CHEMICAL DATA REPORTING

EPA United States Environmental Protection Agency

FACT SHEET: CHEMICALS SNAPSHOT

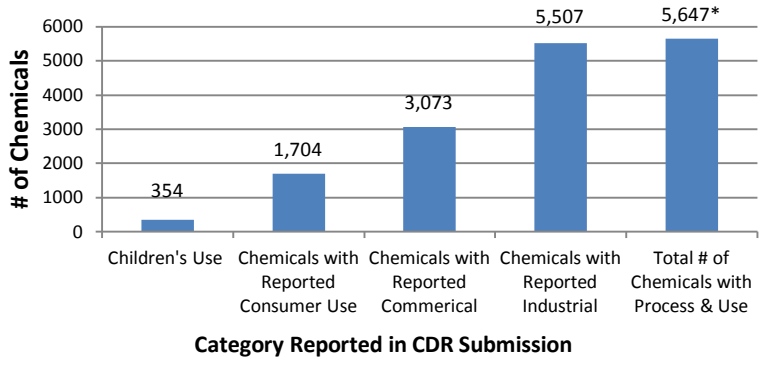
This fact sheet provides a brief overview of the chemical manufacturing, processing, and use information collected for the 2012 Chemical Data Reporting (CDR) rule. When using the data presented in this fact sheet, users should recognize that they do not have access to the complete CDR data set and should draw conclusions from the available data with care.

2012 CDR Data

Under the CDR rule, EPA collects screening-level, exposure-related information on certain chemicals included on the Toxic Substances Control Act (TSCA) Chemical Substance Inventory (TSCA Inventory) and makes that information available for use by EPA and, to the extent possible, the public. The 2012 CDR data are reported to EPA by manufacturers (including importers) of chemicals manufactured (including imported) in volumes of 25,000 pounds or more at a single site during calendar year 2011. The 2012 data also include information on industrial processing and consumer and commercial uses of certain chemicals currently listed on the TSCA Inventory. The CDR data allow EPA to have a good sense of domestic chemical manufacturing, as well as imports and use information helpful for assessing potential exposure and risk.

For the 2012 submission, 1,515 companies reporting for 4,753 sites submitted information on 7,674 chemicals.

Exhibit 1. Chemicals Reported by Category for 2012



* Total is fewer than the sum of all chemicals in all use categories because some chemicals reported multiple use categories.

Chemical Uses

Chemical use information is important because it helps EPA to better assess routes of potential exposure. For the 2012 CDR, EPA required that manufacturers (including importers) report consumer and commercial uses separately to distinguish between the use types. Therefore, CDR submitters are able to report a chemical's use in three

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categories: industrial, commercial, and consumer. A chemical's use information may be reported in more than one category. CDR manufacturers are also required to report whether a chemical is used in products intended for children. The 2012 data show that 354 of the chemicals reported were intended for use in children's products, 1,704 chemicals were used for consumer applications, 3,073 were used for commercial applications, and 5,507 were used for industrial applications. Process and use information was reported for 5,647 chemicals by CDR submitters for 2012.

Chemicals Reported as Used in Children's, Consumer, and Commercial Products

The threshold in 2012 to report manufacturing information for chemicals under the CDR rule was 25,000 pounds, which was the same for the 2006 collection. However, EPA expanded the range of chemicals for which more in-depth processing and use information was reported by lowering the reporting threshold for processing and use information from 300,000 pounds to 100,000 pounds.

For the 2012 CDR, 354 chemicals were reported as used in products intended for children. For purposes of the CDR, "intended for use by children" means the chemical or mixture is used in or on a product that is specifically intended for use by children age 14 or younger. Table 1 presents the top 20 chemicals reported to be used in children's products, according to the 2012 CDR data.

As stated above, the 2012 CDR required manufacturers (including importers) to report consumer and commercial uses separately. For the purposes of CDR, "Consumer use" means the use of a chemical or a mixture containing a chemical (including as part of a manufactured item, or article, such as furniture or clothing) when sold to or made available to consumers for their use. "Commercial use" means the use of a chemical substance or a mixture containing a chemical substance (including as part of an article) in a commercial enterprise providing saleable goods or services, for example dry cleaning. Table 2 lists the top 20 chemicals reported to be used in consumer products. Table 3 lists the top 20 chemicals reported to be used in commercial products.

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Table 1: Top 20 Chemicals Used in Children's Products

(Based on production volume reported to be used in children's products and excluding chemicals of unknown or variable composition, complex reaction products and biological materials (UVCBs). Top Uses excludes "NKRA" and "Other" designations.)

Rank	Chemical Name	CASRN	Top Uses[+*]
1	Calcium carbonate	471-34-1	1) Paper products 2) Non-TSCA use 3) Plastic and rubber products not covered elsewhere
2	Aluminum	7429-90-5	1) Food packaging 2) Metal products not covered elsewhere 3) Water treatment products
3	Propane	74-98-6	1) Plastic and rubber products not covered elsewhere
4	Ethane	74-84-0	1) Plastic and rubber products not covered elsewhere
5	Butane	106-97-8	1) Plastic and rubber products not covered elsewhere
6	Calcium oxide	1305-78-8	1) Non-TSCA use
7	Ethyl benzene	100-41-4	1) Plastic and rubber products not covered elsewhere 2) Toys, playground, and sporting equipment 3) Furniture and furnishings not covered elsewhere
8	2-Methylpropane (Isobutane)	75-28-5	1) Plastic and rubber products not covered elsewhere
9	Aluminum chloride hydroxide	12042-91-0	1) Water treatment products
10	Zinc	7440-66-6	1) Metal products not covered elsewhere
11	Glycerol	56-81-5	1) Personal care products
12	Dicalcium silicate	10034-77-2	1) Adhesives and sealants
13	Hexadecanoic acid	57-10-3	1) Laundry and dishwashing products 2) Personal care products
14	Titanium dioxide	13463-67-7	1) Non-TSCA use 2) Personal care products 3) Arts, crafts, and hobby materials
15	Sodium hydroxide	1310-73-2	1) Personal care products 2) Water treatment products
16	Aluminum hydroxide	21645-51-2	1) Plastics and plastic products not covered elsewhere 2) Foam seating and bedding products 3) Floor coverings

+ The top uses listed are based on the uses reported for each chemical, not necessarily the intended use of the product by children. Descriptions under top uses are taken from appendix D of the 2012 CDR Instructions.

* Manufacturers (including importers) are reporting on downstream uses of a chemical; therefore, some uses were reported as non-TSCA uses.

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Table 1: Top 20 Chemicals Used in Children's Products (Cont.)

(Based on production volume reported to be used in children's products and excluding chemicals of unknown or variable composition, complex reaction products and biological materials (UVCBs). Top Uses excludes "NKRA" and "Other" designations.)

Rank	Chemical Name	CASRN	Top Uses[+*]
17	Butanedionic acid	577-11-7	1) Non-TSCA use
18	Fluorosilicic acid	16961-83-4	1) Water treatment products
19	1,6 Diisocyanatohexane homopolymer	28182-81-2	1) Floor coverings
20	Hetastarch	9005-27-0	1) Paper products

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Table 2: Top 20 Chemicals Used in Consumer Products

(Based on production volume reported to be used in consumer or both consumer and commercial products and excluding chemicals of unknown or variable composition, complex reaction products and biological materials (UVCBs). Top Uses excludes "NKRA" and "Other" designations.)

Rank	Chemical Name	CASRN	Top Uses[+*]
1	Tricalcium silicate	12168-85-3	1) Building/construction materials not covered elsewhere 2) Adhesives and sealants
2	Ethanol	64-17-5	1) Fuels and related products 2) Personal care products 3) Ink, toner, and colorant products
3	Dicalcium silicate	10034-77-2	1) Building/construction materials not covered elsewhere 2) Adhesives and sealants 3) Building/construction materials – wood and engineered wood products
4	Propane	74-98-6	1) Fuels and related products 2) Plastic and rubber products not covered elsewhere 3) Personal care products

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Rank	Chemical Name	CASRN	Top Uses[+*]
5	Sulfuric acid	7664-93-9	1) Batteries 2) Paper products 3) Water treatment products
6	Butane	106-97-8	1) Fuels and related products 2) Plastic and rubber products not covered elsewhere 3) Personal care products
7	Toluene	108-88-3	1) Fuels and related products 2) Paints and coatings
8	Sodium carbonate	497-19-8	1) Building/construction materials not covered elsewhere 2) Laundry and dishwashing products 3) Water treatment products
9	Aluminum calcium iron oxide	12068-35-8	1) Building/construction materials not covered elsewhere 2) Adhesives and sealants 3) Building/construction materials - wood and engineered wood products
10	Aluminum	7429-90-5	1) Metal products not covered elsewhere 2) Food packaging 3) Building/construction materials not covered elsewhere
11	Isopentane	78-78-4	1) Fuels and related products 2) Personal care products
12	Aluminum calcium oxide	12042-78-3	1) Building/construction materials not covered elsewhere 2) Adhesives and sealants
13	Gasoline	86290-81-5	1) Fuels and related products
14	Calcium carbonate	471-34-1	1) Paper products 2) Adhesives and sealants 3) Non-TSCA use
15	Ethylene dichloride	107-06-2	1) Plastic and rubber products not covered elsewhere

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Rank	Chemical Name	CASRN	Top Uses[+*]
16	Ammonium sulfate	7783-20-2	1) Agricultural products (non-pesticidal)
17	Diammonium phosphate	7783-28-0	1) Agricultural products (non-pesticidal) 2) Ink, toner, and colorant products
18	Chloroethene	75-01-4	1) Plastic and rubber products not covered elsewhere
19	Lead	7439-92-1	1) Batteries 2) Metal products not covered elsewhere 3) Non-TSCA use
20	Urea	57-13-6	1) Agricultural products (non-pesticidal) 2) Lawn and garden care products 3) Fuels and related products

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Table 3: Top 20 Chemicals Used in Commercial Products

(Based on production volume reported to be used in commercial or both consumer and commercial products and excluding chemicals of unknown or variable composition, complex reaction products and biological materials (UVCBs). Top Uses excludes "NKRA" and "Other" designations.)

Rank	Chemical Name	CASRN	Top Uses[+*]
1	Ethanol	64-17-5	1) Fuels and related products 2) Paints and coatings
2	Tricalcium silicate	12168-85-3	1) Building/construction materials not covered elsewhere 2) Adhesives and sealants
3	Iron oxide	1309-37-1	1) Metal products not covered elsewhere 2) Building/construction materials not covered elsewhere 3) Water treatment products

+The top uses listed are based on the uses reported for each chemical, not necessarily the intended use of the product by commercial enterprises. Descriptions under top uses are taken from appendix D of the 2012 CDR Instructions.

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Table 3: Top 20 Chemicals Used in Commercial Products (Cont.)

(Based on production volume reported to be used in commercial or both consumer and commercial products and excluding chemicals of unknown or variable composition, complex reaction products and biological materials (UVCBs). Top Uses excludes "NKRA" and "Other" designations.)

Rank	Chemical Name	CASRN	Top Uses[+*]
4	Ammonia	7664-41-7	1) Agricultural products (non-pesticidal) 2) Plastic and rubber products not covered elsewhere 3) Fabric, textile, and leather products not covered elsewhere
5	Urea	57-13-6	1) Agricultural products (non-pesticidal) 2) Lawn and garden care products 3) Building/construction materials – wood and engineered wood products
6	Ammonium nitrate	6484-52-2	1) Agricultural products (non-pesticidal) 2) Explosive materials 3) Lawn and garden care products
7	Propane	74-98-6	1) Fuels and related products 2) Plastic and rubber products not covered elsewhere 3) Agricultural products (non-pesticidal)
8	Butane	106-97-8	1) Fuels and related products 2) Plastic and rubber products not covered elsewhere 3) Personal care products
9	Dicalcium silicate	10034-77-2	1) Building/construction materials not covered elsewhere 2) Adhesives and sealants 3) Building/construction materials – wood and engineered wood products
10	Sulfuric acid	7664-93-9	1) Batteries 2) Paper products 3) Water treatment products
11	Diammonium phosphate	7783-28-0	1) Agricultural products (non-pesticidal) 2) Building/construction materials – wood and engineered wood products 3) Building/construction materials not covered elsewhere
12	Monoammonium phosphate	7722-76-1	1) Agricultural products (non-pesticidal) 2) Lawn and garden care products 3) Building/construction materials not covered elsewhere

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Table 3: Top 20 Chemicals Used in Commercial Products (Cont.)

(Based on production volume reported to be used in commercial or both consumer and commercial products and excluding chemicals of unknown or variable composition, complex reaction products and biological materials (UVCBs). Top Uses excludes "NKRA" and "Other" designations.)

Rank	Chemical Name	CASRN	Top Uses[+*]
13	Calcium carbonate	471-34-1	1) Agricultural products (non-pesticidal) 2) Paper products 3) Adhesives and sealants
14	Sulfur	7704-34-9	1) Agricultural products (non-pesticidal) 2) Water treatment products 3) Lawn and garden care products
15	Aluminum calcium iron oxide	12068-35-8	1) Building/construction materials not covered elsewhere 2) Adhesives and sealants 3) Building/Construction Materials - wood and engineered wood products
16	Sodium carbonate	497-19-8	1) Building/construction materials not covered elsewhere 2) Laundry and dishwashing products 3) Water treatment products
17	Ethylene	74-85-1	1) Plastic and rubber products not covered elsewhere 2) Non-TSCA use
18	Aluminum	7429-90-5	1) Metal products not covered elsewhere 2) Food packaging 3) Building/construction materials not covered elsewhere
19	Aluminum calcium oxide	12042-78-3	1) Building/construction materials not covered elsewhere 2) Adhesives and sealants
20	Toluene	108-88-3	1) Fuels and related products 2) Paints and coatings

+The top uses listed are based on the uses reported for each chemical, not necessarily the intended use of the product by commercial enterprises. Descriptions under top uses are taken from appendix D of the 2012 CDR Instructions

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Information by Production Volume

Production volume information is important because CDR reporting is triggered by the production volume of certain chemicals and because it can be used to assess potential exposure and risk. The total reported production volume (domestically manufactured and imported) for the 2012 data was 9.5 trillion pounds. In comparison, the total reported production volume (manufactured and imported) for the most recent data collection in 2006 was 9.9 trillion* pounds. Preliminary analysis indicates that several factors influenced the decline in overall reported production volume, including decreases in several large commodity chemicals and change in industrial processes.

The top chemicals reported based on production volume in the 2012 data collection are shown in Table 4. The table also presents the 2006 production volume for each chemical.

Table 4: Top 20 Chemicals Based on the Total Reported Production Volume

(Numbers reflect volume ranges, in order to protect confidential business information. Excludes chemicals of unknown or variable composition, complex reaction products and biological materials (UVCBs), for example petroleum streams.)

Chemical Name	CASRN	2012 Production Volume Range (billion pounds)	2006 Production Volume Range (billion pounds)	Change (2006 to 2012)
1. Carbon dioxide	124-38-9	125-130	35-40	↑
2. Ethanol	64-17-5	75-80	15- 20	↑
3. Sulfuric acid	7664-93-9	70-75	70-80	↑
4. Tricalcium silicate	12168-85-3	65-70	120-125	↓
5. Calcium carbonate	471-34-1	50-55	145-150	↓
6. Iron oxide	1309-37-1	50-55	15-20	↑
7. Propane	74-98-6	40-45	70-75	↓
8. Butane	106-97-8	35-40	45-50	↑
9. Ammonia	7664-41-7	35-40	35-40	-
10. Cumene	98-82-8	35-40	5-10	↑
11. Ethane	74-84-0	35-40	20-25	↑
12. 2-Methylpropane (Isobutane)	75-28-5	20-25	20-25	↑
13. Ethylene	74-85-1	20-25	50-55	↑
14. Urea	57-13-6	20-25	15-20	↑
15. Calcium oxide	1305-78-8	20-25	55-60	↓
16. Phosphoric acid	7664-38-2	20-25	10-15	↑
17. Sulfur	7704-34-9	20-25	20-25	↑
18. Dicalcium silicate	10034-77-2	15-20	85- 90	↓
19. Propylene	115-07-1	15-20	130-135	↓
20. Ammonium nitrate	6484-52-2	15-20	10-15	↑

** EPA's comparison between 2012 and 2006 data identified mistakes in 2006 reporting for certain sulfite liquors. Based on anticipated corrected submissions from the reporting companies, the total production volume for the 2006 reporting period went from 26 trillion to 9.9 trillion.*

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Industrial Sectors that Process and Use CDR Chemicals

For each reportable chemical, manufacturers (including importers) were required to report the Industrial Sector (IS) for all sites that received the chemical from them directly or indirectly and that process and use the chemical. For the purposes of CDR, "industrial use" means use at a site at which one or more chemicals or mixtures are manufactured (including imported) or processed. Exhibit 2 depicts the breakdown of the top eight industrial sectors reported for the 2012 data collection.

Exhibit 2. 2012 Top Eight Industrial Sectors that Processed and Used Reportable Chemicals

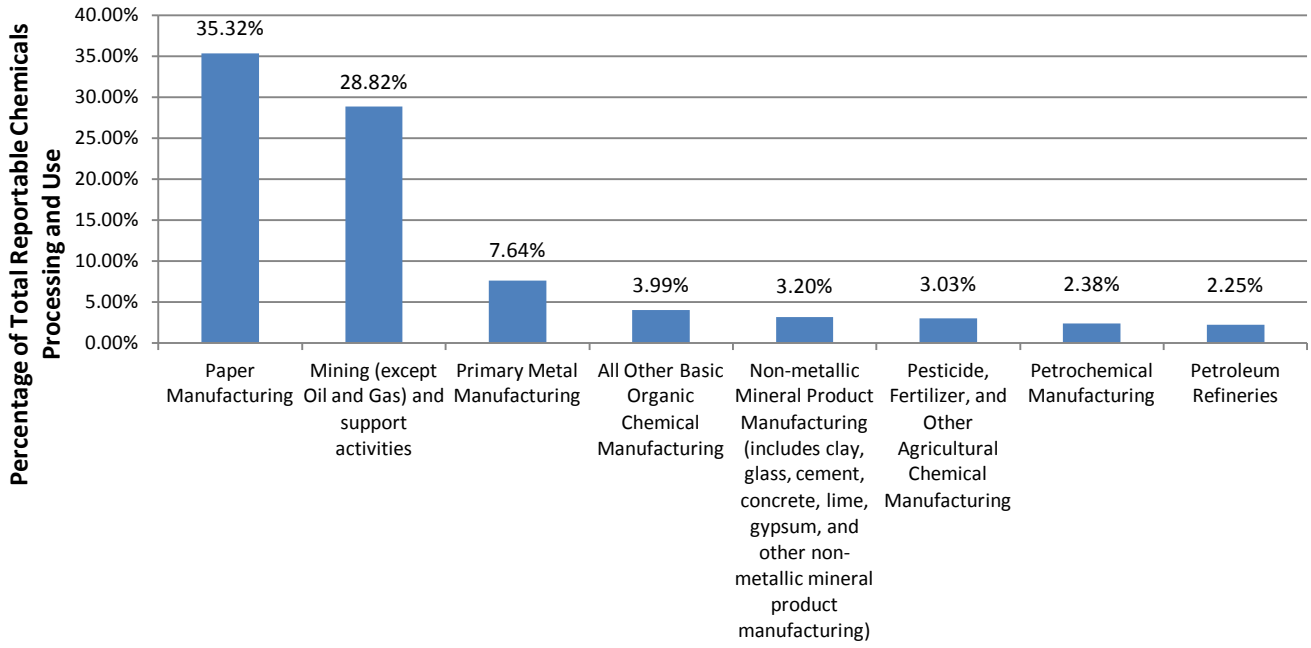

*Exhibit 2 represents 87% of the 2012 processing and use data for reportable chemicals. The 8 industrial sectors with the largest percentages of processing and use of reportable chemicals are displayed.

Recycling

CDR reporters were required to identify whether a chemical was recycled, remanufactured, reprocessed, or reused. According to the 2012 CDR submission, recycling was reported for 18 percent of chemicals. Collection of recycling information is valuable because EPA and other interested parties can analyze future trends in recycling.

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Confidential Business Information

Data submitters for the 2012 CDR were able to designate individual CDR data elements as confidential business information (CBI). Eleven percent of the information for the 2012 CDR was claimed as CBI by submitters. Table 5 presents the percentage of CBI claims for different data elements reported in 2012 and a comparison to 2006.

Table 5: CBI Claims by CDR Data Element

Category	Percentage of CBI Claims in 2012	Percentage of CBI Claims in 2006	Change (2006 to 2012)
Chemical Identity	3%	9%	↓
Domestic Production Volume	23%	32%	↓
Import Volume	18%	20%	↓
Processing and Use Information	6%	28%	↓
Used in Children's Products	0.4%	24%	↓

For Additional Information

For more information please visit the CDR website at http://www.epa.gov/cdr.

A non-confidential collection of historical data, as well as the 2012 CDR data is available at http://www.epa.gov/cdr/tools/data/index.html.

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