

## **CT INFO Nº12, December 2008 Adhesives for CT Tapes. Frequently Asked Questions**

### **Why are there different adhesives?**

Depending on the application environment, the materials being joined, and the performance required, some adhesives work better than others. Most tapes use rubber, acrylic, or more expensive silicone adhesive.

### **ACRYLIC adhesives**

Acrylic adhesive has excellent clarity, high shear strength, and is usually more sustainable to aging, fluorescent light, and sunlight compare to rubber adhesives. While it has good initial adhesion, it may take up to 48 hours to achieve its maximum bond strength since it has gradual adhesion build-up. Acrylic adhesives are well known for the long holding power and excellent performance in a broader temperature range, including temperatures lower than -26°C (-15°F) and higher than 110°C (230°F). CT Tapes acrylic adhesives have records of outstanding performance in different climate conditions, including high temperature, humidity, and low temperatures.

Customers from across continents (including Eastern Europe and North and South America) have reported high satisfaction with CT acrylic adhesive tapes. These adhesives are resistant to aging cracks, UV exposure, and solvents.

Because of its first-rate technical characteristics, acrylic adhesives are used to create a broad range of special properties adhesives, such as cold weather adhesives and flame retardant adhesives.

### **RUBBER adhesives**

Rubber adhesives are the very common and typically inexpensive. These adhesives are frequently used for clear packaging, paper, and cloth tapes. Due to high initial tack, rubber based tapes adhere well to most papers and wood as well as plastics like polypropylene, ABS, and polyethylene. Some rubber based products are capable of handling temperatures up to 90°C, however rubber adhesives are usually flammable and develop more smoke when burning.

#### **Hot melt rubber (synthetic) adhesive**

This adhesive is called hot melt because the adhesive is applied hot during the manufacturing process, and it hardens as it cools. Hot melt adhesive will bond faster to "quick stick" surfaces. It typically has higher tack (will feel stickier to the touch), but is also softer. It has lower heat and shear resistance than acrylic adhesives, and it may sometimes resist UV light.

#### **Natural rubber adhesive**

Properties are similar to that of hot melt rubber, but natural rubber often holds on surfaces where other adhesives will not (i.e. recycled fibers, dust, cold, heat, heavy loads, etc.). It provides good overall adhesion and moisture resistance.

### **SILICONE adhesives**

Silicone adhesives are more expensive and are used where high service temperature is a factor. They also exhibit good chemical resistance, retain electrical properties, and can be removed cleanly with little or no residue.

### **Zinc oxide adhesive**

Zinc oxide based adhesive formula is a skin-friendly adhesive which is commonly used on sports medicine tapes.

### **What is the best way to apply tape?**

Typically finger pressure on the tape is suitable for most applications. For the bigger surfaces, use of a soft rubber roller may be recommended to ensure good contact of the adhesive with the surface. It is always important to ensure that the surfaces are clean, dry, and free of solvents, oils and waxes. Application temperature and pressure may be among additional factors that affect application.