

Functionalization of polypropylene by grafting with itaconic acid

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Grafting of polypropylene was carried out in both boiling xylene and decalin as solvent medium with itaconic acid (2-methylenesuccinic acid) as functional polar monomer using 2,5-dimethyl-2,5-bis(tert-butylperoxy)hexane (Lupersol 101) as radical initiator. It was found that the temperature influenced the percentage of monomer grafted onto polypropylene and that the amount of monomer incorporated was practically constant after 5 min. The results also show that the amount of monomer incorporated is proportional to the initial monomer concentration used in the grafting reaction, although for higher initiator concentrations a reduction in the percentage of grafting was found.