Mitsubishi Chemical Polytetramethylene ether glycol Technology

Polytetramethylene ether glycol: (PTMEG)
PTMEG is manufactured by tetrahydrofuran (THF) polymerization. PTMEG is a key ingredient in the production of a variety of elastomeric products, a major component of spandex fibers, and is also used in thermoplastic polyurethane (TPU) and thermoplastic elastomer (TPEE).

Introduction of Mitsubishi PTMEG Technology
For more than 30 years, Mitsubishi Chemical (MCC) has run PTMEG business (Production and Sales). MCC currently runs 10,000 ton/year batch process ('80) and 25,000 ton/year continuous process ('01) in Japan, and has started operation of 25,000 ton/year continuous plant in China in 2009. MCC has developed its own State-of-Art technology and offers continuous process technology with high performance catalyst which is able to manufacture high quality products.

Feature of Mitsubishi PTMEG process
Features of Mitsubishi PTMEG process are as follows;
(1) Stable and high product quality (uncolored and low impurity), which is highly valued from leading manufacturer of spandex fibers
(2) Using original catalysts
(3) Cost competitive process
(4) Green process
/Low waste and low environmental load

Chemistry of this process

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\text{THF} \xrightarrow{\text{Ac}_2\text{O} (\star)} \text{PTMEG diester} \xrightarrow{\text{Methanol}} \text{PTMEG}
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(\(*\)\(\text{Ac}_2\text{O} : \text{acetic anhydride}\)
World PTMEG Plant Capacity
In 2010, world PTMEG production capacity is 666,000 ton/year. Major area is Asia, and the ratio of China is expected to grow even further.