



Bourns REACH Efforts

January 15, 2019

As of June 2007, the European Regulation (EC) 1907/2006 concerning the Registration, Evaluation, Authorization and Restriction of Chemicals (REACH) entered into force. As a downstream user of chemical substances, Bourns is fully aware of the requirements of REACH. It is our objective to fully comply with REACH securing the dependable supply of our products to our customers.

The Candidate List of Substances of Very High Concern (SVHC) Annex XIV was published on the website of the European Chemicals Agency (ECHA) in October 2008 with additions to the Candidate List in January 2010, March 2010, June 2010, August 2010, December 2010, June 2011, August 2011, December 2011, June 2012, December 2012, June 2013, December 2013, June 2014, December 2014, June 2015, December 2015, June 2016, January 2017, July 2017, January 2018, June 2018 and January 2019. There are now 197 substances identified as SVHC. The REACH Authorization list (Annex XVII) was updated on October 17, 2018 and includes 69 substances. No dangerous substances as listed and described in the conditions of restriction in Annex XVII are present in Bourns articles. There is no intentional release of substances in the normal use of these articles. Bourns does not manufacture substances or preparations.

This document serves as notification of specific SVHCs per REACH requirements.

LEAD: Several product lines include lead in high temperature solder, lead in glass and/or lead in alloys. Some **standard** (non-RoHS compliant) parts may use SnPb plating on pins or terminals. The following chart provides preliminary information on the products (articles) that are now subject to reporting the presence of lead >0.1% w/w.

CADMIUM: This chart also identifies some legacy parts that contains cadmium.

GLASS: Some models do contain resistor and/or conductor ink systems containing a glass matrix. Boron oxide, lead monoxide or cadmium oxide may have been used in the glass formulation prior to processing. Once the glass matrix is processed, these oxides are no longer present in the raw, pure form as listed on the SVHC list. Per the *REACH Dossier, Exemption for registration for glass under REACH regulation 1970/2006/EC*, “although conventionally, glass compositions are expressed as oxides of the different components, glass is a non-crystalline or vitreous inorganic macromolecular structure, which does not contain the chemical components of the different raw materials.”

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Bourns Models Currently Containing Substances of Very High Concern (SVHC)

Models	SVHC reported	SVHC CAS	Material in article >0.1%	Comments
Military trimmers: (250– 1M ohms) RJ12 RJ22 RJ24 RJR24 RJ26 RJR26 RJ50 RJR50	Cadmium Lead	7440-43-9 7439-92-1	Thick films inks for the listed parts may contain cadmium. Please check with rohs@bourns.com for specific part information. Sn90Pb10 coating on pins	Military parts – please contact RoHS@bourns.com for information on upcoming substitution for cadmium. Alternative commercial parts are available. Military part pins are dipped in SnPb solder
Sensors & Controls: 3610S series – 10-Turn Precision Knobpot	Cadmium	7440-43-9	Alloy used for tab contains 18% Cd in homogeneous material	Part is not RoHS2 compliant. No material change planned.
Chip arrays/resistors: CA, CA-AS, CR, CRH, CRM, CRM-A, CR-AS, CRP, CRS, CRS-A, CHP, CHV	Lead	7439-92-1	Lead in glass	
Chipguard	Lead	7439-92-1	Lead in glass	Can vary with model
Ceramic Multifuse: CMF-RL, CMF-RLC, CMF-RD; CMF-RQ, CMF-SD	Lead	7439-92-1	Lead in glass	
Ceramic MF: CMF-SDP	Lead	7439-92-1	High temp solder and lead in glass	
Diodes - PTVS	Lead	7439-92-1	High temp solder	
Rectifier diodes, SMxJ diodes, TVS diodes	Lead	7439-92-1	High temp solder and lead in glass	Can vary with model
Diode PKE39CA	Lead	7439-92-1	High temp solder	
Encoders: 3315, EM14, EN, ES14	Lead	7439-92-1	Lead in alloys and in glass	
Encoders: PEC09,11R,12R; PEL12D, 12S, 12T; PES12	Lead	7439-92-1	Lead in alloys	
Encoders: EMS22A/D/P/Q	Lead	7439-92-1	Lead in glass	
Encoders - Standard : EPS, ES	Lead	7439-92-1	SnPb coating on pins/terminals	For standard , non-compliant version

Fuel cards (Automotive)	Lead	7439-92-1	Lead in glass	Fuel cards typically contain lead in the glass of certain resistive and conductive thick film inks. MDS information is provided via IMDS; any SVHC (i.e. lead) is identified within IMDS along with the % of the SVHC in the specific part.
GDT – Standard: 2020-xxT-XX; 2026-xx-XX; 2027-xx-SM; 2027-xx-XX; 2030-xxT-SM; 2013-xxT-SM; 2035-xx-SM; 3025-xx-XX; 2036-xxSM; 2036-xx-XX; 2037-xx-XX; 2038-xx-XX, 2039-xx-SM; 2047-xx-A	Lead	7439-92-1	Sn90Pb10 plating	For standard , non-compliant version
LSP – LED Shunt Protector	Lead	7439-92-1	Lead in solder	
Minibreakers – AA series	Lead	7439-92-1	Lead in glass	
Panel Controls: 0037, 83, 84, PDB185-GTR, PSM, PTE, PTF, PTH, PTJ,PTL,PTM, PTP,PTS	Lead	7439-92-1	Lead in alloys	
Panel Controls: 96, 3310	Lead	7439-92-1	Lead in glass	
Panel Controls: 39, 51,52, 53, 54, 56, 81, 82, 85,86, 91, 92, 93, 94, 95, 97 ,99, 3851, 3852, 3856	Lead	7439-92-1	Lead in alloys and in glass	3851/3852/3856 Cermet versions only
Power Resistors: PWR163, PWR220T, PWR263, PWR221T	Lead	7439-92-1	Lead in glass	
Precision Potentiometers: 3435S, 3500S, 3501H, 3540S, 3541H, 3543S, 3545S,3547S,3548H/S, 3549H/S, 3590P/S, 3700S, 3701H, 3750S, 3751H, 6574S, 6630S, 6534S, 6537S, 6538S, 6539S, 6637S, 6638S, 6639S, 6657S	Lead	7439-92-1	Lead in alloys	
Precision Potentiometers: 3681, 3682, 3683, 3684, 3685	Lead	7439-92-1	Lead in copper alloy and in glass	
Resistor Networks: 41xxR, 43xxH/M/R, 44xxP, 48xxP	Lead	7439-92-1	High temp solder and lead in glass	

Resistor Networks – Standard: 41xxR, 43xxH/M/R, 48xxP	Lead	7439-92-1	Sn60Pb40 plating on pins	For standard , non-compliant versions
Resistor Networks: 46xxH/M/X	Lead	7439-92-1	Lead in glass	
Resistor Networks: 41xxT, 43xxT, 43xxS, 43xxK, 44xxT, 48xxT	Lead	7439-92-1	High temp solder	
Resistor Networks – Standard: 41xxT, 43xxT, 43xxS, 43xxK, 48xxT	Lead	7439-92-1	Sn60Pb40 plating on pins	For standard , non-compliant versions
Rotary Sensors: AMS22B; AMM20B	Lead	7439-92-1	Lead in alloys	
Solenoid plunger A70295 12L14	Lead	7439-92-1	Lead in steel alloy	
TISP SMA, SMB	Lead	7439-92-1	High temp solder	
Trimpot: 3006, 3009, 3059, 3082, 3223, 3252, 3292, 3296, 3299, 3339, 3262 & 3266 ≥ 51K, 3214 & 3224 ≥ 25K, 3269 ≥ 51K, PV37 ≥ 501K, PVG5 ≥ 50K	Lead	7439-92-1	Lead in copper alloy and in glass	Some models contain lead in the higher resistance values. These models are noted in the first column with ≥ resistance value.
Trimpot: 3302, 3303, 3306, 3309, 3313, 3319, 3329, 3352, 3360, 3364, TC33, TC42, PV12, PV32; 3362 ≥ 50K; 3386 ≥ 51K; 3312 ≥ 5K, 3314 ≥ 24K; 3361 51K; PVG3 ≥ 26K	Lead	7439-92-1	Lead in glass	
Trimpot: 3005, 3057, 3057L, 3250, 3260, 3290	Lead	7439-92-1	Lead in copper alloy	
Trimpot standard models: 3006, 3009, 3059, 3082, 3252, 3262, 3266, 3269, 3292, 3296, 3299, 3329, 3339, 3352, 3360, 3361, 3362, 3386	Lead	7439-92-1	Sn90/Pb10 plating on pins/terminals	For standard , non-compliant versions.