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Service bulletin

Industrial Chemicals and Synthetic Resins

March 2009

Highlights

- In March 2009, total production of polyethylene in Canada increased 16.5% to 298,073 metric tonnes.
- Monthly anhydrous ammonia production increased 17.7% to 370,953 metric tonnes in March 2009. Production declined 10.2% from the same month last year.
- Between February 2009 and March 2009, the production of urea increased 20.0% to 356,914 metric tonnes.
- Monthly production of sulphuric acid increased 6.8% to 325,224 metric tonnes in March 2009. Compared with March 2008, production was down 13.5%.

Statistical tables

Table 1
Production of new virgin resin (excluding compounding or colouring ingredients), by product, monthly

Product	SCG[1] Code	March 2008	February 2009	March 2009	Change March 2009 to February 2009	Change March 2009 to March 2008
		metric tonnes			percent	
Synthetic resins						
Polyethylene, low and linear low density	3901.10, 3901.90.10	155,100 r	146,580	169,010	15.3	9.0
Polyethylene, high density	3901.20	130,527 r	109,187	129,063	18.2	-1.1
Polyethylene, total		285,627 r	255,767	298,073	16.5	4.4
Polystyrene and acrylonitrile-butadiene-styrene (abs)	3903.1, 3903.30	x	x	x	x	x
Polyvinyl chloride	3904.10	x	x	x	x	x
Polyesters, unsaturated	3907.91	5,303	2,289	2,567	12.1	-51.6

1. SCG: Standard Classification of Goods.

Table 2
Production of industrial chemicals, by product, monthly

Product	SCG [1] Code	March 2008	February 2009	March 2009	Change March 2009 to February 2009	Change March 2009 to March 2008
		metric tonnes			percent	
Acids						
Hydrochloric (muriatic) acid, 100%	2806.10.20	11,268	12,791	13,098	2.4	16.2
Nitric acid, 100 %	2808.00.10	65,792	68,927	49,093	-28.8	-25.4
Phosphoric acid, wet process	2809.20	x	x	x	x	x
Sulphuric acid, all grades, including oleum, as 100%	2807	376,143	304,592	325,224	6.8	-13.5
Other Industrial Chemical Products						
Aluminum sulphate (alum)	2833.22	16,335	16,361	17,165	4.9	5.1
Ammonia, anhydrous, 100%	2814.10	413,154	315,174	370,953	17.7	-10.2
Ammonium nitrate, all grades	3102.30	96,271	107,175	87,451	-18.4	-9.2
Ammonium phosphate, all grades	3105.30	x	x	x	x	x
Butadiene	2901.24.10	15,940	11,857	17,877	50.8	12.2
Butylene	2901.23	18,304	11,236	15,258	35.8	-16.6
Carbon black	2803	19,008	x	x	x	x
Chlorine	2801.10	47,004	44,746	41,346	-7.6	-12.0
Ethylene	2901.21	440,333	x	x	x	x
Formaldehyde, 100% solids basis	2912.11	14,440	8,805	10,900	23.8	-24.5
Hydrogen peroxide, 100%	2847.00	22,084	17,220	18,220	5.8	-17.5
Methyl alcohol (methanol)	2905.11	x	x	x	x	x
Propylene, as propylene in all grades	2901.22	78,949	35,387	57,284	61.9	-27.4
Sodium chlorate	2829.11	94,507	73,873	83,581	13.1	-11.6
Sodium hydroxide (caustic soda), as 100% NaOH	2815.1	52,805	63,736	59,984	-5.9	13.6
Urea, all grades	3102.10	323,004	297,345	356,914	20.0	10.5
Benzene	2902.20	65,790	25,544	57,325	124.4	-12.9
Toluene	2902.30	20,670	5,792	11,215	93.6	-45.7
Xylene	2902.4	35,115	17,159	28,691	67.2	-18.3
Zinc oxide	2817.00.1	x	x	x	x	x

1. SCG: Standard Classification of Goods.

Table 3
Production of new virgin resin (excluding compounding or colouring ingredients), by product, year-to-date

Product	SCG [1] Code	Year-to-date March 2008	Year-to-date March 2009	Change year-to-date 2009 over 2008
		metric tonnes		percent
Synthetic resins				
Polyethylene, low and linear low density	3901.10, 3901.90.10	486,744	x	x
Polyethylene, high density	3901.20	381,026	x	x
Polyethylene, total		867,770	825,238	-4.9
Polystyrene and acrylonitrile-butadiene-styrene (abs)	3903.1, 3903.30	x	x	x
Polyvinyl chloride	3904.10	x	x	x
Polyesters, unsaturated	3907.91	15,360	7,464	-51.4

1. SCG: Standard Classification of Goods.

Table 4
Production of industrial chemicals, by product, year-to-date

Product	SCG [1] Code	Year-to-date March 2008	Year-to-date March 2009	Change year-to-date 2009 over 2008
		metric tonnes		percent
Acids				
Hydrochloric (muriatic) acid, 100%	2806.10.20	33,117	36,712	10.9
Nitric acid, 100 %	2808.00.10	222,331	174,726	-21.4
Phosphoric acid, wet process	2809.20	x	x	x
Sulphuric acid, all grades, including oleum, as 100%	2807	1,083,350	984,277	-9.1
Other industrial chemical products				
Aluminum sulphate (alum)	2833.22	50,896	49,516	-2.7
Ammonia, anhydrous, 100%	2814.10	1,198,036	1,017,916	-15.0
Ammonium nitrate, all grades	3102.30	310,104	290,498	-6.3
Ammonium phosphate, all grades	3105.30	x	x	x
Butadiene	2901.24.10	46,033	43,494	-5.5
Butylene	2901.23	51,838	39,016	-24.7
Carbon black	2803	52,052	x	x
Chlorine	2801.10	141,365	128,601	-9.0
Ethylene	2901.21	1,283,646	x	x
Formaldehyde, 100% solids basis	2912.11	45,136	32,657	-27.6
Hydrogen peroxide, 100%	2847.00	64,173	53,536	-16.6
Methyl alcohol (methanol)	2905.11	x	x	x
Propylene, as propylene in all grades	2901.22	224,363	134,799	-39.9
Sodium chlorate	2829.11	278,674	240,167	-13.8
Sodium hydroxide (caustic soda), as 100% NaOH	2815.1	159,023	182,512	14.8
Urea, all grades	3102.10	970,329	947,093	-2.4
Benzene	2902.20	192,736	130,561	-32.3
Toluene	2902.30	68,032	29,261	-57.0
Xylene	2902.4	96,389	64,706	-32.9
Zinc oxide	2817.00.1	x	x	x

1. SCG: Standard Classification of Goods.

Concepts, methodology and data quality

This publication presents the results of the survey, Industrial Chemicals and Synthetic Resins. This survey measures, on a monthly basis, the quantities of selected industrial chemicals and new virgin resins produced by Canadian manufacturers. The target population for this survey includes manufacturers in Canada of selected industrial chemicals and synthetic resins as defined in the Standard Classification of Goods (SCG), that report these products to the Annual Survey of Manufactures and Logging or ASML (Survey ID 2103). This means that estimates from this monthly survey do not cover the entire universe of industrial chemicals and synthetic resins producers in Canada, because the ASML does not survey all businesses. Instead, the ASML uses administrative data to cover the small and medium-sized establishments. These manufacturers are not part of this survey.

General methodology

Data are collected each month from survey respondents using a mail-out / mail-back process. Data capture and preliminary editing are performed simultaneously to ensure validity of the data. Businesses from whom no response has been received or whose data may contain errors are followed-up by telephone or fax.

Missing data for the current month are imputed automatically by applying to the previous month's value, the month-to-month change observed for the same period in the previous year, for the unit in question. However, an option exists for analysts to manually override this imputation with a better estimate based on pertinent knowledge about the industry or the business.

Various confidentiality rules are applied to all data before they are released to prevent the publication or disclosure of any information deemed confidential. If necessary, data are suppressed to prevent direct or residual disclosure of identifiable data.

Direct disclosure could occur when the value in a tabulation cell is composed of a few respondents or when the cell is dominated by a few companies. Residual disclosure could occur when confidential information can be derived indirectly by piecing together information from different sources or data series.

Under normal circumstances, data are collected, captured, edited, tabulated and published within 6 to 7 weeks after the reference month.

Revisions

Data may be revised to include amended information or reports from respondents that are received after the end of a collection cycle. Revisions are disseminated in subsequent periods and reflected in the CANSIM series and in the tables of this publication.

Data accuracy

The methodology for this survey has been designed to promote data accuracy. Since data are collected from all Canadian producers of industrial chemicals and synthetic resins within the target population, the resulting estimates are not subject to sampling error. However, the results are still subject to non-sampling errors associated with coverage, non-response, inaccurate reporting, and processing. Errors relating to coverage and non-response can be measured. All attempts are made to control inaccurate reporting and processing errors.

Moreover, survey results are analyzed to ensure comparability with patterns observed in the historical data series and the economic condition of the industry. Information available from other sources such as the media, other government organizations and industry association are also used in the validation process.

Coverage error

There is a degree of under coverage (referred to as coverage error) in the survey results as there is generally a lag between the time a new business comes into existence and when it is included in the universe of this sub-annual survey. This occurs because the list of businesses surveyed is derived from the latest available survey results for the ASML which are not available until 15 months after the reference period.

This error is kept at a minimum by also using advance information from the ASML, and other sources such as the Canadian Chemicals Producers' Association, trade journals and newspaper articles to identify new survey units.

Based on the ASML 2004 (latest available survey results), the coverage error for the Industrial Chemicals and Synthetic Resins survey was 3%.

Non-response error

Some respondents may be unable to provide data for numerous reasons (i.e. fire, theft, strike, economic hardship, etc.), while others may be too late in responding. To minimize non-response, delinquent respondents are followed up rigorously by phone or fax. Data for the non-responding units are imputed using industry trend and other related information. Data are revised at a later date, if completed questionnaires are received after the end of a collection cycle.

The average non-response error for the Industrial Chemicals and Synthetic Resins survey was estimated at less than 1% for 2005 (the last completed cycle).

Inaccurate response

Inaccuracy may result from poor questionnaire design or an inability on the part of respondents to provide the requested information or from misinterpretation of the survey questions. To reduce such errors, the format and wording in the questionnaire are reviewed from time to time and modified based on feedback from survey respondents and data users. Respondents are also reminded of the importance of their contribution and of the need for accurate reporting.

Processing errors

These errors may occur at various stages in the processing of survey data such as data entry, verification, editing and tabulation. Data are examined for such errors using automated edits along with an analytical review by subject matter experts. Several checks are performed on the collected data to verify internal consistency and comparability over time.

Definitions

Production: production refers to the quantity of products manufactured in Canada during a reference period including intermediate products. The final products may be shipped or retained in inventory.

More detailed data are available from the Annual Survey of Manufactures and Logging, CANSIM Table 301-0003. Specific enquiries should be directed to: The marketing and dissemination section, manufacturing, construction and energy division, Statistics Canada, Ottawa, Ontario, K1A OT6 (Telephone: 1-866-873-8789 or 613-951-9497; Fax line: 613-951-9499; Internet: *manufact@statcan.gc.ca*).

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Symbols

The following standard symbols are used in Statistics Canada publications:

.	not available for any reference period
..	not available for a specific reference period
...	not applicable
0	true zero or a value rounded to zero
0s	value rounded to 0 (zero) where there is a meaningful distinction between true zero and the value that was rounded
p	preliminary
r	revised
x	suppressed to meet the confidentiality requirements of the *Statistics Act*
E	use with caution
F	too unreliable to be published

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Note of appreciation

Canada owes the success of its statistical system to a long standing partnership between Statistics Canada, the citizens of Canada, its businesses, governments and other institutions. Accurate and timely statistical information could not be produced without their continued cooperation and goodwill.