



## EC Declaration of Conformity

Issuer's Name: **Artesyn Embedded Technologies, Inc.**  
Issuer's Address: 3<sup>rd</sup> /4<sup>th</sup> Flr. Techno Plaza One Bldg.  
18 Orchard Rd., Eastwood City Cyberpark,  
Libis, Quezon City, Philippines

Product Description: **5W Standard USB Charger**

Type Designation: **DA5-050EU-B**

The designated product is in conformity with the European Directive:  
REACH, EC Regulation No 1907/2006

**We declare that the information provided is true and complete to the best of our knowledge and that articles or preparations we provide are compliant to restrictions on substances listed in Annex XVII of REACH and none of the substances listed in 'Table 1' is present in the finished article at a level above 0.1% by weight.**

**Compliance with 1907/2006EC has been verified via internal design controls, supplier declarations and/or analytical test data. The person signed below is duly authorized by **Artesyn Embedded Technologies, Inc.** to sign on its behalf.**

**The 1<sup>st</sup> SVHC candidate list of 15 SVHCs released on Aug 2008**

<b>Substance Name</b>	<b>CAS No.</b>	<b>EC No.</b>	<b>Possible Applications</b>
Diaminodiphenylmethane	101-77-9	202-974-4	Curing agent for epoxy resin in PCB, preparation of PU, azo dyes in garments
5-tert-butyl-2,4,6-trinitro-m-xylene (musk xylene)	81-15-2	201-329-4	Cosmetics and soap perfumes
Alkanes, C10-13 chloro (short chain chlorinated paraffins)	85535-84-8	287-476-5	Leather coating, plasticizer in PVC and chlorinated rubber, flame retardant in plastic & textiles
Anthracene	120-12-7	204-371-1	Source of dyestuff
Diarsenic pentaoxide	1303-28-2	215-116-9	Insecticides, weed killer, wood preservatives, coloured glass, dyeing and printing
Diarsenic trioxide	1327-53-3	215-481-4	Weed killers, timber preservatives, manufacture of special glass
Bis(2-ethylhexyl)phthalate (DEHP)	117-81-7	204-211-0	Plasticizer for resin, PVC, blister
Bis(tributyltin)oxide	56-35-9	200-268-0	Pesticide, fungicide in paint
Butyl benzyl phthalate	85-68-7	201-622-7	Plasticizer for resin, PVC, acrylics
Cobalt dichloride	7646-79-9	231-589-4	Moisture indicator in silica gel, absorbent
Dibutyl phthalate	84-74-2	201-557-4	Plasticizer, in adhesives and paper coatings; insect repellent for textiles
Hexabromocyclododecane (HBCDD) and all major diastereoisomers identified (-HBCDD, -HBCDD, -HBCDD)	25637-99-4 and 3194-55-6 (134237-51-7, 134237-50-6, 134237-52-8)	247-148-4 221-695-9	Flame retardant used in HIPS and textiles
Lead hydrogen arsenate	7784-40-9	232-064-2	Insecticides
Sodium dichromate	7789-12-0 10588-01-9	234-190-3	Chrome-tanning of leather, corrosion inhibitor in paints, mordant in textile dyeing process
Triethyl arsenate	15606-95-8	427-700-2	Intermediates for semi-conductor

<b>The 2nd SVHC candidate list of 14 SVHCs released on 13 Jan 2010</b>			
<b>Chemical Name</b>	<b>CAS No.</b>	<b>EC No.</b>	<b>Possible Application</b>
Anthracene oil	90640-80-5	292-602-7	Paint, preservative oil, insecticide
Anthracene oil, anthracene paste, distr. Lights	91995-17-4	295-278-5	
Anthracene oil, anthracene paste, anthracene fraction	91995-15-2	295-275-9	
Anthracene oil, anthracene-low	90640-82-7	292-604-8	
Anthracene oil, anthracene paste	90640-81-6	292-603-2	
Diisobutyl phthalate (DIBP)	84-69-5	201-553-2	Plasticizer
2,4-Dinitrotoluene	121-14-2	204-450-0	Manufacture of explosives, polyurethane plastics, organic synthesis, dyes
Lead chromate	7758-97-6	231-846-0	Used as colorant in painting, printing inks, rubber and plastic
Lead chromate molybdate sulfate red (C.I. Pigment Red 104)	12656-85-8	235-759-9	Used as additives for painting and coatings, printing inks and in plastics
Lead sulfochromate yellow (C.I. Pigment Yellow 34)	1344-37-2	215-693-7	Paint, printing ink, plastic
Coal tar pitch, high temperature	65996-93-2	266-028-2	Paint, moisture seal
tris(2-chloroethyl)phosphate (TCEP)	115-96-8	204-118-5	Flame retardant, plasticizer
Aluminosilicate, Refractory Ceramic Fibres	Index number 650-017-00-8	Index number 650-017-00-8	Used in metallurgy, electricity, petroleum, chemical, chinaware production
Zirconia Aluminosilicate, Refractory Ceramic Fibres	Index number 650-017-00-8	Index number 650-017-00-8	Used in metallurgy, incineration, petroleum, chinaware production

<b>The 3rd SVHC candidate of SVHCs released on 30 March 2010</b>			
<b>Chemical Name</b>	<b>CAS No.</b>	<b>EC No.</b>	<b>Possible Application</b>
Acrylamide	201-173-7	79-06-1	Acrylamide is almost exclusively used for the synthesis of polyacrylamides, which are used in various applications, in particular in waste water treatment and paper processing. Minor uses of acrylamide comprise the preparation of polyacrylamide gels for research purposes and as a grouting agent in civil engineering.

### The 4th Batch SVHC candidate of SVHCs released on 18 June 2010

Chemical Name	CAS No.	EC No.	Possible Application
Trichloroethylene	79-01-6	201-167-4	Cleaning and degreasing of metal parts, used in adhesives, chemical intermediates, in leather and textile processing industries and in paints, lacquers and varnishes industry.
Boric acid	10043-35-3; 11113-50-1	233-139-2; 234-343-4	In biocides and preservatives, personal care products, disinfectants, preservatives in wood, textile, paper, leather, rubber, polymers, additives in several products like dental products, food, glass, ceramics, rubber, fertilizers, flame retardants, paints, industrial fluids, brake fluids, soldering products, and film developers.
Disodium tetraborate, anhydrous	1330-43-4; 12179-04-3; 1303-96-4	215-540-4	In glass and glass fibers, ceramics, detergents and cleaners, metallurgy, and flame retardants.
Tetraboron disodium heptaoxide, hydrate	12267-73-1	235-541-3	In glass and glass fibers, ceramics, detergents and cleaners, personal care products, industrial fluids, metallurgy, adhesives, flame retardants, biocides, and fertilizers.
Sodium chromate	7775-11-3	231-889-5	Steel and alloy industry, leather and textile industry, laboratory (analytical agent), and manufacture of other chromium compounds.
Potassium chromate	7789-00-6	232-140-5	Treatment and coating of metals, manufacture of reagents and chemicals, manufacture of textiles, coloring agent in ceramics, tanning & dressing leather, manufacture of inks & pigments, laboratory (analytical reagent), & pyrotechnics.
Ammonium dichromate	7789-09-5	232-143-1	Oxidizing agent, laboratory (analytical agent), tanning of leather, manufacture of textiles, manufacture of photosensitive screens (cathode ray tubes), and metal treatment.
Potassium dichromate	7778-50-9	231-906-6	Chrome metal manufacturing, treatment and coating of metals, manufacture of reagents & chemicals, laboratory (analytical agent), cleaning of laboratory glassware, tanning leather, manufacture of textiles, photolithography, wood treatment, & corrosion inhibitor in cooling systems.

**The 5th Batch SVHC candidate of SVHCs released on 15 December 2010**

<b>Chemical Name</b>	<b>CAS No.</b>	<b>EC No.</b>	<b>Possible Application</b>
Cobalt (II) sulphate	10124-43-3	233-334-2	Mainly used in the production of other chemicals. Further applications may include manufacture of catalysts and driers, surface treatments (such as electroplating), corrosion prevention, production of pigments, decolorizing (in glass, pottery), batteries, animal food supplement, soil fertilizer, and others.
Cobalt (II) dinitrate	10141-05-6	233-402-1	Mainly used in the production of other chemicals and the manufacture of catalysts. Further applications may include surface treatment and batteries.
Cobalt (II) carbonate	513-79-1	208-169-4	Mainly used in the manufacture of catalysts. Minor uses may include feed additive, production of other chemicals, production of pigments, and adhesion (in ground coat frit).
Cobalt (II) diacetate	71-48-7	200-755-8	Mainly used in the manufacture of catalysts. Minor uses may include production of other chemicals, surface treatment, alloys, and production of pigments, dyes, rubber adhesion, and feed additive.
2-Methoxyethanol	109-86-4	203-713-7	Mainly used as solvent, chemical intermediate and additive for fuels.
2-Ethoxyethanol	110-80-5	203-804-1	Mainly used as solvent and chemical intermediate.
Chromium trioxide	1333-82-0	215-607-8	Used for metal finishing and as fixing agent in waterborne wood preservatives.
<b>Acids generated from chromium trioxide and their oligomers:</b>			Chromium trioxide is mainly used in form of aqueous solutions. Consequently, the uses of these substances are the same as indicated for chromium trioxide. These acids and their oligomers are generated when chromium trioxide is dissolved in water.
Chromic acid,	7738-94-5	231-801-5	
Dichromic acid	13530-68-2	236-881-5	Chromium trioxide is mainly used in form of aqueous solutions. Consequently, the uses of these substances are the same as indicated for chromium trioxide. These acids and their oligomers are generated when chromium trioxide is dissolved in water.
Oligomers of chromic acid and dichromic acid.	---	---	Chromium trioxide is mainly used in form of aqueous solutions. Consequently, the uses of these substances are the same as indicated for chromium trioxide. These acids and their oligomers are generated when chromium trioxide is dissolved in water.

**The 6th Batch SVHC candidate of SVHCs released on 20 June 2011**

<b>Chemical Name</b>	<b>EC Number</b>	<b>CAS Number</b>	<b>Possible Application</b>
2-ethoxyethyl acetate	203-839-2	111-15-9	solvent in coatings and in the chemical industry, intermediate in the manufacture of cyanoacrylate adhesives
Strontium chromate	232-142-6	7789-06-2	corrosion inhibitor in coating mixtures used in the aeronautic / aerospace sector, in the coil coating sector of steel and aluminium and in the vehicle coating sector
1,2-Benzenedicarboxylic acid, di-C7-11-branched and linear alkylesters (DHNUP)	271-084-6	68515-42-4	plasticiser in PVC, foam, adhesives and coatings
Hydrazine	206-114-9	302-01-2	intermediate in the manufacture of hydrazine derivatives, as a monomer in polymerisations, as a corrosion inhibitor in water treatment and for metal
		7803-57-8	reduction and refining of chemicals. It is also used as a propellant for aerospace vehicles and as fuel in military (emergency) power units.
1-methyl-2-pyrrolidone	212-828-1	872-50-4	solvent in coatings, cleaning products, for electronic equipment manufacture, as well as in semiconductor industry, petrochemical processing, pharmaceuticals and agrochemicals
1,2,3-trichloropropane	202-486-1	96-18-4	Intermediate in the manufacture of chlorinated solvents and agricultural products. It is also used as monomer. In the past, it was used as solvent, paint and varnish remover and as degreasing agent.
1,2-Benzenedicarboxylic acid, di-C6-8-branched alkyl esters, C7-rich (DIHP)	276-158-1	71888-89-6	plasticiser in PVC and in sealants, coatings and potentially printing inks
Cobalt dichloride	231-589-4	7646-79-9	Intermediate in the manufacture of other cobalt compounds, in tyre adhesion additives, organic textile dyes, and drying agents for paints. Also used in surface treatment processes, as water treatment / corrosion inhibition chemical, as colourant or for discolouring in the production of inorganic pigments & frits, glass, and ceramic ware, in varistors and magnets, as well as in humidity indicators.

## The 7th Batch SVHC candidate of SVHCs released on 19 December 2011

Substance Name	EC Number	CAS Number	Possible Application
Zirconia Aluminosilicate Refractory Ceramic Fibres <i>are fibres covered by index number 650-017-00-8 in Annex VI, part 3, table 3.1 of Regulation (EC) No 1272/2008 of the European Parliament and of the Council of 16 December 2008</i>	--	--	used for high-temperature insulation, almost exclusively in industrial applications (insulation of industrial furnaces and equipment, equipment for the automotive and aircraft/aerospace industry) and in fire protection (buildings and industrial process equipment).
Calcium arsenate	231-904-5	7778-44-1	used mainly for copper and lead refining; precipitate nickel from the molten metal and to manufacture diarsenic trioxide; active ingredient in germicides and insecticides
Bis(2-methoxyethyl) ether	203-924-4	111-96-6	used primarily as a reaction solvent or process chemical in a wide variety of applications. It is also used as solvent for battery electrolytes, and possibly in other products such as sealants, adhesives, fuels and automotive care products. industrially used in the process regulators for polymerization processes in production of resins, rubbers, polymers
Aluminosilicate Refractory Ceramic Fibres <i>are fibres covered by index number 650-017-00-8 in Annex VI, part 3, table 3.1 of Regulation (EC) No 1272/2008 of the European Parliament and of the Council of 16 December 2008</i>	--	--	used for high-temperature insulation, almost exclusively in industrial applications (insulation of industrial furnaces and equipment, equipment for the automotive and aircraft/aerospace industry) and in fire protection (buildings and industrial process equipment)
Potassium hydroxyoctaoxodizincatedi chromate	234-329-8	11103-86-9	mainly used in coatings in the aeronautic/ aerospace, steel and aluminum coil coating and vehicle coating sectors.
Lead dipicrate	229-335-2	6477-64-1	explosive like lead diazide and lead styphnate and may be used in low amounts in detonator mixtures together with the two other mentioned lead compounds.
N,N-dimethylacetamide	204-826-4	127-19-5	used as solvent and manufacture of various substances and production of fibres for clothing; used as reagent, and in products such as industrial coatings, insulation paper, polyimide films, paint strippers and ink removers.

### The 7th Batch SVHC candidate of SVHCs released on 19 December 2011

Substance Name	EC Number	CAS Number	Possible Application
Arsenic acid	231-901-9	7778-39-4	mainly used to remove gas bubbles from ceramic glass melt (fining agent) and in the production of laminated printed circuit boards; also used in the manufacture of semiconductors and as laboratory agent.
2-Methoxyaniline; o-Anisidine	201-963-1	90-04-0	used in the manufacture of dyes for tattooing and coloration of paper, polymers and aluminium foil.
Trilead diarsenate	222-979-5	3687-31-8	present in complex raw materials for manufacture of copper, lead and a range of precious metals; the raw materials is in the metallurgical refinement process transformed to calcium arsenate and diarsenic trioxide
1,2-dichloroethane	203-458-1	107-06-2	minor used as solvent in the chemical and pharmaceutical industry, as well as in laboratories and mainly used for manufacture of other substances
Pentazinc chromate octahydroxide	256-418-0	49663-84-5	used in coatings in the vehicle coating and aeronautic / aerospace sectors
Formaldehyde, oligomeric reaction products with aniline	500-036-1	25214-70-4	manufacture of other substances; minor uses are as ion exchange resins in nuclear power plants, as hardener for epoxy resins, e.g. for the production of rolls, pipes and moulds, and as well for adhesives
Bis(2-methoxyethyl) phthalate	204-212-6	117-82-8	plasticiser in polymeric materials and paints, lacquers and varnishes, including printing inks
4-(1,1,3,3-tetramethylbutyl)phenol	205-426-2	140-66-9	mainly used in the manufacture of polymer preparations and of ethoxylate surfactants, further used as a component in adhesives, coatings, inks and rubber articles.
Lead diazide, Lead azide	236-542-1	13424-46-9	mainly used as initiator or booster in detonators for both civilian and military uses and as initiator in pyrotechnic devices
Phenolphthalein	201-004-7	77-09-8	mainly used as laboratory agent (pH indicator solutions), minor uses are in pharmaceutical preparations and in some special applications (e.g. pH-indicator paper, disappearing inks)



### The 7th Batch SVHC candidate of SVHCs released on 19 December 2011

Substance Name	EC Number	CAS Number	Possible Application
Dichromium tris(chromate)	246-356-2	24613-89-6	mainly used in mixtures for metal surface treatment in the aeronautic/aerospace, steel and aluminum coating sectors
Lead styphnate	239-290-0	15245-44-0	a primer for small calibre and rifle ammunition, other common uses are in ammunition pyrotechnics, powder actuated devices and detonators for civilian use
2,2'-dichloro-4,4'-methylenedianiline	202-918-9	101-14-4	curing agent in resins and in the production of polymer articles and also for manufacture of other substances; the substance may further be used in construction and arts

### The 8th Batch SVHC candidate of SVHCs released on 18 June 2012

Substance Name	EC Number	CAS Number	Possible Application
[4-[4,4'-bis(dimethylamino)benzhydrylidene]cyclohexa-2,5-dien-1-ylidene]dimethylammonium chloride (C.I. Basic Violet 3) [with ≥ 0.1% of Michler's ketone (EC No. 202-027-5) or Michler's base (EC No. 202-959-2)]	208-953-6	548-62-9	Used mainly for paper coloring and inks supplied in printer cartridges and ball pens. Further uses include staining of dried plants, use as a marker for increasing the visibility of liquids, staining in microbial and clinical laboratories.
1,3,5-tris[(2S and 2R)-2,3-epoxypropyl]-1,3,5-triazine-2,4,6-(1H,3H,5H)-trione (β-TGIC)	423-400-0	59653-74-6	Mainly used as a solder mask ink in the EU. Also used in electrical insulation material, resin molding systems, laminated sheeting, silk screen printing, coatings, tools, adhesives, lining materials and stabilizers for plastics.
1,2-bis(2-methoxyethoxy)ethane (TEGDME; triglyme)	203-977-3	112-49-2	Mainly used as a solvent or as a processing aid in the manufacture and formulation of industrial chemicals. Minor uses in brake fluids and repair of motor vehicles.
4,4'-bis(dimethylamino)-4''-(methylamino)trityl alcohol [with ≥ 0.1% of Michler's ketone (EC No. 202-027-5) or Michler's base (EC No. 202-959-2)]	209-218-2	561-41-1	Used in the formulation of writing inks and potentially other inks, as well as for dyeing a variety of materials.
Lead(II) bis(methanesulfonate)	401-750-5	17570-76-2	Mainly used in plating processes (both electrolytic and electroless) for electronic components (such as printed circuit boards). The substance seems to also be used for batteries in special applications.

**The 8th Batch SVHC candidate of SVHCs released on 18 June 2012**

Substance Name	EC Number	CAS Number	Possible Application
1,2-dimethoxyethane; ethylene glycol dimethyl ether (EGDME)	203-794-9	110-71-4	Mainly used as a solvent or as a processing aid in the manufacture and formulation of industrial chemicals, including use as an electrolyte solvent in lithium batteries.
Diboron trioxide	215-125-8	1303-86-2	Used in a multitude of applications, e.g. in glass and glass fibers, frits, ceramics, flame retardants, catalysts, industrial fluids, metallurgy, nuclear, electrical equipment, adhesives, inks/paints, film developing solutions, detergents and cleaners, reagent chemicals, biocides and insecticides.
$\alpha,\alpha$ -Bis[4-(dimethylamino)phenyl]-4-(phenylamino)naphthalene-1-methanol (C.I. Solvent Blue 4) [with $\geq 0.1\%$ of Michler's ketone (EC No. 202-027-5) or Michler's base (EC No. 202-959-2)]	229-851-8	6786-83-0	Mainly used in the formulation of printing and writing inks, for dyeing paper and in mixtures such as windscreen washing agents.
1,3,5-Tris(oxiran-2-ylmethyl)-1,3,5-triazinane-2,4,6-trione (TGIC)	219-514-3	2451-62-9	Mainly used as a hardener in resins and coatings. Also used in inks for the printed circuit board industry, electrical insulation material, resin molding systems, laminated sheeting, silk screen printing coatings, tools, adhesives, lining materials and stabilizers for plastics.
4,4'-bis(dimethylamino)benzophenone (Michler's ketone)	202-027-5	90-94-8	Used as an intermediate in the manufacture of triphenylmethane dyes and other substances. Further potential uses include use as an additive (photosensitiser) in dyes and pigments, in dry film products and as a process chemical in the production of electronic circuit boards.
N,N,N',N'-tetramethyl-4,4'-methylenedianiline (Michler's base)	202-959-2	101-61-1	Used as an intermediate in the manufacture of dyes and other substances.

The 8th Batch SVHC candidate of SVHCs released on 18 June 2012			
Substance Name	EC Number	CAS Number	Possible Application
Formamide	200-842-0	75-12-7	Mainly used as an intermediate in the manufacture of agrochemicals, pharmaceuticals and industrial chemicals. Minor uses as a solvent, as a laboratory reagent for quality control purposes in forensic laboratories, hospitals, pharmaceutical companies, food and drinks manufacturers and research laboratories. The substance seems to also be used as a plasticizer.
[4-[[4-anilino-1-naphthyl][4-(dimethylamino)phenyl]methylene]cyclohexa-2,5-dien-1-ylidene] dimethylammonium chloride (C.I. Basic Blue 26) [with ≥ 0.1% of Michler's ketone (EC No. 202-027-5) or Michler's base (EC No. 202-959-2)]	219-943-6	2580-56-5	Used in the formulation of inks, cleaners, and coatings, as well as for dyeing paper, packaging, textiles, plastic products, and other types of articles. It is also used in diagnostic and analytical applications.

The 9th Batch SVHC candidate of SVHCs released on 18 December 2012			
Substance Name	EC Number	CAS Number	Possible Application
Bis(pentabromophenyl) ether (DecaBDE)	214-604-9	1163-19-5	Brominated flame retardant
Pentacosafuorotridecanoic acid	276-745-2	72629-94-8	Surfactant/Wetting Agent
Tricosafuorododecanoic acid	206-203-2	307-55-1	Surfactant/Wetting Agent
Henicosafuoroundecanoic acid	218-165-4	2058-94-8	Surfactant/Wetting Agent
Heptacosafuorotetradecanoic acid	206-803-4	376-06-7	Surfactant/Wetting Agent
Diazene-1,2-dicarboxamide (C,C'-azodi(formamide))	204-650-8	123-77-3	Use as a blowing and foaming agent for plastics; as a maturing and bleaching agent in flour.

## The 9th Batch SVHC candidate of SVHCs released on 18 December 2012

Substance Name	EC Number	CAS Number	Possible Application
<p>Cyclohexane-1,2-dicarboxylic anhydride [1]                      cis-cyclohexane-1,2-dicarboxylic anhydride [2]                      trans-cyclohexane-1,2-dicarboxylic anhydride [3]                      [The individual cis- [2] and trans- [3] isomer substances and all possible combinations of the cis- and trans-isomers [1] are covered by this entry].</p>	<p>201-604-9,                      236-086-3,                      238-009-9</p>	<p>85-42-7,                      13149-00-3,                      14166-21-3</p>	<p>Mainly used as a hardener for epoxy resins and as intermediate for plasticizers, specialty resins, insect repellents and rust inhibitors</p>
<p>Hexahydromethylphthalic anhydride, Hexahydro-4-methylphthalic anhydride, Hexahydro-1-methylphthalic anhydride, Hexahydro-3-methylphthalic anhydride</p>	<p>247-094-1,                      243-072-0,                      256-356-4,                      260-566-1</p>	<p>25550-51-0,                      19438-60-9,                      48122-14-1,                      57110-29-9</p>	<p>Serve as hardeners in epoxy resins.</p>
<p>4-Nonylphenol, branched and linear                      [substances with a linear and/or branched alkyl chain with a carbon number of 9 covalently bound in position 4 to phenol, covering also UVCB- and well-defined substances which include any of the individual isomers or a combination thereof]</p>	-	-	
<p>4-(1,1,3,3-tetramethylbutyl)phenol, ethoxylated                      [covering well-defined substances and UVCB substances, polymers and homologues]</p>	-	-	<p>Most 4-(1,1,3,3-tetramethylbutyl)-phenol is used as an intermediate for the production of resins, non-ionic surfactants and rubber additives. It is also used for the manufacturing of antioxidants, fuel oil stabilizers, adhesives, dyestuffs, fungicides, bactericides, and for vulcanizing synthetic rubber.</p>
<p>Methoxy acetic acid</p>	<p>210-894-6</p>	<p>625-45-6</p>	<p>MAA, the toxic metabolite of the widely used industrial solvent ethylene glycol monomethyl ether (EGME) also a major metabolite of ester phthalates that are commonly used in industry as gelling, viscosity and stabilizer reagents</p>
<p>N,N-dimethylformamide</p>	<p>200-679-5</p>	<p>68-12-2</p>	<p>Solvent for liquid and gases. Used in the synthesis of organic compounds. Solvent for Orlon and polyacrylic fibers; used as solvent where slow evaporation rate is needed; termed as the universal organic solvent</p>
<p>Dibutyltin dichloride (DBT)</p>	<p>211-670-0</p>	<p>683-18-1</p>	<p>Used to cure silicon/polyurethane elastomers</p>

**The 9th Batch SVHC candidate of SVHCs released on 18 December 2012**

Substance Name	EC Number	CAS Number	Possible Application
Lead monoxide (lead oxide)	215-267-0	1317-36-8	in ointments, plaster; preparing solution of lead substrate; glazing pottery; glass flux for painting on porcelain and glass; lead glass; varnishes; with glycol as a metal cement; producing iridescent colors on brass and bronze; coloring sulfur-containing substances; pigment for rubber
Orange lead (Lead tetroxide)	215-235-6	1314-41-6	plasters and ointments; paints and varnishes; manufacture of colorless glass.
Lead bis(tetrafluoroborate)	237-486-0	13814-96-5	used in electroplating liquids
Trilead bis(carbonate)dihydroxide	215-290-6	1319-46-6	used as a pigment, curing agent, in temperature sensitive inks, as a grease component, as a heat stabilizer
Lead titanium trioxide	235-038-9	12060-00-3	used as a pigment in paints, ceramic electrical insulators, piezoelectric transducers, oxidation catalysts
Lead Titanium Zirconium Oxide	235-727-4	12626-81-2	Used as a piezoelectric ceramic material
Silicic acid, lead salt	234-363-3	11120-22-2	Mainly used as raw material in making lead glass for electron vacuum tube, optical glass, glass shell, material of lead glassed.
Silicic acid, barium salt, lead-doped	272-271-5	68784-75-8	
1-bromopropane	203-445-0	106-94-5	Used as a degreasing agent and in spray adhesives
Methyloxirane (Propylene oxide)	200-879-2	75-56-9	chemical intermediate in the preparation of polyethers to form polyurethanes. In preparation of lubricants, surfactants, and oils demulsifiers
1,2-Benzenedicarboxylic acid, dipentylester, branched and linear	284-032-2	84777-06-0	plasticizer

### The 9th Batch SVHC candidate of SVHCs released on 18 December 2012

Substance Name	EC Number	CAS Number	Possible Application
Diisopentylphthalate (DIPP)	210-088-4	605-50-5	Plasticizer, solvent, and fragrance carrier
N-pentyl-isopentylphthalate	-	776297-69-9	Used as surfactant and plasticizer
1,2-Diethoxyethane	211-076-1	629-14-1	Used in the manufacture of unsaturated polyester resins, polyurethanes and plasticizers.
Acetic acid, lead salt, basic	257-175-3	51404-69-4	This name can refer to either lead (II) acetate or lead (IV) acetate. Lead (II) acetate is used as a mordant in textile printing and dyeing and as a drier in paints and varnishes. Lead (IV) acetate is used as a general reagent for the introduction of lead into organolead compounds.
Basic lead sulphate (lead oxide sulphate)	234-853-7	12036-76-9	mainly used as stabilizer for non-transparent or translucent PVC products
Dibasic lead phthalate (phthalate(2-dioxotrilead))	273-688-5	69011-06-9	heat stabilizer for PVC
Dioxobis(stearato)trilead	235-702-8	12578-12-0	used as a heat stabilizer
Fatty acids, C16-18, lead salts	292-966-7	91031-62-8	Primarily of interest as a lubricant in PVC Compounds and limited use as a heat stabilizer in combination with other heat stabilizers
Lead cyanamide	244-073-9	20837-86-9	
Lead dinitrate	233-245-9	10099-74-8	Manufacturing of matches and explosives; mordant in dyeing and printing on textiles; mordant for staining horn, mother-of-pearl; oxidizer in the dye industry; sensitizer in photography; process engraving
Pentalead tetraoxide sulphate	235-067-7	12065-90-6	intermediates in lead-acid battery production
Pyrochlore, antimony lead yellow	232-382-1	8012-00-8	used as a pigment, dye, colorant

**The 9th Batch SVHC candidate of SVHCs released on 18 December 2012**

<b>Substance Name</b>	<b>EC Number</b>	<b>CAS Number</b>	<b>Possible Application</b>
Sulfurous acid, lead salt, dibasic	263-467-1	62229-08-7	
Tetraethyllead	201-075-4	78-00-2	used as a fuel stabilizer additive to prevent "knocking" in motors
Tetralead trioxide sulphate	235-380-9	12202-17-4	key intermediates in lead-acid battery production
Trilead dioxide phosphonate	235-252-2	12141-20-7	used as a plastics stabilizer
Furan	203-727-3	110-00-9	used in organic syntheses
Diethyl sulphate	200-589-6	64-67-5	used as an ethylating agent
Dimethyl sulphate	201-058-1	77-78-1	methylating agent for the manufacture of organic chemicals
3-ethyl-2-methyl-2-(3-methylbutyl)-1,3-oxazolidine	421-150-7	143860-04-2	additive used in adhesives
Dinoseb	201-861-7	88-85-7	herbicide; insecticide; miticide
4,4'-methylenedi-o-toluidine	212-658-8	838-88-0	pigment, dye, colorant
4,4'-oxydianiline and its salts	202-977-0	101-80-4	primarily used in the production of polyimide and poly(ester)imide resins
4-Aminoazobenzene; 4-Phenylazoaniline	200-453-6	60-09-3	used in the dyeing process; manufacturing of diazo dyes and indulines
4-methyl-m-phenylenediamine (2,4-toluene-diamine)	202-453-1	95-80-7	used in producing TDI, vulcanization dye, alkaline dyes and dispersal dyes, pharmaceutical intermediates and other organic synthesis intermediates.

<b>The 9th Batch SVHC candidate of SVHCs released on 18 December 2012</b>			
<b>Substance Name</b>	<b>EC Number</b>	<b>CAS Number</b>	<b>Possible Application</b>
6-methoxy-m-toluidine (p-cresidine)	204-419-1	120-71-8	used as a pigment, dye, colorant
Biphenyl-4-ylamine	202-177-1	92-67-1	rubber antioxidant; dye intermediate
o-aminoazotoluene	202-591-2	97-56-3	Coloring oils, fats, and waxes; manufacturing of pigments; chemical intermediate for the production of dyes.
o-Toluidine; 2-Aminotoluene	202-429-0	95-53-4	used in the manufacture of dye and organic chemicals; making color fast to acids; reagent for lignin
N-methylacetamide	201-182-6	79-16-3	used as pesticide, medicine and other organic synthesis intermediates

<b>The 10th Batch SVHC candidate of SVHCs released on 20 June 2013</b>			
<b>Substance Name</b>	<b>EC Number</b>	<b>CAS Number</b>	<b>Possible Application</b>
Cadmium	231-152-8	7440-43-9	used in many kinds of solder and bearing alloys; in electroplating to resist corrosion; stabilizer and rechargeable (Ni-Cd) nickel cadmium batteries; used as a pigment, as a heat stabiliser, in NiCd Batteries, in alloys, as a plating for plugs, contacts and switches, and in optical glass and filters
Cadmium Oxide	215-146-2	1306-19-0	used as a heat stabiliser, in high quality power switching contacts and relays, and as photoelectric applications used as transparent conductive material in the form of thin films; commercial electroplating of cadmium is done by electrode position from cyanide baths
Ammonium pentadecafluorooctanoate (APFO)	223-320-4	3825-26-1	An ammonium salt used as plasticizer; used as a processing aid in the manufacture of fluoropolymers to produce items such as non-stick surfaces on cookware, protective finishes on carpets, and clothing; used to coat food packaging APFO may be found in PVDF plastic up to 1% w/w of the plastic



**The 10th Batch SVHC candidate of SVHCs released on 20 June 2013**

Substance Name	EC Number	CAS Number	Possible Application
Pentadecafluorooctanoic acid (PFOA)	206-397-9	335-67-1	used as an emulsifier for the emulsion polymerization of fluoropolymers such as polytetrafluoroethylene (PTFE, or Teflon), polyvinylidene fluoride, and fluoroelastomers PFOA may be found in PVDF plastic up to 1% w/w of the plastic
Dipentyl phthalate (DPP)	205-017-9	131-18-0	used as a plasticiser in PVC and other plastic polymer and many cosmetics and fragrances, and numerous other consumer products
<p>4-Nonylphenol, branched and linear, ethoxylated</p> <p><i>[substances with a linear and/or branched alkyl chain with a carbon number of 9 covalently bound in position 4 to phenol, ethoxylated covering UVCB- and well-defined substances, polymers and homologues, which include any of the individual isomers and/or combinations thereof]</i></p>	-	-	Widely used as surfactants like industrial cleaners and emulsifier in paints and lacquers, adhesives and pesticides; used in the production of synthetics, stabilisers, as well as phenolic and epoxide-resins; Nonylphenol ethoxylates are found in concentrations up to 10% w/w in specialist coatings based on acrylic esters and specialist paints based on polyvinyl acetates (PVA). If the coating is applied to a very thin light structure, for example aluminium foils, then this could result in > 0.1% w/w of nonylphenol ethoxylates in the article.

### The 11th Batch SVHC candidate of SVHCs released on 16 December 2013

Substance Name	EC Number	CAS Number	Possible Application
Cadmium sulphide	215-147-8	1306-23-6	Cadmium sulphide is used as a yellow colorant in plastics, glass and ceramics, and is found in photoelectric devices including photoresistors, solar cells and piezoelectric transducers.
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)	217-710-3	1937-37-7	C.I. Direct Black 38 is used to color plastics, cellulose, silk, nylon, acetate, wood and leather
Dihexyl phthalate	201-559-5	84-75-3	Dihexyl phthalate (DnHP) is used as a plasticiser in PVC and other plastic polymers.
Imidazolidine-2-thione; (2-imidazoline-2-thiol)	202-506-9	96-45-7	Imidazolidine-2-thione is used as a catalyst in some acrylic adhesive glues which may be used in adhesive tapes (for example, double sided adhesive tapes which may be used to hold the back-light in place in mobile phones)
Trixylyl phosphate	246-677-8	25155-23-1	Trixylyl phosphate (TXP) is a flame retardant which can be found in a range of plastics including PVC, polyurethane, TPE, vinylite, cellulosic resin and natural and synthetic rubber.
Disodium 3,3'-[[1,1'-biphenyl]-4,4'-diylbis(azo)]bis(4-aminonaphthalene-1-sulphonate) (C.I. Direct Red 28)	209-358-4	573-58-0	C.I. Direct Red 28 , also known as Congo Red, is used to color plastics, textiles, paper and PVA.
Lead di(acetate)	206-104-4	301-04-2	Used as coatings and paints, thinners, and paint removers; fillers, putties, and modeling clay; also used in cosmetics such as lipsticks; used as a mordant in textile printing and dyeing; as a drier in paints and varnishes

**The 12th Batch SVHC candidate of SVHCs released on 16 June 2014**

Substance Name	EC Number	CAS Number	Possible Application
Sodium peroxometaborate = Perboric acid, sodium salt	231-556-4	7632-04-4	Serves as a source of active oxygen and used as a bleaching agent in many detergents, laundry detergents, cleaning products, laundry bleaches, tooth bleaching formulas. It has antiseptic properties and can act as a disinfectant.
1,2-Benzenedicarboxylic acid, dihexyl ester, branched and linear	271-093-5	68515-50-4	Plasticizer used to make plastisols that are used in the manufacture of automobile parts (air filters, battery covers) and dip-molded products (tool handles, dishwasher baskets). Also used to plasticize PVC utilized in the manufacture of flooring, canvas tarps, notebook covers, toys, and vinyl gloves among others
Sodium perborate; perboric acid, sodium salt	234-390-0 239-172-9	-	Serves as a source of active oxygen and used as a bleaching agent in many detergents, laundry detergents, cleaning products, laundry bleaches, tooth bleaching formulas. It has antiseptic properties and can act as a disinfectant.
Cadmium chloride	233-296-7	10108-64-2	Cadmium chloride is used for the preparation of cadmium sulfide, used as "Cadmium Yellow", a brilliant-yellow stable inorganic pigment.

**The 13th Batch SVHC candidate of SVHCs released on 17 December 2014**

Substance Name	EC Number	CAS Number	Possible Application
2-benzotriazol-2-yl-4,6-di-tert-butylphenol (UV-320)	223-346-6	3846-71-7	Used as a UV protection agent for PVC and can also be used for PET, PC, PA, ABS and other polymers.
2-ethylhexyl 10-ethyl-4,4-dioctyl-7-oxo-8-oxa-3,5-dithia-4-stannatetradecanoate (DOTE)	239-622-4	15571-58-1	Used as a heat stabilizer for polymers, primarily PVC.
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)			The reaction mass of DOTE and MOTE is added to PVC plastic to make it more stable to heating.
2-(2H-benzotriazol-2-yl)-4,6-ditertpentylphenol (UV-328)	247-384-8	25973-55-1	Used as a UV protection agent in plastics, rubber and polyurethane.
Cadmium fluoride	232-222-0	7790-79-6	Used in electronic and optical application, also used in high temperature dry film lubricants.
Cadmium sulphate	233-331-6	10124-36-4; 31119-53-6	Used for electroplating of cadmium in electronic circuits. It is also a precursor to cadmium-based pigment such as cadmium sulfide.

<b>The 14th Batch SVHC candidate of SVHCs released on 15 June 2015</b>			
<b>Substance Name</b>	<b>EC Number</b>	<b>CAS Number</b>	<b>Possible Application</b>
1,2-benzenedicarboxylic acid, di-C6-10-alkyl esters; 1,2-benzenedicarboxylic acid, mixed decyl and hexyl and octyl diesters with ≥ 0.3% of dihexyl phthalate (EC No. 201-559-5)	271-094-0; 272-013-1	68515-51-5; 68648-93-1	The phthalates may be used as plasticizers in PVC. They are chemically very similar to dihexyl phthalate and may be used as substitute for dihexyl phthalate.
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]	-	-	The primary example listed by ECHA of this substance group is the product sold under the name "karanal." ECHA indicates that the main use, according to public information, is as a fragrance.

<b>The 15th Batch SVHC candidate of SVHCs released on 17 December 2015</b>			
<b>Substance Name</b>	<b>EC Number</b>	<b>CAS Number</b>	<b>Possible Application</b>
Perfluorononan-1-oic-acid and its sodium and ammonium salts	206-801-3	375-95-1; 21049-39-8; 4149-60-4	PFNA may be found in PVDF plastic up to 1% w/w of the plastic
1,3-propanesultone	214-317-9	1120-71-4	1,3-propanesultone may be used as a solvent in battery electrolytes for sealed lithium ion batteries.
2,4-di-tert-butyl-6-(5-chlorobenzotriazol-2-yl)phenol (UV-327)	223-383-8	3864-99-1	UV-327 is used as a UV protection agent in plastics, rubber and polyurethane. Typical addition rates are 0.2-0.5% w/w of the polymer, depending on the polymer and the desired level of UV protection.
2-(2H-benzotriazol-2-yl)-4-(tert-butyl)-6-(sec-butyl)phenol (UV-350)	253-037-1	36437-37-3	UV-350 is used as a UV protection agent in plastics, rubber and polyurethane. Typical addition rates are 0.2-0.5% w/w of the polymer, depending on the polymer and the desired level of UV protection
Nitrobenzene	202-716-0	98-95-3	-

  
**Lilibeth Cansancio**  
 Materials Compliance Engineer  
**Artesyn Embedded Technologies, Inc.**  
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