

CHEMICAL RISK ASSESSMENT

California Proposition 65

Report Number: CP-G103710707-1

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20 February 2019





Chemical Risk Assessment California Proposition 65

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Chemical Risk Assessment

California Proposition 65

This document provides findings describing the C-Slide risks to California Proposition 65 for the products provided to Intertek. Intertek was provided with Bills of Materials and other datasheets.

1.0 Summary and Recommendations

1. C-Slide should complete their data gathering activities by requiring that suppliers provide compliance information and material composition information which addresses, at minimum, the Proposition 65 substances that are applicable to their products. The substances that are relevant to C-Slide's Proposition 65 material types are identified in this report.
2. C-Slide should conduct substance testing for all the materials for which the risk remains medium or high, or which cannot be de-risked, upon the conclusion data gathering activities. Note that substance testing is typically used to give an indication of where a product is positioned relative to the requirements of a law or regulation, and on its own is not an adequate substitute for a Compliance Assurance System, which is implemented within an organization and is specifically intended to facilitate compliance to regulatory requirements.
3. Upon completion of material data gathering and/or substance testing, if the risk of the products containing Proposition 65 listed substances remains high, C-Slide may wish to commission a toxicology assessment of their products. This would assess the amount of contact the user has with the product and then determine the amount of each listed substance the user is exposed to. This number would then be compared to the maximum daily allowance (if one exists for the substance(s)) and it would be determined if there is enough exposure to require a warning statement.
4. C-Slide should update material specifications and purchasing agreements so that suppliers have a contractual obligation to abide by a C-Slide Restricted Substance List (RSL) and its requirements, which should include Proposition 65 listed substances and the requirement to provide Proposition 65 related compliance statements for all components supplied.
5. Where exposure to listed substances cannot be eliminated, C-Slide may instead take the business decision to apply Proposition 65 warnings on the product, informing consumers that use of the product may expose them to a listed substance, to lower or eliminate the litigation risk of the products.

The testing and toxicology recommendations are contingent on C-Slide gathering information on their de-risked products. This includes the High-risk materials and those materials where no information was submitted or identified.



1.1 Evaluation of Documents

C-Slide submitted a collection of test reports with their Bill of materials. The test reports are for the RoHS substances and are against a collection of resins.

While it is possible to use the documents to de-risk parts of the products for substances listed in Annex II of the EU RoHS Directive, it is recommended that in the absence of complete supply chain documentation, C-Slide should also consider testing a representative sample of the finished products against the substances which are relevant to Proposition 65.

It should also be noted that while RoHS allows substances to be present within a finished product within a range of values, any presence of a Proposition 65 substance must be addressed by C-Slide to determine if it represents an exposure risk



2.0 Legislative Requirements

Proposition 65, the Safe Drinking Water and Toxic Enforcement Act of 1986, was enacted as a ballot initiative in November 1986. The Proposition was intended by its authors to protect California citizens and the State's drinking water sources from chemicals known to cause cancer, birth defects or other reproductive harm, and to inform citizens about exposures to such chemicals.

The statute states that *“no person in the course of doing business shall knowingly and intentionally expose any individual to a chemical known to the state (California) to cause cancer or reproductive toxicity without first giving a clear and reasonable warning...”*

This statement is important as it shows the open scope of the legislation. It covers not just children's products, toys, textiles, electronics or any other single type of product, but all products, services and areas (such as covered parking lots that expose individuals to vehicle exhaust emissions and therefore require a warning sign).

Enforcement of California Proposition 65 is based on lawsuits initiated by individuals assessing 60-day notices to parties that are perceived to be in non-compliance. Defendants then have 60 days from notice to prove compliance, comply or face possible legal action. Most lawsuits end in settlements with agreements to reformulate the product in violation and/or add the required warning.

A Proposition 65 list of chemicals known to the state to cause cancer or reproductive toxicity has been developed and is added to as chemicals are brought to the attention of the state or are identified as carcinogens or reproductive toxicants by various authoritative bodies. This list does not imply that use of the substances is restricted or prohibited in the state of California. For products that contain a listed substance above the safe harbor level (or, in the case where one does not exist, at any level), a Proposition 65 warning is required. A warning is to be provided on or with the products in such a way that it is likely to be seen and read by the consumer before purchasing and/or using the products.

Any warning needs to state at least one substance for each of the Cancer and/or Reproductive Toxicity categories, or a single statement for a substance which applies to both categories for all long-form warnings. Refer to Appendix II for additional information.

NOTE: Amendments to the Proposition 65 warning regulations have been approved. Effective August 30, 2018 the new version of the warning entered into effect. The new legislative text is documented in Appendix II.



3.0 Product, Uses, and Exposures

3.1 Product Description

This assessment and mitigation strategy has been developed for the following C-Slide products.

Client Product(s) and Description(s)	
Product Category	Description
Camera Cover	Various products designed to cover a device camera
Audio Plug Blank	Various products designed to be installed in the audio plug a of an electronic device

3.2 Description of Use and Exposure Cases

Consumers are exposed to the product through dermal contact during its use. Indirect oral exposure may occur through hand-to-mouth transfer during or after handling the product.

Product exposure may occur for short or long periods of time and may occur as many as multiple times during a day.

The Intertek Proposition 65 Questionnaire indicates that the products are “serviceable by the user”, so all components must be considered as they may be contacted during disassembly and re-assembly. As such, all the materials used in the product submissions have been assessed, and documented in the accompanying excel workbook.



4.0 Known Uses of Listed Substances

The current Proposition 65 list of chemicals known to the state to cause cancer or reproductive toxicity can be found on the OEHHa (Office of Environmental Health and Hazard Assessment) website¹. There is a risk that listed substances are present due to the base materials, pigments, and additives such as phthalates and flame retardants in the materials of the product (see Risk section below). Note that substances may be present in states or forms that are different from the Proposition 65 list and would therefore not require a warning label.

Based on the results of a literature search, the listed substances which can reasonably be expected to be present in the material types used in the C-Slide product/product line are shown below. An indication of the frequency of enforcement can be inferred based on the number of notices. C-Slide should be aware that some substances have been listed for many years while others are new, so the number of notices may therefore be biased towards older listings. The table below is not an exhaustive list but identifies the most common uses of some regulated substances. The date of search for the table below is as of February 19, 2019.

Substances and Common Uses				
Category	Substance Name	CAS Number	Common Uses	Notices
Phthalates	Butyl benzyl phthalate (BBP) *	85-68-7	plasticizer in plastics (especially PVC), adhesives, electronic equipment components, inks; used in solvents, cleaners, resins	96
Phthalates	Di-n-butyl phthalate (DBP) *	84-74-2	plasticizer in plastics (especially PVC), adhesives, electronic equipment components, inks; used in solvents, cleaners, resins	344
Phthalates	Di(2-ethylhexyl) phthalate (DEHP) *	117-81-7	plasticizer in plastics (especially PVC), adhesives, electronic equipment components, inks; used in solvents, cleaners, resins	3368
Phthalates	Di-isodecyl phthalate (DIDP)	26761-40-0	plasticizer in plastics (especially PVC), adhesives, electronic equipment components, inks; used in solvents, cleaners, resins	50
Phthalates	Di-n-hexyl phthalate (DnHP) *	84-75-3	plasticizer in plastics (especially PVC), adhesives, electronic equipment components, inks; used in solvents, cleaners, resins	5
Phthalates	Di-isononyl phthalate (DINP)	—	plasticizer in plastics (especially PVC), adhesives, electronic equipment components, inks; used in solvents, cleaners, resins	307
Heavy metals	Antimony (Sb)	multiple compounds	alloying of lead and tin for batteries, solder, bearings; additive of flame retardants; stabilizer in PET; pigment additive	14
Heavy metals	Arsenic (As)	multiple compounds	pigments, semiconductors, bronzing, alloys, pressure treated wood, pesticides, herbicides, insecticides, power tools, asphalt	595
Heavy metals	Cadmium (Cd)	multiple compounds	batteries, pigments, electroplating, solder, iron pipe, paints, glazes, solvents, diesel exhaust, saw blades, dry mix concrete, ceramic/cement roofing tiles, tobacco products, vinyl toys and consumer products, fertilizers, galvanized pipe, medical products (including implants), PVC coated cords/wires, topical skin care products, battery additive, power tools	655
Heavy metals	Hexavalent chromium (Cr ⁶⁺)	multiple compounds	pigments, inks, plastics, wood preservation, leather tanning, conversion coating, paints, solvents, paint	536

¹ Proposition 65 list of substances: http://www.oehha.ca.gov/prop65/prop65_list/Newlist.html



Substances and Common Uses				
Category	Substance Name	CAS Number	Common Uses	Notices
			stripper, iron pipe, soldering products, PVC coated wires/cords, key duplication, power tools	
Heavy metals	Lead (Pb)	multiple compounds	lead-acid batteries, ceramic glazes (mostly red and yellow), weights, candle wicks, radiation shielding, leaded glass, solder/welding equipment, brass (and other) alloys, paints and pigments, plumbing/water filtration (alloy), hair dyes, PVC/thermoplastic-coated wires/cords, solder (motherboards, etc.)	7959
Heavy metals	Mercury (Hg)	multiple compounds	fluorescent lamps, thermometers, float switches, batteries, anti-fouling paints	520
Flame retardants	Chlorinated paraffins	108171-26-2	Halogenated flame retardant in plastics, textiles and other materials	2
Flame retardants	Hexachlorobenzene (HCB)	118-74-1	Halogenated flame retardant in plastics, textiles and other materials	58
Flame retardants	Polybrominated biphenyls (PBBs)	substance group	Halogenated flame retardant in plastics, textiles and other materials	1
Flame retardants	Pentabromodiphenyl ether mixture [DE-71 (technical grade)]	-	Halogenated flame retardant in plastics, textiles and other materials	0
Flame retardants	Tris-(2,3-dibromopropyl) phosphate (TDBPP)	126-72-7	Halogenated flame retardant in plastics, textiles and other materials	0
Flame retardants	Tris(1,3-dichloro-2-propyl) phosphate (TDCPP)	13674-87-8	Halogenated flame retardant in plastics, textiles and other materials	323
Flame retardants	Tris(2-chloroethyl) phosphate (TCEP) *	115-96-8	Halogenated flame retardant in plastics, textiles and other materials	66
Flame retardants	Antimony trioxide (Sb ₂ O ₃)	1309-64-4	Non-halogenated flame retardant in plastics, textiles and other materials	14
Flame retardants	Trimethyl phosphate	512-56-1	Non-halogenated flame retardant in plastics, textiles and other materials	0
Textile dyes	C.I. Acid Red 114	6459-94-5	dye for wool, silk, jute and leather	0
Textile dyes	C.I. Basic Red 9 monohydrochloride	569-61-9	dye for textiles (silks and acrylics), leather, fur, paper, carbon paper, plastics, glass, waxes, polishes, soaps, cosmetics, drugs, toilet sanitary preparations, automobile antifreeze solutions, anodized aluminum, high-speed photoduplicating inks, photo-imaging systems, and inkjet computer printers	0
Textile dyes	C.I. Direct Blue 15	2429-74-5	dye for cellulose, leather, paper, cotton, silk and wool	0
Textile dyes	C.I. Direct Blue 218	28407-37-6	copper chelated dye for cellulose, acetate, nylon, silk, wool, tissue, papers, and textile goods with a urea-formaldehyde finish	0
Textile dyes	C.I. Disperse Yellow 3	2832-40-8	monoazo pigment dye for nylon, PVC and acrylic fibres, wools and furs, cellulose acetate, polystyrene and other thermoplastics	0
Textile dyes	Direct Black 38 (technical grade)	1937-37-7	dye for wool, silk, fibers for rope and matting, hogs hair, cellulose, acetate, nylon, and biological stains	0
Textile dyes	Direct Blue 6 (technical grade)	2602-46-2	dye for silk, wool, cotton, nylon, leather, paper, biological stains and writing inks	0
Textile dyes	Direct Brown 95 (technical grade)	16071-86-6	dye for silk, cotton, acetate, cellulose, wool, nylon, leather, paper, and certain plastics	0
Textile dyes	Disperse Blue 1	2475-45-8	fabric dye for nylon, cellulose acetate and triacetate, polyester, and acrylate fibers and for surface dyeing of thermoplastics, as a solvent dye in cellulose acetate plastics, and to dye fur and sheepskins	0



Substances and Common Uses				
Category	Substance Name	CAS Number	Common Uses	Notices
Other (textile)	Ethyl acrylate	140-88-5	manufacture of water-based latex paints and adhesives, textile and paper coatings, leather finish resins, acrylic fibers	9
Other (textile)	Formaldehyde (gas)	50-00-0	treatment of textiles, for example to impart wrinkle-resistance	4244
Other (textile)	Styrene oxide	96-09-3	treatment of fibers and textiles	52
Other (textile)	Vinyl bromide	593-60-2	used in polymers in the production of fabrics and fabric blends that are used in nightwear (mostly for children) and home furnishings	0
Other	Toluene	108-88-3	production of detergents, pharmaceuticals, dyes, paints, textiles, plastics	4999
Other	Bisphenol A (BPA)*	80-05-7	Chemical used to make polycarbonate plastics and epoxy resins	3

* Substance is also currently listed as a REACH Candidate SVHC.



5.0 Risk Analysis by Material Type

5.1 Methodology

The identification of risk associated with the materials comprising the components of C-Slide's products has been performed based on the following criteria:

5.1.1 High-risk Materials

High-risk materials are those where there is reason to believe that listed substances may be present. Usually the substance has a history of regularly being deliberately added. This includes materials such as brass, which generally contains lead, plasticized PVC, which usually contains phthalates and / or heavy metals such as lead and cadmium, and other elastomers, which also often contain phthalates.

5.1.2 Medium-risk Materials

Medium risk is assessed when a literature search indicates a possible or historical use of the substance, but this is not supported with empirical testing or enforcement data. Use may be infrequent, theoretical, or may be suspected as an occasional contaminant.

Examples may include any of the listed colorants which, despite their listing, do not have a notification or enforcement history, or hexavalent chromium, which was historically applied to raw metal stock by steel mills.

5.1.3 Low-risk Materials

Low-risk materials include those where there is no reason to expect that the substance would be present in the component or material. Note that this is only for the base material; any coating or additive may be within a higher risk category.

5.1.4 Complex Articles

For the drawings supplied and captured for this project, not all drawings were complete with regards to the material breakdown. For those items, the material type of 'Complex article' was assigned. Complex articles are "High-Risk" in the absence of any material identifier or other supplier documentation.



5.2 High Level Material Risk Assessment and Findings

The purpose of this section is to summarize the highest priority findings from the risk analysis. This section is not exhaustive and is intended to assist C-Slide to prioritize resolution actions. A full breakdown by material and listed substance risk level follows in section 5.3.

BPA

Bisphenol A is a substance used in the manufacture of several article types. C-Slide should verify that the potential sources of BPA do not cause exposure to the user and may be removed from scope.

Colorants/Dyes

There are several Proposition 65 listed colorants/dyes on the C-Slide Bills of Materials, however, to date there are no notifications against any of these colorants/dyes. C-Slide should verify the colorants/dyes used in their products, and if a Proposition 65 listed substance is verified as being present, take the appropriate steps to de-risk and/or eliminate the use of those colorants/dyes in favor of colorants/dyes which are not on the Proposition 65 list.

Flame Retardants

Several polymers used throughout the designs are specified as flame resistant. There are many Proposition 65 –listed substances which are used as flame retardants. C-Slide should confirm that no listed substances are present in these polymers either by obtaining the “regulatory” section of the materials’ respective SDSs, or by testing.

Heavy Metals

Cadmium, hexavalent chromium, lead, and mercury are all at risk of being present in the assessed products. C-Slide should engage the supply chain to gather the documentation to de-risk the substances and specify in the product design files that only compliant materials be used.

Phthalates

The products assessed are at risk of containing several phthalates. C-Slide should de-risk the substances via supply chain documentation, or by specifying compliant materials in the product design files.

Toluene

Toluene may be found in Synthetic rubbers, adhesives and adhesive coatings. C-Slide should engage the manufacturers of the adhesives to verify the composition, especially for any adhesive which may come into contact with the user of the C-Slide.



5.3 Detailed Material Assessment and Findings

The results of this assessment are provided to C-Slide in a separate MS Excel file, named as follows:

“Intertek – C-Slide – California Proposition 65 Assessment v1.0.xlsx”.

The spreadsheet contains the Bill of Materials for the products, the material composition for each line item and the list of potential high- or medium-risk substances which could be present in the material/article.

C-Slide should use the data, in conjunction with a Compliance Assurance System, to gather and store all required documentation as it relates to California Proposition 65 Compliance for their products.



6.0 Risk Analysis by Settlement Review

6.1 Methodology

60-day notice Data obtained from the California Office of the Attorney General was analyzed to determine the number of notices and settlements on record that are relevant to C-Slide and components or materials used in its products.

Substances which are not relevant to C-Slide have been removed from the results. For example, the result *Wine vinegar, including, but not limited to Antiqua Balsamic Vinegar of Modena, organic, green label [...]* is removed from a “label” search. Therefore, the number of chemicals may not correspond to the number of settlements.

Products and Components

Searches of 60-day enforcement notices were conducted for products like C-Slide’s products, or typical components, using the following search keywords: *Camera Cover, Camera, Lens, Lens Cover*.

The findings are summarized as follows.

Camera Cover: No results were returned from the database.

Camera: 15 results were returned from the database. Of the results, none were for products or articles the same as, or similar to, the products assessed for C-Slide. Of the results returned they were mostly for power-adapters. The primary substances notified against were DIHP and DEHP (phthalates), and Lead.

Lens: Three (3) results were returned from the database. Of the notices, they were for Lens carriers, and lens cleaners. None of the results were against products similar to, or the same as C-Slide products.

Lens Cover: No results were returned from the database.



Materials and Substances

60-day enforcement notices were also searched the substances of interest to C-Slide, based on the composition of their products. The search yielded the following results:

Rubber: These notices include synthetic rubber. They mainly affect items with rubber handles or grips, due to the presence of lead, and in a few cases, the phthalate DEHP.

Brass: Brass is regularly notified. The primary concern is lead.

Phthalates: Over 2000 enforcement actions were found for the substance group *phthalates* (BBP, DBP, DEHP, DIDP, DnHP, and DINP, as listed in Section 4, above) contained in a large variety of product types. Phthalate plasticizers are used mainly in PVC, but they are also found in other plastics. A variety of settlements have been reached regarding the use of phthalates in a broad range of product types, predominantly made of PVC/vinyl and unidentified plastics. Many settlements call for reformulation of the products such that DEHP, BBP, and DBP are limited to 1000ppm (0.1% by weight) or less in the product, or the placement of warning labels on the product if reformulation does not take place as well as on existing inventory. Settlements have also resulted in orders to recall products or to cease manufacturing, distribution and sale of the covered products in California.

Heavy metals: Since 2008 there have been roughly 2000 notifications filed against consumer products (such as toys, tools, jewelry and leather) containing lead and other *heavy metals* (such as cadmium, hexavalent chromium, and mercury), resulting in the requirement that either warnings be provided for products, products be reformulated to remove heavy metals, or defendants cease distribution of the products in California.

Flame retardants: Over 430 60-day notices for *flame retardants* (including those listed in Section 4, above) were found for several product types, mainly upholstered furniture and other foam-containing products. Notices specific to materials used in C-Slide's product type were not found.

Toluene: Thirty-five 60-day notices for *toluene* were found for multiple product types, including adhesives. Notices specific to C-Slide's product type were not found.

Note: All plastic materials are at risk of containing phthalates, heavy metals, and flame retardants, though the likelihood and concentrations of each will vary depending on the type of plastic and product.



7.0 Conformity Document Analysis and Risk Mitigation

7.1 General Strategy

At-risk materials or articles require supporting information to adequately address these risks.

As a general de-risking strategy for chemical regulations, a conformity assessment consisting of data collection regarding the compliance of the materials and articles used in the production of the product is typically used. This practice is founded in the standard EN50581, among others. It also includes conformity information from the manufacturing process and subcontractors. This conformity documentation includes the following:

- Supplier declarations of conformity
- Signed supplier contracts mandating the restricted substance content should be below a Maximum Concentration Value (MCV)
- Material declarations (including REACH CLP-compliant Safety Data Sheets)
- Analytical test reports
- Supplier audit reports

A supplier whose material or article consists of other materials or articles must provide conformity documentation which addresses all material risks. Suppliers are responsible for mitigating any risks from their own respective supply chains through conformity documentation.

7.2 Risks and De-risking Matrix

The de-risking discussion which follow is based on the diagram below.

Minimum De-Risking Requirements		Material/Article Risk					De-Risking Document Types
		No-Risk	Low-Risk	Medium-Risk	High-Risk	Fail	
Supplier Risk	Low-Risk	No Requirement	Any	Any	Any	Fail	
	Medium-Risk	No Requirement	Any	Any	1 Type 1+ 1 Type 2 Documents	Fail	
	High-Risk	No Requirement	Any	1 Type 1+ 1 Type 2 Documents	2 Type 2 Documents	Fail	
	Fail	Fail	Fail	Fail	Fail	Fail	

Figure 1 - De-Risking Matrix

The material/article risk level of a product, as well as the risk of the supplier of the product are used to determine what documentation requirements must be met to de-risk the product. The matrix demonstrates that, as the combined risk levels increase across materials and suppliers, more documentation is required to eliminate those risks. Conversely, lower risk materials/articles provided by low risk suppliers have fewer documentation requirements for the risk level to be mitigated.



7.2.1 De-risking Materials/Articles

High-risk Materials/Articles

A high-risk material or article requires an enhanced level of due diligence. Typical requirements are a material declaration and test report from high risk suppliers, any combination of supplier declaration of conformity, material declaration, and test report from medium risk suppliers, and any one of the three documents from low risk suppliers.

Medium-risk Materials/Articles

Medium risk materials or articles require at least one of: a supplier declaration, material declaration of conformity, or test report. When the supplier is high risk, a combination of these documents is typically required.

Complex Articles

Complex articles are high-risk in the absence of any material identifier or other supplier documentation. A declaration of conformity, combined with any other valid Type 2 document (as described below) should be required to de-risk a complex article to a low risk, but the documentation should be evaluated on a case-by-case basis, as well as the supplier of the article.

7.2.2 De-risking Suppliers

Supplier risk can be built into the conformity assessment process in a material-supplier risk matrix for determining documentation requirements, as previously described when discussing material risk; alternately, a supplier can be classified as low-risk if a restricted substance control program is part of an ISO 9000 or 14000 – certified quality management system, or if the equivalent plan-do-check-act methodology is properly documented and followed in an equivalent system.

Supplier risk is expressed using the following conventions:

Low-risk Suppliers: The supplier has a very good understanding of Proposition 65, comprehensive and effective systems in place to ensure compliance, an existing good relationship with C-Slide, and requires up-stream compliance and documentation. Suppliers with adequately documented restricted substance control programs are included in this category.

Medium-risk Suppliers: Supplier has a good understanding of Proposition 65 and has a basic system of compliance. No pre-existing relationship or poor relationship exists with the C-Slide supply chain.

High-risk Suppliers: Supplier does not understand Proposition 65 or has no compliance system in place.

Failing Suppliers: Suppliers who do not respond to requests for compliance documentation, refuse to take responsibility for Proposition 65 compliance, or are otherwise unable to provide acceptable declarations present risks which cannot be resolved by a process-based approach and are dealt with on a case-by-case basis during the risk mitigation activity.



8.0 Compliance Strategies

8.1 Corporate Level Compliance

At the corporate level, a Compliance Assurance System (CAS) must be robust and kept up-to-date to accommodate the continually increasing requirements for health and environmental legislation compliance. This includes the assurances that products are designed using only approved materials and articles from approved vendors, ensuring that all documentation is current, valid, and encompasses all jurisdictional requirements, and that documentation is properly stored in the event of a request from a regulator or the initiation of an enforcement activity.

A Corporate-level Compliance Program should address the following areas:

- Corporate Strategy
 - Ensure their CAS addresses materials requirements specifically related to Proposition 65, ensuring that all the Common Listed Substances (found in Section 4 of this report) are specifically addressed and that suppliers are made aware of the requirements and contractually obligated to adhere to them.
 - Include all the departments involved in Manufacturing Operations: Design, Procurement, and Quality.
- Product Design
 - Restricted substance requirements and Right-to-Know legislation, such as Proposition 65, REACH and RoHS are becoming more common worldwide. Product design rules should require product designers and engineers to use approved materials in the design and/or specifications of new products. It is important that the CAS enables product compliance to begin during the product design phase. Developing a compliant product, rather than dealing with compliance downstream, is more efficient and highly recommended.
- Supplier Qualification
 - Supplier qualification should include gathering proper compliance documentation from suppliers, ensuring that suppliers have implemented their own CAS program, and auditing suppliers where appropriate.
 - Audits may be required where the CAS puts a supplier in a high-risk category (i.e. where compliance documentation does not meet the required criteria). Supplier audits may also be performed if testing results indicate that a part contains substances that were not identified by the supplier or were identified as not being present in that part.
- Terms and Conditions within Supplier Contracts
 - Supplier contracts should include a Restricted Substance List (RSL) to ensure that no controlled substances are used in the production or manufacture of materials or articles without prior notice, and that no restricted substances are used in the production or manufacture of any products or part of a product.
 - C-Slide should enhance their material or part specifications through the creation of a Restricted Substances List (RSL), to ensure that none of the substances on the RSL are used in the production of materials or components without notice. C-Slide should ensure that the Proposition 65 Common Listed Substances (listed in Section 4 of this report) are included in this RSL.



It should be noted that the Proposition 65 substances list is published at least annually, at which time changes to the list may be made. C-Slide's RSL should be regularly maintained, and any addition of listed substances to the Proposition 65 list should be reflected in C-Slide's RSL, as appropriate.

- C-Slide should ensure that supplier requirements are communicated in a manner which makes them legally binding so that suppliers must abide by them. For example, these requirements should be included in supplier agreements, purchase contracts, or other similar legally binding documentation. It is recommended that C-Slide include in their supplier contracts the following requirement to address the issue of Proposition 65 listed substances in materials: "Materials used shall not contain any substances listed by California's Proposition 65 as chemicals known to the state to cause cancer or reproductive toxicity. "
- Alternatively, where any Proposition 65 listed substances are not restricted by C-Slide, a statement should be required from the supplier identifying the substance(s) used, the specific location (in multi-part assemblies), the quantity (in ppm or percentage) in the material, and any information on the exposure or release rate of the substance from that material. This documentation would provide C-Slide with the information required to determine whether a new supplier can be used to supply a part/material/assembly that does not contain the substance, or to ensure the product is properly labeled.

8.2 Product level Compliance

8.2.1 Product Design

- Products should be designed with low-risk materials where possible. This not only includes using approved materials from approved vendors but also using innately low-risk materials.
- Avoid use of materials such as PVC, to which plasticizers (generally a variety of phthalates) must be added to allow for its flexibility. Many of these phthalates (DEHP, DBP, DINP, etc.) are hazardous and are being controlled. As suppliers move away from some phthalates, they are replacing them with others, which may possibly be added to controlled substance lists at a future date.
- Avoid use of unspecified materials, which, without documentation to prove otherwise, are at high risk of containing Proposition 65 listed chemicals including phthalates, heavy metals and/or flame retardants.



8.3 Material Level Compliance

8.3.1 Data Gathering for Listed Substances

- Detailed material composition information should be gathered for all risk materials as part of any robust CAS, either through direct testing for risk substances, or by gathering material information, SDSs and compliance declarations from suppliers. This documentation should clearly support the final compositions of the materials used; documents such as SDSs for individual material ingredients alone may not provide sufficient information to represent the overall material composition. A combination of both material-testing and data gathering should be performed alongside a CAS that specifies material requirements.
- Compliance documentation should contain a definite statement that the material/component/product does not contain any of the substances in question. To be deemed acceptable, it is suggested that the Declaration of Conformity meet the requirements of ISO 17050.
- Compliance documentation and testing should be specific to the substances listed in the law and to the requirements of the law (material composition limits, exposure rates, etc.). Compliance information should therefore:
 - identify substances or elements of concern (listed heavy metals, phthalates and flame retardants);
 - specify the amount of each listed substance in each material exposed to the user;
 - state categorically any substances not present in the material or part; and
 - conform to the above declaration requirements
- Materials and substances should be identified to the substance level, including substances such as flame retardants, epoxies, pigments, additives, etc. A Chemical Abstracts Service registry number (CAS RN) should be available for each chemical component.
- Compliance documentation should be applicable to the Proposition 65 requirements and should be up-to-date and identify all the substances listed by the legislation at the time the declarations are provided.
- Test reports and SDSs must be up-to-date and representative of the current material formulations.

8.3.2 Substance Presence Testing

- Testing can take the form of x-ray fluorescence (XRF) screening, which can determine the presence of heavy metals (lead, chromium, cadmium, mercury), or wet chemical testing for many of the at-risk substances (heavy metals, halogens in flame retardants, phthalates, etc.). Testing can be done on a limited number of products, parts or materials to verify/validate the compliance of suppliers and contract manufacturers. This would show diligence in the case where a C-Slide product was found to contain a listed substance with no warning label.
- Testing alone cannot prove compliance with a requirement as testing is generally destructive and can only prove the specific tested part, material or product is/was compliant. Without a robust CAS in place, there is no link between the tested sample and other similar parts, materials or products, even from the same supplier



8.3.3 Quantitative Substance Testing and Exposure Limit Testing

- A toxicology assessment can be performed if testing (or material declarations) determines a listed substance is present in a product. This would assess the amount of contact the user has with the product and would then determine the amount of each listed substance to which the user is exposed. This number would then be compared to the maximum daily allowance (if one exists for the substance) to determine if there is enough exposure to require a warning statement.



Appendix I: Summary of Recommended Risk Mitigation Actions

Risk Mitigation Strategic Actions	
Prior to Product Sale into California	
Data Gathering for Listed Substances	Detailed material composition information should be obtained for materials/components for which the risk of Proposition 65 listed substances being present remains. Supporting documentation may be sought from suppliers in the form of additional test reports, material composition information, SDSs and compliance declarations.
Substance Presence Testing	Testing may be performed to determine the presence/absence of the risk substances in the product/components, as identified in the Risk Analysis section and the Common Listed Substances (in Section 4 of this report), for which no supporting documentation was provided by suppliers.
Quantitative Substance Testing and Exposure Limit Testing (as appropriate)	A toxicology assessment can be performed, where a listed substance is present in the product, to assess the amount of contact the user has with the product and determine the amount of each listed substance to which the user is exposed.
Application of Proposition 65 Warning Label	A label should be applied to products which are found (through supplier-provide material information or substance testing results) to contain one or more Proposition 65 listed substance, if C-Slide is unable or unwilling to take the actions necessary to have those substances removed from the products before sale in California. A warning label removes the high risk of enforcement against a product, when sufficient supporting documentation or test results are not available to lower/eliminate the risk potential associated with substances of concern.
Near-future	
Terms and Conditions within Supplier Contracts	Create a company Restricted Substances List (RSL) to ensure no substances of concern are used in the materials or components supplied to C-Slide without notice, ensuring the Common Listed Substances (listed in Section 4 of this report), at a minimum, are included in the RSL. Implement the legal requirement that suppliers must not supply to C-Slide any materials containing any Proposition 65 listed substances, and that they must provide documentation supporting this fact (e.g., as material analysis reports or compliance certificates). Alternately, a statement should be required from suppliers identifying any Proposition 65 listed substance(s) used in the supplied materials.
Long-term	
Corporate Strategy	Ensure a Compliance Assurance System (CAS) is developed and includes Proposition 65 substance requirements.
Product Design-for-Compliance	Products should be designed using approved materials from approved vendors and inherently low-risk materials, where appropriate.



Appendix II: New Regulatory Text for Consumer Product Exposure Warnings

§ 25603 Consumer Product Exposure Warnings— Content

(a) Unless otherwise specified in Section 25607.1 et seq., a warning meets the requirements of this subarticle if it is provided using one or more of the methods required in Section 25602 and includes all the following elements:

(1) A symbol consisting of a black exclamation point in a yellow equilateral triangle with a bold black outline. Where the sign, label or shelf tag for the product is not printed using the color yellow, the symbol may be printed in black and white. The symbol shall be placed to the left of the text of the warning, in a size no smaller than the height of the word “WARNING”.

(2) The word “**WARNING**” in all capital letters and bold print, and:

(A) For exposures to listed carcinogens, the words, “This product can expose you to chemicals including [name of one or more chemicals], which is [are] known to the State of California to cause cancer. For more information go to www.P65Warnings.ca.gov.”

(B) For exposures to listed reproductive toxicants, the words, “This product can expose you to chemicals including [name of one or more chemicals], which is [are] known to the State of California to cause birth defects or other reproductive harm. For more information go to www.P65Warnings.ca.gov.”

(C) For exposures to both listed carcinogens and reproductive toxicants, the words, “This product can expose you to chemicals including [name of one or more chemicals], which is [are] known to the State of California to cause cancer, and [name of one or more chemicals], which is [are] known to the State of California to cause birth defects or other reproductive harm. For more information go to www.P65Warnings.ca.gov.”

(D) For exposures to a chemical that is listed as both a carcinogen and a reproductive toxicant, the words, “This product can expose you to chemicals including [name of one or more chemicals], which is [are] known to the State of California to cause cancer and birth defects or other reproductive harm. For more information go to www.P65Warnings.ca.gov.”

(E) Where a warning is being provided for an exposure to a single chemical the words “chemicals including” may be deleted from the warning content set out in subsections (A), (B), and (D).

(b) A short-form warning may be provided on the product label using all the following elements:

(1) The symbol required in subsection (a)(1).

(2) The word “**WARNING**” in all capital letters, in bold print.

(A) For exposures to listed carcinogens, the words, “Cancer - www.P65Warnings.ca.gov.”



(B) For exposures to listed reproductive toxicants, the words, “Reproductive Harm - www.P65Warnings.ca.gov.”

(C) For exposures to both listed carcinogens and reproductive toxicants, the words, “Cancer and Reproductive Harm - www.P65Warnings.ca.gov.”

(c) A person providing a short-form warning on the product label pursuant to subsection (b) is not required to include within the text of the warning the name or names of a listed chemical.



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