

CHEMFACTS

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CHEMFACTS NETHERLANDS

SECOND EDITION

1981

CHEMICAL DATA SERVICES

First edition 1978
Second edition 1981

Price £45
ISBN 0 617 00428 5

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Published by **CHEMICAL DATA SERVICES**
IPC Industrial Press Ltd, Quadrant House, The Quadrant, Sutton, Surrey SM2 5AS, England
Tel: 01-661 3500 Telex: 892084 Bispres G
Registered at the above address, No. 113326, England

FOREWORD

This revised and expanded second edition of *Chemfacts: Netherlands* reflects the changes and developments which have taken place in the Dutch chemical industry since the first edition appeared in 1978. It deals with the major industrial chemicals produced in the Netherlands and surveys the companies which make them.

The 83 product profiles alphabetically arranged in Section 1 include 15 chemicals which did not appear in the first edition - aluminium sulphate, tertiary butyl alcohol, cyclohexanone, ethylene-propylene rubber, fatty acids, hydroxyethylcellulose, higher oxo alcohols, MTBE, nitrile rubber, polyacetal resins, polyether polyols, polyethylene terephthalate, polyurethanes, α - picoline and sodium chlorate. Each profile starts with a product description, and goes on to give the following information: tables giving figures for production, imports and exports, covering a period of ten years; tables of trade breakdowns for 1979 and 1980, including percentages of the volume of trade with the major importing and exporting countries; and a plant data section with manufacturing details. A map of the Netherlands showing the locations of the plants listed and described completes each product profile. Section 2 consists of profiles of the 46 chemical manufacturers (and 1 holding company) mentioned in the plant data in Section 1.

Earlier this year we conducted a detailed postal survey of chemical companies in the Netherlands, and we would like to thank them for their willing help in checking and where necessary amplifying our data. Their response has been supplemented by the study of published sources, including official statistics, company annual reports, and leading chemical, industrial and economic journals and newspapers published throughout the world.

While every care has been taken to ensure that the information given is accurate, under no circumstances can the publishers be liable in respect of any errors in or omissions from this survey.

Sutton, Surrey, England

October 1981

Chemical Data Services

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Section 2	: Company Information..... 46 companies named in Section 1 (and 1 holding company) are alphabetically arranged: Divider Card 2 carries an index. Information comprises company address and, where available, directorate, details of history and present-day structure, number of employees, financial details, domestic and foreign subsidiaries, details of ownership, manufacturing activities etc.	97
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Note: the following abbreviations are used in Section 1.

P = Process F = Feedstock L = Licensor C = Contractor
 — = None . . . = No details stated/Not available

NOTES

ABS Resins

Empirical formula: No simple formula

Synonyms: Acrylonitrile-Butadiene-Styrene resins.

Translation: French — Resinas ABS; German — ABS Kunstharze; Italian — Resina ABS; Spanish — Resinas ABS.

Description: The commercial resins are usually:— 1) a mixture of styrene - acrylonitrile copolymer with acrylonitrile butadiene rubber. 2) a terpolymer of styrene, butadiene, and acrylonitrile. ABS resins offer a good balance of impact, tensile strength, hardness and modulus of elasticity in the range 40° to 107°C. They are non-staining and have a high gloss, high chemical resistance, and low specific gravity.

Derivation: Can be made by mechanical or latex blending of styrene-acrylonitrile resins with butadiene acrylonitrile rubbers or with graft polymer rubbers. Also by polymerisation of basic resins to form homogenous resins.

Grades: Over 70 grades available, including self-extinguishing, cold-forming, antistatic expandable, glass-reinforced, electroplating, low-gloss, and high blend grades.

Uses: The largest markets are for plastic pipe and fittings, automotive applications, large home appliances. Other uses include telephones, shoe heels, luggage, etc.

MARKET TRENDS

Figures in Metric Tons

Year	Production	Imports	Exports
	No details stated		See footnote for Trade Breakdown



CHEMICAL PLANT DATA

Company	Plant Location	Capacity Metric tons/yr.		Remarks
		Present	Planned	
Borg-Warner Chemicals	Amsterdam	70 000		Powder and granulated form. F — acrylonitrile, butadiene, styrene.
Dow Chemical (Nederland) BV	Terneuzen	52 000		Estimated capacity for ABS and SAN resins. F — acrylonitrile, butadiene, styrene.
DSM	South Limburg	40 000		Capacity for ABS and SAN resins. Extension of 10 000 tpa planned. Daicel process for semi-manufacture of SAN resins. F — acrylonitrile, butadiene, styrene.

TRADE BREAKDOWN

Figures in Metric Tons*

Imports from	1978	1979	Exports to	1978	1979
France	391	657	Brazil		8
United Kingdom	2 277	3 825	Canada		1
USA		5 912	France	18 864	18 771
			Hong Kong		907
			Norway	731	1 505
			South Africa	236	420
			Spain		263
			United Kingdom	6 686	8 079

*These figures are derived from the official trade statistics of the respective countries from which imports came and to which exports went, and are therefore only an approximate indication of the direction of trade in this product.

Acetic Acid

Empirical formula: CH₃COOH

Synonyms: Ethanoic acid, Methane carboxylic acid

Translation: French — Acide acétique; German — Essigsäure; Italian — Acido acetico; Spanish — Acido acético.

Description: Clear colourless liquid with a very pungent odour. Miscible with water, alcohol, glycerine and ether. Melting point: 16.1°C. Boiling point: 118.1°C. Specific gravity: 1.04.

Derivation: (a) From catalytic combination of methanol and carbon monoxide. (b) From oxidation of acetaldehyde in air at 70-80°C in the presence of manganous acetate. There are certain modifications of this process. The acetaldehyde is obtained industrially from ethylene oxidation (e.g. Wacker process), by oxidation of ethanol or by hydration of acetylene. (c) Liquid and vapour-phase catalytic oxidation of butane and other light hydrocarbons.

Grades: The pure acid (minimum 99.8%) is often referred to as glacial acetic acid. There are also many commercial and technical grades with lower acetic acid contents.

Uses: In the manufacture of vinyl acetate and acetic anhydride as well as acetate esters such as ethyl and butyl acetates. Much of the acetic anhydride is used in the production of cellulose acetate.

Hazards: Fire: Combustible liquid, flash point 43.3°C. Stability: Reacts vigorously with oxidising materials and violently with caustic potash and caustic soda. Compatibility: Highly corrosive to metals. Personnel: Vapour causes irritation of eyes and respiratory system. Liquid causes severe burning of skin.

MARKET TRENDS

Figures in Metric Tons

Year	Production	Imports	Exports
1971	No details stated	7 143	10 254
1972		6 200	6 054
1973		12 771	10 915
1974		11 773	7 734
1975		8 289	4 250
1976		6 394	14 748
1977		4 960	22 057
1978		4 375	29 592
1979		6 559	. . .
1980		5 443	. . .

Trade: as 100% acid.



CHEMICAL PLANT DATA

Company	Plant Location	Capacity Metric tons/yr.		Remarks
		Present	Planned	
Akzo Zout Chemie BV	Europoort	100 000		A substantial part of this production is used captively. P — oxidation; F — butane; L — Celanese; C — Akzo/Badger.

TRADE BREAKDOWN

Figures in Metric Tons

Imports from	1979	%	1980	%	Exports
Belgium	3 233	49	2 792	51	No details stated
Federal Republic of Germany	1 519	23	1 598	29	
France			49	1	
German Democratic Republic	663	10	843	15	
Italy			63	1	
United Kingdom	1 123	17			
Others	21	—	98	2	

Acetone

Empirical formula: CH₃COCH₃

Synonyms: Dimethyl ketone, 2-propanone

Translation: French — Acétone; German — Aceton; Italian — Acetone; Spanish — Acetona.

Description: Colourless volatile and highly inflammable liquid with a characteristic odour. Miscible with water and most organic solvents. Melting point: -95°C. Boiling point: 56.5°C. Specific gravity: 0.792.

Derivation: From a) catalytic oxidation of isopropyl alcohol, b) oxidation of cumene, c) vapour-phase oxidation of butane.

Grades: Pure and various commercial and technical grades.

Uses: As an intermediate for many chemical processes, e.g. in the manufacture of methyl isobutyl ketone, methyl methacrylate, Bis-phenol A and other chemicals. Also as a solvent for lacquers, cellulose acetate, vinyl resins, acetylene, gums, chlorophyll etc. Much used as a solvent in the plastics and paint industries.

Hazards: Fire: Highly inflammable liquid, flash point - 9.4°C. If water is used in fire-fighting, large quantities must be applied to prevent re-ignition; a 4% acetone/96% water solution has a flash point as low as 54°C. Compatibility: Will dissolve rubber and many plastics. Personnel: Vapour toxic.

MARKET TRENDS

Figures in Metric Tons

Year	Production	Imports	Exports
1971	No details stated	34 339	29 872
1972		38 140	34 600
1973		34 182	53 921
1974		30 784	61 726
1975		23 364	34 640
1976		28 044	41 146
1977		22 181	60 922
1978		17 663	64 875
1979		32 445	60 104
1980		43 814	56 405



CHEMICAL PLANT DATA

Company	Plant Location	Capacity Metric tons/yr.		Remarks
		Present	Planned	
Shell Nederland Chemie BV	Pernis	140 000		Estimated capacity. P — oxidation; F — isopropanol; L — Hibernia/Shell.

TRADE BREAKDOWN

Figures in Metric Tons

Imports from	1979	%	1980	%	Exports to	1979	%	1980	%
Belgium	444	1	3 500	6	Belgium	4 050	7	4 967	9
Brazil			2 809	5	Federal Republic of Germany	17 293	29	17 533	31
Bulgaria	524	2			France			2 734	5
Canada	437	1			Italy	840	1	1 025	2
Federal Republic of Germany	16 412	51	19 697	35	United Kingdom	3 952	7	1 338	2
France			166	—					
German Democratic Republic	67	—	158	—					
Italy	594	2	758	1					
Spain	1 003	3							
United Kingdom	7 730	24	3 132	6					
USA	5 208	16	13 194	24					
USSR			400	1					
Others	26	—	11 880	21	Others	33 969	57	28 808	51

Acetylene

Empirical formula: CH₃CH

Synonyms: Ethyne, Ethine

Translation: French — Acétylène; German — Acetylen; Italian — Acetilene; Spanish — Acetileno.

Description: Colourless, highly inflammable gas, with garlic odour. Soluble in water and organic solvents. Melting point: -81.8°C (890mm). Boiling point: -84°C.

Derivation: a) By the action of water on calcium carbide, b) by the cracking of petroleum hydrocarbons with steam (Wulff process), c) by the partial oxidation of natural gas (BASF process).

Grades: Technical grades, about 98% acetylene. Much acetylene is compressed in steel cylinders.

Uses: Acetylene was an alternative feedstock to ethylene for production of various chemicals such as: acetaldehyde, vinyl chloride, vinyl acetate, but has now been largely replaced by it, because the latter is cheaper to produce. Acetylene also has important uses in welding technology and as a source of various grades of carbon black.

Hazards: Fire: Highly inflammable; very explosive when compressed or mixed with air in certain proportions. Stability: Forms explosive compounds with copper and silver. Personnel: Toxic when inhaled.

MARKET TRENDS

Figures in Metric Tons

Year	Production	Imports	Exports
1973		55	19
1974		46	22
1975		37	21
1976			
1977			
1978		See footnote	
1979			
1980			

Production figures not disclosed. Trade: 1973-75 refer to acetylene; from 1976 no separate figures are given for acetylene.



CHEMICAL PLANT DATA

Company	Plant Location	Capacity Metric tons/yr.		Remarks
		Present	Planned	
AGA Gas BV	Amsterdam			P — hydrolysis; F — calcium carbide. Acetylene for welding gas. P — cracking; F — naphtha; C — DSM.
DSM	South Limburg	2 000		

TRADE BREAKDOWN

Figures in Metric Tons

Imports	1975	%	1976-80	%	Exports	1975	%	1976-80	%
Federal Republic of Germany	8	22	No details stated		Federal Republic of Germany	7	33	No details stated	
Italy	22	59			France	2	10		
USA	1	3			Italy	10	48		
Others	6	16			Others	2	10		

Acrylic Resins

Empirical formula: (example) $(-\text{CH}_2\text{C}(\text{CH}_3)(\text{COOCH}_3)-)_n$

Synonyms: Polymethyl methacrylate, Acrylate resins

Translation: French — Résines Acryliques; German — Acrylharze, Italian — Resine Acriliche, Spanish — Resinas Acrilicas.

Description: Thermoplastic homo- or copolymer resins and emulsions ranging from soft sticky semi-fluids to hard solids of high clarity, transparency, shock resistance and dielectric strength, chemically stable at normal temperature and having very good resistance to weathering. Polymethacrylates are harder than polyacrylates and methyl esters form harder resins than ethyl or butyl esters. Polyacrylonitrile products are generally formed into fibres.

Derivation: By polymerisation of acrylic acid, methacrylic acid, and their esters, or acrylonitrile.

Uses: Aircraft canopies, automotive use, light fittings, lenses and other optical parts, advertising displays and many other uses which require a clear strong, and resistant material. Protective coating and paints, adhesives, plasticizers, textile and leather coatings and finishes.

MARKET TRENDS

Figures in Metric tons

Year	Production	Imports	Exports
1971	No details stated	8 057	17 937
1972		8 152	23 167
1973		10 520	28 624
1974		11 007	31 918
1975		9 952	28 607
1976		10 478	38 836
1977		12 778	...
1978		11 756	...
1979		12 983	...
1980		12 123	...

Trade: acrylic methacrylic and acrylmethacrylic polymers in form of liquid and paste.



CHEMICAL PLANT DATA

Company	Plant Location	Capacity Metric tons/yr.		Remarks
		Present	Planned	
Chemische Industrie Synres BV	Hook of Holland			Thermosetting acrylic resins and acrylic emulsions. P — emulsion polymerization; F — acrylates. Capacity for polymethyl methacrylate. P — polymerization; F — methyl methacrylate. Acrylic resins. F — acrylates.
ICI Holland BV	Rozenburg	5 000		
Kunsttharsfabriek Synthese BV	Bergen op Zoom			
Polyvinyl Chemie Holland BV	Waalwijk			Acrylic resins (Solid, solutions and emulsions). P — emulsion/solution polymerization; F — acrylates, methacrylates.

TRADE BREAKDOWN

Figures in Metric Tons

Imports from	1979	%	1980	%	Exports
Belgium	612	5	893	7	No details stated
Federal Republic of Germany	8 471	65	7 196	59	
Finland	13	—			
France	1 864	14	1 362	11	
Israel	16	—	50	—	
Italy	167	1	306	3	
Sweden	70	1	94	1	
United Kingdom	1 336	10	1 784	15	
USA	409	3	432	4	
Others	25	—	6	—	

Acrylonitrile

Empirical formula: CH₂=CHCN

Synonyms: Propane nitrile, Vinyl cyanide

Translation: French — Nitrile acrylique, Acrylonitrile; German — Acrylnitril, Akrylnitrol; Italian — Acrilonitrile; Spanish — Acrilonitrilo.

Description: Colourless liquid with a mild odour. Miscible with water and most organic solvents. Melting point: -82°C. Boiling point: 77.3-77.4°C. Specific gravity: 0.8004.

Derivation: The most widely used method is the catalytic ammoxidation of propylene with ammonia (Sohio process). Other methods include the reaction of acetylene and hydrogen cyanide or dehydration of ethylene cyanohydrin.

Grades: Pure (over 99%) and technical grade.

Uses: As a monomer for polymerising to polyacrylonitrile, used in the production of synthetic fibres and in the production of ABS and SAN copolymers as well as oil resistant nitrile rubbers (butadiene — acrylonitrile copolymers).

Hazards: Fire: inflammable liquid, flash point 0°C. Stability: Sensitive to light; very reactive: may polymerise explosively in the presence of strong bases. Personnel: Vapour and liquid toxic. When heated this material may evolve toxic cyanide gas, or explode, or both.

MARKET TRENDS

Figures in Metric Tons

Year	Production	Imports	Exports
1971	No details stated	31 226	37 309
1972		30 128	61 234
1973		47 580	81 356
1974		45 354	65 201
1975		36 811	50 925
1976		35 953	60 440
1977		28 340	60 380
1978		29 850	65 715
1979		31 767	60 926
1980		27 734	90 703



CHEMICAL PLANT DATA

Company	Plant Location	Capacity Metric tons/yr.		Remarks
		Present	Planned	
DSM	South Limburg	150 000		P — ammoxidation; F — propylene, ammonia; L — Sohio; C — Badger.

TRADE BREAKDOWN

Figures in Metric Tons

Imports from	1979	%	1980	%	Exports to	1979	%	1980	%
Austria	1 486	5	2 716	10	Belgium	12 156	20	7 498	8
Belgium	777	2	4 145	15	Federal Republic of Germany	1 891	3	4 489	5
Brazil			798	3	France	27 256	45	24 195	27
Bulgaria					Italy	1 137	2	4 207	5
Federal Republic of Germany	6 364	20	3 192	12	United Kingdom	2 393	4	6 950	8
France	3 158	10	2 861	10	Others	16 093	26	43 364	48
Iran	1 550	5							
Italy	206	1							
United Kingdom	2 281	7	1 292	5					
USA	15 204	48	12 729	46					
USSR	740	2							

Aluminium Sulphate

Empirical formula: a): $\text{Al}_2(\text{SO}_4)_3$
b): the hydrate is $\text{Al}_2(\text{SO}_4)_3 \cdot 18\text{H}_2\text{O}$

Synonyms: Alum (e.g. pearl alum, pickle alum, cake alum, etc.).

Translation: French — Sulfate d'aluminium; German — Aluminium-sulfat; Italian — Solfato di alluminio; Spanish — Sulfato de aluminio.

Description: White crystals, soluble in water (sweet taste); insoluble in alcohol. Specific gravity — (a): 2.71; (b) the hydrate; 1.62. Melting point — (a) decomposes at 770°C ; (b) the hydrate, at 86.5°C .

Derivation: a) from bauxite, alumina hydrate or kaolin by treatment with sulphuric acid; insoluble silicic acid removed by filtration, and the sulphate is then crystallised; b) from waste coal shale and sulphuric acid.

Grades: Iron free and ferric grades: solid (15 — 17% Al_2O_3), liquid (8% Al_2O_3).

Uses: Wide variety of uses, e.g. for sizing of paper, alums, lakes in pigments industry, mordant for dyes, water-proofing materials, clarifying agent for fats and oils, ingredient of lubricating compositions, deodorizers and decolorizers, precipitating agent in sewage treatment, used in food additives.

MARKET TRENDS

Figures in Metric Tons

Year	Production	Imports	Exports
1971	No details stated	3 277	23 668
1972		3 525	14 845
1973		3 519	15 065
1974		4 344	22 456
1975		3 044	15 656
1976		2 919	19 795
1977		9 425	31 128
1978		10 719	26 054
1979		12 048	29 554
1980		12 605	25 554

Trade: 1971-76 exclude trade with Belgium/Luxembourg.



CHEMICAL PLANT DATA

Company	Plant Location	Capacity Metric tons/yr.		Remarks
		Present	Planned	
Rhône-Poulenc Chimische Fabrieken BV	Sas van Gent	80 000		17-18% Al_2O_3 grade. P — digestion; F — alumina trihydrate, sulphuric acid.

TRADE BREAKDOWN

Figures in Metric Tons

Imports from	1979	%	1980	%	Exports to	1979	%	1980	%
Belgium	7 409	61	7 955	63	Belgium	18 188	62	18 118	71
Federal Republic of Germany	1 468	12	1 722	14	Bangladesh	1 202	4	898	4
Hungary	1 575	13	1 312	10	Federal Republic of Germany	1 988	7	1 047	4
Sweden	1 563	13	1 585	13	France	4 431	15	4 631	18
					Gabon	448	2		
					Ivory Coast			100	—
					Madagascar	950	3	350	1
					Nigeria	575	2	259	1
					United Kingdom	1 497	5		
Others	33	—	31	—	Others	275	1	151	1

Ammonia

Empirical formula: NH₃

Translation: French — Ammoniac; German — Ammoniak; Italian — Ammoniaca; Spanish — Ammoniaco.

Description: Colourless gas, with characteristic pungent odour; lighter than air. Easily liquefied by pressure. Very soluble in water. Freezing point (of liquid): -77.7°C. Boiling point: -33.5°C. Specific gravity: 0.77 (at 0°C).

Derivation: Obtained on commercial scale by direct combination of nitrogen and hydrogen at high temperature and pressure in presence of catalyst (Haber process; with various modifications). The hydrogen is usually produced by steam reforming of natural gas or naphtha, or by gasification and partial oxidation of coal and heavy oil fractions.

Grades: Commercial grades contain about 90.5% ammonia. Available in compressed liquid form in steel cylinders. The term "ammonia" is also used for ammonium hydroxide, i.e. solutions of ammonia in water.

Uses: Much of the ammonia produced industrially is used in the manufacture of fertilizers, either directly as liquid ammonia or in solutions, or in derived products such as ammonium salts and urea. Other chemical uses of ammonia are in the production of nitric acid, hydrazine, acrylonitrile and other nitrogenous organic compounds. Liquid ammonia is also used as a refrigerant and solvent.

Hazards: Personnel: Gas extremely irritating; liquid causes burns.

MARKET TRENDS

Figures in Metric Tons

Year	Production	Imports	Exports
1971	1 550 000	1 592	215 810
1972	2 033 000	14	291 717
1973	2 165 000	12 552	268 375
1974	2 066 000	3 028	411 213
1975	1 908 000	4 718	453 507
1976	1 951 000	2 461	351 295
1977	2 166 000	1 007	715 664
1978	2 115 000	100 625	895 136
1979	2 327 000	160 093	534 218
1980	...	156 177	605 575

Trade: excludes ammonia solution; 1971-76 exclude trade with Belgium/Luxembourg.



CHEMICAL PLANT DATA

Company	Plant Location	Capacity		Remarks
		Present	Planned	
Ammoniak Unie BV	Pernis	360 000		P — steam reforming; F — natural gas; L — Kellogg; C — Kellogg.
Esso Chemie BV	Rozenburg	500 000		P — steam reforming; F — natural gas; L — HT; C — Braun.
Nederlandse Stikstof Maatschappij NV	Sluiskil	340 000		P — steam reforming; F — natural gas; L — Braun/Montedison; C — Braun.
UKF	Sluiskil	360 000		P — steam reforming; F — natural gas; L — Braun; C — Braun.
	Geleen	450 000		P — steam reforming; F — natural gas; L — Bechtel; C — Bechtel.
	Geleen	300 000		Several units. P — steam reforming; F — natural gas.
	IJmuiden	350 000		P — steam reforming; F — natural gas; L — Kellogg; C — Kellogg.
UKF/Sté Carbochimique, (Belgium)	Geleen		450 000	Production of ammonia planned for 1984. L — Kellogg; C — Kellogg Continental.

Continued —

TRADE BREAKDOWN

Figures in Metric Tons

Imports from	1979	%	1980	%	Exports to	1979	%	1980	%
Belgium	7 340	5	1 066	1	Algeria	5 000	1		
Federal Republic of Germany	913	1			Belgium	339 656	65	348 076	56
France	232	—			Denmark	16 698	3	21 284	3
United Kingdom	24 037	15	6 505	4	Federal Republic of Germany	13 455	3	67 854	11
USA	4 992	3			Finland	6 697	1		
USSR	114 548	72			France	54 622	10	46 730	8
Venezuela	8 031	5			Greece	10 033	2		
					India			10 520	2
					Irish Republic	19 371	4	8 410	1
					Spain			33 923	6
					United Kingdom	51 386	10	46 164	7
					USA			3 980	1
Others			148 606	95	Others	8 598	2	29 154	5

Ammonium Nitrate

Empirical formula: NH_4NO_3

Translation: French — Nitrate d'ammoniaque; German — Ammoniumnitrat; Italian — Nitrato di ammonio; Spanish — Nitrato de amonio.

Description: Colourless crystalline powder, soluble in water, alcohol, and acetone. Explosive, but does not detonate readily. Specific gravity: 1.725, Melting point: 169.6°C ., decomposes at 210°C .

Derivation: From action of ammonia vapour on nitric acid.

Uses: Fertilizers, explosives, fireworks and pyrotechnics, component of insecticides and herbicides, refrigerating mixtures, oxidising agent for rocket propellants, nutrient for anti-biotics and yeast. Source of nitrous oxide. Ammonium nitrate may be mixed with limestone to produce the fertilizer calcium ammonium nitrate.

MARKET TRENDS

Figures in Metric Tons

Year	Production	Imports	Exports
1971	...	46	2 559
1972	...	16	5 013
1973	...	24	19
1974	...	11	5
1975	...	7	1
1976	436 902	<1	<1
1977	394 767	82	7 715
1978	423 620	38	39 583
1979	...	38	84 180
1980	...	110	86 490

Production: refers to fertilizer year ending in the year stated.
Trade: ammonium nitrate in tons N; 1971-76 exclude trade with Belgium/Luxembourg.

CHEMICAL PLANT DATA

Company	Plant Location	Capacity Metric tons/yr.		Remarks
		Present	Planned	
Esso Chemie BV	Rozenburg	500 000		Capacity for calcium ammonium nitrate. Urea-ammonium nitrate fertilizer capacity is 250 000 tpa. P — neutralization; F — ammonia, nitric acid; L — Uhde; C — Fluor.
Nederlandse Stikstof Maatschappij NV	Sluiskil	400 000		Ammonium nitrate solutions and prills (22%, 26% and 27%N). P — neutralization; F — ammonia, nitric acid; L — Montedison/NSM; C — NSM.
	Sluiskil	480 000		Ammonium nitrate solution and prills (26% and 33.5%N). P — neutralization; F — ammonia, nitric acid; L — Montedison/NSM; C — Tecnimont.
UKF	Geleen	700 000		Capacity for calcium ammonium nitrate. P — neutralization; F — ammonia, nitric acid; L — DSM; C — DSM.
	IJmuiden	560 000		Capacity for calcium ammonium nitrate. P — neutralization; F — ammonia, nitric acid.
Windmill Holland BV	Vlaardingen	120 000		Ammonium nitrate solution. P — neutralization; F — ammonia, nitric acid; L — Fisons.

TRADE BREAKDOWN

Figures in Metric Tons

Imports from	1979	%	1980	%	Exports to	1979	%	1980	%
Belgium			97	88	Algeria			32 534	38
EEC	38	100			Canary Islands			233	—
					China	3 518	4		
					Egypt	22 945	27		
					Federal Republic of Germany	108	—	229	—
					France	29 174	35	33 046	38
					Morocco			2 590	3
					Peru	4 730	6		
					Sweden	3 136	4	3 603	4
					Tunisia	7 857	9	6 538	8
					United Kingdom	11 720	14	7 716	9
Others			13	12	Others	992	1		

