CHAPTER IV

CONCLUSION AND SUGGESTION FOR FUTURE WORK

4.1 Conclusion

BAPD was synthesized by the reaction between allyl glycidyl ether and bisphenol-A and was characterized by ^{1}H NMR spectroscopy. It was then used as a crosslinking agent in the preparation of PU and PU/PS elastomers by employing one-shot process.

When BAPD was used as a crosslinking agent in the preparation of PU and PU/PS elastomers, the equivalent weight ratios of MDI:Polyol:BAPD employed were 2:1.8:0.2, 2:1.4:0.6, 2:1.0:1.0 and 2:0.6:1.4, the amount of styrene monomer employed were 5, 10, 15 and 20 wt% of PU. Dibutyltin dilaurate (0.02 wt% of BAPD) was used as a catalyst. MEKP-Co and BP were used as initiators at 1, 2 and 5 wt% of BAPD. The equivalent ratio of NCO/OH employed was 1.04. The best mechanical properties were obtained from the following formulations; MDI:Polyol:BAPD = 2:1.8:0.2 , 10 or 15 wt% of styrene monomer and 2 wt% of MEKP-Co.

4.2 Suggestion for Future Work

There are still many aspects that require further investigation. They should be as follows:

1. Variation of the equivalent weight ratio of NCO/OH.
2. Using of the other free radical initiators.
3. Studies of the reactions occurring during polymerization in details.