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Service bulletin

Industrial Chemicals and Synthetic Resins

January 2008

Highlights

- Between December 2007 and January 2008, total production of polyethylene decreased 3.2% to 310,155 metric tonnes.
- Ethylene production dropped 4.9% to 424,993 metric tonnes in January 2008.
- Monthly anhydrous ammonia production increased 1.0% to 417,218 metric tonnes. Production was down 0.8% from the same month last year.
- In January 2008, production of urea declined 0.3% to 339,079 metric tonnes. Compared with the January 2007, production was down 2.5%.
- The production of sulphuric acid decreased 1.0% to 369,693 metric tonnes in January 2008.

Statistical tables

Table 1

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

Product	SCG [1] Code	January 2007	December 2007	January 2008	Change January 2008 to December 2007	Change January 2008 to January 2007
		metric tonnes			percent	
Synthetic resins						
Polyethylene, low and linear low density	3901.10, 3901.90.10	x [r]	174,717	170,525	-2.4	x
Polyethylene, high density	3901.20	x [r]	145,607	139,630	-4.1	x
Polyethylene, total		313,311 [r]	320,324	310,155	-3.2	-1.0
Polystyrene and acrylonitrile-butadiene-styrene (abs)	3903.1, 3903.30	9,565	4,686	x	x	x
Polyvinyl chloride	3904.10	x	x	x	x	x
Polyesters, unsaturated	3907.91	6,054	3,961	4,992	26.0	-17.5

1. SCG: Standard Classification of Goods.

Table 2
Production of industrial chemicals, by product, monthly

Product	SCG [1] Code	January 2007	December 2007	January 2008	Change January 2008 to December 2007	Change January 2008 to January 2007
		metric tonnes			percent	
Acids						
Hydrochloric (muriatic) acid, 100%	2806.10.20	11,583	12,239	11,391	-6.9	-1.7
Nitric acid, 100 %	2808.00.10	92,087	84,206	84,058	-0.2	-8.7
Phosphoric acid, wet process	2809.20	x	x	x	x	x
Sulphuric acid, all grades, including oleum, as 100%	2807	351,544	373,278	369,693	-1.0	5.2
Other Industrial Chemical Products						
Aluminum sulphate (alum)	2833.22	13,117	17,108	17,174	0.4	30.9
Ammonia, anhydrous, 100%	2814.10	420,539	413,158	417,218	1.0	-0.8
Ammonium nitrate, all grades	3102.30	90,681	106,005	111,927	5.6	23.4
Ammonium phosphate, all grades	3105.30	x	x	x	x	x
Butadiene	2901.24.10	24,329	15,629	14,026	-10.3	-42.3
Butylene	2901.23	19,434	16,958	16,562	-2.3	-14.8
Carbon black	2803	18,579	18,673	16,904	-9.5	-9.0
Chlorine	2801.10	50,871	50,771	47,982	-5.5	-5.7
Ethylene	2901.21	429,870	446,783	424,993	-4.9	-1.1
Formaldehyde, 100% solids basis	2912.11	14,834	13,782	16,087	16.7	8.4
Hydrogen peroxide, 100%	2847.00	20,764	21,099	21,466	1.7	3.4
Methyl alcohol (methanol)	2905.11	x	x	x	x	x
Propylene, as propylene in all grades	2901.22	82,122	73,460	74,266	1.1	-9.6
Sodium chlorate	2829.11	92,628	92,834	94,567	1.9	2.1
Sodium hydroxide (caustic soda), as 100% NaOH	2815.1	57,210	57,133	53,509	-6.3	-6.5
Urea, all grades	3102.10	347,658	340,052	339,079	-0.3	-2.5
Benzene	2902.20	60,604	70,015	65,884	-5.9	8.7
Toluene	2902.30	26,808	16,805	22,531	34.1	-16.0
Xylene	2902.4	33,640	28,453	29,269	2.9	-13.0
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 January 2007	Year-to-date January 2008	Change year-to-date 2008 over 2007
		metric tonnes		percent
Synthetic resins				
Polyethylene, low and linear low density	3901.10, 3901.90.10	x	170,525	x
Polyethylene, high density	3901.20	x	139,630	x
Polyethylene, total		313,311	310,155	-1.0
Polystyrene and acrylonitrile-butadiene-styrene (abs)	3903.1, 3903.30	9,565	x	x
Polyvinyl chloride	3904.10	x	x	x
Polyesters, unsaturated	3907.91	6,054	4,992	-17.5

1. SCG: Standard Classification of Goods.

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

Product	SCG [1] Code	Year-to-date January 2007	Year-to-date January 2008	Change year-to-date 2008 over 2007
		metric tonnes		percent
Acids				
Hydrochloric (muriatic) acid, 100%	2806.10.20	11,583	11,391	-1.7
Nitric acid, 100 %	2808.00.10	92,087	84,058	-8.7
Phosphoric acid, wet process	2809.20	x	x	x
Sulphuric acid, all grades, including oleum, as 100%	2807	351,544	369,693	5.2
Other industrial chemical products				
Aluminum sulphate (alum)	2833.22	13,117	17,174	30.9
Ammonia, anhydrous, 100%	2814.10	420,539	417,218	-0.8
Ammonium nitrate, all grades	3102.30	90,681	111,927	23.4
Ammonium phosphate, all grades	3105.30	x	x	x
Butadiene	2901.24.10	24,329	14,026	-42.3
Butylene	2901.23	19,434	16,562	-14.8
Carbon black	2803	18,579	16,904	-9.0
Chlorine	2801.10	50,871	47,982	-5.7
Ethylene	2901.21	429,870	424,993	-1.1
Formaldehyde, 100% solids basis	2912.11	14,834	16,087	8.4
Hydrogen peroxide, 100%	2847.00	20,764	21,466	3.4
Methyl alcohol (methanol)	2905.11	x	x	x
Propylene, as propylene in all grades	2901.22	82,122	74,266	-9.6
Sodium chlorate	2829.11	92,628	94,567	2.1
Sodium hydroxide (caustic soda), as 100% NaOH	2815.1	57,210	53,509	-6.5
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Toluene	2902.30	26,808	22,531	-16.0
Xylene	2902.4	33,640	29,269	-13.0
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.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

Information to access the product

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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.