

Application of Adhesives in Early Human Life

Detail Introduction :

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In human history, the application of adhesives has a history of thousands of years.

As early as 6,000 years ago, humans used clay and other mud to build earth-rock houses and other structures. Traces of adhesive can be seen on ancient Egyptian masks, coffins and other funeral objects, furniture, carvings in ancient Greece Thebes, ancient Roman arched cement aqueducts and other monuments or cultural relics.

From the "Old Testament," we know that there was a myth that Noah's Ark was repaired with asphalt. Perhaps the oldest adhesive in the world is asphalt. In 2700 BC, the candlesticks in the southern Iraq Ullah were made by bonding shells or gems to buildings with asphalt. In ancient Egypt, a mixture of ochre pigment and bone glue was used as a sealant for coffins.

Ancient Egypt began to use gum arabic, egg white, animal glue, rosin, etc., for bonding very early. In the archaeological discovery of the site with glue, the ancient city of Teen in northern Egypt has a relief of the lord Lekhannara and a sculpture glued together, as well as Egyptians who are making furniture.

Legend has it that the ancient Greek Daedalus and his son Icarus escaped from an island in a "flying machine" that they bonded together.

In the 9th century BC, the ancient Romans used pine tar and beeswax to seal the seams of ships, and animal glue, cheese, antlers, etc., were used to make adhesives for bonding wood products.

My country is one of the earliest countries in the world to apply adhesives.

Our country began to burn lime more than 4,000 years ago to cement earth and stone and build houses and bridges. In 1986, the golden mask with the head of a bronze figure excavated in Sanxingdui Sacrificial Site, Guanghan, Sichuan, was made of jujube red lacquer mixed with lime, which traces the time when Chinese people used adhesive back to the Xia and Shang dynasties. In the Shang Dynasty 3,500 years ago, my country began to use lacquer, the raw material of vegetable adhesive, to bond and decorate objects. In the Zhou Dynasty 3,000 years ago, animal glue was used as a caulking sealant for wooden boats in our country. In 200 BC, the coffin sealant made of glutinous rice paste in our country was combined with preservation and other measures so that when the coffin was unearthed more than 2,000 years later, the body not only did not rot but also the muscles and joints were still elastic, which caused a sensation in the world. When our country was far away in the Qin Dynasty, people used mortar mixed with glutinous rice and lime to bond the bricks of the Great Wall, making the Great Wall stand in the east of Asia and become a symbol of the ancient civilization.

the Chinese nation. In ancient China, bone glue was used to bond armour, bows, scabbards, etc. In so many ancient books in my country, there are detailed records on the manufacture and use of adhesives. Ancient chemistry monographs such as Wei Boyang's "Zhou Yi Shen Tong Qi" in the Eastern Han Dynasty, "Bao Pu Zi Nei chapter" by Ge Hong in the Eastern Jin Dynasty all involve the manufacture of adhesives. Sixie's "Qi Min Yao Shu" in the Northern Wei Dynasty is an agricultural book, but it specifically describes the process of using adhesives for making pens, protecting books, and repairing houses, as well as the method of cooking animal glue. Song Yingxing's "Tian Gong Kai Wu" in the Ming Dynasty described the production technology of my country's agriculture and handicraft industry, including the manufacture of adhesives. A lot of application experience. As written in "Arc Arrow": "All glue is made by fish fat and sundries... The East China Sea totoaba and those in the middle of Zhejiang who makes white fish take their shells as glue, stronger than gold and iron." "Glue" refers to the swim bladder glue used in the manufacture of bows and arrows. It seems that the quality of glue was very good at that time, and its strength was comparable to that of metal.

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