Homework 2

Plastics in a Circular Economy

This week we went through types of plastics that impact the circular economy. For the following plastics:

i) indicate two (if possible) synthetic schemes by indicating the type of polymerization and drawing out the reaction

ii) two methods to process the polymer by showing a sketch of the process and a short description

iii) some common additives for this plastic, and

iv) some common uses for this plastic (show an image if you can).

v) is the plastic recyclable? is it recycled?

1. Polystyrene (PS), HIPS, PS Foam.
2. Polyethylene Terephthalate (PET, PETE).
3. High Density Polyethylene.
4. Styrene Butadiene Rubber (SBR).
5. Polyhydroxybutyrate (PHB), Polyhydroxyalkanoates (PHA)