

# Inorganic Fertilizer Materials and Related Products: 2002

## Summary

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**SUMMARY OF FINDINGS.** United States production of sulfuric acid in 2002 totaled 39,196,360 thousand

short tons (100 percent H<sub>2</sub>SO<sub>4</sub>), approximately 2.2 percent below the 2001 figure of 40,064,372 short tons.

Production of synthetic ammonia, nitric acid, and ammonium compounds decreased 8.9 percent to 34,023,742 short tons in 2002, from the 2001 level of 31,251,201 short tons. Phosphoric acid production increased 2.6 percent to 11,845,435 short tons in 2002, from the 2001 level of 11,545,9000 short tons.

Production of superphosphate and other phosphatic fertilizer materials for 2002 increased 5.4 percent to 8,544,739 short tons (100 percent P<sub>2</sub>O<sub>5</sub>), from the 2001 level of 8,109,218 short tons (100 percent P<sub>2</sub>O<sub>5</sub>).

For general CIR information, explanation of general terms and historical note, see the appendix.

Address inquiries concerning these data to Primary Goods Industries Branch, Manufacturing and Construction Division (MCD), Washington, DC 20233-6900, or call Walter Hunter, Jr., 301-763-4798.

For mail or fax copies of this publication, please contact the Information Services Center, MCD, Washington, DC 20233-6900, or call 301-763-4673.

**U S C E N S U S B U R E A U**

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Table 1. Shipments and Production of Principal Fertilizer Materials: 1998 to 2002  
 [Quantity in thousands of short tons. Value in millions of dollars]

Product code	Product description	Year	Total production	Total shipments including interplant transfers	
				Quantity	Value (f.o.b. plant)
3253111120	Ammonia, synthetic anhydrous 1/.....	2002	r/ 13,598	5,924	917
		2001	12,227	4,894	904
		2000	15,809	6,337	915
		1999	17,337	(X)	(X)
		1998	18,475	8,303	1,214
3253111201	Ammonium nitrate, original melt liquor 2/.....	2002	6,973	3,671	486
		2001	r/ 6,431	r/ 3,317	551
		2000	7,979	4,146	541
		1999	7,630	(X)	(X)
		1998	9,079	(X)	(X)
3253111240	Ammonium sulfate 1/.....	2002	2,848	2,292	194
		2001	2,588	r/ 2,353	r/ 249
		2000	2,808	2,082	103
		1999	2,875	(X)	(X)
		1998	2,787	2,861	181
3253114100	Urea (100 percent).....	2002	7,758	5,564	824
		2001	6,702	4,426	r/ 647
		2000	7,682	4,682	646
		1999	8,907	(X)	(X)
		1998	8,865	5,586	667
3253111111	Nitric acid (100 percent).....	2002	7,651	1,686	203
		2001	7,074	1,868	r/ 174
		2000	8,708	2,344	280
		1999	8,945	(X)	(X)
		1998	9,285	1,506	160
3253121100	Phosphoric acid (100 percent P2O5).....	2002	11,846	3,395	1,192
		2001	11,546	r/ 3,384	r/ 937
		2000	12,492	3,952	1,126
		1999	13,708	4,415	(X)
		1998	13,891	4,649	1,515
3251881100	Sulfuric acid, gross (100 percent).....	2002	39,196	11,003	499
		2001	40,064	r/ 10,940	557
		2000	43,643	11,930	572
		1999	44,756	(X)	(X)
		1998	48,513	13,043	683
3253124100	Superphosphates and other fertilizer materials (100 percent P2O5).....	2002	8,545	8,456	2,342
		2001	8,109	8,055	r/ 2,232
		2000	8,899	8,822	2,649
		1999	9,133	9,769	(X)
		1998	10,259	10,293	3,046

r/Revised by 5 percent or more from previously published data. X Not applicable.

1/Excludes data for byproduct ammonia liquor and ammonium sulfate published by the Department of Energy.

2/Represents total amount of original melt liquor produced for all purposes.



Table 3. Quantity of Production, Exports, Imports, and Apparent Consumption of Fertilizer Materials: 2002 and 2001  
 [Quantity in thousands of metric tons]

Product code	Product description	Production (quantity)	Exports of domestic merchandise (quantity)	Percent exports to production (quantity)	Imports for consumption (quantity)	Apparent consumption 3/ (quantity)	Percent imports to apparent consumption (quantity)
2002							
3253111120	Ammonia, synthetic anhydrous.....	12,336.2	554.1	4.5	6,035.8	17,818.0	33.9
3253111201	Ammonium nitrate, original solution.....	6,326.3	95.2	1.5	1,043.1	7,274.2	14.3
3253111250	Nitrogen solutions, ammonium nitrate/ urea solutions.....	2,679.2	20.6	0.8	1,471.6	4,130.3	35.6
3253111240	Ammonium sulfate.....	2,583.3	924.1	35.8	311.2	1,970.4	15.8
3253114100	Urea.....	7,038.4	970.4	13.8	4,854.5	10,922.5	44.4
3253121100	Phosphoric acid.....	10,747.1	(D)	(D)	87.7	(D)	(D)
3253124111	Normal and enriched superphosphate.....	(D)	(D)	(D)	(D)	(D)	(D)
3253124121	Concentrated superphosphate.....	(D)	603.1	(D)	36.2	(D)	(D)
3253124211	Diammonium phosphates.....	10,614.9	7,305.5	68.8	158.7	3,468.1	4.6
3251881100	Sulfuric acid, gross.....	35,558.9	190.5	0.5	1,099.1	36,467.5	3.0
2001							
3253111120	Ammonia, synthetic anhydrous.....	11,092.0	(D)	(D)	5,542.8	16,634.8	(D)
3253111201	Ammonium nitrate, original solution..... r/	5,834.2	19.3	0.3	952.5	6,767.4	14.1
3253111250	Nitrogen solutions, ammonium nitrate/ urea solutions.....	2,659.6	33.9	1.3	1,994.7	4,620.4	43.2
3253111240	Ammonium sulfate.....	2,347.9	668.1	28.5	335.4	2,015.2	16.6
3253114100	Urea.....	6,080.1	791.7	13.0	4,799.5	10,088.0	47.6
3253121100	Phosphoric acid.....	10,474.4	(D)	(D)	111.8	(D)	(D)
3253124111	Normal and enriched superphosphate.....	(D)	(D)	(D)	(D)	(D)	(D)
3253124121	Concentrated superphosphate.....	(D)	682.9	(D)	(D)	(D)	(D)
3253124211	Diammonium phosphates.....	10,005.1	6,410.6	64.1	133.5	3,728.0	3.6
3251881100	Sulfuric acid, gross.....	36,346.4	209.7	0.6	1,414.4	37,551.1	3.8

D Withheld to avoid disclosing data for individual companies. r/Revised by 5 percent or more from previously published data.

1/Source: Census Bureau report EM 545, U.S. Exports.

2/Source: Census Bureau report IM 145, U.S. Imports for Consumption.

3/Apparent consumption is derived by subtracting exports from manufacturers' production plus imports. Apparent consumption does not include any adjustments for changes in inventories.

Note: For comparison of North American Industry Classification System (NAICS)-based product codes, HTSUSA import codes, and Schedule B export codes, see Table 4.



Table 2. Production, Shipments, Consumption, and Stocks of Fertilizer Materials and Other Related Chemicals  
[Quantity in short tons. Value in thousands of dollars]

Product code	Chemical and basis	2002				2001				
		Total production	Total shipments, including interplant transfers		Stocks 1/	Total production	Total shipments, including interplant transfers		Stocks 1/	
			Quantity	Value			Quantity	Value		
3253124121	Phosphoric oxide content (100 percent P2O5).....	(D)	(D)	(D)	(X)	(D)	(D)	(D)	(X)	
	Fourth quarter.....	(D)	(D)	(D)	(X)	(D)	(D)	(D)	(X)	
	Third quarter.....	(D)	(D)	(D)	(X)	(D)	(D)	(D)	(X)	
	Second quarter.....	(D)	(D)	(D)	(X)	(D)	(D)	(D)	(X)	
	First quarter.....	(D)	(D)	(D)	(X)	(D)	(D)	(D)	(X)	
	Concentrated:									
	Gross weight.....	(D)	(D)	(X)	(X)	(D)	(D)	(X)	(X)	
	Fourth quarter.....	(D)	(D)	(X)	(D)	(D)	(D)	(X)	(D)	
	Third quarter.....	(D)	(D)	(X)	(D)	(D)	(D)	(X)	(D)	
	Second quarter.....	(D)	(D)	(X)	(D)	(D)	(D)	(X)	(D)	
	First quarter.....	(D)	(D)	(X)	(D)	(D)	(D)	(X)	(D)	
	Nitrogen content.....	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	
Fourth quarter.....	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)		
Third quarter.....	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)		
Second quarter.....	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)		
First quarter.....	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)		
3253124131	Phosphoric oxide content (100 percent P2O5).....	(D)	(D)	(D)	(X)	(D)	(D)	(D)	(X)	
	Fourth quarter.....	(D)	(D)	(D)	(X)	(D)	(D)	(D)	(X)	
	Third quarter.....	(D)	(D)	(D)	(X)	(D)	(D)	(D)	(X)	
	Second quarter.....	(D)	(D)	(D)	(X)	(D)	(D)	(D)	(X)	
	First quarter.....	(D)	(D)	(D)	(X)	(D)	(D)	(D)	(X)	
	Monoammonium phosphates:									
	Gross weight.....	4,594,471	4,104,481	(X)	(X)	4,324,335	3,910,677	(X)	(X)	
	Fourth quarter.....	a/ 1,191,247	a/ 1,015,317	(X)	r/ 145,825	1,222,534	1,232,614	(X)	120,652	
	Third quarter.....	1,083,872	985,307	(X)	132,328	1,013,443	888,687	(X)	165,722	
	Second quarter.....	1,262,917	1,111,905	(X)	146,270	940,051	985,682	(X)	181,767	
	First quarter.....	1,056,435	991,952	(X)	130,554	1,148,307	803,694	(X)	247,898	
	Nitrogen content.....	442,070	(X)	(X)	(X)	500,112	(X)	(X)	(X)	
Fourth quarter.....	a/ 108,878	(X)	(X)	(X)	103,112	(X)	(X)	(X)		
Third quarter.....	r/ 105,100	(X)	(X)	(X)	86,352	(X)	(X)	(X)		
Second quarter.....	r/ 120,205	(X)	(X)	(X)	157,709	(X)	(X)	(X)		
First quarter.....	r/ 107,887	(X)	(X)	(X)	152,939	(X)	(X)	(X)		
3253124211	Phosphoric oxide content (100 percent P2O5).....	2,291,562	2,278,122	615,968	(X)	2,232,618	2,034,362	545,136	(X)	
	Fourth quarter.....	a/ 604,423	a/r/ 595,901	a/ 159,099	(X)	627,408	536,738	140,861	(X)	
	Third quarter.....	552,356	r/ 561,349	153,100	(X)	523,471	451,407	130,034	(X)	
	Second quarter.....	595,172	r/ 590,243	158,472	(X)	516,749	540,956	145,457	(X)	
	First quarter.....	539,611	r/ 530,629	145,297	(X)	564,990	505,261	128,784	(X)	
	Diammonium phosphates:									
	Gross weight.....	11,700,743	9,947,372	(X)	(X)	11,028,515	9,475,273	(X)	(X)	
	Fourth quarter.....	a/ 2,824,887	a/ 2,374,046	(X)	a/r/ 338,942	a/ 3,244,974	a/ 2,786,050	(X)	239,377	
	Third quarter.....	2,987,310	2,519,495	(X)	279,003	a/ 2,794,838	a/ 2,570,574	(X)	233,834	
	Second quarter.....	2,983,869	2,650,496	(X)	179,699	2,485,775	a/ 2,134,311	(X)	266,498	
	First quarter.....	2,904,677	2,403,335	(X)	300,476	2,502,928	1,984,338	(X)	324,513	
	Nitrogen content.....	2,198,338	(X)	(X)	(X)	1,994,965	(X)	(X)	(X)	
Fourth quarter.....	a/r/ 575,012	(X)	(X)	(X)	582,255	(X)	(X)	(X)		
Third quarter.....	545,033	(X)	(X)	(X)	496,941	(X)	(X)	(X)		
Second quarter.....	546,230	(X)	(X)	(X)	(D)	(X)	(X)	(X)		
First quarter.....	532,063	(X)	(X)	(X)	(D)	(X)	(X)	(X)		
3253124222	Phosphoric oxide content (100 percent P2O5).....	5,414,862	5,392,434	1,532,191	(X)	5,078,207	5,286,803	r/ 1,507,051	(X)	
	Fourth quarter.....	a/ 1,321,264	a/ 1,312,182	b/r/ 373,882	(X)	a/ 1,495,896	a/ 1,497,949	a/r/ 414,914	(X)	
	Third quarter.....	1,377,702	1,332,971	a/r/ 400,200	(X)	a/ 1,288,474	a/ 1,177,139	a/r/ 363,825	(X)	
	Second quarter.....	1,376,487	1,433,364	a/r/ 405,887	(X)	1,145,792	1,173,105	a/ 354,600	(X)	
	First quarter.....	1,339,409	1,313,917	a/r/ 352,222	(X)	1,148,045	1,438,610	r/ 373,712	(X)	
	Other ammonium phosphates and other phosphatic fertilizer materials:									
	Gross weight.....	791,855	556,659	(X)	(X)	581,366	326,770	(X)	(X)	
	Fourth quarter.....	a/ 248,320	a/r/ 167,592	(X)	r/ 57,833	a/ 238,734	b/ 138,408	(X)	56,964	
	Third quarter.....	a/r/ 154,255	b/r/ 94,526	(X)	53,188	a/ 101,026	b/ 65,202	(X)	52,559	
	Second quarter.....	a/r/ 148,972	b/r/ 99,640	(X)	(D)	a/ 144,600	b/ 67,553	(X)	(D)	
	First quarter.....	a/r/ 240,308	b/ 194,901	(X)	68,244	a/ 97,006	b/ 55,607	(X)	56,968	
	Nitrogen content.....	98,149	(X)	(X)	(X)	55,485	(X)	(X)	(X)	
Fourth quarter.....	28,889	(X)	(X)	(X)	28,991	(X)	(X)	(X)		
Third quarter.....	19,763	(X)	(X)	(X)	9,704	(X)	(X)	(X)		
Second quarter.....	19,926	(X)	(X)	(X)	(D)	(X)	(X)	(X)		
First quarter.....	29,571	(X)	(X)	(X)	(D)	(X)	(X)	(X)		
3251881100	Phosphoric oxide content (100 percent P2O5).....	286,168	244,922	66,478	(X)	211,593	163,819	r/ 46,329	(X)	
	Fourth quarter.....	b/r/ 93,191	(D)	(D)	(X)	b/ 105,693	(D)	(D)	(X)	
	Third quarter.....	b/r/ 63,273	b/r/ 44,271	b/r/ 11,904	(X)	b/ 32,981	(D)	(D)	(X)	
	Second quarter.....	a/r/ 45,327	(D)	(D)	(X)	(S)	(S)	(S)	(X)	
	First quarter.....	a/r/ 84,377	(D)	(D)	(X)	b/ 29,354	(S)	b/ 6,592	(X)	
	Sulfuric acid (100 percent): 5/									
	Total gross.....	39,196,360	11,003,274	498,576	(X)	40,064,372	r/ 10,939,677	556,726	(X)	
	Fourth quarter.....	a/ 10,042,939	a/ 2,654,439	b/r/ 121,461	a/r/ 437,584	a/ 10,990,233	b/ 2,749,473	b/ 140,807	a/r/ 694,333	
	Third quarter.....	9,831,633	a/r/ 2,790,828	b/r/ 131,326	a/r/ 304,999	a/ 9,875,014	b/r/ 2,774,792	b/ 139,114	b/r/ 460,480	
	Second quarter.....	9,842,123	a/r/ 2,846,312	b/r/ 127,607	a/r/ 358,429	a/ 9,559,813	b/r/ 2,724,479	b/ 139,632	b/r/ 540,080	
	First quarter.....	9,479,665	a/r/ 2,711,695	b/r/ 118,182	a/r/ 389,181	a/ 9,639,312	b/r/ 2,690,933	b/ 137,173	b/r/ 531,843	
	3251881111	By feedstock:								
Elemental sulfur.....		33,063,058	6,222,302	295,287	(X)	32,794,151	r/ 6,013,676	318,439	(X)	
Fourth quarter.....		a/ 8,529,740	b/ 1,546,688	b/r/ 72,676	(X)	9,506,563	b/ 1,544,815	b/ 82,514	(X)	
Third quarter.....		8,239,004	b/r/ 1,668,764	b/r/ 76,525	(X)	a/ 8,057,646	b/r/ 1,538,955	b/r/ 78,743	(X)	
Second quarter.....		8,217,721	b/r/ 1,540,491	b/ 74,684	(X)	7,408,836	b/r/ 1,431,897	b/r/ 75,135	(X)	
First quarter.....		8,076,593	b/r/ 1,466,359	b/ 71,402	(X)	7,821,106	b/r/ 1,498,009	b/r/ 82,047	(X)	
3251881121		Smelting metallic sulfide ore.....	2,789,469	2,484,617	54,193	(X)	2,677,699	2,499,188	55,591	(X)
		Fourth quarter.....	731,078	565,036	13,460	(X)	b/ 677,160	(S)	(S)	(X)
		Third quarter.....	674,670	523,197	13,568	(X)	b/ 600,214	(S)	(S)	(X)
		Second quarter.....	719,892	705,306	14,016	(X)	b/ 694,186	(S)	(S)	(X)
		First quarter.....	663,829	691,078	13,149	(X)	b/ 706,139	(S)	(S)	(X)

Continued

Table 2. Production, Shipments, Consumption, and Stocks of Fertilizer Materials and Other Related Chemicals  
 [Quantity in short tons. Value in thousands of dollars]

Product code	Chemical and basis	2002				2001			
		Total shipments, including interplant transfers		Value	Stocks 1/	Total shipments, including interplant transfers		Value	Stocks 1/
		Total production	Quantity			Total production	Quantity		
3251881130	Decomposition of alkylation and other spent acid.....	2,528,106	1,694,476	120,264	(X)	3,741,162	r/ 1,821,824	151,252	(X)
	Fourth quarter.....	a/r/ 580,078	a/r/ 387,479	a/r/ 27,705	(S) a/r/	594,244	a/r/ 409,626	b/ 35,521	(S)
	Third quarter.....	a/r/ 704,619	a/r/ 448,673	a/r/ 34,070	(S) a/	1,000,749	b/r/ 500,800	b/ 38,722	(S)
	Second quarter.....	a/r/ 689,805	a/r/ 446,953	a/r/ 31,623	b/r/ 54,938	a/ 1,244,358	b/r/ 502,446	b/ 42,922	(S)
	First quarter.....	a/r/ 553,604	a/r/ 411,371	b/r/ 26,866	b/r/ 52,750	a/ 901,811	b/r/ 408,952	b/ 34,087	(S)
3251881141	Other.....	815,727	601,879	28,832	(X) r/	851,360	r/ 604,989	r/ 31,443	(X)
	Fourth quarter.....	a/ 202,043	a/r/ 155,236	b/ 7,620	(X) a/r/	212,266	a/r/ 146,545	a/r/ 7,706	(X)
	Third quarter.....	a/ 213,340	a/r/ 150,194	b/ 7,163	(X) a/r/	216,405	a/r/ 168,484	a/r/ 9,005	(X)
	Second quarter.....	a/ 214,705	a/r/ 153,562	b/ 7,284	(X) a/r/	212,433	a/r/ 149,280	a/r/ 7,674	(X)
	First quarter.....	a/ 185,639	a/r/ 142,887	a/r/ 6,765	(X) a/r/	210,256	b/r/ 140,680	a/r/ 7,058	(X)
3251881212	By grade:								
	Oleum grades.....	1,509,086	878,315	41,388	(X) r/	1,399,889	r/ 912,463	r/ 53,524	(X)
	Fourth quarter.....	a/ 375,539	a/r/ 222,435	b/r/ 10,531	b/r/ 26,177	a/r/ 386,177	b/r/ 233,109	b/r/ 13,523	b/ 34,831
	Third quarter.....	a/r/ 373,227	b/r/ 213,886	b/r/ 10,268	b/r/ 24,874	a/r/ 362,360	b/r/ 238,269	b/r/ 13,856	b/ 18,648
	Second quarter.....	a/r/ 374,078	a/r/ 220,272	b/r/ 10,324	b/r/ 23,150	a/r/ 307,924	b/r/ 209,425	b/r/ 12,334	a/ 14,340
	First quarter.....	a/r/ 386,242	a/r/ 221,722	b/r/ 10,265	b/ 30,713	a/r/ 343,428	b/r/ 231,660	b/r/ 13,811	b/ 29,930
3251881231	Other than oleum grades.....	37,687,274	10,124,959	457,188	(X)	38,664,483	10,027,214	503,202	(X)
	Fourth quarter.....	a/ 9,667,400	a/ 2,432,004	b/r/ 110,930	a/r/ 411,407	a/ 10,604,056	b/ 2,516,364	b/ 127,284	a/r/ 659,502
	Third quarter.....	9,458,406	a/r/ 2,576,942	b/r/ 121,058	a/r/ 280,125	a/ 9,512,654	b/ 2,536,523	b/ 125,258	b/r/ 441,832
	Second quarter.....	9,468,045	a/ 2,626,040	b/r/ 117,283	a/r/ 335,279	a/ 9,251,889	b/ 2,515,054	b/ 127,298	b/r/ 525,740
	First quarter.....	9,093,423	a/ 2,489,973	b/r/ 107,917	a/r/ 358,468	a/ 9,295,884	b/ 2,459,273	b/ 123,362	b/r/ 501,913
3251881311	Spent acid fortified in contact units and included in above production data.....	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)
	Fourth quarter.....	(X)	(X)	(X)	(D)	(X)	(X)	(X)	(D)
	Third quarter.....	(X)	(X)	(X)	(D)	(X)	(X)	(X)	(D)
	Second quarter.....	(X)	(X)	(X)	(D)	(X)	(X)	(X)	(D)
	First quarter.....	(X)	(X)	(X)	(D)	(X)	(X)	(X)	(D)
	Total new acid 6/.....	36,668,254	(X)	(X)	(X)	36,323,210	(X)	(X)	(X)
	Fourth quarter.....	9,462,861	(X)	(X)	(X)	10,395,989	(X)	(X)	(X)
	Third quarter.....	9,127,014	(X)	(X)	(X)	8,874,265	(X)	(X)	(X)
	Second quarter.....	9,152,318	(X)	(X)	(X)	8,315,455	(X)	(X)	(X)
	First quarter.....	8,926,061	(X)	(X)	(X)	8,737,501	(X)	(X)	(X)

- Represents zero. D Withheld to avoid disclosing data for individual companies. N Nitrogen content. P2O5 Phosphoric oxide content. r/Revised by 5 percent or more from previously published data. S Suppressed does not meet publication standards. X Not applicable.

1/Stocks held by producing companies include amounts held at their nonproducing locations.  
 2/Production represents total amount of ammonium nitrate produced including amounts for fertilizer, explosives, and other uses, and amounts consumed in manufacturing other products, and other uses, and amounts consumed in manufacturing other products, such as nitrogen solutions. Stocks represent total stocks held by producing total stocks held by producing companies, including stock of original melt liquor and amounts (liquid and solid) reported as fertilizer, explosives, and other uses.  
 3/Excludes coke oven byproduct ammonium sulfate.  
 4/Solutions containing two or more products such as (a) ammonia, ammonium nitrate; (b) ammonia, urea; (c) ammonia, ammonium nitrate, urea.  
 5/Includes data for government-owned, contractor-operated plants.  
 6/Total new acid equals total gross acid, minus fortified spent acid and sulfuric acid produced from the decomposition of alkylation acids and other spent acids and sludge acid.

Note: Percent of estimation of each item is indicated as follows: a/10 to 25 percent of this item is estimated. b/26 to 50 percent of this item is estimated. c/Over 50 percent of this item is estimated. c/Over 50 percent of this item is estimated.

**Table 4. Comparison of North American Industry Classification System (NAICS)-Based Product codes with Codes with Schedule B Export Codes and HTUSA Import Codes: 2002**

<b>Product code</b>	<b>Product description</b>	<b>Export code 1/</b>	<b>Import code 2/</b>
3253111120	Anhydrous ammonia, synthetic.....	2814.10.0000	2814.10.0000
3253111201	Ammonium nitrate, original solution.....	3102.30.0000	3102.30.0000
3253111240	Ammonium sulfate.....	3102.21.0000	3102.21.0000
3253111251	Nitrogen solutions, ammonium nitrate/urea solutions.....	3102.80.0000	3102.80.0000
3253114100	Urea.....	3102.10.0000	3102.10.0000
3253121100	Phosphoric acid.....	2809.20.0010 2809.20.0020 2809.20.0030	2809.20.0010 2809.20.0020 2809.20.0030
3253124111	Normal and enriched superphosphates.....	3103.10.0010	3103.10.0010
3253124121	Concentrated superphosphates.....	3103.10.0020	3103.10.0020
3253124211	Diammonium phosphates.....	3105.30.0000	3105.30.0000
3251881100	Sulfuric acid.....	2807.00.0000	2807.00.0000

1/Source: 2002 edition, Harmonized System-based Schedule B, Statistical Classification of Domestic and Foreign Commodities Exported from the United States.

2/ Harmonized Tariff Schedule of the United States, Annotated (2002).



# Appendix.

## General CIR Survey Information, Explanation of General Terms and Historical Note

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### GENERAL

The CIR program has been providing monthly, quarterly, and annual measures of industrial activity for many years. Since 1904, with its cotton and fats and oils surveys, the CIR program has formed an essential part of an integrated statistical system involving the quinquennial economic census, manufacturing sector, and the annual survey of manufactures. The CIR surveys, however, provide current statistics at a more detailed product level than either of the other two statistical programs.

The primary objective of the CIR program is to produce timely, accurate data on production and shipments of selected products. The data are used to satisfy economic policy needs and for market analysis, forecasting, and decision making in the private sector. The product-level data generated by these surveys are used extensively by individual firms, trade associations, and market analysts in planning or recommending marketing and legislative strategies, particularly if their industry is significantly affected by foreign trade. Although production and shipments information are the two most common data items collected, the CIR program collects other measures also such as inventories, orders, and consumption. These surveys measure manufacturing activity in important commodity areas such as textiles and apparel, chemicals, primary metals, computer and electronic components, industrial equipment, aerospace equipment, and consumer goods.

The CIR program uses a unified data collection, processing, and publication system. The U.S. Census Bureau updates the survey panels for most reports annually and reconciles the estimates to the results of the broader-based annual survey of manufactures and the economic census, manufacturing sector. The manufacturing sector provides a complete list of all producers of the products covered by the CIR program and serves as the primary source for CIR sampling. Where a small number of producers exist, CIR surveys cover all known producers of a product. However, when the number of producers is too large, cutoff and random sampling techniques are used. Surveys are continually reviewed and modified to provide the most up-to-date information on products produced. The CIR program includes a group of mandatory and voluntary surveys. Typically the monthly and quarterly surveys are conducted on a voluntary basis. Those companies that choose not to respond to the voluntary surveys are required to submit a mandatory annual counterpart corresponding to the more frequent survey.

### NORTH AMERICAN INDUSTRY CLASSIFICATION SYSTEM (NAICS), 1997

The adoption of the North American Industry Classification System (NAICS) in the 1997 Economic Census has had a major impact on the comparability of current and historic data. Approximately half of the industries in the manufacturing sector of NAICS do not have comparable industries in the Standard Industrial Classification (SIC) system that was used in the past.

While most of the change affecting the manufacturing sector was change within the sector, some industries left manufacturing and others came into manufacturing. Prominent among those that left manufacturing are logging and portions of publishing. Prominent among the industries that came into the manufacturing sector are bakeries, candy stores where candy is made on the premises, custom tailors, makers of custom draperies, and tire retreading. The net effect of the classification changes are such that if the 1997 value of shipments data for all manufacturers were tabulated on an SIC basis, it would be approximately 3 percent higher.

Listed below are the NAICS sectors:

- 21 Mining
- 22 Utilities
- 23 Construction
- 31-33 Manufacturing
- 42 Wholesale Trade
- 44-45 Retail Trade
- 48-49 Transportation and Warehousing
- 51 Information
- 52 Finance and Insurance
- 53 Real Estate and Rental and Leasing
- 54 Professional, Scientific, and Technical Services
- 55 Management of Companies and Enterprises
- 56 Administrative and Support and Waste Management and Remediation Services
- 61 Educational Services
- 62 Health Care and Social Assistance
- 71 Arts, Entertainment, and Recreation
- 72 Accommodation and Food Services
- 81 Other Services (except Public Administration)

(Not listed above are the Agriculture, Forestry, Fishing, and Hunting sector (NAICS 11), partially covered by the census of agriculture conducted by the U.S. Department of Agriculture, and the Public Administration sector (NAICS 92), covered by the census of governments conducted by the Census Bureau.)

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The 20 NAICS sectors are subdivided into 96 subsectors (three-digit codes), 313 industry groups (four-digit codes), and, as implemented in the United States, 1170 industries (five- and six-digit codes).

## FUNDING

The Census Bureau funds most of the surveys. However, a number of surveys are paid for either fully or partially by other Federal Government agencies or private trade associations. A few surveys are mandated, but all are authorized by Title 13 of the United States Code.

## RELIABILITY OF DATA

Survey error may result from several sources including the inability to obtain information about all cases in the survey, response errors, definitional difficulties, differences in the interpretation of questions, mistakes in recording or coding the reported data, and other errors of collection, response, coverage, and estimation. These nonsampling errors also occur in complete censuses. Although no direct measurement of the biases due to these nonsampling errors has been obtained, precautionary steps were taken in all phases of the collection, processing, and tabulation of the data in an effort to minimize their influence.

A major source of bias in the published estimates is the imputing of data for nonrespondents, for late reporters, and for data that fail logic edits. Missing figures are imputed based on period-to-period movements shown by reporting firms. A figure is considered to be an impute if the value was not directly reported on the questionnaire, directly derived from other reported items, directly available from supplemental sources, or obtained from the respondent during the analytical review phase. Imputation generally is limited to a maximum of 10 percent for any one data cell. Figures with imputation rates greater than 10 percent are suppressed or footnoted. The imputation rate is not an explicit indicator of the potential error in published figures due to nonresponse, because the actual yearly movements for nonrespondents may or may not closely agree with the imputed movements. The range of difference between the actual and imputed figures is assumed to be small. The degree of uncertainty regarding the accuracy of the published data increases as the percentage of imputation increases. Figures with imputation rates above 10 percent should be used with caution.

## DATA REVISIONS

Statistics for previous years may be revised as the result of corrected figures from respondents, late reports for which imputations were originally made, or other corrections. Data that have been revised by more than 5 percent from previously published data are indicated by footnotes.

## DISCLOSURE

The Census Bureau collects the CIR data under the authority of Title 13, United States Code, which specifies that the information can only be used for statistical purposes and cannot be published or released in any manner that would identify a person, household, or establishment. "D" indicates that data in the cell have been suppressed to avoid disclosure of information pertaining to individual companies.

## EXPLANATION OF GENERAL TERMS

**Capacity.** The maximum quantity of a product that can be produced in a plant in 1 day if operating for 24 hours. Includes the capacity of idle plants until the plant is reported to be destroyed, dismantled, or abandoned.

**Consumption.** Materials used in producing or processing a product or otherwise removing the product from the inventory.

**Exports.** Includes all types of products shipped to foreign countries, or to agents or exporters for reshipment to foreign countries.

**Gross shipments.** The quantity or value of physical shipments from domestic establishments of all products sold, transferred to other establishments of the same company, or shipped on consignment, whether for domestic or export sale or use. Shipments of products purchased for resale are omitted. Shipments of products made under toll arrangements are included.

**Interplant transfers.** Shipments to other domestic plants within a company for further assembly, fabrication, or manufacture.

**Inventories.** The quantity or value of finished goods, work in progress, and materials on hand.

**Machinery in place.** The number of machines of a particular type in place as of a particular date whether the machinery was used for production, prototype, or sampling, or was idle. Machinery in place includes all machinery set up in operating positions.

**Net receipts.** Derived by subtracting the materials held at the end of the previous month from the sum of materials used during the current month.

**Production.** The total volume of products produced, including: products sold; products transferred or added to inventory after adjustments for breakage, shrinkage, and obsolescence, plus any other inventory adjustment; and products that undergo further manufacture at the same establishment.

**Quantities produced and consumed.** Quantities of each type of product produced by a company for internal consumption within that same company.

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**Quantity and value of new orders.** The sales value of orders received during the current reporting period for products and services to be delivered immediately or at some future date. Also represents the net sales value of contract change documents that increase or decrease the sales value of the orders to which they are related, when the parties concerned are in substantial agreement as to the amount involved. Included as orders are only those that are supported by binding legal documents such as signed contracts or letter contracts.

**Quantity and value of shipments.** The figures on quantity and value of shipments represent physical shipments of all products sold, transferred to other establishments of the same company, or shipped on consignment, whether for domestic or export sale. The value represents the net sales price, f.o.b. plant, to the customer or branch to which the products are shipped, net of discounts, allowances, freight charges, and

returns. Shipments to a company's own branches are assigned the same value as comparable appropriate allocation of company overhead and profit. Products bought and resold without further manufacture are excluded.

**Stocks.** Total quantity of ending finished inventory.

**Unfilled orders (backlog).** Calculated by adding net new orders and subtracting net sales from the backlog at the end of the preceding year.

#### **HISTORICAL NOTE**

Data on inorganic fertilizer chemicals and sulfuric acid have been collected by the Census Bureau since 1941. Historical data may be obtained from Current Industrial Reports (called Facts for Industry before 1959) available at your local Federal Depository Library.