



China Ethylene Oxide (EO) Industry Chain Report, 2010-2011

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This report

- ◆ **Analyzes the EO industry and elaborates on the downstream intensive processing fields.**
- ◆ **Focuses on the EO Market .**
- ◆ **Highlights the operation and development of major enterprises in EO industry in china.**

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Abstract

Ethylene oxide (EO) is an organic chemical material ranking only second to polyethylene (PE) and polyvinyl chloride (PVC) among ethylene industrial derivatives, with extensive applications in the production of ethylene glycol (EG), AEO surfactant, polyether for polycarboxylate water reducer, and ethanol amine. In particular, EG is usually produced with EO. In 2010, EO/EG joint production facilities accounted for 65.3% of the EO equivalent capacity, with the rest going to commodity EO.

The end product of EO/EG joint production facilities is EG. Although the EG self-sufficiency rate in China is relatively low, the import price is very low due to the worldwide EG overcapacity, consequently, the price of home-made EG is slumping, and domestic EG industry can only make meager profits. By contrast, the commodity EO industry enjoys a higher profitability due to a serious supply crunch. China's commodity EO supply-demand gap reached 500,000 tons in 2010, and will continue to widen in the

next few years due to little capacity growth during 2010-2013, therefore, the commodity EO industry will still be highly profitable.

Ranked by the equivalent EO capacity, Zhenhai Refining & Chemical Company was No.1 in 2010, accounting for 650,000 tons or 18.2% of the total capacity; the second place went to Shanghai Petrochemical Company Limited, accounting for 14.8% of the total capacity, followed by Yangzi Petrochemical Company Limited, CNOOC and Shell Petrochemicals Company Limited and BASF-YPC Company Limited. When ranked by the capacity of commodity EO, top three companies were Yangzi Petrochemical Company Limited, Shanghai Petrochemical Company Limited and China Sanjiang Fine Chemicals Company Limited.

Particularly, China Sanjiang Fine Chemicals Company Limited is not only China's largest privately-owned EO producer, but also the largest AEO surfactant producer.

Top 10 EO Manufacturers by Equivalent Capacity, 2010

Manufacturers	Equivalent EO Capacity (1,000 tons/year)	Proportion	Commodity EO Capacity (1,000 tons/year)	Proportion	Ranking by Commodity EO Capacity
Sinopec Zhenhai Refining & Chemical Company (ZRCC)	650	18.2%	100	8.1%	5
Sinopec Shanghai Petrochemical Company Limited (SPC)	529	14.8%	136	11.0%	2
Sinopec Yangzi Petrochemical Company Limited (SPC)	340	9.5%	202	16.3%	1
CNOOC and Shell Petrochemicals Company Limited (CSPC)	256	7.2%	40	3.2%	8
Jilin Petrochemical	245	6.8%	110	8.9%	4
BASF-YPC Company Limited	240	6.7%	-	-	
CNGC Liaoning Huajin Chemical Industry Group Co. LTD	240	6.7%	100	8.1%	5
CNGC Liaoning North Chemical	200	5.6%	100	8.1%	5
Liaoyang Petrochemical	160	4.5%	45	3.6%	7
China Sanjiang Fine Chemicals Company Limited	130	3.6%	130	10.5%	3
Total	2990	83.6%	963	77.66%	

Source: ResearchInChina

This report probes into the EO industry and elaborates on the downstream intensive processing fields, including the supply, demand and competition among enterprises in such fields. Take AEO surfactant and polycarboxylate water reducer for example:

1. AEO Surfactant:

AEO surfactant is a nonionic surfactant, mainly used in household and industrial detergents. In 2010, the output of AEO surfactant in China approximated 300,000 tons, and its import volume reached roughly 140,000 tons. In particular, China Sanjiang Fine Chemicals Company Limited and Liaoning Huaxing Group Chemical Corporation, the two largest enterprises in China by AEO capacity, contributed 12.9% and 12.3% of the total output in 2009 respectively,

followed by Sasol (China) Chemical, and enterprises subordinate to CNPC and Sinopec. In 2010, the demand for AEO surfactant approximated 439,500 tons in China, with the market scale close to RMB6 billion. And it is expected that the AEO surfactant demand of China will hit 530,000 tons in 2014.

2. Polycarboxylate Water Reducer

Polycarboxylate water reducer is of high and sustained water reducing effect, which is mainly applied for premixed concrete. Polycarboxylate is principally composed of polyether monomer which is prepared through addition reaction of EO. In 2010, China's output of polycarboxylate water reducer approximated 1.5 million tons, up 18% year-on-year. In addition, the demand for polyether monomer resulted from polycarboxylate water reducer production reached 220,000 tons in 2010. Driven by the growing application of premixed concrete and polycarboxylate water reducer as well as the booming high-speed rail industry, both polycarboxylate water reducer and polyether will grow rapidly, at an estimated annual compound growth rate of 25% in 2010-2014.

In China, there are five large enterprises engaged in the production of polyether monomer for polycarboxylate water reducer, namely Liaoning Oxiranchem, Inc., Honam Petrochemical Corp, Liaoning Kelong Fine Chemicals Co., Ltd., Shanghai Taijie Chemical Co., Ltd. and Zhejiang Huangma Chemical Industry Group Co., Ltd. Key polycarboxylate water reducer producers include Jiangsu Bote New Materials Co., Ltd, Fuclear (Suzhou), Zhejiang Wulong Chemical Industrial Stock Co., Ltd. and Xiamen Academy of Building Research Group Co., Ltd., with polycarboxylate capacities of 150,000 tons, 130,000 tons, 100,000 tons and 80,000 tons respectively. As the development of polycarboxylate water reducer hasn't been long in China, these polycarboxylate water reducer enterprises are generally in their early stage of development, and haven't been able to expand their business beyond their respective provinces.

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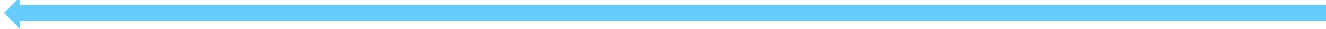
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