

Terms	Definitions
ADDITIVE	A material which does not take part in the chemical reaction but is included to alter the final product e.g. fillers, pigments, flame retardants etc.
CASTING	The filling of essentially open moulds with liquid polyurethane.
CATALYST	An ingredient in polyurethane systems which initiates a chemical reaction or increases the rate of chemical reaction.
CHAIN REACTION	Lengthening of the main chain or backbone of polymer molecules by end to end attachment.
COMPONENT	A separately metered stream of liquid which will be directly introduced into the mixing head.
CROSS LINKING	The formation of chemical links between the molecular chains.
CURE	A term which refers to the completeness of the chemical reaction.
CURING AGENT	A component that results in chemical activity between the components, with an increase in the rate of cure.
CYCLE TIME	A term most commonly used in situations where many items are being manufactured on an automatic or semi-automatic production line. It includes the time required for mould preparation, including release agent application, dispensing of components, reaction, cure and demould.
DEGRADATION	The deterioration of a substance caused by contact with its environment.
DEMOULD TIME	The time between dispensing the liquid components into the mould and removing the article being produced.

DEW POINT	The temperature at which a vapour begins to condense.
ELASTOMER	A flexible or semi-rigid rubber-like material not necessarily made from what is conventionally thought of as a rubber.
ELONGATION	The increase in length of a specimen at the instant before rupture occurs. Expressed as a percent of original length.
EXOTHERM	Heat generated by a chemical reaction.
FLAME RETARDANT	A substance which is added to a polymer formulation to reduce or retard its tendency to burn.
HARDNESS	The surface property relating to the resistance of indentation.
HYDROXYL GROUP	The combined oxygen and hydrogen radical (–OH) which forms the reactive group in polyols.
IMPACT RESISTANCE	Ability to withstand mechanical or physical blows without the loss of protective properties.
ISOCYANATE	The family name of chemical compounds having one or more NCO groups attached to the main chain.
MDI	An abbreviation for diphenylMethane Di Isocyanate.
MICROCELLULAR	An elastomer of cellular or foam structure.
MIL	One thousandth of an inch, 0.001 inch. A unit used to measure coating thickness.

MOULDING	The process of producing a finished article from a closed mould.
NDI	N aphthalene D i I socyanate.
NCO	N itrogen, C arbon, O xxygen. The chemical formula for an isocyanate group.
POLYESTER	Polymeric compound, with the reactive hydroxyl groups containing ester linkages.
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POLYMER	A high molecular weight compound, natural or synthetic, whose chemical structure can be represented by a repeated small unit.
POLYOL	A chemical compound with more than one reactive hydroxyl group attached to the molecule.
POST CURE	The period of cure after the product has been removed from the mould. In some cases, accelerated curing at elevated temperatures is used.
POT LIFE	The length of time after mixing together of the two components during which the polymer remains sufficiently liquid to be processed.
PREPOLYMER	A chemical intermediate manufactured by reacting all the isocyanate with part or all of the polyol.
PTMEG	P oly T etra M ethylene G lycol
PU	Abbreviation for Polyurethane

RIM	Reaction Injection Moulding. A process of injecting a reacting mixture of polyurethane into a mould.
SYSTEM	A rather ambiguous term used to describe almost any combination of mechanical parts or chemicals which have some relationship to each other. Often used to describe the supply of all chemical components needed to produce a polyurethane.
TDI	An abbreviation for Toluene Di Isocyanate.
THERMOSET	A polymer that irreversibly cures from a liquid state to a solid state.
THERMOPLASTIC	A polymer that turns to a liquid when heated and freezes to a solid state when cooled.
THIXOTROPIC	Having the property of decreasing viscosity with increasing shear stress. A coating is thixotropic if it thins with stirring or pumping but thickens back up when movement decreases.
VISCOSITY	A measure of the thickness of a liquid. The lower the number the thinner the liquid.
VOLATILE ORGANIC COMPONENTS (VOC)	Organic materials which evaporate at normal temperatures and pressures, organic materials which have vapour pressure greater than 0.1 mm Hg at one atmosphere.