



## Costco Smart Screening Protocol for Packaging Material - Version 21

**Scope:** This protocol should be used for these item types: **Packaging Materials for NON-FOOD category.**

**Important Note:**

Costco Wholesale Protocols are the property of Costco Wholesale and are not to be used unless approved by Costco Wholesale Non-Foods QA. This Costco Protocol is to only be used by APPROVED Costco Labs that have been approved specifically for this protocol (listed below this statement). Labs approved for this protocol are not always approved for every Costco Wholesale protocol. Please reference other protocols to ensure lab approval prior to use. Costco will reject any results if testing is conducted by a lab not listed below.

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TEST CODE	TESTED PROPERTY	REQUIREMENT	RESULTS		COMMENTS
			Pass	Fail	
Chemical Screening for packaging materials					
Analysis is based on GC, LC, IC, ICP, with various detection techniques and UV	REACH SVHC	Substances of Very High Concern (SVHC) will be published and updated by the European Chemical Agency periodically; Suppliers should follow the most updated version from the agency (http://echa.europa.eu/) to monitor their material supply chain in the manufacturing process. A chemical is required to be registered under REACH if it is manufactured or imported into the EU at or above 1 ton per year and contained in the product above 0.1% by weight. The registration dossier must contain the hazard information on the chemical and where applicable, an assessment of the risks that the use of the substance may pose and how these risks should be controlled.  Costco requires all products to not exceed the 0.1% limit for any SVHC on the Candidate List. Suppliers are required to check the SVHC Candidate List for any updates regardless if they are listed below to ensure compliance. Documentation or testing is required by Costco to show compliance to this requirement.			
Total Cd, Cr, Pb & Hg: DIN EN 16711-1:2016, analysis by ICP-OES or ICP-MS  Cr(VI): Metal: IEC 62321-7-1:2015, analysis by UV/VIS Cr(VI): Natural leather and natural materials: EN ISO 17075-1:2017, analysis by UV/VIS. Confirmation test was performed by EN ISO 17075-2:2017, analysis was conducted by HPLC-DAD or IC-UV Cr(VI): All other materials: IEC 62321-7-2:2017, analysis by UV/VIS	Total Heavy Metals for Packaging Materials	<b>Costco limit:</b> Sum of Lead, Cadmium, Mercury & Chromium VI: 100 mg/kg  <b>US, EU &amp; UK</b> Sum of Lead, Cadmium, Mercury & Chromium VI: 100 mg/kg			
All materials except leather: EN ISO 14362-1:2017, analysis by GC-MS/HPLC-DAD / EN ISO 14362-3:2017, analysis by GC-MS/HPLC-DAD  Leather: EN ISO 17234-1:2020, analysis by GC-MS/HPLC-DAD / EN ISO 17234-2:2011, analysis by GC-MS/HPLC-DAD	Azo-amines and Arylamine Salts  For dyed / colored materials (non-white) only.  Applicable on natural fibers, blended fibers, synthetic fibers, natural materials (including paper and cardboard), natural leather, synthetic coated fabric	20 ppm (each)			
<b>AP:</b> Textile and Leather: EN ISO 21084:2019, analysis by HPLC-MS All other materials: Solvent extraction by THF, analysis by HPLC-MS  <b>APEO:</b> Leather: EN ISO 18218-1:2015, analysis by HPLC-MS All other materials: EN ISO 18254-1:2016, analysis by HPLC-MS	Alkylphenol (AP) & Alkylphenol Ethoxylates (APEOs)  Applicable on natural fibers, blended fibers, synthetic fibers, coatings, dyes & prints, natural materials (including paper and cardboard), polymers, plastics, foams, natural rubber and synthetic rubber, glue, natural leather, synthetic coated fabric	<b>Costco limit:</b> Sum of Alkylphenols: 100 mg/kg Sum of Alkylphenol Ethoxylates: 100 mg/kg			
Solvent extraction by THF, analysis by HPLC-MS	Bisphenol A (BPA), Bisphenol S (BPS), Bisphenol F (BPF), Bisphenol-AF (BPAF) and Bisphenol B (BPB)  Applicable on blend fibers, synthetic fibers, coatings, dyes & prints, natural materials (including paper and cardboard), plastic tapes, polycarbonate, recycled plastic cases, natural leather, synthetic coated fabric	<b>Costco limit:</b> BPA: 1 mg/kg (for receipt paper); Information only (for other materials)  BPS/BPF/BPAF/BPB: Information only  <b>Washington WAC 173-337-114:</b> <b>Shall not contain more than 200 mg/kg Bisphenols for thermal paper</b>  <b>Shall not contain intentionally added bisphenols (for thermal paper).</b>  <b>Note:</b> Ecology presumes the detection of bisphenol concentrations above 200 ppm indicate intentionally added bisphenols.			



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			Pass	Fail	
ASTM D4275:2017, Analysis by GC-MS	Butylhydroxytoluene (BHT)  Applicable on polybags	<b>Costco limit:</b> 25 mg/kg			
ISO 16186:2021, analysis with GC/MS	Dimethylfumurate (DMFu)  Applicable to silica gel packets, foam packaging, leather	<b>Costco limit:</b> 0.1 mg/kg			
Wood: EN 717-3:1996, analysis by UV/VIS  Paper: DIN EN 645:1994 and EN 1541:2001, analysis by UV/VIS  Textiles, Finishings, Dyes, Inks & Coatings: EN ISO 14184-1:2011, analysis by UV/VIS  Leather: EN ISO 17226-1:2019, analysis by HPLC-DAD / EN ISO 17226-2:2019, analysis by UV/VIS	Formaldehyde  Applicable to natural fibers, blended fibers, synthetic fibers, coatings, dyes & prints, natural materials (including paper and cardboard), rubber, glue, natural leather, synthetic coated fabric  Not applicable to composite wood	<b>Costco limit:</b> 150 mg/kg			
EN ISO 22744-1:2020, analysis by GC-MS	Organotin  Applicable to coatings, dyes & prints, polymers, plastics, foams, natural rubber & synthetic rubber, glue, natural leather, synthetic coated fabric	<b>Costco limit:</b> DBT / DOT / MBT / TCyT / TMT / TOT / TPT: 1 mg/kg (Each) TBT / TPhT: 0.5 mg/kg (Each)			
CPSC-CH-C1001-09.4, analysis with GC-MS	Phthalates  Applicable to high risk packaging material including coating, plastic, printed textile, PU/Synthetic leather, composited wood, glue and adhesive	<b>Costco limit:</b> 500 mg/kg (Each) 1000 mg/kg (Sum)			
CPSC-CH-C1001-09.4, analysis with GC-MS	Ortho-Phthalates - TPCH  Applicable to high risk packaging material including coating, plastic, printed textile, PU/Synthetic leather, composited wood, glue and adhesive	<b>Costco Limit:</b> 100 mg/kg (sum)			
In house method, Analysis by GC-MS	Polychlorinated Biphenyls (PCB)	<b>Costco limit:</b> 50 mg/kg			
GC-FID/MS or HPLC-GC-FID analysis	Mineral oil aromatic hydrocarbons (MOAH) and mineral oil saturated hydrocarbons (MOSH) content  (Applicable to ink materials that will be applied to packaging materials)  (For French market only)	Decree of April 13, 2022, specifying the substances contained in mineral oils whose use is prohibited on packaging and for printing intended for the public Official Journal of the French Republic, Number 102, May 3, 2022.  By January 1, 2023  MOAH consisting of 1 to 7 aromatic rings: ≤ 1.0%  By January 1, 2025  1) MOAH consisting of 1 to 7 aromatic rings:  a) ≤ 0.1% and b) ≤ 1 ppm MOAH compounds containing 3 to 7 aromatic rings  2) MOSH consisting of 16 to 35 carbon atoms: ≤ 0.1%  Note : - In lieu of testing, guarantee letter can be submitted			

**IMPORTANT NOTICE:** Please review the Actual Products against the updated Requirements/Regulation. Prior to testing and communicate with clients if additional test required. This protocol is the basic guidelines to follow and does not replace the content of the standard.



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TEST CODE	TESTED PROPERTY	REQUIREMENT	RESULTS		COMMENTS
			Pass	Fail	

Note: It is the Vendor's responsibility to ensure that the products comply with all local laws, regulations and ordinances of Countries and States where products will be sold. A Pass Lab test result does not constitute a certification that a vendor's products meet all legal requirements. It is the vendor's responsibility to manufacture their items to comply with all applicable laws and in conformance with the purchase order terms and conditions.

^ For US order, refer to protocol HL-1001 for additional requirement under Props 65



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			Pass	Fail	

PFAS - Refer to Protocol HL - 1011



## Costco Smart Screening Protocol for Packaging Material - Version 21

Scope: This protocol should be used for these item types: Packaging Materials for General Textile Apparel, Accessories, and Home Textile.

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### Chemical List:

#### 1. EU REACH Substances of Very High Concern (SVHC):

No.	Chemical Name	CAS Number
1	Triethyl arsenate	15606-95-8
2	Anthracene	120-12-7
3	4,4'-Diaminodiphenyl methane (MDA)	101-77-9
4	Dibutyl phthalate (DBP)	84-74-2
5	Cobalt dichloride	7646-79-9
6	Diarsenic pentaoxide	1303-28-2
7	Diarsenic trioxide	1327-53-3
8	Sodium dichromate	7789-12-0(1), 10588-01-9(2)
9	5-tert-butyl-2,4,6-trinitro-m-xylene (musk xylene)	81-15-2
10	Bis (2-ethylhexyl) phthalate (DEHP)	117-81-7
11	Hexabromo cyclododecane (HBCDD) and all major diastereoisomers identified as - HBCDD b - HBCDD g - HBCDD	3194-55-6(3), 25637-99-4(4), 134237-50-6, 134237-51-7, 134237-52-8
12	Alkanes, C10-13, chloro (Short ChainChlorinated Paraffins) (SCCP)	85535-84-8
13	Bis(tributyltin)oxide (TBTO)	56-35-9
14	Lead hydrogen arsenate	7784-40-9
15	Benzyl butyl phthalate (BBP)	85-68-7
16	2,4-Dinitrotoluene	121-14-2
17	Anthracene oil	90640-80-5
18	Anthracene oil, anthracene paste, distn. Lights	91995-17-4
19	Anthracene oil, anthracene paste, anthracene fraction	91995-15-2
20	Anthracene oil, anthracene-low	90640-82-7
21	Anthracene oil, anthracene paste	90640-81-6
22	Diisobutyl phthalate (DiBP)	84-69-5
23	Aluminosilicate, Refractory Ceramic Fibres	650-017-00-8(index no.)
24	Zirconia Aluminosilicate, Refractory Ceramic Fibres	650-017-00-8(index no.)
25	Lead chromate	7758-97-6
26	Lead chromate molybdate sulfate red (C.I. Pigment Red 104)	12656-85-8
27	Lead sulfochromate yellow (C.I. PigmentYellow 34)	1344-37-2
28	Acrylamide	79-06-1
29	Tris(2-chloroethyl) phosphate	115-96-8
30	Coal tar pitch, high temperature	65996-83-2
31	Trichloroethylene	79-01-6
32	Boric acid	10043-35-3 /11113-50-1
33	Disodium,tetraborate,anhydrous	1330-43-4, 12179-04-3, 1303-96-4
34	Tetraboron disodium heptaoxide, hydrate	12267-73-1
35	Sodium chromate	7775/11/3
36	Potassium chromate	7789-00-6
37	Ammonium dichromate	7789/9/5
38	Potassium dichromate	7778-50-9
39	Cobalt(II) diacetate	71-48-7
40	Cobalt(II) carbonate	513-79-1
41	Cobalt(II) dinitrate	10141-05-6
42	Cobalt(II) sulphate	10124-43-3
43	2-Ethoxyethanol	110-80-5
44	2-Methoxyethanol	109-86-4
45	Chromium trioxide	1333-82-0
46	Acids generated from chromium trioxide and their oligomers: Chromic acid and Dichromic acid	7738-94-5 13530-68-2
47	2-ethoxyethyl acetate	111-15-9
48	Strontium chromate	7789/6/2
49	1,2-Benzenedicarboxylic acid, di-C7-11-branched and linear alkyl esters (DHNUP)	68515-42-4
50	Hydrazine	7803-57-8, 302-01-2
51	1-methyl-2-pyrrolidone	872-50-4
52	1,2,3-trichloropropane	96-18-4
53	1,2-Benzenedicarboxylic acid,di-C6-8-branched alkyl esters, C7-rich (DIHP)	7188-89-6
54	Lead styphnate	15245-44-0
55	Lead diazide, Lead azide	13424-46-9
56	Lead dipicrate	6477-64-1
57	Phenolphthalein	77-09-8
58	2,2'-Dichloro-4,4'-methylenedianiline (MOCA)	101-14-4
59	N,N-dimethylacetamide (DMAC)	127-19-5
60	Trilead diarsenate	3687-31-8
61	Calcium arsenate	7778-44-1
62	Arsenic acid	7778-39-4
63	Bis(2-methoxyethyl) ether	111-96-6
64	1,2-Dichloroethane	107-06-2
65	4-(1,1,1,3,3-Tetramethylbutyl)phenol; 4-tert-octyl phenol	140-66-9
66	2-Methoxyaniline; o-Anisidine	90-04-0
67	Bis(2-methoxyethyl) phthalate	117-82-8
68	Formaldehyde, oligomeric reaction products with aniline (technical MDA)	25214-70-4
69	Pentazinc chromate octahydroxide	49663-84-5
70	Potassium hydroxyoctaoxodizincatedichromate	11103-86-9

71	Dichromium tris(chromate)	24613-89-6
72	1,2-bis(2methoxy-ethoxy) ethane (TEGDME, triglyme)	112-49-2
73	1,2-dimethoxyethane; ethylene glycol dimethyl ether (EGDME)	110-71-4
74	4,4'-bis(dimethylamino)-4'-(methyl-amino)trityl alcohol (C.I. Solvent Violet 8)	561-41-1
75	4,4'-bis(dimethylamino) benzophenone(Michler's ketone)	90-94-8
76	[4-[[4-anilino-1-naphthyl][4-(dimethylamino)phenyl]methylene]cyclohexa-2,5-dien-1-ylidene] dimethylammonium chloride (C.I. Basic Blue 26)	2580-56-5
77	N,N,N',N'-tetramethyl-4,4'-methylenedianiline(Michler's base)	101-61-1
78	o,o-Bis[4-(dimethylamino)phenyl]-4'-(phenylamino)naphthalene-1-methanol (C.I. Solvent Blue 4)	6786-83-0
79	Diboron trioxide	1303-86-2
80	Formamide	75-12-7
81	Lead(II) bis(methanesulfonate)	17570-76-2
82	1,3,5-Tris(oxiran-2-ylmethyl)-1,3,5-triazine-2,4,6-trione (TGIC)	2451-62-9
83	1,3,5-tris[(2S and 2R)-2,3-epoxypropyl]-1,3,5-triazine-2,4,6-(1H,3H,5H)trione (β-TGIC)	59653-74-6
84	[4-[4,4'-bis(dimethyl-amino)benzhydrylidene]cyclohexa-2,5-dien-1-ylidene]dimethyl ammonium chloride (C.I. Basic Violet 3)	548-62-9
85	Bis(pentabromophenyl) ether (deca-BDE)	1163-19-5
86	Pentacosafuorotridecanoic acid	72629-94-8
87	Henicosafuoroundecanoic acid	2058-94-8
88	Tricosafuorododecanoic acid	307-55-1
89	Heptacosafuorotetradecanoic acid	376-06-7
90	4-(1,1,3,3-tetramethylbutyl)phenol, ethoxylated – covering well defined substances and UVCB substances, polymers and homologues	.
91	4-nonylphenol, branched and linear – substances with a linear and/or branched alkyl chain with a carbon number of 9 covalently bonded in position 4 to phenol, covering also UVCB and well-defined substances which include any of the individual isomers or a combination thereof	.
92	Diazene-1,2-dicarboxamide (C,C'- azodi(formamide))	123-77-3
93	Cyclohexane-1,2-dicarboxylic anhydride(Hexahydrophthalic anhydride- HHPA)cis-cyclohexane-1,2-dicarboxylic anhydride trans-cyclohexane-1,2-dicarboxylic anhydride(The individual cis- and trans- isomer and all possible combinations of the cis- and trans-)	85-42-7, 13149-00-3, 14166-21-3
94	Hexahydromethylphthalic anhydride, Hexahydro-4-methylphthalic anhydride, Hexahydro-1-methylphthalic anhydride, Hexahydro-3-methylphthalic anhydride	25550-51-0, 19438-60-9, 48122-14-1, 57110-29-9
95	Methoxy acetic acid	625-45-6
96	1,2-Benzenedicarboxylic acid, dipentylester, branched and linear	84777-06-0
97	Diisopentylphthalate (DIPP)	605-50-5
98	N-pentyl-isopentylphthalate	776297-69-9
99	1,2-Diethoxyethane	629-14-1
100	N,N-dimethylformamide; dimethyl formamide	68-12-2
101	Dibutyltin dichloride (DBT)	683-18-1
102	Acetic acid, lead salt, basic	51404-69-4
103	Basic lead carbonate (trilead bis(carbonate)dihydroxide)	1319-46-6
104	Lead oxide sulfate (basic lead sulfate)	12036-76-9
105	[Phthalato(2-)]dioxole/lead (dibasic lead phthalate)	69011-06-9
106	Dioxobis(stearato)trilead	12578-12-0
107	Fatty acids, C16-18, lead salts	91031-62-8
108	Lead bis(tetrafluoroborate)	13814-96-5
109	Lead cynamidate	20837-86-9
110	Lead dinitrate	10099-74-8
111	Lead oxide (lead monoxide)	1317-36-8
112	Lead tetraoxide (orange lead)	1314-41-6
113	Lead titanium trioxide	12060-00-3
114	Lead titanium zirconium oxide	12626-81-2
115	Pentalead tetraoxide sulphate	12065-90-6
116	Pyrochlore, antimony lead yellow	8012-00-8
117	Silicic acid, barium salt, lead -doped	68784-75-8
118	Silicic acid, lead salt	11120-22-2
119	Sulfurous acid, lead salt, dibasic	62229-08-7
120	Tetraethyllead	78-00-2
121	Tetralead trioxide sulphate	12202-17-4
122	Trilead dioxide phosphonate	12141-20-7
123	Furan	110-00-9
124	Propylene oxide; 1,2-epoxypropane;methyloxirane	75-56-9
125	Diethyl sulphate	64-67-5
126	Dimethyl sulphate	77-78-1
127	3-ethyl-2-methyl-2-(3-methylbutyl)-1,3- oxazolidine	143860-04-2
128	Dinoseb	88-85-7
129	4,4'-methylenedi-o-toluidine	838-88-0
130	4,4'-oxydianiline and its salts	101-80-4
131	4-Aminazobenzene; 4-Phenylazobenzene	60-09-3
132	4-methyl-m-phenylenediamine (2,4-toluene- diamine)	95-80-7
133	6-methoxy-m-toluidine (p-cresidine)	120-71-8
134	Biphenyl-4-ylamine	92-67-1
135	o-aminoazotoluene	97-56-3
136	o-Toluidine; 2-Aminotoluene	95-53-4
137	N-methylacetamide	79-16-3
138	1-bromopropane; n-propyl bromide	106-94-5
139	Pentadecafluorooctanoic acid (PFOA)	335-67-1
140	Dipentyl phthalate (DPP)	131-18-0
141	Cadmium oxide	1306-19-0
142	Cadmium	7440-43-9
143	Ammonium pentadecafluorooctanoate (APFO)	3825-26-1
144	4-Nonylphenol, branched and linear, ethoxylated	.
145	Triethyl phosphate	25155-23-1
146	Lead di(acetate)	301-04-2
147	Imidazolidine-2-thione (2-imidazoline-2-thiol)	96-45-7
148	Disodium 4-amino-3-[[4'-[[2,4-diaminophenyl]azo][1,1'-biphenyl]-4-yl]azo]-5-hydroxy-6-(phenylazo)naphthalene-2,7-disulphonate (C.I. Direct Black 38)	1937-37-7
149	Disodium 3,3'-[[1,1'-biphenyl]-4,4'-diylbis(azo)]bis(4-aminonaphthalene-1-sulphonate) (C.I. Direct Red 28)	573-58-0
150	Dihexyl phthalate	84-75-3
151	Cadmium sulphide	1306-23-6
152	Sodium peroxometaborate	7632-04-4
153	Sodium perborate, perboric acid, sodium salt	15120-21-5, 11138-47-9

154	Cadmium chloride	10108-64-2
155	1,2-Benzenedicarboxylic acid, dihexyl ester, branched and linear	68515-50-4
156	Reaction mass of 2-ethylhexyl 10-ethyl-4,4-dioctyl-7-oxo-8-oxa-3,5-dithia-4-stannatetradecanoate and 2-ethylhexyl 10-ethyl-4-[[2-[[2-ethylhexyl]oxy]-2-oxoethyl]thio]-4-octyl-7-oxo-8-oxa-3,5-dithia-4-stannatetradecanoate (reaction mass of DOTE and MOTE)	
157	Cadmium sulphate	10124-36-4, 31119-53-6
158	Cadmium fluoride	7790-79-6
159	2-ethylhexyl 10-ethyl-4,4-dioctyl-7-oxo-8-oxa-3,5-dithia-4-stannatetradecanoate (DOTE)	15571-58-1
160	2-benzotriazol-2-yl-4,6-di-tert-butylphenol (UV-320)	3846-71-7
161	2-(2H-benzotriazol-2-yl)-4,6-ditertpentylphenol (UV-328)	25973-55-1
162	5-sec-butyl-2-[2,4-dimethylcyclohex-3-en-1-yl]-5-methyl-1,3-dioxane [1], 5-sec-butyl-2-(4,6-dimethylcyclohex-3-en-1-yl)-5-methyl-1,3-dioxane [2]covering any of the individual stereoisomers of [1] and [2] or any combination thereof	
163	1,2-benzenedicarboxylic acid, di-C6-10-alkyl esters or mixed decyl and hexyl and octyl diesters with ≥ 0.3% of dihexyl phthalate (EC No. 201-559-5)	68515-51-5, 68648-93-1
164	Perfluorononan-1-ol-acid and its sodium and ammonium salts	4149-60-4, 375-95-1, 21049-39-8
165	Nitrobenzene	98-95-3
166	2-(2H-benzotriazol-2-yl)-4-(tert-butyl)-6-(sec-butyl)phenol (UV-350)	36437-37-3
167	2,4-di-tert-butyl-6-(5-chlorobenzotriazol-2-yl)phenol (UV-327)	3864-99-1
168	1,3-propanesultone	1120-71-4
169	Benzo[def]chrysene (benzo[a]pyrene)	50-32-8
170	4,4'-isopropylidenediphenol (bisphenol A; BPA)	80-05-7
171	Nonadecafluorodecanoic acid (PFDA) and its sodium and ammonium salts	335-76-2, 3830-45-3, 3108-42-7
172	p-(1,1-dimethylpropyl) phenol	80-46-6
173	4-heptylphenol, branched and linear [substances with a linear and/or branched alkyl chain with a carbon number of 7 covalently bound predominantly in position 4 to phenol, covering also UVCB- and well-defined substances which include any of the individual isomers or a combination thereof]	-
174	Perfluorohexane-1-sulphonic acid and its salts	355-46-4
175	1,6,7,8,9,14,15,16,17,17,18,18- Dodecachloropentacyclo[12.2.1.16,9.02,13.05,10] octadeca-7,15-diene ("Dechlorane Plus™") [covering any of its individual anti- and syn-isomers or any combination thereof]	-
176	Benz[aj]anthracene	56-55-3
177	Cadmium nitrate	10325-94-7
178	Cadmium carbonate	513-78-0
179	Cadmium hydroxide	21041-95-2
180	Chrysene	218-01-9
181	Reaction products of 1,3,4-thiadiazolidine-2,5-dithione, formaldehyde and 4-heptylphenol, branched and linear (RP-HP) [with ≥0.1% w/w 4-heptylphenol, branched and linear]	
182	Benzene-1,2,4-tricarboxylic acid 1,2-anhydride (trimellitic anhydride; TMAI)	552-30-7
183	Benzo[ghi]perylene	191-24-2
184	Decamethylcyclotetrasiloxane (D5)	541-02-6
185	Dicyclohexyl phthalate (DCHP)	84-61-7
186	Disodium octabrate	12008-41-2
187	Dodecamethylcyclohexasiloxane (D6)	540-97-6
188	Ethylenediamine	107-15-3
189	Lead	7439-92-1
190	Octamethylcyclotetrasiloxane (D4)	556-67-2
191	Terphenyl hydrogenated	61788-32-7
192	1,7,7-trimethyl-3-(phenylmethylene) bicyclo[2.2.1]heptan-2-one (3-Benzylidenecamphor)	15087-24-8
193	2,2-bis(4'-hydroxyphenyl)-4-methylpentane	6807-17-6
194	Benzo[k]fluoranthene	207-08-9
195	Fluoranthene	206-44-0
196	Phenanthrene	85-01-8
197	Pyrene	129-00-0
198	2-methoxyethyl acetate	110-49-6
199	Tris(4-nonylphenyl, branched and linear) phosphite (TNPP) with ≥ 0.1% w/w of 4-nonylphenol, branched and linear (4-NP)	--
200	2,3,3,3-tetrafluoro-2-(heptafluoropropoxy)propionic acid, its salts and its acyl halides (covering any of their individual isomers and combinations thereof)	--
201	4-tert-butylphenol	98-54-4
202	2-Benzyl-2-dimethylamino-4'-morpholinobutyrophenone	119313-12-1
203	2-Methyl-1-(4-methylthiophenyl)-2-morpholinopropan-1-one	71868-10-5
204	Diisohexyl phthalate	71850-09-4
205	Perfluorobutane sulfonic acid (PFBS) and its salts	--
206	1-vinylimidazole	1072-63-5
207	2-methylimidazole	693-98-1
208	Dibutylbis(pentane-2,4-dionato-O,O')tin	22673-19-4
209	Butyl 4-hydroxybenzoate (Butylparaben)	94-26-8
210	Bis[2-(2-methoxyethoxy)ethyl]ether	143-24-8
211	Diocetyl dilaurate, stannane, dioctyl-, bis(coco acyloxy) derive, and any other stannane, dioctyl-, bis(fatty acyloxy) derive, wherein C12 is the predominant carbon number of the fatty acyloxy moiety	--
212	1,4-dioxane	123-91-1

213	2,2-bis(bromomethyl)propane1,3-diol (BMP) 2,2-dimethylpropan-1-ol, tribromo derivative3-bromo-2,2-bis(bromomethyl)-1-propanol (TBNPA) 2,3-dibromo-1-propanol (2,3-DBPA)	3296-90-0 36483-57-5, 1522-92-5 96-13-9
214	2-(4-tert-butylbenzyl)propionaldehyde and its individual stereoisomers	-
215	4,4'-(1-methylpropylidene)bisphenol; (bisphenol B)	77-40-7
216	Orthoboric acid, sodium salt	13840-56-7
217	Glutaral	111-30-8
218	Medium-chain chlorinated paraffins (MCCP) (C14 to C17)	-
219	Phenol, alkylation products (mainly in para position) with C12-rich branched or linear alkyl chains from oligomerization, covering any individual isomers and/ or combinations thereof (PDDP)	-
220	6,6'-di-tert-butyl-2,2'-methylene-d-p-cresol	119-47-1
221	tris(2-methoxyethoxy)vinylsilane	1067-53-4
222	(±)-1,7,7-trimethyl-3-[(4-methylphenyl)methylene]bicyclo[2.2.1]heptan-2-one covering any of the individual isomers and/or combinations thereof (4-MBC)	-
223	S-(tricyclo[5.2.1.02,6]deca-3-en-8(or 9)-yl O-(isopropyl or isobutyl or 2-ethylhexyl) O-(isopropyl or isobutyl or 2-ethylhexyl) phosphorodithioate	255881-94-8
224	N-(hydroxymethyl)acrylamide	924-42-5
225	1,1'-[ethane-1,2-diylbis(oxy)]bis[2,4,6-tribromobenzene] (BTBPE)	37853-59-1
226	2,2',6,6'-tetrabromo-4,4'-isopropylidenediphenol (Tetrabromobisphenol A (TBBPA))	79-94-7
227	4,4'-sulphonyldiphenol (Bisphenol S (BPS))	80-09-10
228	Barium diboron tetraxide	13701-59-2
229	Bis(2-ethylhexyl) tetrabromophthalate covering any of the individual isomers and/or combinations thereof (TBPH)	26040-51-7
230	Isobutyl 4-hydroxybenzoate (Isobutylparaben (IBP))	4247-02-3
231	Melamine (1,3,5-triazine-2,4,6-triamine)	108-78-1
232	Perfluoroheptanoic acid and its salts (PFHpA and its salts) (Sodium perfluoroheptanoate/ potassium perfluoroheptanoate/ Ammonium perfluoroheptanoate/ Perfluoroheptanoic acid)	20109-59-5, 21049-36-5, 6130-43-4, 375-85-9
233	Reaction mass of 2,2,3,3,5,5,6,6-octafluoro-4-(1,1,1,2,3,3,3,3-heptafluoropropan-2-yl)morpholine and 2,2,3,3,5,5,6,6-octafluoro-4-(heptafluoropropyl)morpholine	-
234	Diphenyl(2,4,6-trimethylbenzoyl)phosphine oxide	75980-60-8
235	Bis(4-chlorophenyl) sulphone	80-07-9

2. Organotins

1	Dibutyltin (DBT)	--
2	Diocetyltn (DOT)	--
3	Monobutyltin (MBT)	--
4	Tricyclohexyltin (TCyT)	--
5	Trimethyltin (TMT)	--
6	Triocetyltn (TOT)	--
7	Tripropyltin (TPT)	--
8	Tributyltin (TBT)	--
9	Triphenyltin (TPhT)	--

3. Phthalates

1	Diisononyl Phthalate (DINP)	28553-12-0
2	Di-n-octyl Phthalate (DNOP)	117-84-0
3	Bis-(2-ethylhexyl) Phthalate (DEHP)	117-81-7
4	Diisodecyl Phthalate (DIDP)	26761-40-0
5	Benzylbutyl Phthalate (BBP)	85-68-7
6	Dibutyl Phthalate (DBP)	84-74-2
7	Diisobutyl phthalate (DIBP)	84-69-5
8	Di-n-Hexylphthalate (DnHP)	84-75-3
9	Diethylphthalate (DEP)	84-66-2
10	Dimethylphthalate (DMP)	131-11-3
11	Di-n-pentylphthalate (DnPP)	131-18-0
12	Di-cyclohexylphthalate (DCHP)	84-61-7
13	Di-C6-8 branched alkylphthalate (DIHP)	71888-89-6
14	Bis (2-methoxyethyl) phthalate (DMEP)	117-82-8
15	Diisopentylphthalate (DIPP)	605-50-5
16	Dipropyl phthalate (DPRP)	131-16-8
17	Diisooctyl phthalate (DIOP)	27554-26-3
18	Diisohexyl phthalate, branched and linear (DHxP)	68515-50-4
19	Di-C7-11 branched alkylphthalate (DHNUP)	68515-42-4
20	1,2-Benzenedicarboxylic acid, dipentylester, branched and linear (DPP)	84777-06-0
21	1,2-benzenedicarboxylic acid, di-C6-10 alkyl esters; 1,2-benzenedicarboxylic acid, mixed decyl and hexyl and octyl diesters with ≥ 0.3% of dhexyl phthalate	68515-51-5 / 68648-93-1
22	N-pentyl-isopentyl phthalate (nPIPP)	776297-69-9
23	Diisohexyl phthalate (DIHxP)	71850-09-4

4. Azo-amines and Arylamine Salts

1	4-Aminobiphenyl	92-67-1
2	Benzidine	92-87-5
3	4-Chlor-o-toluidine	95-69-2
4	2-Naphthylamine	91-59-8
5	o-Aminoazotoluene	97-56-3
6	5-nitro-o-toluidine / 2-Amino-4-nitrotoluene	99-55-8
7	4-Chloroaniline	106-47-8
8	4-methoxy-m-phenylenediamine / 2,4-Diaminoanisole	615-05-4
9	4,4'-Diaminodiphenylmethane	101-77-9
10	3,3'-Dichlorobenzidine	91-94-1
11	3,3'-Dimethoxybenzidine	119-90-4
12	3,3'-Dimethylbenzidine	119-93-7
13	4,4'-methylenedi-o-toluidine / 3,3'-Dimethyl-4,4'-diaminodiphenylmethane	838-88-0
14	p-Cresidine	120-71-8
15	4,4'-Methylene-bis-(2-chloroaniline)	101-14-4
16	4,4'-Oxydianiline	101-80-4
17	4,4'-Thiodianiline	139-65-1
18	o-Toluidine	95-53-4
19	4-methyl-m-phenylenediamine / 2,4-Toluylenediamine	95-80-7



20	2,4,5-Trimethylaniline	137-17-7
21	4-aminoazobenzene	60-09-3
22	O-Anisidine	90-04-0
23	2,6-Xyldine	87-62-7
24	2,4-Xyldine	95-68-1
25	4-chloro-o-toluidinium chloride	3165-93-3
26	2-Naphthylammoniumacetate	553-00-4
27	4-methoxy-m-phenylene diammonium sulphate; 2,4-diaminoanisole sulphate	39156-41-7
28	2,4,5-trimethylaniline hydrochloride	21436-97-5

5. Ortho-Phthalates - TPCH		
1	Dichlorohexyl Phthalate (DCHP)	84-61-7
2	1,2-Benzenedicarboxylic acid, diethyl ester (DEP)	84-66-2
3	1,2-Benzenedicarboxylic acid, diisobutyl ester (DIBP)	84-69-5
4	1,2-Benzenedicarboxylic acid, dibutyl ester (DBP)	84-74-2
5	1,2-Benzenedicarboxylic acid, dihexyl ester (DnHP)	84-75-3
6	1,2-Benzenedicarboxylic acid, butyl benzyl ester (BBP)	85-68-7
7	1,2-Benzenedicarboxylic acid, bis(2-ethylhexyl) ester (DEHP)	117-81-7
8	Bis (2-methoxyethyl) phthalate (DMEP)	117-82-8
9	1,2-Benzenedicarboxylic acid, dioctyl ester (DnOP)	117-84-0
10	1,2-Benzenedicarboxylic acid, dimethyl ester (DMP)	131-11-3
11	Dipropyl phthalate (DPpP)	131-16-8
12	Di-n-pentylphthalate (DnPP)	131-18-0
13	Diisopentylphthalate (DiPP)	605-50-5
14	Diisododecyl Phthalate (DiDP)	26761-40-0 / 68515-49-1
15	1,2-Benzenedicarboxylic acid, diisooctyl ester (DIOP)	27554-26-3
16	1,2-Benzenedicarboxylic acid, diisononyl ester (DINP)	28553-12-0 / 68515-48-0
17	1,2-Benzenedicarboxylic acid, di-C7-11-branched and linear alkyl esters (DHNUP)	68515-42-4
18	1,2-Benzenedicarboxylic acid, dihexyl ester, branched and linear (DHP)	68515-50-4
19	1,2-Benzenedicarboxylic acid, di-C6-10-alkyl esters	68515-51-5 / 68648-93-1
20	Diisohexyl phthalate (DiHexP)	71850-09-4
21	1,2-Benzenedicarboxylic acid, di-C6-8-branched alkyl esters, C7-rich (DIHpP)	71888-89-6
22	1,2-Benzenedicarboxylic acid, dipentylester, branched and linear	84777-06-0
23	N-pentyl-isopentylphthalate (nPiPP)	776297-69-9



## Costco Smart Screening Protocol for Packaging Material - Version 21

**Scope:** This protocol should be used for these item types: Packaging Materials for General Textile Apparel, Accessories, and Home Textile.

### Important Note:

Costco Wholesale Protocols are the property of Costco Wholesale and are not to be used unless approved by Costco Wholesale Non-Foods QA. This Costco Protocol is to only be used by APPROVED Costco Labs that have been approved specifically for this protocol (listed below this statement). Labs approved for this protocol are not always approved for every Costco Wholesale protocol. Please reference other protocols to ensure lab approval prior to use. Costco will reject any results if testing is conducted by a lab not listed below.

**Approved Labs:** Contact Costco QA, or company listed below to confirm lab location (i.e. Hong Kong) approval for Costco Program.



Date	Content Update	Amended by	Approved by	Date
20-Mar-18	Protocol Creation	Eric Ho	Becky Berg	21-Mar-18
21-Aug-18	Update SVHC Candidate List Add parameters of AFIRM RSL for Packaging	Aaron Shum	Becky Berg	22-Aug-18
12-Feb-19	Update SVHC Candidate List Exclude composite wood from Formaldehyde testing	Aaron Shum	Frank Madrigal	15-Feb-19
20-Sep-19	Update SVHC Candidate List add parameter of bisphenol S, F, AF	Keith Tsang	Frank Madrigal	29-Jul-19
12-Feb-20	Update SVHC Candidate List	Keith Tsang	Becky Berg	6-Feb-20
29-Jul-20	Update SVHC Candidate List to 209 items	Keith Tsang	Kenny Brock	Jul-14-2020
11-Oct-20	1) add the azo dye and arylamine 2) update the testing method of CrVI for packaging 3) update the testing method for formaldehyde 4) add the plastic material for organotin 5) add PFOA and related substance and update the substance list of PFOS, PFOA 6) update the substance of phthalate to 23 items from 12 items 7) Expanded the scope to Packaging Materials for NON-FOOD	Keith Tsang	Kenny Brock	1-Dec-20
26-Feb-21	Total Heavy Metals for Packaging Materials is updated with added SI 2015/1640	Keith Tsang	Chrissy Barsness	24-Feb-21
6-Jul-21	- Deleted requirement of PFOS for plastic material - Added 2+8 SVHC substances, total up to 219 items	Wallis Lo	Kenny Brock	2021/7/22

29-Sep-21	<ul style="list-style-type: none"> <li>- Azo-amines and Arylamines salts: Updated test method, added leather test method, updated testing scope</li> <li>- Total Heavy Metal for Packaging Materials: Updated test method</li> <li>- AP/APEO: Updated test method and testing scope</li> <li>- Bisphenol: Updated test method and testing scope</li> <li>- BHT: Updated year version of test method</li> <li>- Formaldehyde: Updated test method, added leather test method, updated testing scope</li> <li>- Organotin: Updated test method and testing scope</li> <li>- PFOS and related substances, PFOA and its salts, PFOA-related substances: Updated test method and requirement</li> <li>- Phthalates: Updated testing scope, added new analyte [Diisohexyl phthalate (DHxP)], corrected the name of "1,2-Benzenedicarboxylic acid, dihexyl ester, branched and linear standard" to "Diisohexyl phthalate, branched and linear (DHxP)"</li> <li>- PFCAs &amp; PFASs: Updated test method and testing scope</li> </ul>	Wallis Lo	Kenny Brock	2021/11/18
11-Oct-21	<ul style="list-style-type: none"> <li>- Add leather into applicable material of DMFu</li> <li>- Composite wood is not applicable for Formaldehyde</li> </ul>	Wallis Lo	Kenny Brock	2021/11/23
15-Feb-22	<ul style="list-style-type: none"> <li>- Add Ortho-phthalates and PFAS for US TPCH</li> <li>- Add Ortho-phthalates and PFAS substance list for US TPCH</li> <li>- Update the applicable material on relevant entries of phthalates and PFCA, PFOS and PFOA</li> <li>- Reallocate testlines</li> <li>- Update SVHC candidate list</li> </ul>	Ruby Lau	Becky Berg	2022/2/11
12-Jul-22	- Updated SVHC list to 224 items	Wallis Lo		
27-Jul-22	- Updated the method of DMFu	Wallis Lo		
20-Sep-22	- Updated the testing scope of Bisphenol Content	Wallis Lo	Kenny Brock	2022/10/9
27-Oct-22	- Changed the requirement of Ortho-phthalates & PFAS to Costco requirement	Wallis Lo	Jeff Welch	2022/10/15
1-Feb-23	<ul style="list-style-type: none"> <li>- Updated SVHC list (added 9 substances)</li> <li>- Added MOAH and MOSH test line for France market</li> </ul>	Wallis Lo	Becky Berg	2023/1/18

3-Jul-23	<ul style="list-style-type: none"> <li>- Updated testing scope and requirement of Bisphenol Content, added BPB</li> <li>- Updated AP/APEO testing scope</li> <li>- Updated Azo &amp; Arylamine salts test method and testing scope</li> <li>- Updated Formaldehyde testing scope</li> <li>- Updated Organotin testing scope</li> <li>- Updated PFOS &amp; PFOA test line &amp; analyte list</li> <li>- Added TOF test line</li> <li>- Added 2 SVHC (total 235)</li> </ul>	Wallis Lo	Kenny Brock	2023/6/27
1-Aug-23	- Updated TOF test method	Wallis Lo	Kenny Brock	2023/7/26
10-Oct-23	<ul style="list-style-type: none"> <li>- Updated Bisphenol test line</li> <li>- Deleted TOF test line and all PFAS test lines as PFAS refers to HL-1011</li> </ul>	Wallis Lo	Becky Berg Blake Southworth	2023/9/19 2023/10/7
8-Nov-23	- Updated Bisphenol test line	Wallis Lo	Becky Berg	2023/11/1