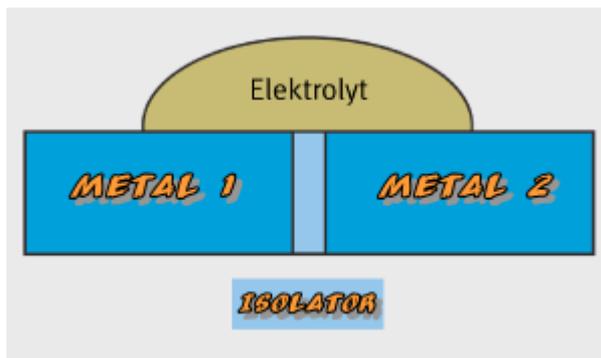


BENEFITS OF USING ADHESIVES

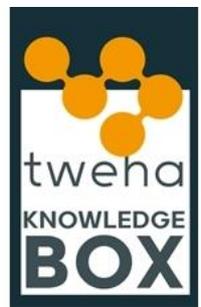
Why using adhesives to bond material things? There are currently several techniques to create a bond, such as welding, riveting, screwing, etc. The use of adhesives and glues as materials used to perform unions are in a phase of expansion and boom, because they include the following advantages and benefits compared to other joining methods:

- The adhesives materials allows joint substrates with different geometries, sizes and composition. With the adhesive we can joint glass, plastics, metals, ceramics ...
- The use of adhesives eliminates the corrosion associated with dissimilar metals joining with different galvanic potential, such as the joining of steel with aluminum.



- The use of adhesive as bonding material does not produce any deformation in the materials or substrates, eliminating metal grinding processes (grinding and putty), reducing the manufacturing cost and improving the aesthetics of the product.
- Do not produce any mechanical aggression to the substrate, avoiding any damage to the structure of the material.
- Great flexibility in the product design as well as an improvement in its aesthetics.
- Reduction of the product weight, in the case of traction vehicles (cars, ships, locomotives) weight reduction is directly linked to reducing energy consumption and pollutant emissions to the environment.
- Increasing the resistance to impact and fatigue resistance using elastic adhesive, increasing reliability and product life cycle.
- Homogeneous distribution of tensions throughout the union allowing the elimination of stress concentrations that can lead to the fracture of the union.
- Reduction of noise and vibration.
- Reduction in the number of components such as screws, nuts, washers, rivets, etc ... necessary for the union, reducing the manufacturing cost of the union.
- Sealing function and protection against corrosion.
- Special adhesives prepared to conduct electricity or electrical insulator, are usually used in the field of electronics.

On the other hand, there are a number of processes / products that would be impossible to manufacture without the use of adhesives, such as the tapes for masking process prior to



painting, repairing bicycle wheels, climate style window with noise and temperature insulation, placement of brackets on the teeth, tooth reconstruction...

TWEHA, 2020