



Costco Smart Screening Protocol for Packaging Material-V38

Client Code: _____ Technician: _____ MTS Report Number: _____
Start Date: _____ Finish Date: _____ Result Reviewed by: _____

Scope: This protocol should be used for these item types: packaging, food packaging, disposable products like garbage bags, plastic cups, disposable containers, ziplock bags etc.

Important Note:

For D28 Seasonal Decoration and Costumes Packaging Material:
- In lieu of testing, Pre-Production testing CSS report dated within 6 months can be submitted for document review during Production Testing.

TEST CODE	TESTED PROPERTY	REQUIREMENT	RESULTS		COMMENTS
			Pass	Fail	

ANALYTICAL

Supplemental Protocol

Food Packaging material Smart Screening Protocol	Food Packaging and Labeling Material	[For Food packaging material only] In addition to the following Packaging Material protocol, also shall comply the additional requirement in Supplemental Food Packaging Protocol			
US, CN, EU, JP, KR, TW SP-952	PFAS Restrictions	Must comply with requirements.			

Packaging Component Test

UK, France, Spain, Iceland, Sweden EC / 1907 / 2006 GC/MS; LC/MS; ICP; UV-Vis; XRF	Substances of Very High Concern (SVHC) content Applicable to articles including accessible and inaccessible materials.	[For packaging material] Shall not exceed 1000 mg/kg (0.1% by weight) in article or material. Note: - Refer to Candidate list of EC No. 1907/2006 for list of SVHC to be tested. Reference: https://echa.europa.eu/candidate-list-table			
ISO 21084 /ISO 18254-1 / ISO 18218-1 / Solvent extraction, LC-MS or LC-MS-MS analysis	Alkylphenol & Alkylphenol Ethoxylates Applicable to Natural fibers, Synthetic fibers, Blend fibers, Coating, Dyes & Prints, Natural Materials (including paper and cardboard), Polymers, Plastics, Foams, Natural Rubber & Synthetic Rubber, Glue, Natural leather, Synthetic coated fabric.	Limit: Sum of alkylphenols (NP/OP): 100 mg/kg Sum of Alkylphenol Ethoxylates (NPEO/OPEO): 100 mg/kg			
EN ISO 14362-1 (Textiles) / EN ISO 17234-1 (leather) / EN ISO 14362-3 (pAAB textiles) / EN SO 17234-2 (pAAB leather)	Azo Dyes (Detailed lists in 'Reference Chemical List') For dyed/colored materials (non-white) only. Applicable to Natural fibers, Synthetic fibers, Blend fibers, Natural materials, Natural leather, Synthetic coated fabric (Print only tested together with base material if it cannot be separated).	Limit: 20 mg/kg (each)			
Leather: EN ISO 11936/ All other materials: Solvent extraction by THF, analysis with LC-MS. Note for textiles: For precipitation, draw the extract to another container and add methanol or acetonitrile. This keeps the extraction process consistent.	Bisphenols Applicable to Blend fibers, Synthetic fibers, Coatings, Dyes & Prints, Natural materials (including paper and cardboard), Plastic Tapes, Polycarbonate, Recycled Plastic Cases, Natural Leather, Synthetic coated fabric	Limit: Receipt paper: BPA: 1 ppm Other packaging: 1000 ppm each (Bisphenol-A (BPA), Bisphenol-S (BPS), Bisphenol-B (BPB), Bisphenol-F (BPF)) In preparation for forthcoming restrictions, significantly lower levels of bisphenols should be achievable, e.g., in polyamide, over time or better alternatives should be substituted if possible. US: Washington Safer Products Restrictions and Reporting WAC 173-337-114 (3) Limit: Shall not contain intentionally added bisphenols. Applicable to thermal paper. Note: Ecology presumes the detection of bisphenol concentrations above 200 ppm indicate intentionally added bisphenols. Effective Date: January 1, 2026 California AB 2244 Limit: Bans use of thermal receipts containing BPA and BPS. Effective Date: January 1, 2025 (BPA)			
ASTM D4275	Dibutylhydroxytoluene (BHT) Applicable to Polybags	Limit: 25 mg/kg			
ISO 16186	Dimethyl Fumarate (DMFu) Applicable to Silica gel packets, Foam packaging, Natural leather	Limit: 0.1 mg/kg			
UV-Vis method: JIS L1041 / EN ISO 14184-1 (Textile) / CNS 15580-1 / EN 717-3 (wood) / EN 645 and EN 1541 (paper) / EN ISO 17226-2 / EN ISO 17226-1 (leather) / ISO 14184-2 (Others)	Formaldehyde Applicable to Natural fibers, Synthetic fibers, Blend fibers, Coatings, Dyes & Prints, Natural materials (including paper and cardboard), Rubber, Glue, Natural leather, Synthetic coated fabric Not applicable to Composite Wood	Limit: 150 mg/kg			
CEN ISO/TS 16179 / EN ISO 22744-1/ Solvent extraction, GC-MS analysis	Organotin Compounds Applicable to Coatings, Dyes & Prints, Polymers, Plastics, Foams, Natural Rubber & Synthetic Rubber, Glue, Natural leather, Synthetic coated fabric, Metallic glitter, Polyurethane products and Heat transfer material.	Limit: Tributyltin (TBT): 0.5 mg/kg Triphenyltin (TPHT): 0.5 mg/kg Dibutyltin (DBT): 1 mg/kg Dioctyltin (DOT): 1 mg/kg Monobutyltin (MBT): 1 mg/kg Monooctyltin (MOT): 1 mg/kg Tricyclohexyltin (TcYHT): 1 mg/kg Trimethyltin (TMT): 1 mg/kg Trioctyltin (TOT): 1 mg/kg Tripropyltin (TPT): 1 mg/kg Dimethyltin (DMT): 1 mg/kg Diphenyltin (DPHT): 1 mg/kg Dipropyltin (DPT): 1 mg/kg Monomethyltin (MMT): 1 mg/kg Monophenyltin (MPHT): 1 mg/kg Tetraethyltin (TeET): 1 mg/kg Tetraoctyltin (TeOT): 1 mg/kg TPCH Limit: 100 mg/kg (sum) (Costco requirement)			
CPSC-CH-C1001-09.4 / ISO 14389 Solvent extraction, GC-MS analysis	Phthalates (Detailed lists in 'Reference Chemical List') (Applicable to high risk packaging materials including coating, plastic, printed textile, PU/Synthetic leather, composite wood, glue and adhesive)				



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Important Note:

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: 1. ≤ 0.1% and 2. ≤ 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.				
Analysis is based on GC, LC, IC, ICP, with various detection techniques and UV	French Decree hazardous substances in waste-generating products Applicable to accessible and inaccessible materials Test for "French market only".	French Article L541-9-1 on providing consumers with information about the presence of hazardous substances in waste-generating products ≤ 0.1% for each of the hazardous substances. According to French Decree No.2021-1285 of October 2021, there are two lists of hazardous substances for waste-generating products: - Substances of very high concern on the Candidate List under Regulation (EC) No.1907/2006 (REACH) Reference: https://echa.europa.eu/candidate-list-table - Substances giving rise to an equivalent level of concern as the Candidate List above that are established by (national) legislation after consulting the National Agency for Food, Environment and Occupational Health Safety (l'Agence nationale de sécurité sanitaire de l'alimentation, de l'environnement et du travail, ANSES) <u>List of additional dangerous substance furthermore the REACH SVHC:</u> 1. Diisooctyl phthalate (DIOP) (CAS No.:27554-26-3) 2. 1,3-Benzenediol (CAS No.:108-46-3) Under French Order of August 30, 2023, suppliers who place products containing				
Analysis is based on GC, LC, IC, ICP, with various detection techniques and UV	French Decree endocrine disruptors in products (Detailed lists in 'Reference Chemical List') Applicable to accessible and inaccessible materials. Test for "French market only".	French Decree No. 2020-105 on the 'Fight Against Waste and the Circular Economy' Article 13-II on information disclosure on the presence of endocrine disruptors (ED) in products ≤ 0.1% for each of the endocrine disruptors. List of substances with endocrine disrupting properties are mentioned in I and II of Article L. 5232-5 Under the French Order of 28 September 2023, suppliers who place products containing an endocrine disruptor (ED) in a concentration of more than 0.1% on the market are obliged to disclose their information on an electronic platform (Scan4Chem) that is available to the public.				
EN ISO 17881-1	HBCDD Applies to all articles including EPS packaging foam, plastic, coating, textile.	Limit: 100 mg/kg (for recycled EPS packaging foam) 75 mg/kg (for other materials)				
ISO 18219-1 (Leather) ISO 22818 (Textile and others)	SCCP Applicable to high risk packaging materials including coating, plastic, printed textile, PU/ Synthetic leather, composite wood, glue and	Limit: 0.15%				
EN 17134-2	PCP Applicable to high risk packaging materials including coating, paper, cardboard, textile and leather.	Limit: 5 mg/kg				
EN 17137, GC-MS analysis	Hexachlorobenzene (HCB) For UK, France, Spain, Iceland, Sweden Applicable to substances, mixtures and articles, including pesticides, chlorinated solvents, inks, coatings, paints and toners, wood application, textile application and plastics	Costco: 10 mg/kg EU POPs, UK POPs: HCB: 10 mg/kg LoG can be accepted in lieu of testing.				
In-house method, GC-MS analysis	Methylene Chloride content (CAS no. 75-09-2) Applicable materials (accessible and inaccessible): plastics, leathers, coatings, coated metals, adhesives/glues, solvents	US EPA final rule (TSCA 40 CFR Part 751) Prohibited in manufacturing, processing, importation, distribution and use of methylene chloride for all consumer uses and most commercial uses: paint stripper, degreaser and solvent, and an ingredient in adhesives and sealants. (reporting limit: 10 mg/kg) Exemption: 1. Those important to national security and the economy, including the production of hydrofluorocarbon-32 refrigerant, and lithium-ion battery separators for electric vehicles. 2. There is a 10-year limited exemption for emergency use by NASA—if no technically or economically feasible alternative is available. 3. There is a 10-year limited exemption for civilian aviation. Effective date: July 8, 2024 Under the final rule: 1. Methylene chloride distribution to retailers must be phased out by February 3, 2025. 2. Manufacturers and Importers have until May 5, 2025 to cease production and importation. 3. Non-retail distributors have until January 28, 2026 to cease distribution. 4. If methylene chloride is used in a process, processors have 15 months, until August 1, 2025, to cease use. Industrial and commercial (as opposed to retail) users have until April 28, 2026, to cease use.				

ANALYTICAL (TPCH – US / PPWR, Regulation (EU) 2025/40 - EU / SI 2015/1640 - UK/State of Maine Chapter 277 Public Law H.P. 1043 - L.D. 1433) (Regulatory)

All packaging materials and components used on an item sold in the US / EU / UK will be tested to TPCH / PPWR, Regulation (EU) 2025/40 / SI 2015/1640/ State of Maine Chapter 277 Public Law H.P. 1043 - L.D. 1433. These laws set limits for the amount of toxic heavy metals that are present in outer and inner packaging materials and components such as color box or color label, master carton, stickers, tape, banding materials, wrapping papers, banding straps and inks. These regulations apply to everything tested for Costco Wholesale- apparel, home textiles and hard goods.

Costco Wholesale requires that the lab test high risk packaging materials including coatings, plastic, printed textile, metal, leather, PU/Synthetic leather, composite wood, glue and adhesive. The lab can use up to 5 like components in one composite test. No more than a total of 5 composite test should be conducted (Like materials to be composited and each composite containing an equal weight of the 5 components). If result exceeds 100ppm, testing to be performed on each individual component within the composite and results will be reported per each individual component.

ANALYTICAL METHOD: A weighted portion of the dried substrate material is digested with nitric acid for total metals content. After digestion, the sample is filtered and brought to a known volume, and then analyzed for the four metals using AA or ICP analysis.

Packaging/ Materials/ Components	Submitted by Vendor? (Yes/No)	Selects Randomly Chosen Components, and indicate with an "X" which ones were tested.	LEAD	CADMIUM	MERCURY	Hexavalent CHROMIUM	TOTAL HEAVY METALS FOR EACH PACKAGING COMPONENT (SHOULD NOT EXCEED 100 PPM)	PCB (SHOULD NOT EXCEED 50 ppm) (Costco Requirement)
Master Carton								
Ink used for printing of Master Carton - All Colors								



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Important Note:

Polybag								
Ink used for printing of Poly bag - All Colors								
Blister (Clamshell)								
Blister Card - All designs or styles								
Instruction Sheet								
Printed label for different designs or styles								
Adhesive tape for different styles and sizes								
Insert card for different designs or styles								
Tissue paper - All Colors								
Logo card for different designs or styles								
Window box with window sheet for different designs or styles								
Plastic screw holder for different color								
Hang tag								
Cable Tie								
Plastic wire or metal wire (twist ties)								
Plastic (Banding Strap)								
Plastic Fastener used to tighten banding strap								
Natural materials Polymers, Plastics, Foams, Natural Rubber & Synthetic Rubber								
Metal								
Natural leather								
Artificial leather								
Other								

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. (For Silverware additional test should be included)

EXEMPTION REMARK:

1. YKK zippers are exempt from all testing, no CSS or analytical testing required.
2. Items submitted with an OEKO-TEX Certificate (OEKO-TEX Standard 100 or higher, StEP by OEKO-TEX, Detox To Zero by Oeko-Tex, Made In Green by OEKO-TEX, ECO PASSPORT by OEKO-TEX, MyStEP by OEKO-TEX, Hohenstein Institute /LEATHER STANDARD by OEKO-TEX) or Bluesign certification, or Cradle to Cradle certification or C2C material health certifications at silver level or higher or EPA Safer Choice certification, will exempt component(s) or the full item from Costco Smart Screening (CSS), PFAS and FR supplemental testing. Vendor should send the applicable approved certification(s) to the lab for confirmation when the BOM is sent, or at the time of sample selection. The testing lab should then review the certificate and verify validation and exempt certified components accordingly from CSS, PFAS and FR supplemental testing.
3. Micro-Pak and Superdry brand desiccant packs are exempt from CSS testing (bag and desiccant material).
4. ~~Note: e.g., Charming, ITI, SSI and Compass GreenTech packaging materials are exempt from CSS testing if the vendor submits a valid matching CSS test report dated within 4 years or submits a valid~~

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.

This is a list of the types of packaging components and the number of samples to be sent to MTS. To avoid delays, please be sure ALL packaging-related components are submitted, even if they are not on the list. Contact MTS for the required number of samples if the component is not on the list.

Master Carton	11 Pcs
Ink used for printing of Master Carton - all colors	20 mL per color
Polybag	10 pcs
Ink used for printing of Polybag - all colors	20 mL per color
Blister (Clamshell)	10 pcs
Blister Card - All designs or styles	5 pcs each
Instruction Sheet	3 pcs
Printed label for different designs or styles	5 pcs each
Adhesive Tape for different styles and sizes	1 roll each
Insert card for different designs or styles	16 pcs each
Tissue paper - All Colors	3 pcs per color
Window Box w/Sheet for different designs or styles	5 pcs each
Plastic screw holder for different color	10 pcs each
Hang tag	5 pcs
Cable Tie	10 pcs (Approximate 20 cm length for one piece)
Plastic wire or Metal wire (Twist ties)	20 g/m
Plastic Plastic (Banding Strap)	5 feet
Plastic Fastener used to tighten banding straps.	12 pcs