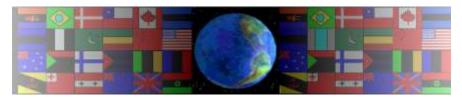# THERMOPLASTIC ELASTOMERS (TPE)
ALSO CALLED THERMOPLASTIC RUBBERS

V.Ryan © 2000 - 2011

On behalf of The World Association of Technology Teachers

W.A.T.T.

World Association of Technology Teachers

This exercise can be printed and used by teachers and students. It is recommended that you view the website (www.technologystudent.com) before attempting the design sheet .

SAMPLE THERMOPLASTIC ELASTOMERS (TPEs) - complete the table below.

NAME	PROPERTIES	PRACTICAL APPLICATIONS
ARNITEL	Can be machined and engineered in the same way as thermoplastics and has excellent mechanical properties (flexibility) associated with rubber	
HYTREL		Ideal for components requiring resistance to flex fatigue. It resists tearing, flex damage, creep and abrasion. It offers strength and stiffness, plus outstanding toughness especially whilst resisting hydrocarbons and many other fluids. Hytrel can be processed industrially using the methods including injection moulding, blow moulding, calendaring, rotational moulding, extrusion and casting.
KRATON	The Kraton family of polymers are versatile, combining high strength, properties of hardness, and low viscosity.	
STYROFLEX	Has outstanding resilience, toughness, high thermal stability and transparency. Styroflex thermoplastic elastomer, can be processed by extrusion and injection moulding.	
RITEFLEX		Has applications in the automotive industry, including body parts, shock absorbers, radiator grilles, bellows, and hoses, collars, and flexible couplings in machine and plant construction. Another area of application is the coating of steel components for the purpose of noise reduction.