

Production plants of liquid and gaseous large volume inorganic chemicals in Germany (UBA 1/2000)

Product	Produktion capacity	Production process	Manufacturer
NH₃	Local authority: 330 kt/a ⁽³⁾	H ₂ from heavy oil gasification, Haber - Bosch	Ruhr Oel GmbH, Gelsenkirchen
	BAT-Note ('96) : 1250 t/d	H ₂ from natural gas reforming, Haber - Bosch	BASF, Ludwigshafen
	BAT-Note ('96) : 1200 kt/a / 1360 t/d	H ₂ from heavy oil gasification, Haber - Bosch	Hydro Agri, Brunsbüttel
	BAT-Note ('96): 1900 t/d	H ₂ from natural gas reforming, Haber - Bosch	EC Erdölchemie Köln
	Local authority: 300 kt/a (3)	H ₂ from natural gas reforming, Haber - Bosch	PCK Schwedt
BAT-Note ('96): 900 t/d		SKW Stickstoffwerke Piesteritz, Lutherstadt Wittenberg	
BAT-Note ('96): 450 t/d			
PCK: 180 kt/a			
BAT-Note ('96): 2 x 1650 t/d			
HF	Bayer: 42 kt/a	from CaF ₂ +H ₂ SO ₄	Bayer, Leverkusen
	Honeywell: 12 kt/a	from CaF ₂ +H ₂ SO ₄	Honeywell, Specially Chemicals, Seelze
	Fluorchemie: 12 kt/a	from CaF ₂ +H ₂ SO ₄	Fluorchemie Dohna GmbH, Dohna ⁽⁷⁾
	Fluorchemie: 12 kt/a	from CaF ₂ +H ₂ SO ₄	Fluorchemie Stulln GmbH, Stulln ⁽⁷⁾
Local authority: 13 kt/a		Solvay, Fluor und Derivate GmbH, Bad Wimpfen	
Solvay: ca. 35 kt/a	from CaF ₂ +H ₂ SO ₄		
HNO₃ ⁽⁸⁾	Local authority: 315 kt/a	Combustion of ammonia	EC Erdölchemie Köln
	Local authority: 100 kt/a	Combustion of ammonia	Compo GmbH & Co KG Werk, Krefeld
	Local authority: 150 kt/a	Combustion of ammonia, part of a anilin - production - plant	Böhlen
	Local authority: 96 kt/a	Combustion of ammonia	BASF, Ludwigshafen
	SRI: 245 kt/a	Combustion of ammonia	Hydro Agri GmbH & Co KG, Rostock
	SKW: 165 kt/a	Combustion of ammonia	SKW Stickstoffwerke Piesteritz, Lutherstadt Wittenberg
	PCK: 337 kt/a ⁽⁹⁾	Combustion of ammonia	PCK, Raffinerie GmbH, Schwedt

<p>H₂SO₄</p> <p>Local authority: 1380 kt/a Local authority: 730 kt/a ⁽¹⁾ Local authority: 360 kt/a ⁽¹⁾ Röhm: 352 kt/a</p> <p>Local authority: 350 kt/a ⁽¹⁾ Local authority: 337 kt/a Local authority: 300 kt/a ⁽⁴⁾ Local authority: 256 kt/a Local authority: 317 kt/a Röhm: 180 kt/a Industry: 160 kt/a Local authority: 120 kt/a ⁽⁴⁾ MIM 125 - 130 kt/a</p> <p>Local authority: 104 kt SO₃/a Goldschmidt: 65 kt/a Thyssen: 13 kt/a Local authority: 70 t/d Local authority: 55 kt/a ⁽¹⁾</p> <p>Berzelius: 55 kt/a ⁽¹⁰⁾ Grillo: 70 kt SO₂/a Local authority: 15 kt/a (in 1996) Local authority: 2,5 kt/a (in 1996) EON: 35 kt/a Bayer: 3 kt/a</p>		<p>Waste gas from copper ores</p> <p>Residual acids and salts from TiO₂ – production</p> <p>Sulfur compounds</p> <p>Recycling of Sulfuric acid from the methacryl acid ester – process</p> <p>Residual acids and salts from TiO₂ – production</p> <p>Sulfur burning and gases from power stations</p> <p>Zinc ores</p> <p>Sulfur burning</p> <p>Side product</p> <p>Pb/ Zn - ores</p> <p>Waste gas from a sinter plant</p> <p>Pyrit, Sulfur</p> <p>production from residual - H₂SO₄</p> <p>Combustion of liquid Sulfur</p> <p>Sulfuric acid plant in a coking plant (produced amount in 1997)</p> <p>SO₃ from Sulfur containing residuals and Sulfur burning</p> <p>Waste gas from lead production</p> <p>Recycling of sulfur containing residues</p> <p>Side product</p> <p>Side product</p> <p>Activated carbon process</p> <p>Activated carbon process</p>	<p>Norddeutsche Affinerie AG, Hamburg</p> <p>Sachtleben Duisburg</p> <p>Bayer Leverkusen</p> <p>Röhm GmbH, Worms</p> <p>Kerr Mc Gee, Uerdingen</p> <p>Grillo – Werke, Frankfurt</p> <p>Ruhr Zink Datteln</p> <p>DOMO CaproLeuna, Leuna</p> <p>BASF , Ludwigshafen</p> <p>Röhm - Hüls, Wesseling</p> <p>Metaleurop Weser Blei GmbH, Nordenham</p> <p>MIM Hüttenwerke Duisburg GmbH</p> <p>PVS Chemicals Germany GmbH, Kelheim (ehem. Südchemie AG)</p> <p>BASF , Ludwigshafen</p> <p>Th. Goldschmied AG, Mannheim</p> <p>Thyssen Stahl AG, Duisburg</p> <p>Oxeno, Marl</p> <p>Berzelius Stolberg GmbH</p> <p>Grillo - Werke AG, Duisburg</p> <p>Ruhrkohle Bergbau AG, Bottrop</p> <p>Ruhrkohle Bergbau AG, Gelsenkirchen</p> <p>EON Kraftwerke GmbH Arzberg</p> <p>Bayer Uerdingen</p>
--	--	--	---

COCl₂	Local authority: 92 kt/a no information	In connection with TDA- / TDI - Herstellung In connection with MDA- / MDI - Herstellung	Brunsbüttel Stade -Bützfleth Bayer, Leverkusen Bayer, Uerdingen
H₂	Local authority: 35 kt/a ⁽⁵⁾ Local authority: 40 kt/a ^{(3),(6)} Local authority: 43 kt/a ⁽⁴⁾ Local authority: 37 kt/a ⁽⁵⁾ New plant since 1997	Steamreformer with Low - NO _x - burner Heavy oil gasification Natural and heating gas reforming Steamcracker Steamcracker	Degussa - Hüls, Marl Ruhr Oel, Gelsenkirchen DEA Wesseling EC Dormagen BSL Olefinverbund, Böhlen
CO₂	Local authority: 689 kt/a	Side product from ammonia production	BASF, Ludwigshafen
CO	Local authority: 70 kt/a Local authority: 54 kt/a	Coal gasification Coal gasification	Bayer Uerdingen Bayer Leverkusen
H₂/CO - gas	Local authority: 215 kt/a Local authority: 480 kt/a Local authority: 108,8 kt/a Local authority: 366,6 kt/a Local authority: 350 kt/a Local authority: 235 kt/a ⁽⁶⁾ Local authority: 1055 kt/a ^{(3),(6)} Local authority: 50 kt/a Local authority: 55 Mio Nm ³ /a CO 120 Mio Nm ³ /a H ₂ Local authority: 60 000 Nm ³ /h Local authority: 28,5 kt/a 2600 Nm ³ /h CO 8200 Nm ³ /h H ₂	Heavy oil gasification Heavy oil gasification part of a methanol - plant natural gas, part of an acetylene plant Heavy and residual oil gasification Heavy and waste oil gasification Heavy oil gasification partial oxidation of natural gas Natural gas steam reforming Solid bed pressure gasification Natural gas steam reforming	Ruhrchemie Oberhausen BASF, Ludwigshafen BASF, Ludwigshafen BASF, Ludwigshafen DEA Wesseling Oxeno Marl Ruhr Oel Gelsenkirchen Air Liquide, Cuxhaven Bayer, Brunsbüttel SVZ Schwarze Pumpe BASF , Schwarzheide

Legend

- 1) Calculated from SO_3 capacity.
- 2) Raw gas. Used for methanol -, ammonia - and/or hydrogen production (further products: CO_2 and soot pellets).
- 3) Max.-capacity from the raw gas. Further up to 300.000 t/a methanol. Product depend on situation at the market.
- 4) Information not exactly.
- 5) Sum calculated from 2 plants (Cracker) with both 18.500 ja to.
- 6) Calculated from m^3/h to t/a for CO and H_2 in a proportion of 1:1.
- 7) Fluorchemie Dohna and Stulln GmbH are connected manufacturers belonging to a single mother company.
- 8) If not described differently - related to 100 % HNO_3 .
- 9) 56 % HNO_3 .
- 10) 96 % H_2SO_4 .

Source

Local authority: Information of the local authorities.
Name of the manufacturer: Information of the company himself.
SRI: 1996/97 Directory of chemical products - Europe, SRI Consulting.