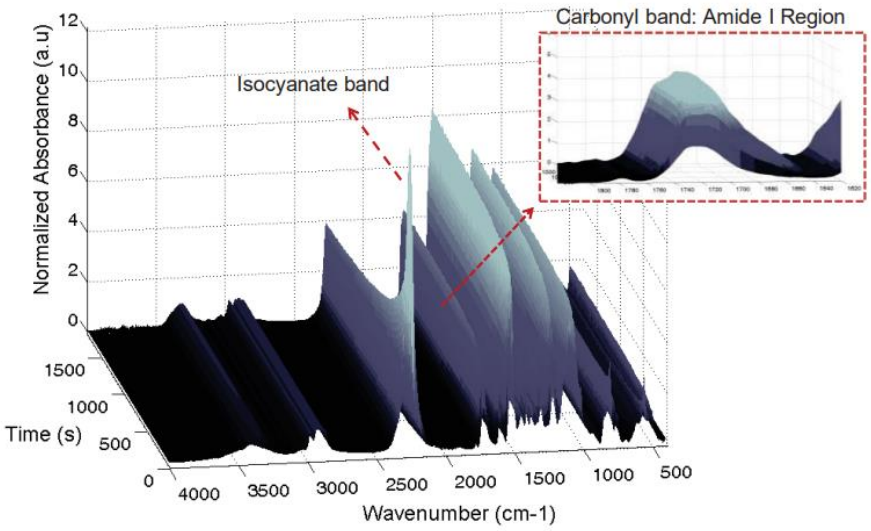
CellMat Technologies

FTIR SPECTROSCOPY

Following the reaction kinetics of reactive systems

FUNDAMENTALS OF THE TECHNIQUE

- UNIQUE APPROACH TO FOLLOW THE EVOLUTION OF THE FOAMING AND CROSS-LINKING REACTIONS WITH TIME.
- VALID FOR DIFFERENT POLYMERIC SYSTEMS: PUR, PUF, PIR, SILICONE, etc.
- KEY TOOL TO UNDERSTAND THE FINAL CELLULAR STRUCTURE AND PROPERTIES OF THE FOAMS.
- FUNDAMENTAL APPROACH TO OPTIMIZE POLYMERIC FORMULATIONS.

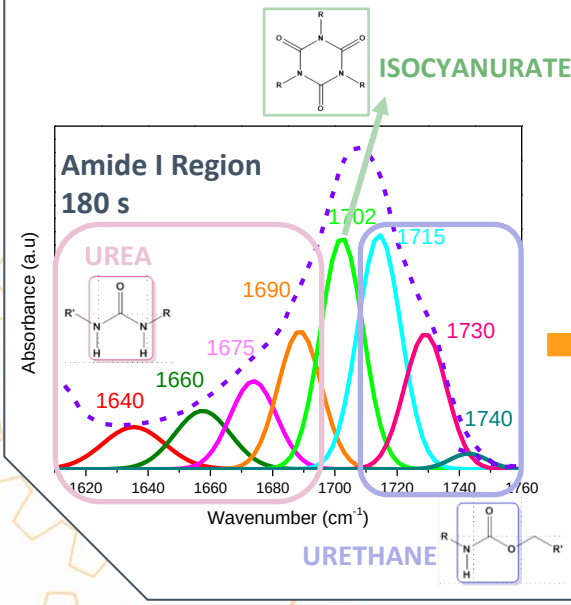


CASE STUDY

Evaluation of the blowing and gelling reactions of PIR foams produced with different isocyanates: #ISO1 and #ISO2

OBJECTIVE

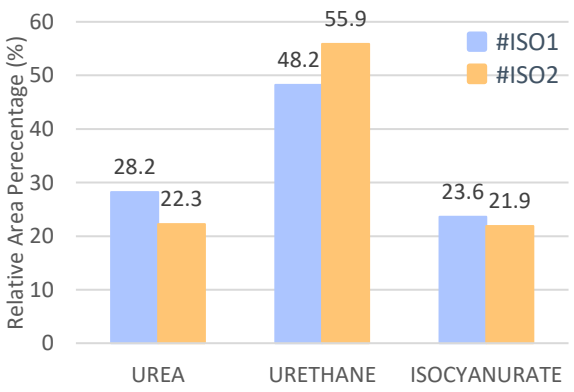
- To determine the evolution of the urea, urethane and isocyanurate products as a function of time.

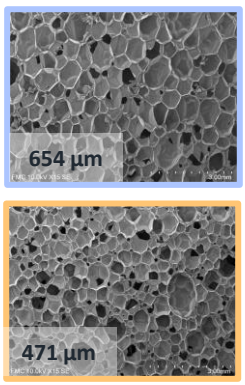


RESULTS

- The amount of urethane and therefore, the viscosity, is higher in the sample #ISO2.
- The nucleation mechanisms are increased, and the degeneration ones are reduced.
- Consequently, the cell size of the foam #ISO2 is lower than the cell size of the foam #ISO1.

RELATIVE AREA PERCENTAGE (180 s)





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