

Rohm and Haas Canada LP, a wholly owned subsidiary of The Dow Chemical Company Toxics Reduction Act Public Annual Summary Report Reporting Year 2016

Issue Date: 26-May-2017

Purpose

Rohm and Haas Canada LP, a wholly owned subsidiary of The Dow Chemical Company is regulated under the Toxics Reduction Act, 2009 and Ontario Regulation 455/09. The act and regulation require that a summary of data submitted to the Ontario Ministry of the Environment under the Act is made public.

Dow is a Responsible Care® Company

Dow Canada and as such Rohm and Haas Canada LP's West Hill site is a member of the Chemistry Industry Association of Canada (http://www.canadianchemistry.ca/) and as such follows the association's Responsible Care® initiative. Responsible Care was developed in Canada in 1988 as a program to collectively improve the environmental, health and safety performance of member companies. Responsible Care has been very successful in this regard and has expanded into a global movement, now practiced in more than 60 countries around the world, and overseen by the International Council of Chemical Associations (https://www.iccachem.org).

Responsible Care® is the chemistry industry's commitment to sustainability – the betterment of society, the environment, and the economy. Through Responsible Care®, CIAC member-companies strive to "do the right thing and be seen to do the right thing."

Responsible Care® covers all aspects of our company's business, over the entire life cycle of our products. In addition, Dow Canada and our Site Leader Greg Johnston must annually reaffirm their commitment to the Ethic and Principles for Sustainability, and the Codes of Practice, and undergo a regular third-party verification process that allows independent experts and members of the public to verify that they're living up to the standards set by Responsible Care®.

Dow Canada was successfully reverified in 2016 by outside community and industry verifiers. To view the latest report, visit http://www.canadianchemistry.ca/responsible_care/uploads/2016_Dow.pdf Dow Canada will be reverified again in 2019.

A key component of Responsible Care is to innovate for safer products and processes that conserve resources, reduce risk and enhance value. This is accomplished through a regular review of products and processes.

At Dow's West Hill site we addressed this through the key codes of practice for Responsible Care which include: Operations, Stewardship and Accountability.

Dow is a Responsible Care® Company, continued

Dow Canada has embraced the goals of the chemistry industry's Responsible Care initiative and applied them throughout our processes and We dedicate ourselves, our technology and our business practices to sustainability - the betterment of society, the environment and the economy.

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The principles of Responsible Care® are key to our business success, and compel us to continually innovate for safer and greener products and processes, and work to continuously improve our environmental, health and safety performance.

NPRI Identification Number

MOE O.Reg 127/01 Identification Number

n/a

2065

Legal Name and Facility Address of the Owner and Operator of the facility

Rohm and Haas Canada LP 2 Manse Road

Toronto, ON M1E 3T9

Mailing Address

Same as Facility Address

Number of Full-Time Employees

73

North American Industry Classification System (NAICS) 2, 4 and 6 digit code

31-33 - Manufacturing

- Paint, Coating and Adhesive Manufacturing 3255

325510 - Paint and Coating Manufacturing

Public Contact

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3243425 Nova Scotia Company

UTM Coordinates

Easting: 647152 Northing: 4846708 Zone: 17T

Legal Canadian Parent Company

2 Manse Road

Toronto, ON M1E 3T9

Name of all toxic substances for which plans are required to be prepared

Acrylic Acid (and its salts)

Methyl methacrylate Acrylonitrile Methylolacrylamide Acrylamide Octylphenol ethoxylates Ammonia Styrene

100% Ownership

Butyl acrylate Sulphuric Acid Ethyl acrylate

Zinc (and its compounds) Ethylene Glycol

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Acry	7110	Δ	CIA
TACI	, 110		CIU

Substance Name	Acrylic Acid (and its salts)
CAS Number	79-10-7

Date of Toxic Reduction Plan 18-December-2013

Reduction **Objective and Target**

A reduction of the use and creation of Acrylic Acid and its salts as well as a reduction of emissions, transfer and disposal is not targeted at this point.

Description of Steps and **Effectiveness**

Not applicable.

Amendments

There have been no amendments to the plan in the reporting period.

Substance Accounting

	2016	2015	Year over Year change
On a facility basis:	Unit: [Tonnes]	Unit: [Tonnes]	Unit: [%]
Amount that entered the facility as the substance itself or as a constituent of another substance	100 – 1000	100 – 1000	9.12
Amount of the substance that was created	1-10	1-10	-25.5
Amount contained in product	0-1	0-1	0
Total Quantity Released (All Media)	0.003	0.003	0
Off-site Transfer for Disposal	0.000	0.000	0
Off-site Transfer for Treatment	3.435	4.615	-25.6
Off-site Transfer for Recycling	0.000	0.000	0

Progress Review

Not applicable.

Acrylonitrile

Substance Name	Acrylonitrile
CAS Number	107-13-1

Date of Toxic Reduction Plan 18-December-2013

Reduction Objective and **Target**

A reduction of the use of Acrylonitrile, as well as a reduction of emissions, transfer and disposal is not targeted at this point.

Reporting Year 2016

Description of Steps and **Effectiveness**

Not applicable.

Amendments

There have been no amendments to the plan in the reporting period.

Substance Accounting

	2016	2015	Year over Year change
On a facility basis:	Unit: [Tonnes]	Unit: [Tonnes]	Unit: [%]
Amount that entered the facility as the substance itself or as a constituent of another substance	1,000 – 10,000	1,000 – 10,000	-9.43
Amount of the substance that was created	0 - 1	0 - 1	0
Amount contained in product	0 - 1	0 - 1	13.5
Total Quantity Released (All Media)	0.253	0.384	-34.1
Off-site Transfer for Disposal	0.000	0.000	0
Off-site Transfer for Treatment	0.207	0.205	0.98
Off-site Transfer for Recycling	0.000	0.000	0

Progress Review

Not applicable.

Acrylamide

Substance Name	Acrylamide
CAS Number	79-06-1

Date of Toxic Reduction Plan

17-December-2012

Reduction Objective and **Target**

A further reduction of Acrylamide emissions and disposals at this point is not technically feasible but we remain committed to evaluate new technologies as they become available.

Description of Steps and **Effectiveness**

Not applicable.

Amendments

There have been no amendments to the plan in the reporting period.

Substance Accounting

	2016	2015	Year over Year change
On a facility basis:	Unit: [Tonnes]	Unit: [Tonnes]	Unit: [%]
Amount that entered the facility as the substance itself or as a constituent of another substance	10 – 100	10 – 100	8.16
Amount of the substance that was created	0 - 1	0 - 1	0
Amount contained in product	0 - 1	0 - 1	0
Total Quantity Released (All Media)	0.0002	0.0001	100
Off-site Transfer for Disposal	0.000	0.000	0
Off-site Transfer for Treatment	0.041	0.039	5.13
Off-site Transfer for Recycling	0.000	0.000	0

Progress Review

Not applicable.

Ammonia

Substance Name	Ammonia (total)
CAS Number	no single CAS RN applies to
	this substance

Date of Toxic Reduction Plan

18-December-2013

Reduction Objective and Target A further reduction of Ammonia usage as well as a reduction of emissions and transfers at this point is not technically or economically feasible but we remain committed to evaluate new technologies as they become available.

Description of Steps and Effectiveness

Not applicable.

Amendments

There have been no amendments to the plan in the reporting period.

Substance Accounting

	2016	2015	Year over Year change
On a facility basis:	Unit: [Tonnes]	Unit: [Tonnes]	Unit: [%]
Amount that entered the facility as the substance itself or as a constituent of another substance	100 – 1000	100 – 1000	1.52
Amount of the substance that was created	0 - 1	0 - 1	0
Amount contained in product	100 – 1000	100 – 1000	0.63

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Substance
Accounting

Cont'ed

2016 2015 Year over Year change On a facility basis: Unit: **Unit: Unit:** [Tonnes] [Tonnes] [%] 2.180 1.899 6.09 Total Quantity Released (All Media) 0 Off-site Transfer for Disposal 0.000 0.000 Off-site Transfer for Treatment 1.442 1.240 16.3 0.000 0.000 0 Off-site Transfer for Recycling

Progress Review

Not applicable.

Butyl acrylate

Substance Name	Butyl acrylate
CAS Number	141-32-2

Date of Toxic Reduction Plan 18-December-2013

Reduction Objective and Target A reduction of the use of Butyl acrylate, as well as a reduction of emissions, transfer and disposal is not targeted at this point.

Description of Steps and Effectiveness Not applicable.

Amendments

There have been no amendments to the plan in the reporting period.

Substance Accounting

	2016	2015	Year over Year change
On a facility basis:	Unit: [Tonnes]	Unit: [Tonnes]	Unit: [%]
Amount that entered the facility as the substance itself or as a constituent of another substance	10,000 – 100,000	10,000 – 100,000	-1.50
Amount of the substance that was created	0-1	0 – 1	0
Amount contained in product	1 – 10	1 – 10	-5.68
Total Quantity Released (All Media)	0.192	0.240	-19.9
Off-site Transfer for Disposal	0.000	0.000	0
Off-site Transfer for Treatment	0.029	0.031	-6.86
Off-site Transfer for Recycling	0.000	0.000	0

Progress Review

Not applicable.

Ethyl acrylate

Substance Name	Ethyl acrylate
CAS Number	140-88-5

Date of Toxic Reduction Plan 18-December-2013

Reduction Objective and Target A reduction of the use of Ethyl acrylate, as well as a reduction of emissions, transfer and disposal is not targeted at this point.

Description of Steps and Effectiveness Not applicable.

Amendments

There have been no amendments to the plan in the reporting period.

Substance Accounting

	2016	2015	Year over Year change
On a facility basis:	Unit: [Tonnes]	Unit: [Tonnes]	Unit: [%]
Amount that entered the facility as the substance itself or as a constituent of another substance	1,000 – 10,000	1,000 – 10,000	3.54
Amount of the substance that was created	0-1	0-1	0
Amount contained in product	0 - 1	0 - 1	-2.47
Total Quantity Released (All Media)	0.029	0.072	-60.8
Off-site Transfer for Disposal	0.000	0.000	0
Off-site Transfer for Treatment	0.002	0.014	-82.9
Off-site Transfer for Recycling	0.000	0.000	0

Progress Review

Not applicable.

Ethylene Glycol

Substance Name	Ethylene Glycol
CAS Number	107-21-1

Date of Toxic Reduction Plan 7-December-2015

Reduction Objective and Target A reduction of Ethylene glycol usage at this point is not technically or economically feasible.

Description of Steps and Effectiveness Not applicable.

Amendments

There have been no amendments to the plan in the reporting period.

Substance Accounting

	2016	2015	Year over Year change
On a facility basis:	Unit: [Tonnes]	Unit: [Tonnes]	Unit: [%]
Amount that entered the facility as the substance itself or as a constituent of another substance	10 – 100	10 – 100	-43.5
Amount of the substance that was created	0 - 1	0 - 1	0
Amount contained in product	10 - 100	10 – 100	-43.7
Total Quantity Released (All Media)	0.0001	0.0002	-50.0
Off-site Transfer for Disposal	0.000	0.000	0
Off-site Transfer for Treatment	0.085	0.130	-34.6
Off-site Transfer for Recycling	0.000	0.000	0

Progress Review

Not applicable.

Methyl methacrylate

Substance Name	Methyl methacrylate
CAS Number	80-62-6

Date of Toxic Reduction Plan

18-December-2013

Reduction Objective and **Target**

A reduction of the use of Methyl methacrylate, as well as a reduction of emissions, transfer and disposal is not targeted at this point.

Description of Steps and **Effectiveness**

Not applicable.

Amendments

There have been no amendments to the plan in the reporting period.

Substance Accounting

	2016	2015	Year over Year change
On a facility basis:	Unit: [Tonnes]	Unit: [Tonnes]	Unit: [%]
Amount that entered the facility as the substance itself or as a constituent of another substance	10,000 – 100,000	10,000 – 100,000	-0.89
Amount of the substance that was created	0 - 1	0 - 1	0
Amount contained in product	0 - 1	0 - 1	19.9

Substance
Accounting
Cont'ed

	2016	2015	Year over Year change
On a facility basis:	Unit: [Tonnes]	Unit: [Tonnes]	Unit: [%]
Total Quantity Released (All Media)	0.064	0.120	-46.46
Off-site Transfer for Disposal	0.000	0.000	0
Off-site Transfer for Treatment	0.478	0.016	2888
Off-site Transfer for Recycling	0.000	0.000	0

Progress Review

Not applicable.

Methylol acrylamide

Substance Name	N-Methylolacrylamide
CAS Number	924-42-5

Date of Toxic Reduction Plan 18-December-2013

Reduction Objective and Target A reduction of the use of n-Methylolacrylamide, as well as a reduction of emissions, transfer and disposal is not targeted at this point.

Description of Steps and Effectiveness Not applicable.

Amendments

There have been no amendments to the plan in the reporting period.

Substance Accounting

	2016	2015	Year over Year change
On a facility basis:	Unit: [Tonnes]	Unit: [Tonnes]	Unit: [%]
Amount that entered the facility as the substance itself or as a constituent of another substance	10 – 100	10 – 100	-4.91
Amount of the substance that was created	0 - 1	0 - 1	0
Amount contained in product	0 - 1	0 - 1	-12.5
Total Quantity Released (All Media)	0.000	0.000	0
Off-site Transfer for Disposal	0.000	0.000	0
Off-site Transfer for Treatment	0.000	0.000	0
Off-site Transfer for Recycling	0.000	0.000	0

Progress Review

Not applicable.

Octylphenol and
its ethoxylates

Substance Name	Octylphenol and its ethoxylates
CAS Number	no single CAS RN applies to this substance

Date of Toxic Reduction Plan 18-December-2013

Reduction Objective and **Target**

A reduction of the use of Octylphenol and its ethoxylates, as well as a reduction of emissions, transfer and disposal is not targeted at this point.

Description of Steps and **Effectiveness**

Not applicable.

Amendments

There have been no amendments to the plan in the reporting period.

Substance Accounting

	2016	2015	Year over Year change
On a facility basis:	Unit: [Tonnes]	Unit: [Tonnes]	Unit: [%]
Amount that entered the facility as the substance itself or as a constituent of another substance	100 – 1,000	100 – 1,000	-8.46
Amount of the substance that was created	0 - 1	0 - 1	0
Amount contained in product	100 - 1,000	100 - 1,000	-13.9
Total Quantity Released (All Media)	0.000	0.000	0
Off-site Transfer for Disposal	0.000	0.000	0
Off-site Transfer for Treatment	0.003	0.978	-99.7
Off-site Transfer for Recycling	0.000	0.000	0

Progress Review

Not applicable.

Styrene

Substance Name	Styrene
CAS Number	100-42-5

Date of Toxic Reduction Plan 18-December-2013

Reduction Objective and **Target**

A reduction of the use of Styrene, as well as a reduction of emissions, transfer and disposal is not targeted at this point.

Reporting Year 2016

Description of Steps and **Effectiveness**

Not applicable.

Amendments

There have been no amendments to the plan in the reporting period.

Substance Accounting

	2016	2015	Year over Year change
On a facility basis:	Unit: [Tonnes]	Unit: [Tonnes]	Unit: [%]
Amount that entered the facility as the substance itself or as a constituent of another substance	1,000 – 10,000	1,000 – 10,000	5.90
Amount of the substance that was created	0 – 1	0 – 1	0
Amount contained in product	0 – 1	0 – 1	-19.5
Total Quantity Released (All Media)	1.886	1.677	12.5
Off-site Transfer for Disposal	0.000	0.000	0
Off-site Transfer for Treatment	0.070	0.072	-2.78
Off-site Transfer for Recycling	0.000	0.000	0

Progress Review

Not applicable.

Sulphuric acid

Substance Name	Sulphuric acid
CAS Number	7664-93-9

Date of Toxic Reduction Plan

18-December-2012

Reduction Objective and **Target**

Through our commitment to Responsible Care ®, Rohm and Haas Canada LP is committed to continuously improve our operations. We intend to reduce Sulfuric Acid usage by improving utility usage of our process.

We are targeting a reduction of 1,800 kg of Sulfuric Acid by reducing the amount of deionized water used in the manufacturing process.

Description of Steps and **Effectiveness**

Activity: Reduce deionized water usage.

New backflow prevention requirements, mandating additional protection layers to maximise drinking water protection forced the proposed modification to be re-evaluated.

Amendments

There have been no amendments to the plan in the reporting period.

Substance Accounting

	2016	2015	Year over Year change
On a facility basis:	Unit: [Tonnes]	Unit: [Tonnes]	Unit: [%]
Amount that entered the facility as the substance itself or as a constituent of another substance	10 – 100	10 – 100	-1.58
Amount of the substance that was created	0 - 1	0 - 1	0
Amount contained in product	0 - 1	0 - 1	0
Total Quantity Released (All Media)	0.0004	0.0004	0
Off-site Transfer for Disposal	0.000	0.000	0
Off-site Transfer for Treatment	0.000	0.000	0
Off-site Transfer for Recycling	0.000	0.000	0

Progress Review

The plan targeted the engineering changes to be implemented in 2014. New backflow prevention requirements, mandating additional protection layers to maximise drinking water protection forced the proposed modification to be re-evaluated and re-engineered. The implementation is scheduled for 2017/2018. The delay in implementation has no impact on the quantity of emissions of Sulphuric Acid from the site but will reduce usage.

Zinc	(and	its
comp	ound	ls)

Substance Name	Zinc (and its compounds)
CAS Number	no single CAS RN applies
	to this substance

Date of Toxic Reduction Plan

17-December-2012

Reduction **Objective and Target**

A further reduction of Zinc emissions and disposals at this point is not feasible but we remain committed to evaluate new technologies as they become available.

Description of Steps and **Effectiveness**

Not applicable.

Amendments

There have been no amendments to the plan in the reporting period.

Substance Accounting

	2016	2015	Year over Year change
On a facility basis:	Unit: [Tonnes]	Unit: [Tonnes]	Unit: [%]
Amount that entered the facility as the substance itself or as a constituent of another substance	100 – 1000	100 – 1000	6.81
Amount of the substance that was created	0 - 1	0 - 1	0
Amount contained in product	100 - 1000	100 - 1000	9.25
Total Quantity Released (All Media)	0.000	0.000	0
Off-site Transfer for Disposal	0.013	0.013	0
Off-site Transfer for Treatment	0.117	0.108	7.96
Off-site Transfer for Recycling	0.000	0.000	0

Progress Review

Not applicable.

Annual Report Certification Statement

As of May 26, 2017, I certify that I have read the report on the toxic substance reduction plan for Acrylic Acid (and its salts); Acrylonitrile; Acrylamide; Ammonia (total); Butyl acrylate; Ethyl acrylate; Ethylene Glycol; Methyl methacrylate; Methylol acrylamide; Octylphenol ethoxylates; Styrene; Sulphuric Acid and Zinc (and its compounds) and am familiar with their contents and to my knowledge the information contained in the report is factually accurate and the report complies with the Toxic Reduction Act, 2009 and Ontario Regulation 455/09 (General) made under the Act.

Gree Johnston (original signature on file)	_26-May-2017
Greg Johnston, Site Leader, Rohm and Haas Canada LP	Date