



Service bulletin

Industrial Chemicals and Synthetic Resins



June 2006

Highlights

- In June 2006, the production of ethylene fell 5.1% to 391,174 metric tonnes. Compared with the same month last year, production was up 3.5%.
- Polyethylene production decreased 2.3% to 296,269 metric tonnes between May and June 2006. However, it increased 22.7% compared with June 2005.
- Urea production also declined 10.8% to 298,841 metric tonnes in June 2006, but rose 13.7% from the same month last year.

Statistical tables

Table 1

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

Product	SCG ¹ Code	June 2005	May 2006	June 2006	Change June 2006 to May 2006	
		metric tonnes			%	
Synthetic resins						
Polyethylene, low and linear low density	3901.10, 3901.90.10	119,931 ^r	x	x	x	x
Polyethylene, high density	3901.20	121,438 ^r	x	x	x	x
Polyethylene, total		241,369 ^r	303,113	296,269	-2.3	22.7
Polystyrene and acrylonitrile-butadiene-styrene (abs)	3903.1, 3903.30	13,633	17,605	8,057	-54.2	-40.9
Polyvinyl chloride	3904.10	x	x	x	x	x
Polyesters, unsaturated	3907.91	8,195	7,534	7,402	-1.8	-9.7

x suppressed to meet the confidentiality requirements of the *Statistics Act*

1. SCG: Standard Classification of Goods.

Table 2
Production of industrial chemicals, by product, monthly

Product	SCG ¹ Code	June 2005	May 2006	June 2006	Change June 2006 to May 2006	
		metric tonnes			%	
Acids						
Hydrochloric (muriatic) acid, 100%	2806.10.20	10,963	12,551	13,470	7.3	22.9
Nitric acid, 100 %	2808.00.10	91,185	103,641	96,642	-6.8	6.0
Phosphoric acid, wet process	2809.20	x	x	x	x	x
Sulphuric acid, all grades, including oleum, as 100%	2807	249,680	319,532	283,782	-11.2	13.7
Other Industrial Chemical Products						
Aluminum sulphate (alum)	2833.22	17,441	14,367	14,883	3.6	-14.7
Ammonia, anhydrous, 100%	2814.10	329,568	410,038	389,976	-4.9	18.3
Ammonium nitrate, all grades	3102.30	90,010	111,414	96,684	-13.2	7.4
Ammonium phosphate, all grades	3105.30	x	x	x	x	x
Butadiene	2901.24.10	22,060	24,221	20,356	-16.0	-7.7
Butylene	2901.23	21,986	21,985	18,004	-18.1	-18.1
Carbon black	2803	20,654	18,877	18,661	-1.1	-9.6
Chlorine	2801.10	85,126	82,117	79,642	-3.0	-6.4
Ethylene	2901.21	378,045	412,255	391,174	-5.1	3.5
Formaldehyde, 100% solids basis	2912.11	22,115	21,156	20,892	-1.2	-5.5
Hydrogen peroxide, 100%	2847.00	20,238	12,143	x	x	x
Methyl alcohol (methanol)	2905.11	x	x	x	x	x
Propylene, as propylene in all grades	2901.22	64,718	67,216	52,109	-22.5	-19.5
Sodium chlorate	2829.11	92,946	90,307	90,401	0.1	-2.7
Sodium hydroxide (caustic soda), as 100% NaOH	2815.1	94,268	88,470	85,851	-3.0	-8.9
Urea, all grades	3102.10	262,720	334,922	298,841	-10.8	13.7
Benzene	2902.20	76,543	59,754	59,851	0.2	-21.8
Toluene	2902.30	21,017	17,329	15,693	-9.4	-25.3
Xylene	2902.4	27,269	19,148	15,731	-17.8	-42.3
Zinc oxide	2817.00.1	x	x	x	x	x

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

Product	SCG ¹ Code	Year-to-date June 2005	Year-to-date June 2006	Change year-to-date 2006 over 2005
		metric tonnes		%
Synthetic resins				
Polyethylene, low and linear low density	3901.10, 3901.90.10	949,127	x	x
Polyethylene, high density	3901.20	711,437	x	x
Polyethylene, total		1,660,564	1,799,452	8.4
Polystyrene and acrylonitrile-butadiene-styrene (abs)	3903.1, 3903.30	101,432	94,390	-6.9
Polyvinyl chloride	3904.10	x	x	x
Polyesters, unsaturated	3907.91	46,642	43,786	-6.1

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

Product	SCG ¹ Code	Year-to-date June 2005	Year-to-date June 2006	Change year-to-date 2006 over 2005
		metric tonnes		%
Acids				
Hydrochloric (muriatic) acid, 100%	2806.10.20	68,745	79,779	16.1
Nitric acid, 100 %	2808.00.10	612,997	596,557	-2.7
Phosphoric acid, wet process	2809.20	x	x	x
Sulphuric acid, all grades, including oleum, as 100%	2807	1,921,694	1,957,099	1.8
Other industrial chemical products				
Aluminum sulphate (alum)	2833.22	87,348	80,929	-7.3
Ammonia, anhydrous, 100%	2814.10	2,381,508	2,288,257	-3.9
Ammonium nitrate, all grades	3102.30	625,244	600,934	-3.9
Ammonium phosphate, all grades	3105.30	x	x	x
Butadiene	2901.24.10	134,933	130,220	-3.5
Butylene	2901.23	119,180	107,674	-9.7
Carbon black	2803	117,567	113,546	-3.4
Chlorine	2801.10	507,825	492,798	-3.0
Ethylene	2901.21	2,454,418	x	x
Formaldehyde, 100% solids basis	2912.11	x	124,571	x
Hydrogen peroxide, 100%	2847.00	124,547	x	x
Methyl alcohol (methanol)	2905.11	x	x	x
Propylene, as propylene in all grades	2901.22	413,764	390,969	-5.5
Sodium chlorate	2829.11	584,162	561,793	-3.8
Sodium hydroxide (caustic soda), as 100% NaOH	2815.1	565,823	537,599	-5.0
Urea, all grades	3102.10	1,809,076	1,785,575	-1.3
Benzene	2902.20	459,035	374,109	-18.5
Toluene	2902.30	113,183	119,307	5.4
Xylene	2902.4	170,116	x	x
Zinc oxide	2817.00.1	x	x	x

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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 all manufacturers in Canada of industrial chemicals and synthetic resins as defined in the Standard Classification of Goods (SCG), that report these products to the . The businesses included in these 4 surveys are selected from respondents 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 0T6 (Telephone: 1-866-873-8789 or 613-951-9497; Fax line: 613-951-9499; Internet: manufact@statcan.ca).

Release date: August 2006

Information to access the product

This product, Catalogue no. 46-002-XIE, is available for free in electronic format. To obtain a single issue, visit our website at www.statcan.ca and select Our Products and Services.

Frequency: Monthly / ISSN 1481-5354

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