

Information Sheet

SUBJECT: DIFFERENCE BETWEEN POLYETHER & POLYESTER

POLYETHER: Conventional & Polymer Polyol (Grafted) Products:

- Ether foams have excellent memory. When compressed, ethers return to the original shape.
- Ether die-cuts cleanly and, because of good memory, recovers with crisp, clean edges.
- Ethers are more hydrolytically stable, therefore, will not break down when subjected to heat and moisture.
- Conventional ethers are generally less expensive than grafted polyol ethers and polyesters.
- From a fabricating standpoint, ether buns are much larger; therefore, produce better yields with less handling.
- Ether densities range from < 1.0 pcf (pounds per cubic foot) through & including 6.0 pcf.
- Ether IFD (indent force deflection), an indication of firmness, can range from 15 through 200 lbs./50 in.²
- By varying the combination of density and IFD, a broad range of products can be developed.
- Ethers are more resistant to acids and bases.
- Grafted products have the strength and firmness of esters with the positive characteristics of ethers.

POLYESTER:

- Esters can be produced in either clickable (i.e., they die cut easily and cleanly) or non-clickable (i.e., the edges could crimp or seal when cut) formulations.
- Esters are available in densities from 1.5 pcf through 6.0 pcf.
- Esters have excellent physical properties of tensile, tear and elongation, therefore, can withstand stretching and abrasive handling.
- Esters swell less than ethers when subject to hydrocarbons, alcohols, etc..
- Esters have a more uniform controlled cell structure.
- Esters can be thermally or chemically reticulated for value-added properties for filtration.

Note: Flexible polyurethane foam is tested in accordance with ASTM D 3574.

