

Prepared for

Electrical Components International
91 Lincoln St.
Tillsonburg, Ontario
N4G 2P9

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Public Report on Toxics Reduction

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ELECTRICAL COMPONENTS INTERNATIONAL ANNUAL PUBLIC REPORT FOR LEAD

ANNUAL PUBLIC REPORT FOR LEAD

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Prepared by **Hajar Pourbafrani**
Checked by
Approved by **Paul Geisberger**
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Ramboll
2400 Meadowpine Boulevard
Suite 100
Mississauga, ON L5N 6S2
Canada
T +1 289 290 0600
F + 1 905 821 3711
www.ramboll.com

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1. FACILITY INFORMATION

Substance Names and CAS number:	Lead (and its compounds)
NPRI ID:	27867
Address of Facility	91 Lincoln St. Tillsonburg, Ontario N4G 2P9
Legal Name and address of the owner and the operator of the facility:	Electrical Components International Inc. 91 Lincoln St. Tillsonburg, Ontario N4G 2P9
Number of full-time employees:	140
NAICS Code:	336320
Name Position and Telephone number (and address if different from facility) of the following people	
Plan contact	Paul Csanyi, Plant Manager (519) 688-2707
Technical contact	Paul Csanyi, Plant Manager (519) 688-2707
Highest Ranking Employee	Paul Csanyi, Plant Manager (519) 688-2707
UTM coordinates of the facility	523175 E, 4744620 N, Zone 17
For each parent Company if applicable:	
Legal name	N/A
Street and mailing address	
Percentage ownership	

2. TOXIC SUBSTANCE QUANTIFICATIONS FOR 2019 REPORTING YEAR

2.1 Other Substances

Other Substances for which Plans are required at the facility:

- None

2.2 Summary of Quantifications

Description	Reporting Period		Change (kg) [2019] - [2018]	% Change [2019/2018] - 100%	Reason for Change in Quantification
	[2019]	[2018]			
Mass entering the facility; use (kg)	111	178	-66	-38%	Use of lead-free automotive block heater and power cord products
Mass created (kg)		0	-	-	-
Mass contained in product (kg)	111	178	-66	-38%	Use of lead-free automotive block heater and power cord products
Mass disposed off-site to landfill (kg)	0.00	0.01	-	100%	Disposed materials do not contain significant quantities of lead.
Mass transferred off-site for recycling (kg)	0.00	0.01	-	100%	Recycled materials do not contain significant quantities of lead.
Mass released to air (kg)	0.003	0.005	-0.002	-38%	Use of products containing lead and lead compounds have decreased
Mass released to water bodies (kg)	0	0	-	-	-
Mass released to land (kg)	0	0	-	-	-

3. OBJECTIVE AND TARGET

Electrical Components International Inc. (ECI) continues to reduce the use of lead by introducing lead-free designs for automotive block heater and power cord products. ECI's target is to reduce the use of lead by 75% (or 751.7 kilograms per year) within one year of preparing the reduction plan. ECI has received approval from clients and has implemented the new designs.

4. TOXIC SUBSTANCE REDUCTION OPTIONS

ECI developed a Toxic Substance Reduction Plan in August 2015. Two options for reduction of lead use were selected for implementation.

4.1 Lead-free PVC

ECI uses PVC resin containing lead in the manufacture of power cords for the automotive industry. In 2017, ECI initiated testing of a lead-free PVC resin and completed the internal validation of this material to fully integrate it into their power cord production line.

Steps Taken in Previous Year

The Steps described in the plan that were taken during the previous calendar year:

- The plan was developed in August 2015 but delayed due to customer approvals and external validation. The first step of the Plan was to complete internal validation of lead-free PVC resin, which was targeted for completion by 2 months from plan implementation.
- The second step of the Plan was to contract a supplier of lead-free PVC resin, which was targeted for completion by 4 months from Plan implementation.
- These targets have finally been reached in Aug 2017 as project start-up delays were encountered during 2016 in identifying lead-free PVC compound suppliers that met clients' material specification requirements and testing protocol. A supplier has been identified in late 2016 and CSA were implanted by middle of 2017. As such, the facility has started replacing the lead-free product from 3rd Quarter of 2017.
- In Aug 2017, ECI facility gained the necessary approvals to use the lead-free PVC resin. The facility used high-volume engine block heater cords since Aug 2017.
- In 2018, ECI replaced significantly one type of PVC resin containing lead and lead compounds with lead-free PVC resin.
- In 2019, ECI replaced all remaining PVC resins containing lead with lead-free PVC resins. As such, ECI reached the expectations related to lead-free PVC target.

4.1.1 Reduction in Substance Use

Amount of reduction in the use, creation and discharge to air, land or water of the substance at the facility during the previous calendar year that resulted due to the steps mentioned above:

- Compared to 2018, 100% reduction occurred in 2019.

4.1.2 Reduction in Substance Contained in Product

The amount of reduction in the substance contained in product at the facility during the previous calendar year that resulted due to the steps mentioned above:

- Compared to 2018, 100% reduction occurred in 2019.

4.1.3 Timelines

An indication of whether the timelines set out in the Plan will be met:

- The Toxic Substance Reduction Plan was developed in August 2015, and all steps for this option were targeted for implementation within 6 months but delayed due to customer approvals and external validation. The timelines targeted in 2019 for reducing lead use set out in the current version of the Toxic Reduction Plan have been met.

4.2 Replace Leaded Solder with Glue

ECI uses lead solder to secure fittings to heat elements in their automotive block heater production line. Lead-soldered fittings on heating elements can be replaced with glued fittings. ECI has completed testing on glued fittings and has found the new product design to be more reliable than the current soldered product.

ECI has purchased equipment to produce glued fittings, and has started shipping glued product to some customers, which are driven to switch to lead-free products.

4.2.1 Steps Taken in Previous Year

The Steps described in the plan that were taken during the previous calendar year:

- Installation of new production equipment to produce heating elements with glued fittings was targeted for completion in 0.5 months. This equipment was installed as planned in 2015.
- The development of health and safety procedures and internal training were targeted for completion within 4 months. This target was met in 2015.
- Customer approval for the new product formulation was targeted for completion within one year (August 2016) but it was delayed due to validation funding. The costs associated with third party testing and validation of the glued fittings for existing project specifications

exceeded the research and development funding budget for 2015, and this testing is scheduled to occur during 2016 and was completed in Oct 2016.

- New customer requests in 2018 to use lead solder in designs have been directed away to use epoxy designs. This target was met in 2019 CY.

4.2.2 Reduction in Substance Use

Amount of reduction in the use, creation and discharge to air, land or water of the substance at the facility during the previous calendar year that resulted due to the steps mentioned above:

- ECI has reduced the amount of lead used at the facility by about 67 Kg (~ 38%) due to implementation of new epoxy compound on one major customer's products for the entire year of 2019.

4.2.3 Reduction in Substance Contained in Product

The amount of reduction in the substance contained in product at the facility during the previous calendar year that resulted due to the steps mentioned above:

- The facility has reduced the amount of lead contained in its product by about 67 Kg (~ 38%) due to use of the new epoxy compound for one major customer for the entire year of 2019.

4.2.4 Timelines

An indication of whether the timelines set out in the Plan will be met:

The Toxic Substance Reduction Plan was developed in August 2015 and all steps for this The Toxic Substance Reduction Plan was developed in August 2015 and all steps for this option were targeted for implementation within 1 year (August 2016). The timelines set out in the current version of the Toxic Reduction Plan, including installation of new production equipment to produce heating elements with glued fittings, the development of health and safety procedures, and completion of internal training have been met in 2015.

4.3 Additional actions taken during the previous calendar year to achieve the plan's objectives

- No additional actions were taken in 2019 CY.

4.4 Comparison of Steps Taken

A comparison of the steps identified in the Plan, and the steps that have been taken is provided below:

- The Toxic Substance Reduction Plan was developed in August 2015, and all steps for producing power cords with lead-free PVC resin were targeted for completion within 6 months (February 2016) but were delayed due to identifying a lead-free supplier.
- The first step of the Plan was to complete internal validation of lead-free PVC resin, which was targeted for completion by 2 months from the plan implementation.
- The second step of the Plan was to contract a supplier of lead-free PVC resin, which was targeted for completion by 4 months from plan implementation. The targets for 2018 were partially reached, as project start-up delays were encountered in identifying lead-free PVC compound suppliers that met clients' material specification requirements and testing protocol.
- All steps for replacing lead solder with epoxied fittings were targeted for completion with one year of the Plan implementation date (August 2016).
- Installation of new production equipment to produce block heaters with glued fittings was targeted for 0.5 months. This equipment was installed as planned in 2015.
- Internal training and the development of health and safety procedures were targeted for completion within 4 months and were completed.
- Customer approval for the new product formulation was targeted for completion within one year (August 2016) but were delayed due to 3rd party validation budget and testing. The validation testing was completed in Oct 2016. Samples were supplied to customers for approval in 2017.

- One of the major lead-containing PVC products was fully replaced with lead-free PVC resin in 2018.
- In 2019, all lead-containing PVC products were replaced with lead-free PVC resins.

4.5 Effectiveness of the Steps Taken

ECI is working towards implementing steps to reduce lead use. ECI entirely replaced the PVC compounds containing lead with lead-free PVC resin in 2019. ECI also reduced the use lead solder by 38% in 2019. Therefore, ECI was able to meet the target plan to a good extent in 2019.

5. CERTIFICATION

As of July 01, 2020, I, Paul Csanyi, certify that I have read the report on the toxic substance reduction plan for the toxic substance referred to below and am familiar with its contents, and to my knowledge the information contained in the report is factually accurate and the report complies with the Toxics Reduction Act, 2009 and Ontario Regulation 455/09 (General) made under that Act, with the exception of the regulatory deadline.

Lead (and its compounds)



Paul Csanyi
Plant Manager
Electrical Components International Inc.