

**2017 Annual Quantification Summary -  
Toxic Reduction Plan for Manganese and  
Chromium**

**May 24, 2018**

## Basic Facility Information

<b>ID Numbers</b>	
NPRI ID Number	7088
Business Number	137161428
<b>Facility Identification and Site Address</b>	
Company Name	Profile Industries Ltd.
Facility Name	Profile Industries Ltd.
Address	201 Gary ray Drive, Weston, ON M9L 2T2
Spatial coordinates of the facility	Latitude: 43.80355 Longitude: -79.50016
UTM coordinates of the facility	UTMX: 617742 UTMY: 4847246 Datum: 17
<b>Parent Company</b>	
Company Name	Global Upholstery Co. Inc.
Address	560 Super test Road, Downsview, ON, M3J 2M6
Business Number	130973217
Percentage of the facility owned by the parent company	80%
<b>North American Industrial Classifications</b>	
Two-Digit NAICS Code	31-33
Four-Digit NAICS Code	3372
Six-Digit NAICS Code	337214
<b>Numbers of Employees</b>	
Number of full-time Employees	135
<b>Highest Ranking Employee and Public Contact</b>	
Name	Amine Elsemine
Position/Title	General Manager
Address	201 Gary ray Drive, Weston, ON M9L 2T2
Telephone Number	(416)748-2505
Fax Number:	(416) 748-0926
E-mail address	a.elsemine@profileindustries.ca
<b>Person Responsible for the Toxic Substance Reduction Plan Preparation</b>	
Name	Harpal Banwait
Position/Title	Quality and Environment Supervisor
Address	201 Gary ray Drive, Weston, ON M9L 2T2
Telephone Number	(416)748-2505
Fax Number:	(416) 748-0926
E-mail address	harpal@profileindustries.ca

## Toxic Reduction Plan

1. Substance: Chromium - CAS No. n/a

Summary of Options	
Material or feedstock substitution	<p>#1: Thinner material</p> <p>The following estimates are based on increasing each coil thickness that is used here by one gauge (higher gauge number is thinner material) and with the 2015 production numbers.</p> <p>Average change in thickness across all product lines: 12.07%</p> <p>Amount of steel purchased: 10,174,386 kg</p> <p>Reduction in steel weight: 1,228,048 kgs</p> <p>Reduction in chromium: 1.1%*1,228,048kg=13,509 kg</p>
Product design or reformulation	<p>#2: Redesign for less material</p> <p>Based on calculations from existing projects:</p> <p>Average reduction in steel per cabinet: 3 %</p> <p>Amount of steel purchased: 10,174,386 kg</p> <p>Reduction in steel weight: 10,174,386*3%=305,231 kg</p> <p>Reduction in chromium: 1.1%*305,231 kg=3357 kg</p>
Equipment or process modification	<p>#3: Part consolidation</p> <p>Based on calculations from existing changes:</p> <p>Average reduction in quantity of steel per cabinet: 1%</p> <p>Amount of steel purchased: 10,174,386 kg</p> <p>Reduction in steel weight: 10,174,386 kg*1%=101,743 kg</p> <p>Reduction in chromium: 1.1%*101,743kg=1119 kg</p>
Onsite reuse or recycling	<p>#4: Using scrap to make new parts</p> <p>Savings are calculated based on current parts being made with this method:</p> <p>Savings of approximately 2.5kg/cabinet</p> <p>Number of cabinets made per year: 232,735</p> <p>Savings in steel per year: 581,838 kg</p> <p>Savings in chromium: 1.1%*581,838=6,400 kg</p>
Improved inventory management or purchasing techniques	<p>#5: Just in time manufacturing</p> <p>It is unclear whether this option would reduce the use of steel at Profile Industries. Production levels would remain approximately the same, only with a greater emphasis on time efficiency in the plant.</p>

<p>Training or Improved operating practices</p>	<p>#6: Improved training for all processes</p>	<p>Parts are checked for accuracy approximately every 10% of daily production. The following calculations are based on the if this rate was doubled (every 5% of production):                  Average number of faulty parts found per day from fabrication and welding due to operator error: 3                  Estimated reduction in faulty parts from improved training and operating practices: 1                  Recycled steel from faulty parts (% of total steel purchased): 0.113%                  Percentage recycled after changes: 0.0753%                  Steel saved per year: <math>10,174,386 \text{ kg} * 0.0753\% = 7,661 \text{ kg}</math>                  Reduction in chromium: <math>7,661 \text{ kg} * 1.1\% = 84 \text{ kg}</math></p>
<p>Spill or leak prevention</p>	<p>None</p>	<p>The company could not identify an option to prevent the spilling or leaking of a chemical contained in solid steel.</p>

## 2. Substance: Manganese - CAS No. n/a

Summary of Options	
<p>Material or feedstock substitution</p>	<p>#1: Thinner material                   The following estimates are based on increasing each coil thickness that is used here by one gauge (higher gauge number is thinner material) and with the 2015 production numbers.                  Average change in thickness across all product lines: 12.07%                  Amount of steel purchased: 10,174,386 kg                  Reduction in steel weight: 1,228,048 kg                  Reduction in manganese: <math>1.65\% * 1,228,048 \text{ kg} = 20,263 \text{ kg}</math></p>
<p>Product design or reformulation</p>	<p>#2: Redesign for less material                   Based on calculations from existing projects:                  Average reduction in steel per cabinet: 1.1%                  Amount of steel purchased: 10,174,386 kg                  Reduction in steel weight: <math>10,174,386 \text{ kg} * 1.1\% = 111,918 \text{ kg}</math>                  Reduction in manganese: <math>1.65\% * 111,918 \text{ kg} = 1847 \text{ kg}</math></p>

# PROFILE INDUSTRIES LIMITED

Equipment or process modification	#3: Part consolidation	<p>Based on calculations from existing changes:            Average reduction in quantity of steel per cabinet: 6.3%            Amount of steel purchased: 10,174,386 kg            Reduction in steel weight: 10,174,386 kg*6.3%=640,986 kg            Reduction in manganese: 1.65%*640,986 kg=10,576 kg</p>
Onsite reuse or recycling	#4: Using scrap to make new parts	<p>Savings are calculated based on current parts being made with this method:            Savings of approximately 2.5kg/cabinet            Number of cabinets made per year: 232,735            Savings in steel per year: 581,838 kg            Savings in manganese: 1.65%*581,838=9,600kg</p>
Improved inventory management or purchasing techniques	#5: Just in time manufacturing	<p>It is unclear whether this option would reduce the use of steel at Profile Industries. Production levels would remain approximately the same, only with a greater emphasis on time efficiency in the plant.</p>
Training or Improved operating practices	#6: Improved training for all processes	<p>Parts are checked for accuracy approximately every 10% of daily production. The following calculations are based on the if this rate was doubled (every 5% of production):            Average number of faulty parts found per day from fabrication and welding due to operator error: 3            Estimated reduction in faulty parts from improved training and operating practices: 1            Recycled steel from faulty parts (% of total steel purchased): 0.113%            Percentage recycled after changes: 0.0753%            Steel saved per year: 10,174,386 kg*0.0753%=7661 kg            Reduction in manganese: 7661 kg*1.65%=126 kg</p>
Spill or leak prevention	None	<p>The company could not identify an option to prevent the spilling or leaking of a chemical contained in solid steel.</p>

## Summary of Chromium for 2011-2017 reporting Year:

Year	Used [tonnes/yr.]	Created [tonnes/yr.]	Contained in Product [tonnes/yr.]	On-site Release [tonnes/yr.]			Disposal [tonnes/yr.]		Off-Site Recycling [tonnes/yr.]
				Air	Water	Land	On-Site	Off-site	
2011	>100 to 150	0	118	>0 to 1	0	0	0	0	8
2012	>100 to 150	0	104	>0 to 1	0	0	0	0	11
2013	>100 to 150	0	102	>0 to 1	0	0	0	0	9.8
2014	>100 to 150	0	93	>0 to 1	0	0	0	0	9.2
2015	>100 to 150	0	102	>0 to 1	0	0	0	0	9.9
2016	>100 to 150	0	91	>0 to 1	0	0	0	0	7.8
2017	>100 to 150	0	91	>0 to 1	0	0	0	0	7.0

## Summary of Manganese for 2011-2017 Reporting Year:

Year	Used [tonnes/yr.]	Created [tonnes/yr.]	Contained in Product [tonnes/yr.]	On-site Release [tonnes/yr.]			Disposal [tonnes/yr.]		Off-Site Recycling [tonnes/yr.]
				Air	Water	Land	On-Site	Off-site	
2011	>100 to 150	0	118	>0 to 1	0	0	0	0	8
2012	>100 to 150	0	104	>0 to 1	0	0	0	0	11
2013	>100 to 150	0	102	>0 to 1	0	0	0	0	9.8
2014	>100 to 150	0	93	>0 to 1	0	0	0	0	9.2
2015	>100 to 150	0	153	>0 to 1	0	0	0	0	14.8
2016	>100 to 150	0	136	>0 to 1	0	0	0	0	11.7
2017	>100 to 150	0	137	>0 to 1	0	0	0	0	10.5

## Certification

As of May 24, 2018, I, Amine Elsemine, certify that I have read the toxic substance reduction plans dated September 30 and October 1, 2013 for the toxic substance referred to below and am familiar with its contents, and to my knowledge the plan is factually accurate and complies with the Toxics Reduction Act, 2009 and Ontario Regulation 455/09 (General) made under that Act.

[Chromium, Manganese]



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Amine Elsemine  
General Manager, Profile Industries, Ltd.  
(Highest Ranking Employee)

MAY 25/18

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Date