

**Environmental, Health and Safety Specification:  
Materials Declaration Management Process for Equipment**

**Table of Contents:** This specification contains the following sections:

1.0 Purpose	Page 1
2.0 Scope	Page 1
3.0 Materials Requiring Declaration	Page 1
4.0 Material Composition Declaration (MCD) Form	Page 2
5.0 Carestream Health Responsibilities	Page 2
6.0 Supplier Responsibilities	Page 2
7.0 Reference Documents	Page 3
<b>Appendices</b>	
Table A. Materials Requiring Declaration: JIG List A	Page 3
Table B. Materials Requiring Declaration: JIG List B	Page 4
Table C. Materials Requiring Declaration: Carestream Health Materials of Interest	Page 5
Table D. Detailed JIG Lists A with CAS Numbers	Page 6
Table E. Detailed JIG Lists B with CAS Numbers	Page 9
Table F. Detailed JIG Lists C with CAS Numbers	Page 12

**1.0 Purpose:**

The purpose of this specification is to:

- identify materials for declaration for Electrical and Electronic Equipment (EEE), and
- establish the process for exchanging material and substance data between suppliers and Carestream Health to ensure the sale of regulatory compliant products worldwide.

**2.0 Scope:**

This specification applies to complete products, subassemblies, components and materials that are supplied to Carestream Health for incorporation into Carestream Health products. It covers materials and substances that may be present in the supplied product or component. It does not apply to packaging materials (eg., cardboard, plastic trays) or process chemicals, unless those chemicals constitute part of a finished product or component.

**3.0 Materials Requiring Declaration:**

Carestream Health adopted the Joint Industry Guide (JIG) 101 Material Composition Declaration for Electrical and Electronic Equipment as the basis of materials specification. Tables A and B list the categories of materials or substances requiring declaration, typical material/substance uses and requirements and exceptions or thresholds of use.

Carestream Health also developed a list of materials of specific interest to Carestream Health. These materials are listed in Table C.

Tables D-F contains expanded listings of the materials in Tables A, B and C, and includes, when available, specific Chemical Abstract Services (CAS) numbers.

Suppliers are required to declare the presence or use of materials requiring declaration listed in Tables A-C in a product or component supplied to Carestream Health.

#### **4.0 Materials Composition Declaration (MCD) Form:**

Carestream Health adopted IPC-1752-1, Declaration Class 3 as the data format for Supplier declarations. Carestream Health's Suppliers must respond using the Carestream Health customized IPC-1752-1, available at:

[www.carestreamhealth.com/ehs-supplier.html](http://www.carestreamhealth.com/ehs-supplier.html) as:

*Equipment Materials Composition Declaration Form MCD-1752.*

The form includes sections to declare:

1. RoHS (Restriction on Hazardous Substances) reporting at a homogeneous material level in yes/no format
2. RoHS substance reporting at a homogeneous level
3. JIG 101 A & B materials at the item level
4. Carestream Health List C materials, at the item level.

#### **5.0 Carestream Health Responsibilities:**

It is the responsibility of Carestream Health personnel to do the following.

- 5.1 Include in all engineering drawings references to EKMD-1752 and MCD-1752.

Recommended language: Materials must comply with Carestream Health Standard EKMD-1752. Suppliers must complete MCD-1752 and return to Carestream Health.

- 5.2 Attach EKMD-1752 and MCD-1752 to all contracts.

- 5.3 Include in all purchase orders references to EKMD-1752 and MCD-1752.

Recommended language: **Carestream Health procurement policy requires that all of our Suppliers and Distributors comply with all applicable standards for Environment, Health, and Safety protection. For Carestream Health's specific Worldwide Supplier EHS Standards and guidance go to:**

[www.carestreamhealth.com/ehs-supplier.html](http://www.carestreamhealth.com/ehs-supplier.html)

- 5.4 Send targeted requests to Suppliers for specific products or components when needed to assess Environmental, Health and Safety for new products or components.

- 5.5 Respond to Supplier questions, sent to:

[HG-SupplierDeclaration@carestreamhealth.com](mailto:HG-SupplierDeclaration@carestreamhealth.com)

#### **6.0 Supplier Responsibilities:**

It is the responsibility of the Supplier to comply with the request in Section 3.0, *Materials Requiring Declaration*, including:

- 6.1 Review and understand materials listed in Tables A through C

- 6.2 Contact supply chain for material composition declaration information in order to provide an accurate response

- 6.3 Complete the supplier information and all sections of MCD-1752

- 6.4 Digitally sign MCD-1752 by an authorized company representative and submit to [HG-SupplierDeclaration@carestreamhealth.com](mailto:HG-SupplierDeclaration@carestreamhealth.com) , and

- 6.5 Resubmit an updated MCD-1752 when material content for a product or component changes, and invalidates a previously submitted declaration form.

**7.0 Reference Documents:**

Additional information is available at:  
 JIG-101 Joint Industry Guide on Material Composition Declaration for Electronic Products:  
 MCD-1752 Equipment Materials Composition Declaration Form  
 IPC-1751 Generic Requirements for Declaration Process Management,  
 IPC-1752 Material Declaration Management  
 IPC-1752-3 Users Guide for Materials Declaration Forms

**APPENDICIES**

**Table A. Materials Requiring Declaration: JIG List A.**

<b>Material/Substance</b>	<b>Typical Uses</b>	<b>Requirements and Exceptions or Threshold (MCV)</b>
Asbestos	Heat insulation	No intentional addition
Azo Colorants	Wire coating material (inks, coatings, pigments and dyes)	No intentional addition of dyes and pigments based on the restricted amines listed (except if breakdown products are less than 30 ppm)
Cadmium/Cadmium Compounds	Thick film inks on circuit boards, solid state relays, batteries, (inks, pigments, dyes, coatings, plastics), certain glass filters, cadmium plating in high voltage applications, plugs, commutators, fuses, PVC sheathed wires, photocouplers, photodetectors, solder, electrical contacts, resistors, pole plates	No intentional addition except for uses in electrical safety applications. No levels > 100 ppm. Cadmium used as a stabilizer in PVC wire insulation is acceptable at levels below 100 ppm.
Hexavalent Chromium/Hexavalent Chromium Compounds (Cr+6)	Chromate conversion coatings for metal corrosion protection, EMI plating, (inks, pigments, dyes, coatings, plastics), vermiculite contaminant, fasteners, screws, nuts, shafts, etching of anodized aluminum, passivation of stainless steel	No intentional addition and No levels >1000 ppm
Lead/Lead Compounds	Solder, weights, lubricants, glass lenses, light bulbs/tubes, paints, coatings, (inks, pigments, dyes, coatings, plastics, PVC sheathed wires, vulcanized rubber molding, ceramics, electrodes, resistor component, semiconductors, zinc plating, die-bond material, sensor component material, humidity sensors, X-Ray shielding plastic plates, rubber	No intentional addition (except for use in glass of Cathode Ray Tubes, fluorescent tubes, optical lenses; as an alloying element in steel containing up to 0.35% by weight, lead in aluminum containing up to 0.4% lead by weight, and as a copper alloy containing up to 4.0% lead by weight; lead in high melting temperature type solders *85% lead); lead in solders for servers, storage and storage array systems (until 2010); lead in solders for network infrastructure equipment for switching, signaling, transmission, as well as in network management systems for telecommunication; lead in

		electronic ceramic parts, e.g. piezo electronic devices; lead in shielding for radiographic applications; lead in UPS transformers for medical devices). No levels > 1000 ppm.
Lead/Lead Compounds - PVC Cables & Wires	PVC wire insulation on wires, wiring harnesses, power cords, external interconnect cables	Lead used as a plasticizer in PVC wire insulation at levels < 1000 ppm is allowed, but in the case of external cables, external cords, power and interconnect cables, lead must be below 300 ppm.
Mercury/Mercury Compounds	Electrical relays/switches, lamps, batteries, inks, pigments, dyes, coatings, plastics, scanners, LCD, mercury electrodes, dry cells, mercury cells, electrical contacts, sensors, rubber, resins	No intentional addition (except for use in specialty mercury vapor lamps and backlit LCD lamps) No levels > 1000 ppm
Ozone Depleting Substances - Class I CFCs, HBFCs	Cleaning agents, lubricants, adhesives, cooling agents	No intentional addition or use in manufacturing, of Class I ODS
Ozone Depleting Substances - Class II HCFCs	Foaming plastics, halogen lamps, fire extinguishers	Class II ODS cannot be present at levels > 1000 ppm
Polybrominated biphenyls (PBB) ,and	Flame retardants, plastics, circuit boards, foams, wire insulation	No intentional addition and no levels > 1000 ppm
Polybrominated diphenyl ethers (PBDE)	Flame retardants, plastics, circuit boards, foams, wire insulation	No intentional addition and no levels > 1000 ppm
Polychlorinated Biphenyls (PCBs)	Electrical transformers and heat exchangers	No intentional addition
Polychlorinated Naphthalenes (more than 3 chlorine atoms)	Elastic rubber, elastomer belts, oil seals, mechanical seals, insulating oil in capacitors, plastic parts	No intentional addition
Radioactive Substances	Optical lenses	No intentional addition
Short Chained Chlorinated Paraffins	Thermoplastic PVC parts, substrate conductor and wire, sheathing of electrical wires	No intentional addition
Tributyl Tin (TBT) and Triphenyl Tin (TPT)	Silicone bonding agents, rubber catalyst, SAW filters Note: Tin-Lead solder does not contain organic tin	No intentional addition
Tributyl Tin Oxide (TBTO)	Printing inks, flameproof plastics, rubber elastomers	No intentional addition

**Table B. Materials Requiring Declaration: JIG List B.**

Material/Substance	Typical Uses	Requirements and Exceptions or Threshold (MCV)
Antimony/Antimony Compounds	Optical lenses, solder, printing inks, wire coating material, semiconductor devices, resistor component, transformers, insulating tapes, rubber, DC converters, printed circuit boards, resin material	Report at levels >1000 ppm
Arsenic/Arsenic Compounds	Glass, metal bonding agents, coatings, LED's, semiconductors, photocouplers, fiberglass, insulating tapes, printed circuit boards, optical lenses	Report at levels >1000 ppm
Beryllium/Beryllium Compounds	Beryllium-copper electrical contacts, EMI gaskets, flat springs, relays, switches, jacks, sockets, wires	Report at levels >1000 ppm
Bismuth/Bismuth Compounds	Electrical solder, copper circuits, lead alloys, piezoelectric elements, electrodes	Report at levels >1000 ppm

Brominated Flame Retardants (other than PBB or PBDE)	Plastics additive, vulcanized rubber molding, semiconductors, LCD, TV chassis	Report at levels >1000 ppm
Nickel (external applications only)	Batteries, optical reflection coatings, lead frame, thick film conductors, semiconductors, decorative plating, electroplating for corrosion protection, ceramic capacitors, magnetic recording media	Report at levels >1000 ppm
Phthalate esters e.g. di n-butyl phthalate (DBP), di-ethylhexyl phthalate (DEHP), Bis(2 methoxyethyl) phthalate (DMEP)	Equipment, plastics, paint accelerants, safety glass, adhesives, lubricants, PVC cables, wires and cords, no clean fluxes, heat shrink tubing, rubber, buttoncovers, anti-skid feet, EMI gaskets, mold release, labels, foam, textiles, dyes, pigments, keyboard and keys, scroll wheels on mice, ear phones, covers, and liquid cleaners.	Report at levels >1000 ppm
Selenium/Selenium Compounds	Semiconductors, photo cells, printing inks, photocouplers	Report at levels >1000 ppm
Polyvinyl Chloride (PVC)	Wire insulation, plastics, tubing, conduit, packaging (blisters, shrink bands, flexible packaging)	Report at levels >1000 ppm

**Table C. Materials Requiring Declaration: Carestream Health Materials of Interest (List C).**

Material/Substance	Typical Uses	Requirements and Exceptions or Threshold (MCV)
Natural Rubber Latex	Medical devices, neck and wrist straps, eye pieces, camera grips, buttons on electronic equipment, promotional items	No intentional addition (Some uses in medical devices may be allowed. Labeling may be required per FDA. Report usage.)
Copper/Copper Compounds	Electrical contacts	Report any level of use
Gold/Gold Compounds	Circuit board leads, contacts	Report any level of use
Magnesium/Magnesium Compounds	Housings	Report any level of use
Palladium/Palladium Compounds	Circuit board contacts	Report any level of use
Silver/Silver Compounds	Electrical contacts	Report any level of use
Bis-phenol A	Resins, curing agents, hardeners, plastic resin formulations, paperboard packaging, metal cans, phenolic resins, industrial coatings, plasticizers, paints, heat transfer fluids, and lubricants	Report any level of use

**Maximum concentration value such as 1000 ppm shall apply at the homogeneous material level.** Homogeneous material means a material that cannot be mechanically disjointed into different materials or materials of uniform composition throughout. Mechanically disjointed means materials that can be separated by mechanical means such as unscrewing, crushing, grinding, and desoldering. A semiconductor component would have several homogeneous materials, i.e., the plastic housing, lead frame, tin plating of the lead frame wires, lead frame alloy, etc. An electric cable would have three materials, i.e., the internal conductor wire, the conductor wire insulation, and the outside cable jacket.

**Table D. Detailed JIG List A with CAS Numbers**

<b>Asbestos/Asbestos Materials</b>	<b>CAS-number</b>
Asbestos and Asbestos Materials	1332-21-4
Actinolite	77536-66-4
Amosite (Grunerite)	12172-73-5
Anthophyllite	77536-67-5
Chrysotile	12001-29-5
Crocidolite	12001-28-4
Tremolite	77536-68-6
<b>Azo Colorants*</b>	<b>CAS Numbers</b>
4-Aminobiphenyl	92-67-1
Benzidine	92-87-5
4-Chloro-o-toluidine	95-69-2
2-Naphthylamine	91-59-8
o-Aminoazotoluene	97-56-3
5-Nitro-o-toluidine	99-55-8
4-Chloroaniline	106-47-8
4-Methoxy-m-phenylenediamine	615-05-4
4,4'-Diaminodipheylmethane	101-77-9
3,3'-Dichlorobenzidine	91-94-1
3,3'-Dimethoxybenzidine	119-90-4
3,3'-Dimethylbenzidine	119-93-7
4,4'-Methylenedi-o-toluidine	838-88-0
p-Cresidine	120-71-8
4,4'-Methylene-bis-(2-chloro-anilene)	101-14-4
4,4'-Oxydianilene	101-80-4
4,4'-Thiodianiline	139-65-1
o-Toluidine	95-53-4
4-Methyl-m-phenylenediamine	95-80-7
2,4,5-Trimethylaniline	137-17-7
o-Anisidine	90-04-0
4-Amino azobenzene	60-09-03

**\*Please note: The azo colorant restriction applies to certain azo colorants, that by reduction cleavage of azo groups may release one of the listed 22 aromatic amines.**

<b>Cadmium/Cadmium Compounds</b>	<b>CAS Numbers</b>
Cadmium	7440-43-9
Cadmium oxide	1306-19-0
Cadmium sulfide	1306-23-6
Cadmium chloride	10108-64-2
Cadmium sulfate	10124-36-4
Other cadmium compounds	
<b>Chromium VI and its Compounds</b>	<b>CAS Numbers</b>
Ammonium dichromate	
Barium chromate	10294-40-3
Calcium chromate	13765-19-0
Chromic acetate	1066-30-4
Chromic acid	
Chromium	7440-47-3
Chromium (VI) oxide	1333-82-0
Chromium carbonate	
Chromium trioxide	1333-82-0
Lead chromate	7758-97-6
Lead chromate oxide	
Potassium chromate	7789-00-6
Potassium dichromate	7778-50-9

Sodium chromate	7775-11-3
Sodium dichromate	10588-01-9
Strontium chromate	6/2/7789
Zinc chromate	13530-65-9
<b>Hydrochlorofluorocarbons/ Isomers* Class II ODS</b>	<b>CAS Numbers</b>
Dichlorofluoromethane (HCFC 21)	75-43-4
Chlorodifluoromethane (HCFC 22)	75-45-6
Chlorofluoromethane (HCFC 31)	593-70-4
Tetrachlorofluoroethane (HCFC 121) 1,1,1,2-tetrachloro-2-fluoroethane (HCFC 121a) 1,1,2,2-tetrachloro-1-fluoroethane	134237-32-4 354-11-0 354-14-3
Trichlorodifluoroethane (HCFC 122) 1,2,2-trichloro-1,1-difluoroethane	41834-16-6 354-21-2
Dichlorotrifluoroethane(HCFC 123) Dichloro-1,1,2-trifluoroethane 2,2-dichloro-1,1,1-trifluoroethane 1,2-dichloro-1,1,2-trifluoroethane (HCFC-123a) 1,1-dichloro-1,2,2-trifluoroethane (HCFC-123b) 2,2-dichloro-1,1,2-trifluoroethane(HCFC-123b)	34077-87-7 90454-18-5 306-83-2 354-23-4 812-04-4 812-04-4
Chlorotetrafluoroethane (HCFC 124) 2-chloro-1,1,1,2-tetrafluoroethane 1-chloro-1,1,2,2-tetrafluoroethane (HCFC 124a)	63938-10-3 2837-89-0 354-25-6
Trichlorofluoroethane (HCFC 131) 1-Fluoro-1,2,2-trichloroethane 1,1,1-trichloro-2-fluoroethane (HCFC131b)	27154-33-2 (134237-34-6) 359-28-4 811-95-0
Dichlorodifluoroethane (HCFC 132) 1,2-dichloro-1,1-difluoroethane (HCFC 132b) 1,1-dichloro-1,2-difluoroethane(HFCF 132c) 1,1-dichloro-2,2-difluoroethane 1,2-dichloro-1,2-difluoroethane	25915-78-0 1649-08-7 1842-05-3 471-43-2 431-06-1
Chlorotrifluoroethane (HCFC 133) 1-chloro-1,2,2-trifluoroethane 2-chloro-1,1,1-trifluoroethane (HCFC-133a)	1330-45-6 1330-45-6 75-88-7
Dichlorofluoroethane(HCFC 141) 1,1-dichloro-1-fluoroethane (HCFC-141b) 1,2-dichloro-1-fluoroethane	1717-00-6 430-57-9 1717-00-6 (25167-88-8)
Chlorodifluoroethane (HCFC 142) 1-chloro-1,1-difluoroethane (HCFC142b) 1-chloro-1,2-difluoroethane (HCFC142a)	25497-29-4 75-68-3 25497-29-4
Hexachlorofluoropropane (HCFC 221)	134237-35-7
Pentachlorodifluoropropane (HCFC 222)	134237-36-8
Tetrachlorotrifluoropropane (HCFC 223)	134237-37-9
Trichlorotetrafluoropropane (HCFC 224)	134237-38-0
Dichloropentafluoropropane, (Ethyne, fluoro-) (HCFC 225) 2,2-Dichloro-1,1,1,3,3-pentafluoropropane(HCFC 225aa) 2,3-Dichloro-1,1,1,2,3-pentafluoropropane(HCFC 225ba) 1,2-Dichloro-1,1,2,3,3-pentafluoropropane(HCFC 225bb) 3,3-Dichloro-1,1,1,2,2-pentafluoropropane (HCFC 225ca) 1,3-Dichloro-1,1,2,2,3-pentafluoropropane (HCFC 225cb) 1,1-Dichloro-1,2,2,3,3-pentafluoropropane(HCFC 225cc) 1,2-Dichloro-1,1,3,3,3-pentafluoropropane(HCFC 225da) 1,3-Dichloro-1,1,2,3,3-pentafluoropropane (HCFC 225ea) 1,1-Dichloro-1,2,3,3,3-pentafluoropropane(HCFC 225eb)	127564-92-5 (2713-09-9) 128903-21-9 422-48-0 422-44-6 422-56-0 507-55-1 13474-88-9 431-86-7 136013-79-1 111512-56-2
Chlorohexafluoropropane (HCFC 226)	134308-72-8
Pentachlorofluoropropane (HCFC 231)	134190-48-0
Tetrachlorodifluoropropane (HCFC 232)	134237-39-1
Trichlorotrifluoropropane (HCFC 233) 1,1,1-Trichloro-3,3,3-Trifluoropropane	134237-40-4 7125-83-9
Dichlorotetrafluoropropane (HCFC 234)	127564-83-4

Chloropentafluoropropane (HCFC 235) 1-Chloro-1,1,3,3,3-pentafluoropropane	134237-41-5 460-92-4
Tetrachlorofluoropropane (HCFC 241)	134190-49-1
Trichlorodifluoropropane (HCFC 242)	134237-42-6
Dichlorotrifluoropropane (HCFC 243) 1,1-dichloro-1,2,2-trifluoropropane 2,3-dichloro-1,1,1-trifluoropropane 3,3-Dichloro-1,1,1-trifluoropropane	134237-43-7 7125-99-7 338-75-0 460-69-5
Chlorotetrafluoropropane (HCFC 244) 3-chloro-1,1,2,2-tetrafluoropropane	134190-50-4 679-85-6
Trichlorofluoropropane (HCFC 251) 1,1,3-trichloro-1-fluoropropane	134190-51-5 818-99-5
Dichlorodifluoropropane (HCFC 252)	134190-52-6
Chlorotrifluoropropane (HCFC 253) 3-chloro-1,1,1-trifluoropropane (HCFC 253fb)	134237-44-8 460-35-5
Dichlorofluoropropane (HCFC 261) 1,1-dichloro-1-fluoropropane	134237-45-9 7799-56-6
Chlorodifluoropropane (HCFC 262) 2-chloro-1,3-difluoropropane	134190-53-7 102738-79-4
Chlorofluoropropane (HCFC 271) 2-chloro-2-fluoropropane	134190-54-8 420-44-0

**\*Please note: These materials may contain isomers that are not listed here. Isomers with CAS numbers have been included when available.**

<b>Polybrominated Biphenyls (PBBs) and Polybrominated Diphenyls (PBDEs)</b>	<b>CAS Numbers</b>
Bromobiphenyl and its ethers	2052-07-5 (2-Bromobiphenyl) 2113-57-7 (3-Bromobiphenyl) 92-66-0 (4-Bromobiphenyl) 101-55-3 (ether)
Decabromobiphenyl and its ethers	13654-09-6 1163-19-5 (ether)
Dibromobiphenyl and its ethers	92-86-4 2050-47-7 (ether)
Heptabromobiphenylether	68928-80-3
Hexabromobiphenyl and its ethers	59080-40-9 36355-01-8 (hexabromo-1,1'-biphenyl) 67774-32-7 (Firemaster FF-1) 36483-60-0 (ether)
Nonabromobiphenylether	63936-56-1
Octabromobiphenyl and its ethers	61288-13-9 32536-52-0 (ether)
Pentabromobidphenyl ether (note: Commercially available PeBDPO is a complex reaction mixture containing a variety of brominated diphenyloxides.	32534-81-9 (CAS number used for commercial grades of PeBDPO)
Polybrominated Biphenyls	59536-65-1
Tetrabromobiphenyl and its ethers	40088-45-7 40088-47-9 (ether)
Tribromobiphenyl ether	49690-94-0
<b>Polychlorinated Biphenyls (PCBs)</b>	<b>CAS Numbers</b>
Polychlorinated Biphenyls	1336-36-3
Aroclor	12767-79-2
Chlorodiphenyl (Aroclor 1260)	11096-82-5
Kanechlor 500	27323-18-8
Aroclor 1254	11097-69-1
Terphenyls	26140-60-3
<b>Polychlorinated Naphthalenes</b>	<b>CAS Numbers</b>
Polychlorinated Naphthalenes	70776-03-3
Other polychlorinated Naphthalenes	-
<b>Radioactive Substances</b>	<b>CAS Numbers</b>
Uranium	-
Plutonium	-
Radon	-
Americium	-
Thorium	-
Cesium	7440-46-2

Strontium	7440-24-6
Other radioactive substances	-
<b>Shortchain Chlorinated Paraffins</b>	<b>CAS Numbers</b>
Chlorinated paraffins (C10-13)	85535-84-8
Other Short Chain Chlorinated Paraffins	-
<b>Tributyl Tin, Triphenyl Tin and oxides</b>	<b>CAS Numbers</b>
Bis(tri-n-butyltin) oxide	56-35-9
Triphenyltin N,N'-dimethyldithiocarbamate	1803-12-9
Triphenyltin fluoride	379-52-2
Triphenyltin acetate	900-95-8
Triphenyltin chloride	639-58-7
Triphenyltin hydroxide	76-87-9
Triphenyltin fatty acid salts (C=9-11)	47672-31-1
Triphenyltin chloroacetate	7094-94-2
Tributyltin methacrylate	2155-70-6
Bis(tributyltin) fumarate	6454-35-9
Tributyltin fluoride	1983-10-4
Bis(tributyltin) 2,3-dibromosuccinate	31732-71-5
Tributyltin acetate	56-36-0
Tributyltin laurate	3090-36-6
Bis(tributyltin) phthalate	4782-29-0
Copolymer of alkyl acrylate, methyl methacrylate and tributyltin methacrylate(alkyl; C=8)	-
Tributyltin sulfamate	6517-25-5
Bis(tributyltin) maleate	14275-57-1
Tributyltin chloride	1461-22-9
Mixture of tributyltin cyclopentanecarboxylate and its analogs (Tributyltin naphthenate)	-
Mixture of tributyltin 1,2,3,4,4a,4b,5,6,10,10a-decahydro-7-isopropyl-1,4a-dimethyl-1-phenanthlenecarboxylate and its analogs (Tributyltin rosin salt)	-
Other Tributyl Tins & Triphenyl Tins	-

**Table E.** Detailed JIG List B with CAS Numbers.

<b>Antimony/Antimony Compounds</b>	<b>CAS Numbers</b>
Antimony (metallic)	7440-36-0
Antimony trioxide	1309-64-4
Antimony pentoxide	1314-60-9
Antimony trichloride	10025-91-9
Sodium antimonate	15432-85-6
Other antimony compounds	-
<b>Arsenic/Arsenic Compounds</b>	<b>CAS Numbers</b>
Arsenic	7440-38-2
Gallium arsenide	1303-00-0
Calcium arsenate	7778-44-1
Calcium arsenite	27152-57-4
Arsenic pentoxide	1303-28-2
Arsenic trioxide	1327-53-3
Potassium arsenite	10124-50-2
Potassium arsenate	7784-41-0
Lead arsenate	3687-31-8
Other arsenic compounds	-
<b>Beryllium/Beryllium Compounds</b>	<b>CAS Numbers</b>
Beryllium	7440-41-7
Beryllium-aluminum alloy	12770-50-2
Beryllium chloride	7787-47-5
Beryllium fluoride	7787-49-7
Beryllium hydroxide	13327-32-7

Beryllium oxide	1304-56-9
Beryllium phosphate	13598-15-7
Beryllium sulfate	13510-49-1
Beryllium sulfate tetrahydrate	7787-56-6
Beryl ore	1302-52-9
Other beryllium compounds	-
<b>Bismuth/Bismuth Compounds</b>	<b>CAS Numbers</b>
Bismuth	7440-69-9
Bismuth trioxide	1304-76-3
Bismuth nitrate	10361-44-1
Other bismuth compounds	-
<b>Brominated Flame Retardants (other than PBBs or PBBEs)</b>	<b>CAS Numbers</b>
Brominated flame retardant which comes under notation of ISO 1043-4 code number FR(14)[Aliphatic/alicyclic brominated compounds]	-
Brominated flame retardant which comes under notation of ISO 1043-4 code number FR(15)[Aliphatic/alicyclic brominated compounds in combination with antimony compounds]	-
Brominated flame retardant which comes under notation of ISO 1043-4 code number FR(16)[Aromatic brominated compounds excluding brominated diphenyl ether and biphenyls]	-
Brominated flame retardant which comes under notation of ISO 1043-4 code number FR(17)[Aromatic brominated compounds excluding brominated diphenyl ether and biphenyls] in combination with antimony compounds]	-
Brominated flame retardant which comes under notation of ISO 1043-4 code number FR(22)[Aliphatic/alicyclic chlorinated and brominated compounds]	-
Brominated flame retardant which comes under notation of ISO 1043-4 code number FR(42) [Brominated organic phosphorus compounds]	-
Poly(2,6-dibromo-phenylene oxide)	69882-11-7
Tetra-decaboro-diphenoxy-benzene	58965-66-5
1,2-Bis(2,4,6-tribromo-phenoxy) ethane	37853-59-1
3,5,3',5'-Tetrabromo-bisphenol A (TBBA)	79-94-7
TBBA, unspecified	30496-13-0
TBBA-epichlorhydrin oligomer	40039-93-8
TBBA-TBBA-diglycidyl-ether oligomer	70682-74-5
TBBA carbonate oligomer	28906-13-0
TBBA carbonate oligomer, phenoxy end capped	94334-64-2
TBBA carbonate oligomer, 2,4,6-tribromo-phenol terminated	71342-77-3
TBBA-bisphenol A-phosgene polymer	32844-27-2
Brominated epoxy resin end-capped with tribromophenol	139638-58-7
Brominated epoxy resin end-capped with tribromophenol	135229-48-0
TBBA-(2,3-dibromo-propyl-ether)	21850-44-2
TBBA bis-(2-hydroxy-ethyl-ether)	4162-45-2
TBBA-bis-(allyl-ether)	25327-89-3
TBBA-dimethyl-ether	37853-61-5
Tetrabromo-bisphenol S	39635-79-5
TBBS-bis-(2,3-dibromo-propyl-ether)	42757-55-1
2,4-Dibromo-phenol	615-58-7
2,4,6-tribromo-phenol	118-79-6

Pentabromo-phenol	608-71-9
2,4,6-Tribromo-phenyl-alltl-ether	3278-89-5
Tribromo-phenyl-allyl-ether, unspecified	26762-91-4
Bis(methyl)tetrabromo-phthalate	55481-60-2
Bis(2-ethylhexyl)tetrabromo-phthalate	26040-51-7
2-Hydroxy-propyl-2-(2-hydroxy-ethoxy)-ethyl-TBP	20566-35-2
TBPA, glycol-and propylene-oxide esters	75790-69-1
N,N'-Ethylene -bis-(tetrabromo-phthalimide)	32588-76-4
Ethylene-bis85,6-dibromo-norbornane-2,3-dicarboximide)	52907-07-0
2,3-Dibromo-2-butene-1,4-diol	3234-02-4
Dibromo-neopentyl-glycol	3296-90-0
Dibromo-propanol	96-13-9
Tribromo-neopentyl-alcohol	36483-57-5
Poly tribromo-styrene	57137-10-7
Tribromo-styrene	61368-34-1
Dibromo-styrene grafted PP	171091-06-8
Poly-dibromo-styrene	31780-26-4
Bromo-/Chloro-paraffins	68955-41-9
Bromo-/Chloro-alpha-olefin	82600-56-4
Vinylbromide	593-60-2
Tris-(2,3-dibromo-propyl)-isocyanurate	52434-90-9
Tris(2,4-Dibromo-phenyl) phosphate	49690-63-3
Tris(tribromo-neopentyl) phosphate	19186-97-1
Chlorinated and brominated phosphate ester	125997-20-8
Pentabromo-toluene	87-83-2
Pentabromo-benzyl bromide	38521-51-6
1,3-Butadiene homopolymer,brominated	68441-46-3
Pentabromo-benzyl-acrylate, monomer	59447-55-1
Pentabromo-benzyl-acrylate, polymer	59447-57-3
Decabromo-diphenyl-ethane	61262-53-1
Tribromo-bisphenyl-maleinimide	59789-51-4
Brominated trimethylphenyl-lindane	59789-51-4
Other Brominated Flame Retardants	-
Hexabromo-cyclo-dodecane (HBCD), unspecified	3194-55-6
Tetrabromo-chyclo-octane	31454-48-5
1,2-Dibromo-4-(1,2 dibromo-methyl)-cyclo-hexane	3322-93-8
TBPA Na salt	25357-79-3
Tetrabromo phthalic anhydride	632-79-1
<b>Nickel/Nickel Compounds</b>	<b>CAS Numbers</b>
Nickel	7440-02-0
Nickel acetate	373-02-4
Nickel carbonate	3333-67-3
Nickel carbonyl	13463-39-3
Nickel hydroxide	12054-48-7 or 11113-74-9
Nickelocene	1271-28-9
Nickel oxide	1313-99-1
Nickel subsulfide	12035-72-2
Other nickel compounds	
<b>Phthalates</b>	<b>CAS Numbers</b>
Di-"isonyl" phthalate (DINP)	28553-12-0
Bis (2-ethylhexyl) phthalate (DEHP)	117-81-7
Dibutyl phthalate (DBP)	84-74-2
Di- "isodecyl" phthalate (DIDP)	26761-40-0
Bis(n-octyl) Phthalate (DNOP)	117-84-0
Butyl benzyl phthalate (BBP)	85-68-7
<b>Chlorinated Polymers</b>	<b>CAS Number</b>
Vinyl chloride polymer (PVC)	9002-86-2
<b>Selenium/Selenium Compounds</b>	<b>CAS Numbers</b>

Selenium and materials	7782-49-2
Hydrogen selenide	7783-07-5
Sodium selenide	1313-85-5
Selenium dioxide	7446-08-4
Sodium selenate	10112-94-4
Dimethyl selenide	593-79-3
Selenium oxide	12640-89-0
Other selenium compounds	-

**Table F.** Detailed Carestream Health Specific List C with CAS Numbers.

<b>Material/Substance</b>	<b>CAS Numbers</b>
Copper	7440-50-8
Other copper compounds	-
Gold	7440-57-5
Other gold compounds	-
Palladium	7440-05-3
Other palladium compounds	-
Magnesium	7439-95-4
Other magnesium compounds	-
Silver	7440-22-4
Other silver compounds	-
Natural Rubber	9006-04-6
Other materials made with or from <i>Hevea brasiliensis</i> latex	-
Bisphenol A (BPA)	80-05-7