppm	Solvent extraction and GS-MS or LC-MS
	Odor test for components and finished products	≤ Grade 2		SNV195 651

CAS NO.	Restricted Substance	Brooks Limit	Lab MDL	Test Method
56-55-3 50-32-8 205-99-2 192-97-2 205-82-3 207-08-9 218-01-9 53-70-3 191-24-2 193-39-5 91-20-3 83-32-9 208-96-8 120-12-7 206-44-0 86-73-7 85-01-8 129-00-0	PAHs (Polycyclic Aromatic Hydrocarbons) 18kinds Benzo(a)anthracene Benzo(a)pyrene Benzo(b)fluoranthene Benzo(e)pyrene (BeP) Benzo(j)fluoranthene(BjFA) Benzo(k)fluoranthene Chrysene Dibenz(a,h)anthracene Benzo(ghi)perylene Indeno(1,2,3-cd)pyrene Naphthalene Acenaphthene Acenaphthylene Anthracene Fluoranthene Fluorene Phenanthrene Pyrene	0.5ppm for the first 10 PAHs (yellow mark), 2ppm for Naphthalene, 10ppm for sum of other 7 PAHs, 10ppm for sum of 18 PAHs	0.2ppm	AFPS GS 2014:01 PAK
93-72-1 93-76-5 309-00-2 57-74-9 72-54-8 72-55-9 50-29-3 60-57-1 72-20-8 76-44-8 1024-57-3 118-74-1 608-73-1 465-73-6 4234-79-1 143-50-0 58-89-9 72-43-5 2385-85-5 72-56-0 82-68-8	Pesticides (36 kinds) 2-(2,4,5-trichlorophenoxy)propionic acid, its salts and compounds 2,4,5-trichlorophenoxyacetic acid, its salts and compounds Aldrin Chlordane Dichloro-diphenyl-dichloro ethane (DDD) Dichloro-diphenyl-dichloro ethylene (DDE) Dichloro-diphenyl-trichloro ethane (DDT) Dieldrin (5) Endrine Heptachlorine Epoxy-heptachlorine Hexachlorobenzene Hexachlorocyclohexane (HCH, all isomers) Isodrin Kelevane Kepone (Chlordecone) Lindane Methoxychlor Mirex Perthane Quintozene			

CAS NO.	Restricted Substance	Brooks Limit	Lab MDL	Test Method
8001-50-1 297-78-9 8001-35-2 99688-47-8 81161-70-8 76253-60-6 116-06-3 6164-98-3 115-32-2 121-75-5 298-00-0 56-38-2 57648-21-2	Pesticides (continued) Strobane Telodrin Toxaphene Halogenated naphthalenes Halogenated diarylalkanes Halogenated diphenyl methanes, including Monomethyl-dibromo-diphenyl methane Monomethyl-dichloro-diphenyl methane Monomethyl-tetrachloro-diphenyl methane Aldicarb Chlordimeform Dicofof Malathion Methyl Parathion Parathion Timiperone (DTTB)	Must not be used	0.5ppm	US EPA 8081A/8151A
77536-66-4 12172-73-5 77536-67-5 12001-29-5 12001-28-4 77536-68-6	Asbestos (6 kinds) Actinolite Amosite Anthrophyllite Chrysotile Crocidolite Tremolite	Must not be used	1%	Microscopic examination; minimum magnification 1-250, attached; ratio of fiber length to diameter is at polarized light filter least 3:1 (industry practice – not specified by the regulation)
2551-62-4 75-46-7 75-10-5 593-53-3 138495-42-8 354-33-6 359-35-3 811-97-2 75-37-6 430-66-0 420-46-2 431-89-0 677-56-5	Fluorinated Greenhouse Gases Sulfur hexafluoride - SF6 Hydrofluorocarbons (HFCs): HFC-23 - CHF3 HFC-32 - CH2F2 HFC-41 - CH3F HFC-43-10mee - C5H2F10 HFC-125 - C2HF5 HFC-134 - C2H2F4 HFC-134a - CH2FCF3 HFC-152a - C2H4F2 HFC-143 - C2H3F3 HFC-143a - C2H3F3 HFC-227ea - C3HF7 HFC-236cb - CH2FCF2CF3	Must not be used	0.1ppm	Headspace GC-MS

CAS NO.	Restricted Substance	Brooks Limit	Lab MDL	Test Method
431-63-0 690-39-1 679-86-7 460-73-1 406-58-6 75-73-0 76-16-4 76-19-7 355-25-9 678-26-2 355-42-0 115-25-3	HFC-236ea - CHF ₂ CHFCF ₃ HFC-236fa - C ₃ H ₂ F ₆ HFC-245ca - C ₃ H ₃ F ₅ HFC-245fa - CHF ₂ CH ₂ CF ₃ HFC-365mfc - CF ₃ CH ₂ CF ₂ CH ₃ Perfluorocarbons (PFCs): Perfluoromethane - CF ₄ Perfluoroethane - C ₂ F ₆ Perfluoropropane - C ₃ F ₈ Perfluorobutane - C ₄ F ₁₀ Perfluoropentane - C ₅ F ₁₂ Perfluorohexane - C ₆ F ₁₄ Perfluorocyclobutane - c-C ₄ F ₈			
1746-01-6 40321-76-4 51207-31-9 57117-31-4 39227-28-6 19408-74-3 57653-85-7 57117-41-6 70648-26-9 72918-21-9 57117-44-9 60851-34-5 35822-46-9 3268-87-9 67562-39-4 55673-89-7 39001-02-0 50585-41-6 109333-34-8 67933-57-7 131166-92-2	Dioxins & Furans Group 1: 2,3,7,8-Tetrachlorodibenzo-p-dioxin 1,2,3,7-Pentachlorodibenzo-p-dioxin 2,3,7,8-Tetrachlorodibenzofuran 2,3,4,7,8-Pentachlorodibenzofuran Group 2: 1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin 1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin 1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin 1,2,3,7,8-pentachlorodibenzofuran 1,2,3,4,7,8-Hexachlorodibenzofuran 1,2,3,7,8,9-Hexachlorodibenzofuran 1,2,3,6,7,8-Hexachlorodibenzofuran 2,3,4,6,7,8-Hexachlorodibenzofuran Group 3: 1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin 1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin 1,2,3,4,6,7,8-Heptachlorodibenzofuran 1,2,3,4,7,8,9-Heptachlorodibenzofuran 1,2,3,4,6,7,8,9-Octachlorodibenzofuran Group 4: 2,3,7,8-Tetrabromodibenzo-p-dioxin 1,2,3,7,8-Pentabromodibenzo-p-dioxin 2,3,7,8-Tetrabromodibenzofuran 2,3,4,7,8-Pentabromodibenzofuran	Sum of Group 1: 1 µg/kg Sum of Group 1 & 2: 5µg/kg Sum of Group 1, 2 & 3: 100 µg/kg Sum of Group 4: 1 µg/kg Sum of Group 4 & 5: 5 µg/kg	0.1 µg/kg	US EPA 8290 – (industry practice – not specified by the regulation)

CAS NO.	Restricted Substance	Brooks Limit	Lab MDL	Test Method
110999-44-5 110999-46-7 110999-45-6 107555-93-1	Dioxins & Furans (continued) Group 5: 1,2,3,4,7,8-Hexabromodibenzo-p-dioxin 1,2,3,7,8,9-Hexabromodibenzo-p-dioxin 1,2,3,6,7,8-Hexabromodibenzo-p-dioxin 1,2,3,7,8-Pentabromodibenzofuran			
	pH value	4.0 – 7.5		Textile: BS EN ISO 3071 Leather: ISO 4045
98-86-2	Acetophenone (only for kids products)	50ppm	10ppm	Extraction with acetone in 60°C for 30mins & GC-MS
617-94-7	2-phenyl-2-propanol (only for kids products)	50ppm	10ppm	Extraction with acetone in 60°C for 30mins & GC-MS
75-12-7	Formamide	1000ppm	2ppm	Extraction with methanol at 70°C & GC-MS; EPA 8260
1336-36-3 53469-21-9	Halogenated biphenyls, including Polychlorinated Biphenyls (PCBs)	Must not be used	50ppm	US EPA 3550B/8082A
	Halogenated terphenols, including Polychlorinated Terphenyls (PCTs)	Must not be used	50ppm	US EPA 8082
121-14-2	2,4-Dinitrotoluene (DNT)	Not Detected	1000ppm	Screening by GC-MS
624-49-7	Dimethyl Fumarate	Must not be used	0.1ppm	GC-MS analysis
90-43-7	o-Phenylphenol (o-PP)	1000ppm	0.5ppm	Extraction with KOH, GCMS

RSL Process & Testing Guidance

All Brooks products must comply with Brooks RSL where applicable. Suppliers/Factories should refer to the table to determine that their products are in compliance with Brooks requirements.

All Brooks supplier/factory must sign Brooks RSL Source Compliance Agreement (**Appendix 2**). The Agreement is to be completed by a senior manager. The Agreement signing is required whenever a new version of Brooks RSL is issued. The signed Agreement means that supplier/factory have understood Brooks RSL and would like to comply with the requirements, including prohibitions and limitations. Finished products factory is responsible for their subcontractors.

Test results will be valid for one year from the RSL test date unless otherwise stated.

All the tests must be done in Brooks Approved lab (**Appendix 1**).

Use of a subcontractor is not allowed unless it has RS confirmation.

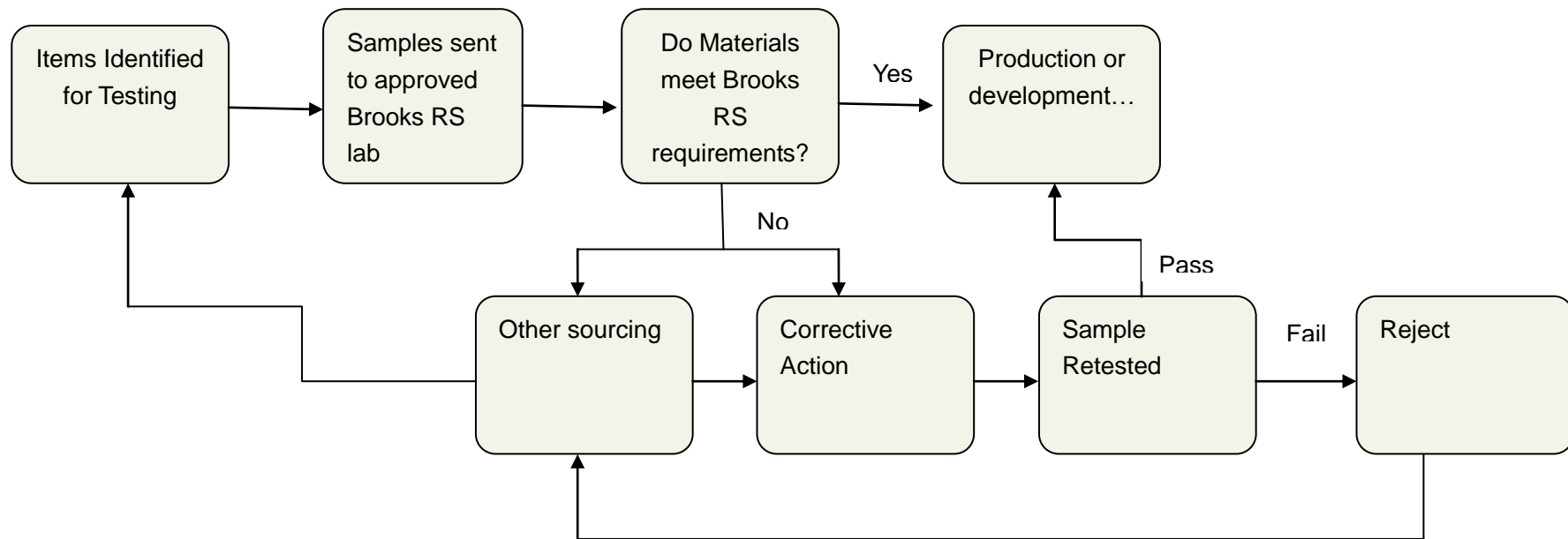
For any failed test, the factory needs to fill in Brooks Corrective Action Form (**Appendix 3**) and implement the corrective action immediately (within one week generally). For repeated failed test, Brooks will reject the material or the vendor.

Products shipped to EU, also need to meet SVHCs requirements (**Appendix 7**).

Products shipped to US, also need to meet Washington's CHCC requirements (**Appendix 8**). Report is required under the Children's Safe Product Act depending on why the chemical is present in the children's product and the amount present.

Any RS consultation, please Email to Victor.song@brooksrunning.com

Brooks RSL Testing Flow



RSL Process & Testing Guidance – Footwear Key Chemical Test List - Footwear

Test items	Natural Fibers	Synthetic Fibers	Blends	Polymer (EVA, TPU, Foam)	Rubber	Natural Leather	Synthetic leather	Ink, Paint, Pigment	Chemical, Solvent, Primer, Adhesive	Metal Items	Paper insole
AZO Dyes	●	●	●			●	●				
Disperse Dyes		●	●								
PCP/ TePC	●		●			●					●
Total Metal (Cd, Pb, Hg)	●	●	●	●	●	●	●	●		●	●
Nickel – Release										●	
Chromium VI						●					
Extractable Antimony		●	●								
Formaldehyde	●	●	●			●	●				●
AP, APEO	●	●	●	●	●	●	●	●	●		
Organotin Compounds				●	●	●	●	●	●		
Phthalates				●	●		●	●	●		
PVC				●							
Formamide				● only EVA, foam							
Nitrosamines					●						
DMFu						●					
PAHs				● only EVA	●						
VOC								●	●		
PFOS/PFOA	○	○	○								

About Key Chemical Test List - Footwear ...

All materials used in Brooks footwear must comply with Brooks RSL. This section gives test requirements for material types, that is “Key Chemical Test List - footwear”. The priority list identifies some high risk parameters for RS check. All materials used in Brooks must be tested once a year as Key Chemical Test List.

PVC, DMF and PFOS must not be used in Brooks footwear.

○ means only for water repellent functions. ● mark must be tested.

AZO Dyes and Disperse Dyes are exempt from white and transparent materials.

VOCs is for solvent-based inks, paints, adhesives and primers only.

RSL Implementation - Footwear

Routine test

During development, RS team will identify materials by color, vendor, ingredient, production origin for RS test. Factory is responsible for test arrangement. It may happen at any time according to development conditions. For new vendors, their materials must be tested as Key Chemical Test List unless otherwise stated. Supplier is responsible for test cost.

For production quality materials, Brooks RS team will develop the material list by color and factory each month. Factory will conduct the test as the monthly list. Supplier is responsible for test cost.

Random test

Brooks reserves the right to randomly select and test at any stage of production. The test samples can be materials, components or finished products. Brooks will pay for the testing. In preproduction trial stage, we'll select some key models for RS inspection. It's prerequisite for shipping.

Test Requirements

For mesh and Pu, **neon and metallic** color should be tested each season although it's been checked within one year. Base colors are checked each year, including red, yellow, blue, black, white. The number of colors and tests can vary by vendors.

For **neon or metallic polymer** (Rubber, EVA, TPU or other), should be tested each season, other colors are once a year.

For **recycled** outsole/midsole polymers, it's necessary to check frequently based on use frequency in order to reduce the risk of contaminants.

Brooks RS team will decide the testing frequency according to any potential risks.

RSL Process & Testing Guidance - Apparel

Key Chemical Test List - Apparel

Test items	Natural Fibers	Synthetic Fibers	Blends	Polymer (EVA, TPU, Foam, RB)	Natural Leather	Synthetic leather	Ink, Pigment	Paint,	Metal Items
AZO Dyes	●	●	●		●	●			
Disperse Dyes		●	●						
Carcinogenic Dyes	●	●	●		●	●			
PCP/ TePC	●		●		●				
Pesticides	●		●						
Total Metal (Cd, Pb, Hg)	●	●	●	●	●	●	●		●
Nickel – Release									●
Chromium VI					●				
Extractable Metals	●	●	●						
Formaldehyde	●	●	●		●	●			
AP, APEO	●	●	●	●	●	●	●		
Organotin Compounds				●	●	●	●		
Phthalates				●		●	●		
PVC				●					
VOCs							●		
Ph value	●	●	●						
PFOS/PFOA	○	○	○						
Flame Retardants	○	○	○						

About Key Chemical Test List – Apparel ...

All materials used in Brooks apparel must comply with Brooks RSL. This section gives test requirements for material types, that is “Key Chemical Test List - apparel”. The priority list identifies some high risk parameters for RS check. All materials used in Brooks must be tested once a year as Key Chemical Test List.

PVC, Flame Retardants, Pesticides and PFOS must not be used in Brooks apparel.

○ means only for water repellent functions or the material treated by flame retardants. ● mark must be tested.

AZO Dyes, Carcinogenic Dyes and Disperse Dyes are exempt from white and transparent materials.

VOCs is for solvent-based inks, paints, and primers only.

For fabrics, **neon and metallic** color should be tested each season although it's been checked within one year. Base colors are checked each year, including red, yellow, blue, black, white. The number of colors and tests can vary by vendors.

RSL Implementation - Apparel

Routine test

Each development season, apparel team will develop the material list by color, factory and vendor that'll be used in all styles. Based on the list, RS team will identify materials by color, vendor, ingredient, production origin for RS test. Factory is responsible for test arrangement. For new vendors, their materials must be tested as Key Chemical Test List unless otherwise stated. Supplier is responsible for test cost.

For repeated orders, all materials are subject to a yearly test. Supplier is responsible for test cost.

Random test

Brooks reserves the right to randomly select and test at any stage of production. The test samples can be materials, components or finished products. Brooks will pay for the testing.

Manufacturing Restricted Substances List

CAS NO.	Restricted Substance	Common Potential Uses
Class I and II Ozone Depleting Substances	Chlorofluorocarbon-11 (CFC-11) Chlorofluorocarbon-12 (CFC-12) Chlorofluorocarbon-13 (CFC-13) Chlorofluorocarbon-111 (CFC-111) Chlorofluorocarbon-112 (CFC-112) Chlorofluorocarbon-113 (CFC-113) Chlorofluorocarbon-114 (CFC-114) Chlorofluorocarbon-115 (CFC-115) Chlorofluorocarbon-211 (CFC-211) Chlorofluorocarbon-212 (CFC-212) Chlorofluorocarbon-213 (CFC-213) Chlorofluorocarbon-214 (CFC-214) Chlorofluorocarbon-215 (CFC-215) Chlorofluorocarbon-216 (CFC-216) Chlorofluorocarbon-217 (CFC-217) Carbon Tetrachloride (Tetrachloromethane) Halon-1211 Halon-1301 Halon-2402 Methyl Bromide Methyl Chloroform (1,1,1-Trichloroethane) Hydrochlorofluorocarbon-21 (HCFC-21) Hydrochlorofluorocarbon-22 (HCFC-22) Hydrochlorofluorocarbon-31 (HCFC-31) Hydrochlorofluorocarbon-121 (HCFC-121) Hydrochlorofluorocarbon-122 (HCFC-122) Hydrochlorofluorocarbon-123 (HCFC-123) Hydrochlorofluorocarbon-124 (HCFC-124) Hydrochlorofluorocarbon-131 (HCFC-131) Hydrochlorofluorocarbon-132 (HCFC-132) Hydrochlorofluorocarbon-133 (HCFC-133) Hydrochlorofluorocarbon-121 (HCFC-121) Hydrochlorofluorocarbon-141 (HCFC-141) Hydrochlorofluorocarbon-142 (HCFC-142) Hydrochlorofluorocarbon-221 (HCFC-221) Hydrochlorofluorocarbon-222 (HCFC-222) Hydrochlorofluorocarbon-223 (HCFC-223) Hydrochlorofluorocarbon-224 (HCFC-224)	Solvent Cleaner

CAS NO.	Restricted Substance	Common Potential Uses
	Hydrochlorofluorocarbon-225 (HCFC-225) Hydrochlorofluorocarbon-226 (HCFC-226) Hydrochlorofluorocarbon-231 (HCFC-231) Hydrochlorofluorocarbon-232 (HCFC-232) Hydrochlorofluorocarbon-233 (HCFC-233) Hydrochlorofluorocarbon-234 (HCFC-234) Hydrochlorofluorocarbon-235 (HCFC-235) Hydrochlorofluorocarbon-241 (HCFC-241) Hydrochlorofluorocarbon-242 (HCFC-242) Hydrochlorofluorocarbon-243 (HCFC-243) Hydrochlorofluorocarbon-244 (HCFC-244) Hydrochlorofluorocarbon-251 (HCFC-251) Hydrochlorofluorocarbon-252 (HCFC-252) Hydrochlorofluorocarbon-253 (HCFC-253) Hydrochlorofluorocarbon-261 (HCFC-261) Hydrochlorofluorocarbon-262 (HCFC-262) Hydrochlorofluorocarbon-271 (HCFC-271)	
84-74-2	Di-n-butyl Phthalates (DNP)/ Phthalic Acid etc.	Plasticizers, solvents
71-43-2	Benzene/ Benzol/ phenyl hydride	Solvent cleaner
101-14-4	4,4-methylenebis (2-chloraniline)/ MOCA	Press Pad
872-50-4	n-methyl pyrrolidone/ NMP/1-methyl-2-pyrrolidinone	Solvent cleaner
110-54-3	n-hexane	Solvent cleaner
75-35-4	1,1-Dichloroethylene	Solvent cleaner
79-00-5	1,1,2-Trichloroethane/ Vinyl trichloride	Solvent cleaner
67-66-3	Trichloromethane/ Chloroform	Solvent cleaner
1330-20-7	Xylene and its all isomers/ Ethylbenzene, o,m,p-xylene	Solvent in primers, adhesives, paints and inks
1319-77-3	Cresol/ Cresylic Acid	Nylon and plastic primers and resins
108-39-4	m – cresol	
95-48-7	o – cresol	
106-44-5	p - cresol	
127-19-5	N,N-Dimethylacetamide/ DMAC	Solvent in primers, adhesives and resins

67-68-5	Dimethyl sulfoxide/DMSO	Solvent cleaner
68-12-2	Dimethyl formamide/ DMF	Solvent cleaner
111-76-2	Ethylene glycol monobutyl ether/ EGBE/ Butyl cellusolve	Solvent cleaner
50-00-0	Formaldehyde	Solvent cleaner, anti-shrinkage resin, mold inhibitor
75-09-2	Methylene Chloride/ Dichloromethane	Solvent cleaner
108-95-2	Phenol/ Carboic acid/ phenyl alcohol	Solvent in primers, adhesives and resins for nylon and plastic
127-18-4	Tetrachloroethylene/ Perchloroethylene/ PERC	Solvent cleaner
71-55-6	1,1,1-trichloroethane/1,1,1-TCA, methyl chloroform	Solvent cleaner
108-88-3	Toluene/ Methylbenzene	Solvent in primers, adhesives, paints and inks
584-84-9	2,4-Toluene diisocyanate/ TDI	Activator in some polyurethane foams
91-08-7	2,6-Toluene diisocyanate/TDI	Activator in some polyurethane foams
79-01-6	Trichloroethylene/ TCE/ trichlorethene	Solvent cleaner

The Manufacturing Restricted Substance List applies to the factories that manufacture Brooks finished products. Those chemicals listed, regardless of concentration, should not be intentionally introduced into manufacturing process, especially where there are substitutes for them.

Every factory must document any chemicals used in the manufacturing process on Brooks Chemical Register Form. Chemicals on the form must meet Brooks RSL requirements. Chemicals not documented on the form can't be used in footwear process. Each chemical must have complete MSDS.

Each chemicals in outsole/midsole formulas must be registered in the Chemical form.

Each ink, primer, adhesive, paint must be documented in the Chemical Form.

Packaging Restricted Substance Requirements

A. Definition of Packaging and Packaging Materials

Packaging as defined by the Packaging and Packaging and Packaging Waste Directive 94/62/EC (as amended by 2004/12/EC) and the CONEG (the Coalition of Northeastern Governors) model legislation includes, but is not limited to:

- Hang Tags
- Shoes boxes
- Swifttachs
- Clamshells
- Labels (UPC, case lot and carton)
- Hangers
- Retail, Gift and Specialty Boxes
- Bags and Polybags
- Corrugated Cartons
- Shipping Pallets
- Slip Sheets
- Tissue Paper
- Foam
- Size Strips
- Inserts
- Tape

EU Directive 94/62/EC (as amended by 2004/12/EC) defines packaging as “all products made of any materials of any nature to be used for the containment, protection, handling, delivery and presentation of goods, from raw materials to processed goods, from the producer to the user or the consumer. Non-returnable items used for the same purposes shall also be considered to constitute packaging.”

B. Packaging Restricted Substance List and requirements

All packaging and packaging components must comply, in all respects, to the requirements for heavy metals content as stated in Article 11 of the European Union’s Packaging and Packaging Waste Directive 94/62/EC (as amended by 2004/12/EC) and the CONEG model legislation. That is, the sum of the concentration levels of Cadmium, Mercury, Lead and Hexavalent Chromium present in packaging or packaging components shall not exceed 100ppm.

C. Dangerous Substances

All packaging and packaging components using chemicals must be accompanied with a MSDS.

D. Suppliers Responsibility

Suppliers must maintain a formal confirmation of conformity which demonstrates compliance with the heavy metal standards consistent with Directive 94/62/EC and CEN/TR 13695-1:2004. All suppliers are required to minimize the use of any “dangerous substances” in accordance with EN 13428: 2004 (the methodology is fully explained in CEN/TR 13695-1:2004).

Reference for “dangerous” substances : <http://www.kemi.se/nclass/default.asp>

Complete list of “N” substances can be purchased at: <http://www.ellispub.com/index.php?menu=products&site=dangerous>

Suppliers are also responsible for maintaining testing schedule and worksheet for packaging materials that are supplied to BROOKS. Please reference the spreadsheet called Brooks PRSL Schedule and Worksheet.XLS.

E. Testing Requirements:

- a. 3rd party testing will be required 2 weeks upon first production of a new design or specifications.
- b. After the date of the first third party test, testing can be conducted once every two years.
- c. All testing costs will be responsibility of the supplier unless defined differently by Brooks.
- d. Brooks policy is to prohibit PVC, BHT and any active packaging in packaging components.
- e. Metals, Formaldehyde and odor must be tested for all the packaging materials.
- f. PVC and Phthalates are for plastic packaging only. Brooks reserves the right to check other test parameters.
- g. Packaging supplier should fill in the Brooks Packaging Supplier Testing Schedule Worksheet (**Appendix 6**) when they do the routine test.

Packaging Restricted Substance List

CAS NO.	Restricted Substance	Brooks Limit	Lab MDL	Test Method
7439-92-1 7440-43-9 7439-97-6 18540-29-9	Metals Lead Cadmium Mercury Chromium VI	Total sum of all metals: 100ppm	5ppm each	Microwave digestion with nitric acid, analysis by ICPMS
28553-12-0 117-81-7 117-84-0 26761-40-0 85-68-7 84-74-2 84-69-5	Phthalates Di-isononyl phthalate (DINP) Di(ethylhexyl) phthalate (DEHP) Di-n-octyl phthalate (DNOP) Di-iso-decyl phthalate (DIBP) Butyl benzyl phthalate (BBP) Dibutyl phthalate (DBP) Di-isobutyl phthalate (DIBP)	Not Detected for DEHP, BBP and DBP Total 500ppm for others	50ppm	GC-MS analysis CPSC-CH-C1001-09
9002-86-2	(Polyvinyl Chloride) PVC	Must not be used	10% for FTIR test	Beilstein test plus Fourier Transform-Infrared Spectroscopy
80-05-7	Bis-phenol A (BPA)	Not Detected	1ppm	Analysis is conducted by HPLC/MS
	Butylhydroxytoluene (BHT)	Not Detected		Industry practice – not specified by the regulation
50-00-0	Formaldehyde	75ppm	20ppm	ISO 14184-1 Leather: ISO 17226-1
624-49-7	Dimethyl Fumarate	Must not be used	0.1ppm	GC-MS analysis
	Active packaging	Not Detected		Visual confirmation

Appendix 1: Brooks Approved Laboratories

Lab	Address	Contact
Intertek - GZ	Intertek South China, E201, No.7-2, Caipin Road, Guangzhou Science City, GETDD Guangzhou. 510663	Stefanie Stefanie.huang@intertek.com Tel: 86-20-82139019
Intertek - Vietnam	Intertek Vietnam, 1 st Floor, E.Town E.W Building, 364 Cong Hoa, Ward 13, Tan Binh District, HCM City	Thao Le Thao.le@intertek.com Tel: 84-8 62971099-ext 154
CTI - SZ	Centre Testing International Corporation, Build C, Hongwei Industrial Zone, Baoan 70 District, Shenzhen China, 518101	Simon Simon.peng@cti-cert.com Tel:86-755-33683434; Chris Chris.zhu@cti-cert.com Tel: 86-13922258337
TUV - GZ	TUV SUD China 5F, Communication Building, 163 Pingyun Rd, Huangpu Ave. West Guangzhou 510656 P.R. China	Jay Jay.guo@tuv-sud.cn Tel: 86-20-38153468
TUV - Vietnam	Level 3 and 4, Bohemia Saigon Building, Lot III – 26, 19/5A Street, Industry Group III, Tan Binh Industrial Zone, Tay Thanh Ward, Tan Phu District, HCMC, Vietnam	S. Sathishkumar S.Sathishkumar@tur-sud.vn Tel: 84-932 664 822
SGS - HK	SGS Hong Kong Ltd. 4/F On Wui Centre, 25 Lok Yip Road, Fanling, N.T., Hong Kong	Sarah Sarah-sh.wang@sgs.com Tel: 852-22048348
SGS - GZ	SGS – CSTC Guangzhou Branch 198 Kezhu Road, Sciencetech Park, Guangzhou Economic & Technology Development District, Guangzhou, China 510663	Kitty Zhang Kitty.Zhang@sgs.com Tel: 86-20-82155601
SGS - Vietnam	Lot III/21, 19/5A Street, Industrial Group III, Tan Binh Industrial Zone, Tay Thanh Ward, Tan Phu District, Ho Chi Minh City, Vietnam	Ngan Thai Ngan.Thai@sgs.com Tel: 84-8 38160999

Each Brooks Approved laboratory is global testing house. They have different branch or lab in different area and country. If you select other branch which is not listed, pls contact Victor – Victor.Song@brooksrunning.com .

Appendix 2: Brooks Sports Inc Restricted Substances List Source Compliance Agreement

- We received, read, and fully understand Brooks Sports' Restricted Substances List (RSL), including its prohibitions and limitations.
- Compliance with the RSL is a condition to, and incorporated in, each and every order placed by Brooks Sports. Each shipment constitutes our warranty that the goods shipped fully comply with the RSL.
- We understand and agree that every order Brooks Sports gives us is in reliance on this agreement.
- We certify that each current and future material, part, product, and other goods that we supply or otherwise deliver to Brooks Sports meet, and will continue to meet, each specification of the RSL.

The undersigned is an owner, director, officer or managing agent, authorized to agree to and sign this declaration on behalf of the company identified below:

Company Name: _____

Contact Name: _____

Position: _____

Address: _____

Phone Number: _____

Email address: _____

Signature: _____

Date: _____

Appendix 3: Brooks RSL Corrective Action Register Form

Supplier Name & address:	Material/Component/Product description:	Color tested:	Laboratory tested:
Contact person name, phone & email:	Test Report No & Date tested:	Failure parameter & result:	Brooks Requirements:
Factory Supplied to & Quantity Supplied:			

Why is this chemical used in your process?

Were you aware that this chemical was in the Brooks RSL?

What is your corrective action plan & schedule, including how to prevent failures in future, the material replacement or production process change to ensure Brooks RSL compliance?

Who will be responsible to manage the action plan and communicate back to Brooks, including material vendor and related factories?

Signature:

Date:

Submit form to: victor.song@brooksruntime.com

By signing this form, the material supplier and related factories acknowledge that their material or process has been found to be non-compliant to Brooks RSL and they'll implement the corrective action. Supplier or factory will be responsible for retesting cost to make sure the corrective action is being sustained.

Appendix 4: Brooks Test Request Form

Test Lab:		Submit Date:	
<input type="checkbox"/> Footwear	<input type="checkbox"/> Accessory & gear	<input type="checkbox"/> Apparel	
Supplier Information			
Vendor Name:			
Supplier Address:			
Contact Person:		Email:	
TEL:		FAX:	
Invoice to:			
Sample Information			
Sample Description:		Color:	
Finished Product Factory Name:			
Product Category <input type="checkbox"/> Adults <input type="checkbox"/> Kids			
Testing Information (Material Test Package)			
<input type="checkbox"/> Natural Fibers	<input type="checkbox"/> Synthetic Fibers	<input type="checkbox"/> Blends	
<input type="checkbox"/> Polymer	<input type="checkbox"/> Rubber	<input type="checkbox"/> Natural Leather	
<input type="checkbox"/> Synthetic Leather	<input type="checkbox"/> Ink, Paint & Pigment	<input type="checkbox"/> Chemical, Solvent adhesive & Primer	
<input type="checkbox"/> Paper Insole	<input type="checkbox"/> Packaging		
Testing Information (Individual Test)			
<input type="checkbox"/> AZO Dyes	<input type="checkbox"/> Disperse Dyes	<input type="checkbox"/> Carcinogenic Dyes	
<input type="checkbox"/> PCP/TePC	<input type="checkbox"/> Total Metals	<input type="checkbox"/> Extractable Metals	
<input type="checkbox"/> Chromium VI	<input type="checkbox"/> Nickel - Release	<input type="checkbox"/> Antimony	
<input type="checkbox"/> Formaldehyde	<input type="checkbox"/> AP, APEO	<input type="checkbox"/> Organotin Compounds	
<input type="checkbox"/> Phthalates	<input type="checkbox"/> PVC	<input type="checkbox"/> Nitrosamines	
<input type="checkbox"/> DMF	<input type="checkbox"/> PAHs	<input type="checkbox"/> VOCs	
<input type="checkbox"/> PFOS, PFOA	<input type="checkbox"/> Flame Retardants	<input type="checkbox"/> Ph value	
<input type="checkbox"/> Pesticides	<input type="checkbox"/> Acetophenone	<input type="checkbox"/> 2-phenyl-2-propanol	
Test Type: <input type="checkbox"/> First Test <input type="checkbox"/> Retest (Previous Report No.: _____)			
Service Requested (Working days start at sample receipt) <input type="checkbox"/> Regular: 5 working days <input type="checkbox"/> Express: 3 working days (surcharge)		Remark: All test reports should be copied to Victor.song@brooksrunning.com	

Appendix 6: BROOKS Packaging Supplier Testing Schedule Worksheet

Restrictions for printed and unprinted materials:

Packaging Supplier:	
Address:	
Contact:	
Signature:	

Packaging SKU	Material Description	Third Party Test Date	Internal Test Date	Packaging SKU Expire Date

Appendix 7: SVHCs list acc. To REACH – Annex I (see the link)

<http://echa.europa.eu/web/guest/candidate-list-table>