

CHARLOTTE HICKS

charlotte.hicks7979@gmail.com, www.linkedin.com/in/charlottebhicks

Propylene Glycol

Propylene glycol is a three carbon molecule produced from propylene oxide which is derived from natural gas. Shale gas drilling (fracking) has been a market changer for the natural gas industry, in that shale gas is richer in ethane (building block for ethylene) rather than propane (the building block for propylene). This, along with other factors, has made propylene supplies volatile and it tempting manufactures to switch to cheaper ethylene based materials when possible.

Downstream materials of Propylene Glycol include:

1. Polymers
 - a. Polyester resins (unsaturated, UPRs)
 - i. Surface coatings
 - ii. Glass fiber reinforced resins
 - iii. Primarily used in construction industry
 - b. Thermoset Plastics
 - c. Polyurethanes (**co-product tech grade HCl**)
2. Food/Pharmaceuticals
 - a. Humectant
 - b. Preservative
 - c. Vaporizers
3. Other:
 - a. Solvent
 - b. E-cigarettes (**potential market disrupter**)
 - c. Antifreeze/Deicing Fluids