

2020 NPRI & TRA REPORT

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**PREPARED BY:
ENVIROVISION INC.
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NATIONAL POLLUTANT INVENTORY RELEASE (NPRI)

The National Pollutant Release Inventory (NPRI) is Canada's legislated, publicly accessible inventory of pollutant releases to air, water and land, as well as disposals and transfers for recycling. The NPRI is managed by Environment Canada and currently tracks over 300 substances and groups of substances divided in 5 Parts. If reporting is required, the deadline to submit the NPRI Report is June 1st each year.

Part 1A – Core Substances

Part 1A NPRI substances are reportable if they were manufactured, processed or otherwise used at a concentration $\geq 1\%$ by weight (except for by-products and mine tailings, which have no concentration threshold) and in a quantity of 10 tonnes or more, and employees (including contractors) worked $\geq 20\,000$ hours at the facility (or an activity to which the employees threshold does not apply took place).

Part 1B – Alternate Threshold Substances

Part 1B substances are reportable if they were manufactured, processed or otherwise used at the facility in quantities equal to or exceeding mass thresholds, and employees (including contractors) worked $\geq 20\,000$ hours at the facility (or an activity to which the employee's threshold does not apply took place).

Part 2 – Polycyclic Aromatic Hydrocarbons

Part 2 substances are reportable if polycyclic aromatic hydrocarbons (PAHs) were incidentally manufactured or present in mine tailings, and were released, disposed of or transferred for recycling in a combined quantity of ≥ 50 kilograms, and employees (including contractors) worked $\geq 20\,000$ hours at the facility (or an activity to which the employees threshold does not apply took place). Wood preservation facilities using creosote must report regardless of the mass threshold for PAHs and regardless of the number of hours worked by employees.

Part 3 – Dioxins, Furans and Hexachlorobenzene

Part 3 substances are reportable if any of the following activities took place at the facility:

- incineration
- chlorinated solvent production
- metal smelting
- power generation
- iron and steel manufacturing
- pulp and paper manufacturing
- titanium dioxide pigment production
- cement manufacturing
- magnesium production
- wood preservation using pentachlorophenol

Part 4 – Criteria Air Contaminants (CACs)

Criteria Air Contaminants (CACs) released from stationary combustion equipment regardless of the number of employees at the facility. Additionally, facilities with $\geq 20\,000$ employee hours (including contractors), or where an activity to which the employee threshold does not apply took place, must consider all other sources of CACs at the facility. CACs are reportable if they were released to the air from the facility in quantities equal to or exceeding their release thresholds.

Part 5 – Speciated Volatile Organic Compounds (VOCs) – Additional Reporting Requirements

Part 5 substances are reportable if they were released to air in a quantity of ≥ 1 tonne and the 10 tonne air release threshold for VOCs (under Part 4) was met.

CHANGES TO THE NPRI SUBSTANCE LIST FOR 2020

Deletion of substances

Two substances have been deleted from the Part 1, Group A, list:

- C.I. Disperse Yellow 3 (CAS RN 2832-40-8)
- Decabromodiphenyl oxide (CAS RN 1163-19-5)

Three substances have been deleted from the Part 5 list:

- Adipic acid (CAS RN 124-04-9)
- Heavy alkylate naphtha (CAS RN 64741-65-7)
- White mineral oil (CAS RN 8042-47-5)

Change to previously listed substance

- All isomers of propylene glycol methyl ether acetate (CAS RN 108-65-6) must now be reported. Propylene glycol methyl ether acetate (PGMEA) has been moved from the Other Groups and Mixtures section to the Isomer Groups section of the Part 5 list. All isomers of PGMEA must now be reported: alpha-PGMEA (CAS RN 108-65-6), beta-PGMEA (CAS RN 70657-70-4), and mixtures of PGMEA (CAS RN 84540-57-8).

Addition of substances

One substance has been added to the Part 1, Group A list:

- Naphthenic acid fraction compounds and their salts (no specific CAS RN applies).

Three substances have been added to the Part 1, Group B, list:

- 2-Propanone, reaction products with diphenylamine, also known as PREPOD (CAS RN 68412-48-6): 50 kg at 1%.
- 1,4-Benzenediamine, N,N'-mixed phenyl and tolyl derivatives, also known as BENPAT (CAS RN 68953-84-4): 50 kg at 1%.
- Azo disperse dyes (27 CAS RNs apply): 10 kg at 0.1%.

Changes to the requirements for reporting Part 3 substances

Facilities that produce iron ore pellets using an induration furnace are now required to report for dioxins, furans and hexachlorobenzene.

The toxic equivalency factors for five dioxin and furan congeners have been updated:

- 1,2,3,7,8-Pentachlorodibenzo-p-dioxin (CAS RN 40321-76-4)
- Octachlorodibenzo-p-dioxin (CAS RN 3268-87-9)
- 2,3,4,7,8-Pentachlorodibenzofuran (CAS RN 57117-31-4)
- 1,2,3,7,8-Pentachlorodibenzofuran (CAS RN 57117-41-6)
- Octachlorodibenzofuran (CAS RN 39001-02-0)

O. REG. 127/01: AIRBORNE CONTAMINANT DISCHARGE MONITORING AND REPORTING

This Regulation was revoked on **January 1, 2020**. This will remove all requirements under this regulation for facilities to report on emissions of **acetone** starting with the 2019 reporting year. Therefore, reporting on **2019 acetone emissions will not be required on June 1, 2020 or thereafter**.

TOXIC REDUCTION ACT & ONTARIO REGULATION 455/05 (TRA)

The Ministry of the Environment, Conservation and Parks is proposing to make changes to reduce burden under the Toxics Reduction Act, 2009 and Ontario Regulation 455/09.

On **December 31, 2021**, the Toxics Reduction Act, 2009 will be repealed and its associated regulations revoked, ending the Toxics Reduction Program. Until this time, facilities must continue to meet the requirements of the *Toxics Reduction Act, 2009* and its associated regulations.

The proposed amendments are intended to reduce burden associated with the overlap between Ontario's focus on toxic reduction planning and the federal government's Chemicals Management Plan requirements to take action on chemicals. By 2021, most substances regulated by Ontario's Toxics Reduction Act, 2009 will be covered by the federal program. To avoid this unnecessary duplication, Ontario is proposing that **facilities with existing toxics reduction plans will no longer be required to review their plans and will refer to their existing plans for opportunities to reduce toxics**. It is also proposed that any facilities entering the program will not have any planning, reviewing, or reporting obligations.

Only facilities with current plans for substances that meet reporting thresholds would continue to annually report on the amounts of those substances under the Toxics Reduction Program. Annual reports would continue to include information about the progress being made to reduce those substances.

This would preserve elements of the program that support Ontarians' right to know about toxic substances in their communities while maintaining the right balance between a healthy environment and a healthy economy.

The government is also proposing to repeal the Toxics Reduction Act, 2009 and regulations made thereunder in 2021, and defer entirely to the federal government as they finalize their chemical management assessments and take action on substances deemed to be toxic.

Amends *Ontario Regulation 455/09* made under the *Toxics Reduction Act, 2009* to clarify that facilities with existing toxic reduction plans for **acetone** will no longer be required to prepare annual reports with respect to their plans for **acetone**, starting with the 2019 reporting year. Therefore, **annual reports based on 2019 acetone data will not be required on June 1, 2020 or thereafter**.

SUMMARY:

Based on the information provided and the assessment of the activities at the facility in **2020**, **Styrene** is manufactured, processed, or otherwise used in quantities meeting the reporting criteria to the NPRI. Worksheets included below show also comparisons of substance use and releases to reporting criteria. **Volatile Organic Components** were released to air in a quantity less than 10 tonnes (Part 4 NPRI). **Styrene** is not reportable under NPRI Part 5.

Copy of the report and supporting information should be kept for at least three years in the case it is required by the Environment Canada.

Information Provided by Facility

#	Material Trade Name	Manufacturer	Material Code	Type of Material	2020		2019	
							Quantity	UofM
1	29-03 PARAFFIN WAX / STYRENE SOLUTION	CCP COMPOSITES		Wax	345	kg	315	kg
2	ACETONE	COMET CHEMICAL COMPANY LTD.		Solvent	6309	kg	3850	kg
3	LUPEROX DDM-9	ARKEMA CANADA INC	DDM-9	Catalyst	992	kg	1,095	kg
4	GELCOAT 50, 53, 55-SERIES	CCP COMPOSITES		Gelcoat	850	kg	660	kg
5	GELCOAT 040-4917	POLYNT COMPOSITES			4,780	kg	11,254	kg
6	NATURAL GAS	ENBRIDGE CONSUMERS GAS		Fuel	87,871	m3	87,929	m3
7	POLYESTER RESIN 718-4884-12	POLYNT	718-4884	Resin	94,610	kg	88,469	kg
8	PROLITE25	RG MARSHALL		Sand	237,000	kg	276,450	kg
9	TR 216 LIQUID MOLD RELEASE MIX	T.R. INDUSTRIES		Wax	52	US gal	32	US gal
10	TR-210 SELF STRIPPING LIQUID MOLD RELEASE	T.R. INDUSTRIES		Wax	51	US gal	20	US gal
11	Number of employees						22	
12	Operation Schedule: days per week:						5-6 days	
13	Operation Schedule: starting time in the morning (HH:MM)						7am-3:30pm	
14	Shut down period(s)						1 week Christmas time	

Complete SDS List

Complete SDS List

MR. MARBLE

Reporting Year: 2020

#	Material Trade Name	Manufacturer	SDS Revision Date	Material Code	Type of Material	Remark
1	ACETONE	COMET CHEMICAL COMPANY LTD.	01/08/2017			
2	CADOX L-50A CATALYSTS/HARDENERS CADOX L50A L5032	AKZO NOBEL POLYMER CHEMICALS LLC	23/08/2016	0366623-003-C		
3	CADOX M-50A CATALYSTS/HARDENERS CADOX M50A M5032	AKZO NOBEL CHEMICALS INC.	07/05/2016	11-076289		
4	DOLOFIL 2055	UNIVAR CANADA LTD.	07/07/2017	LA8306		
5	GELCOAT 944-SERIES BASE WHITE 944W005	POLYNT COMPOSITES CANADA INC.	25/10/2016		Coating	
6	GELCOAT GRANICOAT 302 (ALEXANDER, ALICON, NURY, ACCENT, STARLIGHT, SOLIDS, SPARKLE)	SAFAS CORPORATION	11/05/2017			
7	GELCOAT SERIES 50	POLYNT COMPOSITES CANADA INC.	04/05/2017		Coating	
8	GELCOAT SIL08LH-70A CLEAR LOW VOC	INTERPLASTIC CORPORATION	04/08/2017			
9	GELCOAT STYPOL 040-4917	POLYNT COMPOSITES CANADA INC.	17/08/2018			
10	LA 9016 MOLD SEALER XTEND XTR	UNIVAR CANADA LTD.	26/10/2017	LA9016		
11	LUPEROX DDM-9	ARKEMA CANADA INC.	18/04/2011			
12	NATURAL GAS	ENBRIDGE CONSUMERS GAS	21/04/2016		Fuel	
13	PROLITE SERIES FILLER	THE R. J. MARSHALL COMPANY	19/12/2016			
14	RESIN 718-4884 SERIES	POLYNT COMPOSITES CANADA INC.	14/06/2015	4000000000074		
15	RESIN A596-MABG-20	AOC LLC	26/08/2016	NA-1608:3648		
16	RESIN POLYLITE 32154-25 (RESIN 5766C0000 MARBLE CLEAR 10)	REICHHOLD INC.	15/12/2017	5286 5287		
17	RESIN SIL94BA	MINCHEM	18/03/2017			
18	TR 216 LIQUID MOLD RELEASE MIX	TR INDUSTRIES	03/10/2017			
19	TR-100,102,104 & TR-108 MOULD RELEASE	OMNITECHNICK GMBH	01/05/2017			
20	TR210GAL TR-210 SELF STRIPPING LIQUID MOLD RELEASE	TR INDUSTRIES	16/07/2016			
21	WAX SOLUTIONS/RELESES 29-02 AIR DRY WAX SOLUTION	CCP COMPOSITES	02/12/2017		Coating	

SDS List of Materials Containing Reportable Ingredients

SDS List of Materials with Reportable Ingredients

MR. MARBLE

Reporting Year: 2020

#	Material Trade Name	Manufacturer	Material Code	Type of Material	Current Year		Previous Year	
					Quantity Used or processed	UofM	Quantity Used or processed	UofM
1	CADOX L-50A CATALYSTS/HARDENERS CADOX L50A L5032	AKZO NOBEL POLYMER CHEMICALS LLC	0366623-003-C			Kg		Kg
2	CADOX M-50A CATALYSTS/HARDENERS CADOX M50A M5032	AKZO NOBEL CHEMICALS INC.	11-076289			Kg		Kg
3	DOLOFIL 2055	UNIVAR CANADA LTD.	LA8306			Kg		Kg
4	GELCOAT 944-SERIES BASE WHITE 944W005	POLYNT COMPOSITES CANADA INC.		Coating		Kg		Kg
5	GELCOAT GRANICOAT 302 (ALEXANDER, ALICON, NURY, ACCENT, STARLIGHT, SOLIDS, SPARKLE)	SAFAS CORPORATION				lb		lb
6	GELCOAT SERIES 50	POLYNT COMPOSITES CANADA INC.		Coating	850	Kg	660	Kg
7	GELCOAT SIL08LH-70A CLEAR LOW VOC	INTERPLASTIC CORPORATION				Kg		Kg
8	GELCOAT STYPOL 040-4917	POLYNT COMPOSITES CANADA INC.			4,780	Kg	11,254	Kg
9	LA 9016 MOLD SEALER XTEND XTR	UNIVAR CANADA LTD.	LA9016			US gallon		US gallon
10	LUPEROX DDM-9	ARKEMA CANADA INC.			992	Kg	1,095	Kg
11	NATURAL GAS	ENBRIDGE CONSUMERS GAS		Fuel				
12	RESIN 718-4884 SERIES	POLYNT COMPOSITES CANADA INC.	4000000000074		94,610	Kg	88,469	Kg
13	RESIN A596-MABG-20	AOC LLC	NA-1608:3648			Kg		Kg
14	RESIN POLYLITE 32154-25 (RESIN 5766C0000 MARBLE CLEAR 10)	REICHOLD INC.	5286 5287			Kg		Kg
15	RESIN SIL94BA	MINCHEM				Kg		Kg
16	TR 216 LIQUID MOLD RELEASE MIX	TR INDUSTRIES			52	US gallon	32	US gallon
17	TR-100,102,104 & TR-108 MOULD RELEASE	OMNITECHNICK GMBH				Kg		Kg
18	TR210GAL TR-210 SELF STRIPPING LIQUID MOLD RELEASE	TR INDUSTRIES			51	US gallon	20	US gallon
19	WAX SOLUTIONS/RELESES 29-02 AIR DRY WAX SOLUTION	CCP COMPOSITES		Coating	345	Kg	315	Kg

Reporting Thresholds Worksheets (NPRI – Part 1)
(USE)

Reporting Threshold Worksheet

MR. MARBLE

Reporting Year: 2020

CAS Registry Number: 100-42-5

Substance Name: STYRENE (NPRI - PART 5)

#	Material Trade Name	Manufacturer	Entered Quantity	Entered U of M	A Total Weight of Material [tonnes]	B Average Concentration [%]	(A/100) x B Calculated Weight of Substance [tonnes]	Note
Materials with reportable ingredients that do not meet reporting criteria (i.e. < 1.00% or exempt)								
Total for Materials with reportable ingredients that do not meet reporting criteria							0.0000	
Materials with reportable ingredients that meet reporting criteria (i.e. >= 1.00% or by-product)								
1	GELCOAT SERIES 50	POLYNT COMPOSITES CANADA INC.	850	Kg	0.8500	40.5	0.3443	
2	GELCOAT STYPOL 040-4917	POLYNT COMPOSITES CANADA INC.	4,780	Kg	4.7800	35	1.6730	
3	RESIN 718-4884 SERIES	POLYNT COMPOSITES CANADA INC.	94,610	Kg	94.6100	37.5	35.4788	
4	WAX SOLUTIONS/RELESES 29-02 AIR DRY WAX SOLUTION	CCP COMPOSITES	345	Kg	0.3450	96	0.3312	
Total Reportable Weight of Substance							37.8272	
TOTAL Weight of Substance (all materials for facility)							37.8272	

Program	Group	Concentration Threshold [%]	Threshold	Unit	Total Weight of Substance [tonnes]	Reportable
NPRI	Part 1	1.000000	10	Tonne	37.8272	Yes

Reporting Threshold Worksheet

MR. MARBLE

Reporting Year: 2020

CAS Registry Number: 107-21-1

Substance Name: ETHYLENE GLYCOL

#	Material Trade Name	Manufacturer	Entered Quantity	Entered U of M	A Total Weight of Material [tonnes]	B Average Concentration [%]	(A/100) x B Calculated Weight of Substance [tonnes]	Note
Materials with reportable ingredients that do not meet reporting criteria (i.e. < 1.00% or exempt)								
1	GELCOAT STYPOL 040-4917	POLYNT COMPOSITES CANADA INC.	4,780	Kg	4.7800	0.55	0.0263	
Total for Materials with reportable ingredients that do not meet reporting criteria							0.0263	
Materials with reportable ingredients that meet reporting criteria (i.e. >= 1.00% or by-product)								
Total Reportable Weight of Substance							0.0000	
TOTAL Weight of Substance (all materials for facility)							0.0263	

Program	Group	Concentration Threshold [%]	Threshold	Unit	Total Weight of Substance [tonnes]	Reportable
NPRI	Part 1	1.000000	10	Tonne		No

Reporting Threshold Worksheet

MR. MARBLE

Reporting Year: 2020

CAS Registry Number: 108-88-3

Substance Name: TOLUENE (NPRI - PART 5)

#	Material Trade Name	Manufacturer	Entered Quantity	Entered U of M	A Total Weight of Material [tonnes]	B Average Concentration [%]	(A/100) x B Calculated Weight of Substance [tonnes]	Note
Materials with reportable ingredients that do not meet reporting criteria (i.e. < 1.00% or exempt)								
Total for Materials with reportable ingredients that do not meet reporting criteria							0.0000	
Materials with reportable ingredients that meet reporting criteria (i.e. >= 1.00% or by-product)								
1	TR 216 LIQUID MOLD RELEASE MIX	TR INDUSTRIES	52	USGallon	0.1713	37.5	0.0642	
2	TR210GAL TR-210 SELF STRIPPING LIQUID MOLD RELEASE	TR INDUSTRIES	51	USGallon	0.1386	72.5	0.1005	
Total Reportable Weight of Substance							0.1647	
TOTAL Weight of Substance (all materials for facility)							0.1647	

Program	Group	Concentration Threshold [%]	Threshold	Unit	Total Weight of Substance [tonnes]	Reportable
NPRI	Part 1	1.000000	10	Tonne	0.1647	No

Reporting Threshold Worksheet

MR. MARBLE

Reporting Year: 2020

CAS Registry Number: 1330-20-7

Substance Name: XYLENE (MIXED ISOMERS) (NPRI - PART 5)

#	Material Trade Name	Manufacturer	Entered Quantity	Entered U of M	A Total Weight of Material [tonnes]	B Average Concentration [%]	(A/100) x B Calculated Weight of Substance [tonnes]	Note
Materials with reportable ingredients that do not meet reporting criteria (i.e. < 1.00% or exempt)								
1	TR210GAL TR-210 SELF STRIPPING LIQUID MOLD RELEASE	TR INDUSTRIES	51	USGallon	0.1386	0.3	0.0004	
Total for Materials with reportable ingredients that do not meet reporting criteria							0.0004	
Materials with reportable ingredients that meet reporting criteria (i.e. >= 1.00% or by-product)								
1	TR 216 LIQUID MOLD RELEASE MIX	TR INDUSTRIES	52	USGallon	0.1713	2.45	0.0042	
Total Reportable Weight of Substance							0.0042	
TOTAL Weight of Substance (all materials for facility)							0.0046	

Program	Group	Concentration Threshold [%]	Threshold	Unit	Total Weight of Substance [tonnes]	Reportable
NPRI	Part 1	1.000000	10	Tonne	0.0042	No

Reporting Threshold Worksheet

MR. MARBLE

Reporting Year: 2020

CAS Registry Number: 67-63-0

Substance Name: ISOPROPYL ALCOHOL (NPRI - PART 5)

#	Material Trade Name	Manufacturer	Entered Quantity	Entered U of M	A Total Weight of Material [tonnes]	B Average Concentration [%]	(A/100) x B Calculated Weight of Substance [tonnes]	Note
Materials with reportable ingredients that do not meet reporting criteria (i.e. < 1.00% or exempt)								
Total for Materials with reportable ingredients that do not meet reporting criteria							0.0000	
Materials with reportable ingredients that meet reporting criteria (i.e. >= 1.00% or by-product)								
1	TR 216 LIQUID MOLD RELEASE MIX	TR INDUSTRIES	52	USGallon	0.1713	12.5	0.0214	
Total Reportable Weight of Substance							0.0214	
TOTAL Weight of Substance (all materials for facility)							0.0214	

Program	Group	Concentration Threshold [%]	Threshold	Unit	Total Weight of Substance [tonnes]	Reportable
NPRI	Part 1	1.000000	10	Tonne	0.0214	No

Reporting Threshold Worksheet

MR. MARBLE

Reporting Year: 2020

CAS Registry Number: 78-93-3

Substance Name: METHYL ETHYL KETONE (NPRI - PART 5)

#	Material Trade Name	Manufacturer	Entered Quantity	Entered U of M	A Total Weight of Material [tonnes]	B Average Concentration [%]	(A/100) x B Calculated Weight of Substance [tonnes]	Note
Materials with reportable ingredients that do not meet reporting criteria (i.e. < 1.00% or exempt)								
1	LUPEROX DDM-9	ARKEMA CANADA INC.	992	Kg	0.9920	0.55	0.0055	
Total for Materials with reportable ingredients that do not meet reporting criteria							0.0055	
Materials with reportable ingredients that meet reporting criteria (i.e. >= 1.00% or by-product)								
Total Reportable Weight of Substance							0.0000	
TOTAL Weight of Substance (all materials for facility)							0.0055	

Program	Group	Concentration Threshold [%]	Threshold	Unit	Total Weight of Substance [tonnes]	Reportable
NPRI	Part 1	1.000000	10	Tonne		No

Reporting Threshold Worksheet

MR. MARBLE

Reporting Year: 2020

CAS Registry Number: 80-62-6

Substance Name: METHYL METHACRYLATE

#	Material Trade Name	Manufacturer	Entered Quantity	Entered U of M	A Total Weight of Material [tonnes]	B Average Concentration [%]	(A/100) x B Calculated Weight of Substance [tonnes]	Note
Materials with reportable ingredients that do not meet reporting criteria (i.e. < 1.00% or exempt)								
Total for Materials with reportable ingredients that do not meet reporting criteria							0.0000	
Materials with reportable ingredients that meet reporting criteria (i.e. >= 1.00% or by-product)								
1	GELCOAT STYPOL 040-4917	POLYNT COMPOSITES CANADA INC.	4,780	Kg	4.7800	7.5	0.3585	
Total Reportable Weight of Substance							0.3585	
TOTAL Weight of Substance (all materials for facility)							0.3585	

Program	Group	Concentration Threshold [%]	Threshold	Unit	Total Weight of Substance [tonnes]	Reportable
NPRI	Part 1	1.000000	10	Tonne	0.3585	No

Reporting Threshold Worksheet

MR. MARBLE

Reporting Year: 2020

CAS Registry Number: 95-63-6

Substance Name: 1,2,4-TRIMETHYLBENZENE (NPRI - PART 5)

#	Material Trade Name	Manufacturer	Entered Quantity	Entered U of M	A Total Weight of Material [tonnes]	B Average Concentration [%]	(A/100) x B Calculated Weight of Substance [tonnes]	Note
Materials with reportable ingredients that do not meet reporting criteria (i.e. < 1.00% or exempt)								
Total for Materials with reportable ingredients that do not meet reporting criteria							0.0000	
Materials with reportable ingredients that meet reporting criteria (i.e. >= 1.00% or by-product)								
1	TR 216 LIQUID MOLD RELEASE MIX	TR INDUSTRIES	52	USGallon	0.1713	18.55	0.0318	
2	TR210GAL TR-210 SELF STRIPPING LIQUID MOLD RELEASE	TR INDUSTRIES	51	USGallon	0.1386	7.5	0.0104	
Total Reportable Weight of Substance							0.0422	
TOTAL Weight of Substance (all materials for facility)							0.0422	

Program	Group	Concentration Threshold [%]	Threshold	Unit	Total Weight of Substance [tonnes]	Reportable
NPRI	Part 1	1.000000	10	Tonne	0.0422	No

Reporting Threshold Worksheet

MR. MARBLE

Reporting Year: 2020

CAS Registry Number: 98-82-8

Substance Name: CUMENE

#	Material Trade Name	Manufacturer	Entered Quantity	Entered U of M	A Total Weight of Material [tonnes]	B Average Concentration [%]	(A/100) x B Calculated Weight of Substance [tonnes]	Note
Materials with reportable ingredients that do not meet reporting criteria (i.e. < 1.00% or exempt)								
1	TR210GAL TR-210 SELF STRIPPING LIQUID MOLD RELEASE	TR INDUSTRIES	51	USGallon	0.1386	0.3	0.0004	
Total for Materials with reportable ingredients that do not meet reporting criteria							0.0004	
Materials with reportable ingredients that meet reporting criteria (i.e. >= 1.00% or by-product)								
1	TR 216 LIQUID MOLD RELEASE MIX	TR INDUSTRIES	52	USGallon	0.1713	1.75	0.0030	
Total Reportable Weight of Substance							0.0030	
TOTAL Weight of Substance (all materials for facility)							0.0034	

Program	Group	Concentration Threshold [%]	Threshold	Unit	Total Weight of Substance [tonnes]	Reportable
NPRI	Part 1	1.000000	10	Tonne	0.0030	No

Reporting Thresholds Worksheets (NPRI – Part 4)
(VOLATILE ORGANIC COMPOUNDS – USE)

Reporting Threshold Worksheet - NPRI (Part 4 - VOCs Use)

MR. MARBLE

Reporting Year: 2020

CAS Registry Number: 100-42-5

Substance Name: STYRENE (NPRI - PART 5)

#	Material Trade Name	Manufacturer	Entered Quantity	Entered U of M	A Total Weight of Material [tonnes]	B Average Concentration [%]	(A/100) x B Calculated Weight of Substance [tonnes]	Note
1	GELCOAT SERIES 50	POLYNT COMPOSITES CANADA INC.	850	Kg	0.8500	40.5	0.3443	
2	GELCOAT STYPOL 040-4917	POLYNT COMPOSITES CANADA INC.	4,780	Kg	4.7800	35	1.6730	
3	RESIN 718-4884 SERIES	POLYNT COMPOSITES CANADA INC.	94,610	Kg	94.6100	37.5	35.4788	
4	WAX SOLUTIONS/RELESES 29-02 AIR DRY WAX SOLUTION	CCP COMPOSITES	345	Kg	0.3450	96	0.3312	
Total Weight of Substance:							37.8272	

Reporting Threshold Worksheet - NPRI (Part 4 - VOCs Use)

MR. MARBLE

Reporting Year: 2020

CAS Registry Number: 107-21-1

Substance Name: ETHYLENE GLYCOL

#	Material Trade Name	Manufacturer	Entered Quantity	Entered U of M	A Total Weight of Material [tonnes]	B Average Concentration [%]	(A/100) x B Calculated Weight of Substance [tonnes]	Note
5	GELCOAT STYPOL 040-4917	POLYNT COMPOSITES CANADA INC.	4,780	Kg	4.7800	0.55	0.0263	
Total Weight of Substance:							0.0263	

Reporting Threshold Worksheet - NPRI (Part 4 - VOCs Use)

MR. MARBLE

Reporting Year: 2020

CAS Registry Number: 108-67-8

Substance Name: 1,3,5 TRIMETHYL BENZENE (NPRI - PART 5)

#	Material Trade Name	Manufacturer	Entered Quantity	Entered U of M	A Total Weight of Material [tonnes]	B Average Concentration [%]	(A/100) x B Calculated Weight of Substance [tonnes]	Note
6	TR210GAL TR-210 SELF STRIPPING LIQUID MOLD RELEASE	TR INDUSTRIES	51	USGallon	0.1386	3	0.0042	
Total Weight of Substance:							0.0042	

Reporting Threshold Worksheet - NPRI (Part 4 - VOCs Use)

MR. MARBLE

Reporting Year: 2020

CAS Registry Number: 108-88-3

Substance Name: TOLUENE (NPRI - PART 5)

#	Material Trade Name	Manufacturer	Entered Quantity	Entered U of M	A Total Weight of Material [tonnes]	B Average Concentration [%]	(A/100) x B Calculated Weight of Substance [tonnes]	Note
7	TR 216 LIQUID MOLD RELEASE MIX	TR INDUSTRIES	52	USGallon	0.1713	37.5	0.0642	
8	TR210GAL TR-210 SELF STRIPPING LIQUID MOLD RELEASE	TR INDUSTRIES	51	USGallon	0.1386	72.5	0.1005	
Total Weight of Substance:							0.1647	

Reporting Threshold Worksheet - NPRI (Part 4 - VOCs Use)

MR. MARBLE

Reporting Year: 2020

CAS Registry Number: 1330-20-7

Substance Name: XYLENE (MIXED ISOMERS) (NPRI - PART 5)

#	Material Trade Name	Manufacturer	Entered Quantity	Entered U of M	A Total Weight of Material [tonnes]	B Average Concentration [%]	(A/100) x B Calculated Weight of Substance [tonnes]	Note
9	TR 216 LIQUID MOLD RELEASE MIX	TR INDUSTRIES	52	USGallon	0.1713	2.45	0.0042	
10	TR210GAL TR-210 SELF STRIPPING LIQUID MOLD RELEASE	TR INDUSTRIES	51	USGallon	0.1386	0.3	0.0004	
Total Weight of Substance:							0.0046	

Reporting Threshold Worksheet - NPRI (Part 4 - VOCs Use)

MR. MARBLE

Reporting Year: 2020

CAS Registry Number: 25340-17-4

Substance Name: DIETHYLBENZENE

#	Material Trade Name	Manufacturer	Entered Quantity	Entered U of M	A Total Weight of Material [tonnes]	B Average Concentration [%]	(A/100) x B Calculated Weight of Substance [tonnes]	Note
11	TR210GAL TR-210 SELF STRIPPING LIQUID MOLD RELEASE	TR INDUSTRIES	51	USGallon	0.1386	0.55	0.0008	
Total Weight of Substance:							0.0008	

Reporting Threshold Worksheet - NPRI (Part 4 - VOCs Use)

MR. MARBLE

Reporting Year: 2020

CAS Registry Number: 25551-13-7

Substance Name: TRIMETHYL BENZENE (NPRI - PART 5)

#	Material Trade Name	Manufacturer	Entered Quantity	Entered U of M	A Total Weight of Material [tonnes]	B Average Concentration [%]	(A/100) x B Calculated Weight of Substance [tonnes]	Note
12	TR 216 LIQUID MOLD RELEASE MIX	TR INDUSTRIES	52	USGallon	0.1713	22.5	0.0385	
Total Weight of Substance:							0.0385	

Reporting Threshold Worksheet - NPRI (Part 4 - VOCs Use)

MR. MARBLE

Reporting Year: 2020

CAS Registry Number: 64741-41-9

Substance Name: NAPHTHA HEAVY STRAIGHT RUN

#	Material Trade Name	Manufacturer	Entered Quantity	Entered U of M	A Total Weight of Material [tonnes]	B Average Concentration [%]	(A/100) x B Calculated Weight of Substance [tonnes]	Note
13	TR 216 LIQUID MOLD RELEASE MIX	TR INDUSTRIES	52	USGallon	0.1713	12.5	0.0214	
Total Weight of Substance:							0.0214	

Reporting Threshold Worksheet - NPRI (Part 4 - VOCs Use)

MR. MARBLE

Reporting Year: 2020

CAS Registry Number: 64742-95-6

Substance Name: LIGHT AROMATIC SOLVENT NAPHTHA (NPRI - PART 5)

#	Material Trade Name	Manufacturer	Entered Quantity	Entered U of M	A Total Weight of Material [tonnes]	B Average Concentration [%]	(A/100) x B Calculated Weight of Substance [tonnes]	Note
14	GELCOAT STYPOL 040-4917	POLYNT COMPOSITES CANADA INC.	4,780	Kg	4.7800	0.55	0.0263	
15	TR 216 LIQUID MOLD RELEASE MIX	TR INDUSTRIES	52	USGallon	0.1713	22.5	0.0385	
16	TR210GAL TR-210 SELF STRIPPING LIQUID MOLD RELEASE	TR INDUSTRIES	51	USGallon	0.1386	17.5	0.0243	
Total Weight of Substance:							0.0891	

Reporting Threshold Worksheet - NPRI (Part 4 - VOCs Use)

MR. MARBLE

Reporting Year: 2020

CAS Registry Number: 67-63-0

Substance Name: ISOPROPYL ALCOHOL (NPRI - PART 5)

#	Material Trade Name	Manufacturer	Entered Quantity	Entered U of M	A Total Weight of Material [tonnes]	B Average Concentration [%]	(A/100) x B Calculated Weight of Substance [tonnes]	Note
17	TR 216 LIQUID MOLD RELEASE MIX	TR INDUSTRIES	52	USGallon	0.1713	12.5	0.0214	
Total Weight of Substance:							0.0214	

Reporting Threshold Worksheet - NPRI (Part 4 - VOCs Use)

MR. MARBLE

Reporting Year: 2020

CAS Registry Number: 78-93-3

Substance Name: METHYL ETHYL KETONE (NPRI - PART 5)

#	Material Trade Name	Manufacturer	Entered Quantity	Entered U of M	A Total Weight of Material [tonnes]	B Average Concentration [%]	(A/100) x B Calculated Weight of Substance [tonnes]	Note
18	LUPEROX DDM-9	ARKEMA CANADA INC.	992	Kg	0.9920	0.55	0.0055	
Total Weight of Substance:							0.0055	

Reporting Threshold Worksheet - NPRI (Part 4 - VOCs Use)

MR. MARBLE

Reporting Year: 2020

CAS Registry Number: 80-62-6

Substance Name: METHYL METHACRYLATE

#	Material Trade Name	Manufacturer	Entered Quantity	Entered U of M	A Total Weight of Material [tonnes]	B Average Concentration [%]	(A/100) x B Calculated Weight of Substance [tonnes]	Note
19	GELCOAT STYPOL 040-4917	POLYNT COMPOSITES CANADA INC.	4,780	Kg	4.7800	7.5	0.3585	
Total Weight of Substance:							0.3585	

Reporting Threshold Worksheet - NPRI (Part 4 - VOCs Use)

MR. MARBLE

Reporting Year: 2020

CAS Registry Number: 8052-41-3

Substance Name: STODDARD SOLVENT (NPRI - PART 5)

#	Material Trade Name	Manufacturer	Entered Quantity	Entered U of M	A Total Weight of Material [tonnes]	B Average Concentration [%]	(A/100) x B Calculated Weight of Substance [tonnes]	Note
20	TR210GAL TR-210 SELF STRIPPING LIQUID MOLD RELEASE	TR INDUSTRIES	51	USGallon	0.1386	7.5	0.0104	
Total Weight of Substance:							0.0104	

Reporting Threshold Worksheet - NPRI (Part 4 - VOCs Use)

MR. MARBLE

Reporting Year: 2020

CAS Registry Number: 95-63-6

Substance Name: 1,2,4-TRIMETHYLBENZENE (NPRI - PART 5)

#	Material Trade Name	Manufacturer	Entered Quantity	Entered U of M	A Total Weight of Material [tonnes]	B Average Concentration [%]	(A/100) x B Calculated Weight of Substance [tonnes]	Note
21	TR 216 LIQUID MOLD RELEASE MIX	TR INDUSTRIES	52	USGallon	0.1713	18.55	0.0318	
22	TR210GAL TR-210 SELF STRIPPING LIQUID MOLD RELEASE	TR INDUSTRIES	51	USGallon	0.1386	7.5	0.0104	
Total Weight of Substance:							0.0422	

Reporting Threshold Worksheet - NPRI (Part 4 - VOCs Use)

MR. MARBLE

Reporting Year: 2020

CAS Registry Number: 98-82-8

Substance Name: CUMENE

#	Material Trade Name	Manufacturer	Entered Quantity	Entered U of M	A Total Weight of Material [tonnes]	B Average Concentration [%]	(A/100) x B Calculated Weight of Substance [tonnes]	Note
23	TR 216 LIQUID MOLD RELEASE MIX	TR INDUSTRIES	52	USGallon	0.1713	1.75	0.0030	
24	TR210GAL TR-210 SELF STRIPPING LIQUID MOLD RELEASE	TR INDUSTRIES	51	USGallon	0.1386	0.3	0.0004	
Total Weight of Substance:							0.0034	

Reportable Summary

Program	Group	Threshold	Unit	Calculated Weight of Substance [tonnes]
NPRI	Part 4	10	Tonne	38.6181
NPRI	Part 5	1 substance(s)		

Reportable NPRI Part 5

#	Substance Name	CAS Registry Number	Calculated Weight of Substance [tonnes]
1	STYRENE (NPRI - PART 5)	100-42-5	37.8272

NPRI Report

Natural Gas Burned

87,871

m³

2020 Reporting Year - Mr Marble (59 Ortona Court, Concord, Ontario, L4K 3M2)

Part 1 Substance Releases										
Substance Name	Cas #	Weight % *	Emission Factor	EF** Units	EF Rating	Activity Rate from input tab	Total Release	Units	Total Release	Units
Benzene	71-43-2	9.09	NA	NA	NA	NA	NA	kg	0.0007030	tonnes
Cyclohexane	110-82-7	2.27	NA	NA	NA	NA	NA	kg	0.0001757	tonnes
Formaldehyde	50-00-0	18.18	NA	NA	NA	NA	NA	kg	0.0014059	tonnes
Toluene	108-88-3	4.55	NA	NA	NA	NA	NA	kg	0.0003515	tonnes
Arsenic	***	NA	0.00320	kg/10 ⁶ m ³	E	87,871	0.00028	kg	0.0000003	tonnes
Cadmium	***	NA	0.01760	kg/10 ⁶ m ³	D	87,871	0.00155	kg	0.0000015	tonnes
Chromium	***	NA	0.02240	kg/10 ⁶ m ³	D	87,871	0.00197	kg	0.0000020	tonnes
Cobalt	***	NA	0.00134	kg/10 ⁶ m ³	D	87,871	0.00012	kg	0.0000001	tonnes
Copper	***	NA	0.01360	kg/10 ⁶ m ³	C	87,871	0.00120	kg	0.0000012	tonnes
Manganese	***	NA	0.00608	kg/10 ⁶ m ³	D	87,871	0.00053	kg	0.0000005	tonnes
Mercury	***	NA	0.00416	kg/10 ⁶ m ³	D	87,871	0.00037	kg	0.0000004	tonnes
Molybdenum	***	NA	0.01760	kg/10 ⁶ m ³	D	87,871	0.00155	kg	0.0000015	tonnes
Nickel	***	NA	0.03360	kg/10 ⁶ m ³	C	87,871	0.00295	kg	0.0000030	tonnes
Selenium	***	NA	0.00038	kg/10 ⁶ m ³	E	87,871	0.00003	kg	0.0000000	tonnes
Vanadium	***	NA	0.03680	kg/10 ⁶ m ³	D	87,871	0.00323	kg	0.0000032	tonnes
Zinc	***	NA	0.46400	kg/10 ⁶ m ³	E	87,871	0.04077	kg	0.0000408	tonnes

* Weight percent from SPECIATE 3.2 program (Profile 0003 - External Combustion Boiler - Natural Gas)

** EF = Emission Factor

*** no single CAS # applies to this substance

Refer to the introduction (in section 2.4 of the toolbox) for the description of EF ratings.

Refer to the introduction (in section 2.4 of the toolbox) for the description of EF ratings.

Part 2 - 3 Substance Releases						
Substance Name	CAS #	Emission Factor	EF** Units	Activity Rate from input tab	Total Release (tonnes)	Units
Due to small emission factors associated with Part 2 and 3 substances, emissions are not calculated. Refer to AP-42 chapter 1.4 for details.						

Part 4 Criteria Air Contaminants (CAC) Releases							
Substance Name	CAS #	Emission Factor	EF** units	EF Rating	Activity Rate from input tab	Total Release (tonnes)	Units
Carbon Monoxide (CO)	630-08-0	1344	kg/10 ⁶ m ³	B	87,871	0.11810	tonnes
Sulphur Dioxide (SO2)	7446-09-5	9.6	kg/10 ⁶ m ³	A	87,871	0.00084	tonnes
Oxides of Nitrogen, expressed as NO2 (NOx)	11104-93-1	1600	kg/10 ⁶ m ³	B	87,871	0.14059	tonnes
Volatile Organic Compounds (VOCs)	*	88	kg/10 ⁶ m ³	C	87,871	0.00773	tonnes
Total Particulate Matter (TPM)	*	30.4	kg/10 ⁶ m ³	B	87,871	0.00267	tonnes
Particulate Matter less than or equal to 10 microns (PM10)	*	30.4	kg/10 ⁶ m ³	B	87,871	0.00267	tonnes
Particulate Matter less than or equal to 2.5 microns (PM2.5)	*	30.4	kg/10 ⁶ m ³	B	87,871	0.00267	tonnes

* no single CAS # applies to this substance

** EF = Emission Factor

Refer to the introduction (in section 2.4 of the toolbox) for the description of EF ratings.

Part 5 Selected Volatile Organic Compounds Releases									
Substance Name	CAS #	Weight % *	Emission Factor	EF units	EF Rating	Activity Rate from input tab	Total Release (tonnes)	Units	
Benzene	71-43-2	9.09	NA	NA	NA	NA	0.0007	tonnes	
N-butane	106-97-8	20.45	NA	NA	NA	NA	0.0016	tonnes	
Formaldehyde	50-00-0	18.18	NA	NA	NA	NA	0.0014	tonnes	
Isomers of hexane		2.27	NA	NA	NA	NA	0.0002	tonnes	
N-pentane	109-66-0	13.64	NA	NA	NA	NA	0.0011	tonnes	
Isomers of pentane		20.45	NA	NA	NA	NA	0.0016	tonnes	
Propane	74-98-6	9.09	NA	NA	NA	NA	0.0007	tonnes	
Toluene	108-88-3	4.55	NA	NA	NA	NA	0.0004	tonnes	

* Weight percent from SPECIATE 3.2 program (Profile 0003 - External Combustion Boiler - Natural Gas)

NA - Not Applicable

Refer to the introduction (in section 2.4 of the toolbox) for the description of EF ratings.

2020 Reporting Year - Mr Marble 59 Ortona Court, Concord, Ontario, L4K 3M2 - On-Site Releases of the Substance to the Environment - Releases to Air (Stack or Point Releases)

Material Name	Styrene (CAS# 100-42-5)							TPM
	Usage (tonnes)	Usage (%)	Substance (%)	Weight of Substance (tonnes)	Emission Factor (Pounds of Styrene Emitted per Ton of Resin or Gelcoat Processed)	Emission Factor	Air Releases (tonnes)	Air Releases (tonnes)
	A	B=Ai / At	C	D = A x C/100	E	F = E / 2,000	G = F x A	
29-02 PARAFFIN WAX / STYRENE SOLUTION	0.345	0.34	96.00	0.3312			0.3312	
GELCOAT SERIES 50	0.850	0.85	40.50	0.3443	328.5000	0.1643	0.1396	0.5058
GELCOAT 944 SERIE		0.00	30.25	0.0000	196.6250	0.0983	0.0000	0.0000
GELCOAT GRANICOAT		0.00	17.00	0.0000	110.5000	0.0553	0.0000	0.0000
GELCOAT STYPOL 040-4917	4.780	4.75	35.00	1.6730	245.0000	0.1225	0.5856	0.3227
RESIN 718-4884 SERIES	94.610	94.06	37.50	35.4788	109.0000	0.0545	5.1562	
RESIN A596-MABG-20		0.00	29.50	0.0000	74.3400	0.0372	0.0000	
RESIN POLYLITE 32154-25		0.00	28.00	0.0000	70.5600	0.0353	0.0000	
Total (At)	100.585	100	39.22	37.8272	---	0.5673	6.2126	0.8284

Emission Factor Unified Emission Factors for Open Molding of Composites: Gelcoat Controlled Spray Application

Formulas for materials with styrene content > 33%: $0.73 \times (1.03646 \times \% \text{ styrene} - 0.195) \times 2,000$

Formulas for materials with styrene content < 33%: $0.325 \times \% \text{ styrene} \times 2,000$

Emission Factor Unified Emission Factors for Open Molding of Composites: Resin - Manual

Formulas for materials with styrene content > 33%: $0.73 \times (1.03646 \times \% \text{ styrene} - 0.195) \times 2,000$

Formulas for materials with styrene content < 33%: $0.126 \times \% \text{ styrene} \times 2,000$

	Use	Air Releases		
Styrene	100-42-5	37.8272	6.213	tonnes Reportable

	VOCs (Use)	Styrene (Use)	Styrene Air Releases	Natural Gas Air Releases	VOCs Air Releases	
	A	B	C	D	E=A-B+C+D	
Volatile Organic Compounds (VOCs)	38.6181	37.8272	6.2126	0.0077	7.0112	tonnes Not Reportable

		Natural Gas	Gel Coat Application	PM Air Releases	
		A	B	C = A+ B	
Total Particulate Matter (TPM)	NA-M08	0.0027	0.0157	0.0184	tonnes Not Reportable
Particulate Matter less than or equal to 10 microns (PM10)	NA-M09	0.0027	0.0157	0.0184	tonnes Not Reportable
Particulate Matter less than or equal to 2.5 microns (PM2.5)	NA-M10	0.0027	0.0157	0.0184	tonnes Not Reportable
PM = 0.8284 tonnes x (100-98.1)/100 = 0.0157 tonnes Gelcoat					

2020 Reporting Year - Mr Marble (59 Ortona Court, Concord, Ontario, L4K 3M2) - NPRI Summary

2020

2019 Increased Reasons for Changes in Quantities Released from
(Decreased) Previous Year

NPRI Part 1 Releases to Air (meet the mass reporting threshold and concentration, 10 tonnes and 1%)

Styrene	100-42-5	6.2126	tonnes	Reportable	6.6110	-6.03%	No significant change (i.e. < 10%) or no change
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Part 4: Criteria Air Contaminants (CACs)

Carbon Monoxide (CO)	630-08-0	0.1181	tonnes	Not Reportable	< 20 tonnes	0.118	
Sulphur Dioxide (SO2)	7446-09-5	0.0008	tonnes	Not Reportable	< 20 tonnes	0.001	
Oxides of Nitrogen, expressed as NO2 (NOx)	11104-93-1	0.1406	tonnes	Not Reportable	< 20 tonnes	0.141	
Volatile Organic Compounds (VOCs)	NA-M16	7.0112	tonnes	Not Reportable	< 10 tonnes	7.7891	-9.99%
Total Particulate Matter (TPM)	NA-M08	0.0184	tonnes	Not Reportable	< 20 tonnes	0.025	
Particulate Matter less than or equal to 10 microns (PM10)	NA-M09	0.0184	tonnes	Not Reportable	< 0.5 tonnes	0.025	
Particulate Matter less than or equal to 2.5 microns (PM2.5)	NA-M10	0.0184	tonnes	Not Reportable	< 0.3 tonnes	0.025	

Part 5 Speciated VOCs (Total VOC Releases to air under Part 4 must be ≥ 10 tonnes AND Releases to air of one or more of the 75 Part 5 substances must be ≥ 1 tonne.)

Styrene	100-42-5	6.2126	tonnes	Not Reportable under Part 5 NPRI	6.6110	-6.03%	No significant change (i.e. < 10%) or no change
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TRA Report

2020 Reporting Year - Mr Marble (59 Ortona Court, Concord, Ontario, L4K 3M2) - NPRI Summary - TRA Summary

Use + Creation = Transformed + Destroyed + Contained in Product + On site or Offsite Release (to air, land, water) + Offsite Transfers (for treatment, recycling) + Disposals

		Enters the facility (Use) [tonnes]	Creation [tonnes]	Contained in Product [tonnes]		<u>Reasons for Changes in Quantities Released from Previous Year</u>
Volatile Organic Compounds (VOCs)	NA-M16	38.6181	0.0077	0.0000	Not Reportable	-0.61% No significant change (i.e. < 10%) or no change
Styrene	100-42-5	37.8272	n/a	0.0000	Reportable	0.38% No significant change (i.e. < 10%) or no change

2019 Reporting Year - Mr Marble (59 Ortona Court, Concord, Ontario, L4K 3M2) - NPRI Summary - TRA Summary

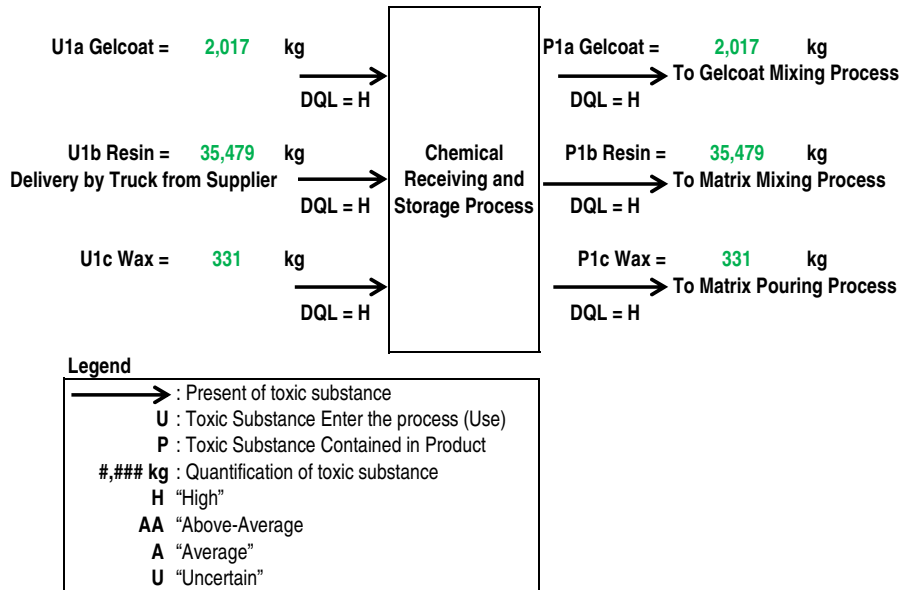
Volatile Organic Compounds (VOCs)	NA-M16	38.8549	0.0077	0.0000		-0.2368
Styrene	100-42-5	37.6845	n/a	0.0000		0.1427

2020 Toxic Reduction Accounting at the Process Level - Styrene

Chemical Receiving and Storage Process

Process Flow Diagram for Chemical Receiving and Storage Process

Process Flow Diagram for Styrene in Chemical Receiving and Storage Process



Process Description:

Gelcoats, resins & wax products containing Styrene are introduced to the Facility at the chemical receiving process in a liquid form. The gelcoat are received by truck in 5 or 45-gallon pails (U1a). The resins are received by truck in 45-gal drums (U1b). The wax is received by truck in 5-gallon pails (U1c).

The pails and drums containing Styrene are transferred, using forklifts to the storage area and kept in the storage area until required in the gelcoat mixing process (P1a), matrix mixing process (P1b) and Matrix Pouring process (P1c).

There are no records of any spills in 2020 at the Facility.

The materials containing Styrene are ordered based on the forecasts given by the customers.

The pails and drums are not opened during chemical receiving and storage process.

Input/Output Balance for the Chemical Receiving and Storage Process

Use + Creation = Transformed + Destroyed + Contained in Product + Released to Air + Released to Land + Released to Water + on-site or Off-site Disposal + Off-site
 (U1a + U1b + U1c) = (P1a + P1b + P1c)

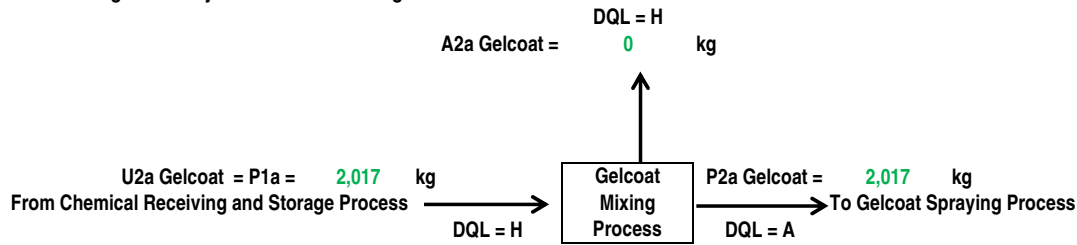
U1a (kg) =	2,017	P1a (kg) =	2,017
U1b (kg) =	35,479	P1b (kg) =	35,479
U1c (kg) =	331	P1c (kg) =	331
	37,827 -		37,827 =
			0

2020 Toxic Reduction Accounting at the Process Level - Styrene

Gelcoat Mixing Process

Process Flow Diagram for Gelcoat Mixing Process

Process Flow Diagram for Styrene in Gelcoat Mixing Process



Legend

→	: Present of toxic substance
U	: Toxic Substance Enter the process (Use)
P	: Toxic Substance Contained in Product
A	: On-site Release of Substance to Air
#,### kg	: Quantification of toxic substance
H	"High"
AA	"Above-Average"
A	"Average"
U	"Uncertain"

Process Description:

Gelcoat is a pigmented polymer resin that is sprayed onto moulds to give the glossy high quality finish to the product.

The gelcoat is mixed instantaneously with 1% methyl ethyl ketone peroxide (MEKP) catalyst. The fluid impingement technology (FIT) gelcoat spray gun mixes the resin and catalyst in the spray gun so there are no emissions from mixing (A2a = 0 kg). Molds to be sprayed are placed in the gelcoat spray booths and the gelcoat is applied.

Therefore, it been assumed that 100% of the gelcoat containing Styrene leaves the gelcoat mixing process going to the gelcoat spraying process (P2a).

Input/Output Balance for the Gelcoat Mixing Process

Use + Creation = Transformed + Destroyed + Contained in Product + Released to Air + Released to Land + Released to Water + on-site or Off-site Disposal + Off-site

$$U2a = A2a + P2a$$

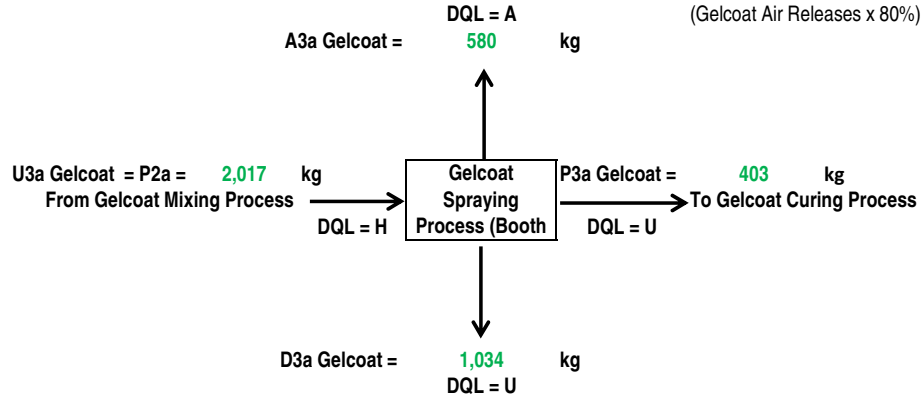
U2a (kg) =	2,017	A2a (kg) =	0
		P2a (kg) =	2,017
	2,017 -		2,017 =
			0

2020 Toxic Reduction Accounting at the Process Level - Styrene

Gelcoat Spraying Process

Process Flow Diagram for Gelcoat Spraying Process

Process Flow Diagram for Styrene in Gelcoat Spraying Process



Legend

→	: Present of toxic substance
U	: Toxic Substance Enter the process (Use)
P	: Toxic Substance Contained in Product
D	: Toxic Substance Destroyed
A	: On-site Release of Substance to Air
#,### kg	: Quantification of toxic substance
H	"High"
AA	"Above-Average"
A	"Average"
U	"Uncertain"

Process Description:

As there are no emissions during gelcoat mixing process, it been assumed that the total gelcoat containing Styrene purchased in 2020 enters the gelcoat spraying process (U3a). It been assumed that 80% of the gelcoat containing Styrene that enters the gelcoat spraying process is emitted into the atmosphere during gelcoat spraying process (A3a). The rest of Styrene not emitted into the atmosphere is destroyed (D3a) into a non toxic substance. Therefore, it been assumed that 20% of the gelcoat containing Styrene leaves the gelcoat application process (P3a).

Input/Output Balance for the gelcoat spraying process

Use + Creation = Transformed + Destroyed + Contained in Product + Released to Air + Released to Land + Released to Water + on-site or Off-site Disposal + Off-site

$$U3a = A3a + D3a + P3a$$

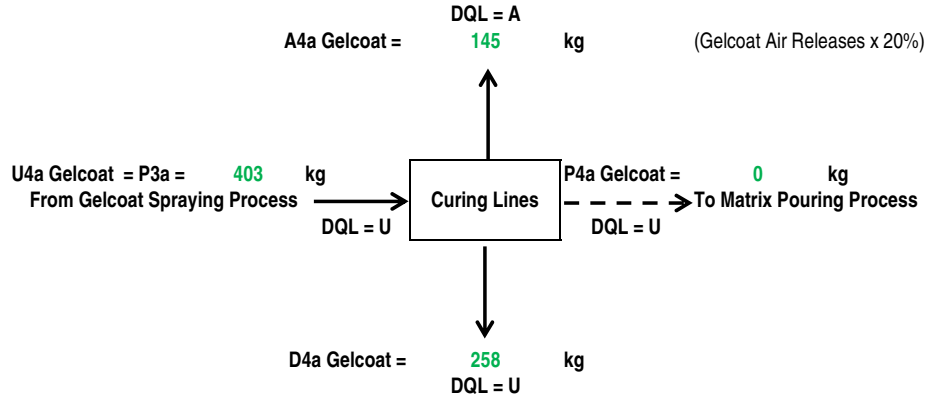
U3a (kg) =	2,017	A3a (kg) =	580	
		D3a (kg) =	1,034	
		P3a (kg) =	403	
2017.25 -		2017.25 =		0

2020 Toxic Reduction Accounting at the Process Level - Styrene

Gelcoat Curing Process

Process Flow Diagram for Gelcoat Curing Process

Process Flow Diagram for Styrene in Gelcoat Curing Process



Legend

\longrightarrow	: Present of toxic substance
$-\ - \ - \longrightarrow$: Absence of toxic substance
U	: Toxic Substance Enter the process (Use)
P	: Toxic Substance Contained in Product
D	: Toxic Substance Destroyed
A	: On-site Release of Substance to Air
#,### kg	: Quantification of toxic substance
H	"High"
AA	"Above-Average"
A	"Average"
U	"Uncertain"

Process Description:

It been assumed that 20% of total gelcoat containing Styrene purchased in 2020 enters the gelcoat curing process (U4a) and is emitted into the atmosphere during gelcoat curing process (A4a). The rest of Styrene not emitted into the atmosphere is destroyed (D4a) into a non toxic substance after curing no Styrene is present in the finished parts (P4a).

Input/Output Balance for the gelcoat Curing Process

Use + Creation = Transformed + Destroyed + Contained in Product + Released to Air + Released to Land + Released to Water + on-site or Off-site Disposal + Off-site
 $U4a = A4a + D4a + P4a$

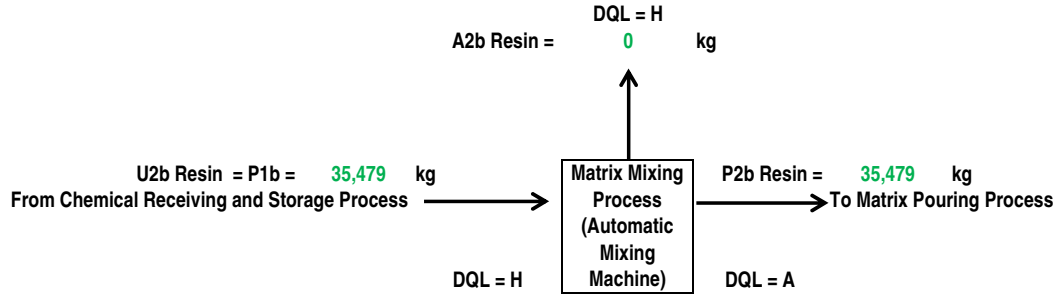
U4a (kg) =	403	A4a (kg) =	145	
		D4a (kg) =	258	
		P4a (kg) =	0	
	403.45 -		403.45 =	0

2020 Toxic Reduction Accounting at the Process Level - Styrene

Matrix Mixing Process

Process Flow Diagram for Matrix Mixing Process

Process Flow Diagram for Styrene in Matrix Mixing Process



Legend

→	: Present of toxic substance
U	: Toxic Substance Enter the process (Use)
P	: Toxic Substance Contained in Product
A	: On-site Release of Substance to Air
#,### kg	: Quantification of toxic substance
H	"High"
AA	"Above-Average"
A	"Average"
U	"Uncertain"

Process Description:

The casting operation consists of mixing resin, catalyst, calcium carbonate and small quantities of pigments in the mixer using an automatic machine so there are no emissions from mixing ($A_{2b} = 0$ kg) and pouring the liquefied blend onto the moulds. Therefore, it been assumed that 100% of the matrix containing Styrene leaves the matrix mixing process going to the matrix pouring process (P_{2b}).

Input/Output Balance for the Matrix Mixing Process

Use + Creation = Transformed + Destroyed + Contained in Product + Released to Air + Released to Land + Released to Water + on-site or Off-site Disposal + Off-site

$$U_{2b} = A_{2b} + P_{2b}$$

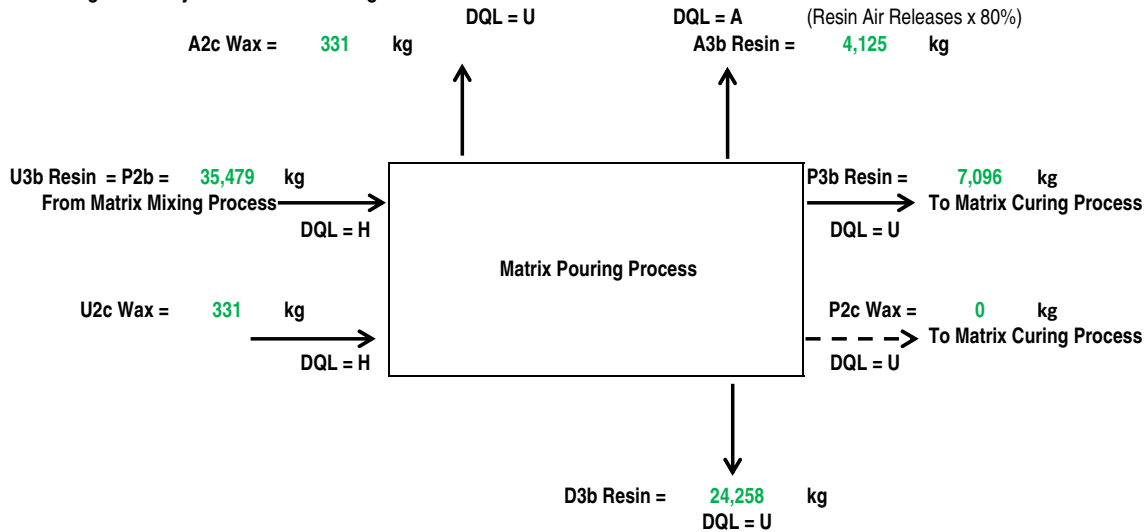
U2b (kg) =	35,479	A2b (kg) =	0	
		P2b (kg) =	35,479	
	35,479 -		35,479 =	0

2020 Toxic Reduction Accounting at the Process Level - Styrene

Matrix Pouring Process

Process Flow Diagram for Matrix Pouring Process

Process Flow Diagram for Styrene in Matrix Pouring Process



Legend

	: Present of toxic substance
U	: Toxic Substance Enter the process (Use)
P	: Toxic Substance Contained in Product
D	: Toxic Substance Destroyed
A	: On-site Release of Substance to Air
#,### kg	: Quantification of toxic substance
H	"High"
AA	"Above-Average"
A	"Average"
U	"Uncertain"

Process Description:

As there are no emissions during matrix mixing process, it been assumed that the total resin containing Styrene purchased in 2020 enters the matrix pouring process (U3b). It been assumed that 80% of the resin containing Styrene that enters the matrix pouring process is emitted into the atmosphere during matrix pouring process (A3b). The rest of Styrene not emitted into the atmosphere is destroyed (D3b) into a non toxic substance. Therefore, it been assumed that 20% of the resin containing Styrene leaves the matrix pouring process (P3b).

The wax is applied onto the mould to better demoulding. Wax containing Styrene enters the matrix pouring process from the chemical receiving and storage process (U2c). The wax is manually applied with a cloth onto open-cavity moulds before matrix pouring to avoid any sticking when removing the mould. The wax is discharged into the atmosphere (A2c) through a stack designated for the pouring area. The wax is not used in any other processes (P2c = 0 kg).

Input/Output Balance for the Matrix Pouring process

Use + Creation = Transformed + Destroyed + Contained in Product + Released to Air + Released to Land + Released to Water + on-site or Off-site Disposal + Off-site
 $(U3b + U2c) = (A3b + A2c) + D3b + (P3b + P2c)$

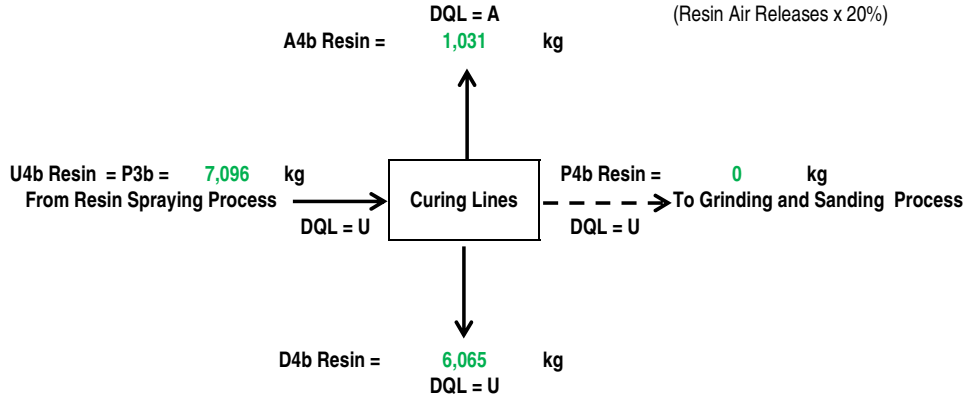
U3b (kg) =	35,479	A3b (kg) =	4,125
U2c (kg) =	331	A2c (kg) =	331
		D3b (kg) =	24,258
		P3b (kg) =	7,096
		P2c (kg) =	0
<hr/>		<hr/>	
	35,810 -		35,810 =
			0

2020 Toxic Reduction Accounting at the Process Level - Styrene

Matrix Curing Process

Process Flow Diagram for Matrix Curing Process

Process Flow Diagram for Styrene in Matrix Curing Process



Legend

\longrightarrow	: Present of toxic substance
\dashrightarrow	: Absence of toxic substance
U	: Toxic Substance Enter the process (Use)
P	: Toxic Substance Contained in Product
D	: Toxic Substance Destroyed
A	: On-site Release of Substance to Air
#,### kg	: Quantification of toxic substance
H	"High"
AA	"Above-Average"
A	"Average"
U	"Uncertain"

Process Description:

It been assumed that 20% of total resin containing Styrene purchased in 2020 enters the matrix curing process (U4b) and is emitted into the atmosphere during matrix curing process (A4b). The rest of Styrene not emitted into the atmosphere is destroyed (D4b) into a non toxic substance. after curing no Styrene is present in the finished parts (P4b).

Input/Output Balance for the Matrix Curing Process

Use + Creation = Transformed + Destroyed + Contained in Product + Released to Air + Released to Land + Released to Water + on-site or Off-site Disposal + Off-site
 $U4b = A4b + D4b + P4b$

U4b (kg) =	7,096	A4b (kg) =	1,031
		D4b (kg) =	6,065
		P4b (kg) =	0
7095.75 -		7095.75 =	
			0

Table 1 Summary - facility level quantification for Styrene:

Form of Involvement	Amount of substance [kg]
Enters the facility (use): U1a + U1b + U1c	37,827
Created at the facility:	0
Released (air) from the facility: A2a + A3a + A4a + A2b + A3b + A4b + A2c	6,213
Released (land) from the facility:	0
Released (water) from the facility:	0
Disposed of (on-site) by the facility:	0
Disposed of (off-site) by the facility:	0
Transferred (for recycling) from the facility:	0
Contained in product that leaves the facility:	0
Destroyed at the facility (Optional): D3a + D4a + D3b + D4b	31,615

Statement of Certification