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## **Technical Tape and Label Information**

#### **UltraClean:**

- Offers the highest level of cleanliness available for today's critical environments.
- Suitable for use in Class 100 to Class 1 cleanrooms.
- UltraTape's web cleaning system dissipates the static layer, allowing both sides of the label stock to be cleaned.
- Classic Clean:
- Offers cleanroom packaging and is ideal for keeping products safe from environmental contamination prior to use.
- Suitable for Class 10,000 (ISO Class 7) to Class 100,000 (ISO Class 8) cleanrooms.

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### **Residue Free Tape:**

- No visual material transfer on Glass
- Over 24 hour at room temperature
- Acrylic (low and medium tack)
- Lowest residue over long period of time (years)
- Synthetic Rubber
- Low residue over shorter time (month)
- Natural Rubber
- Highest residue over long time

### Tape Cleanliness:

- Proprietary Manufacturing process
- Cleanroom Certified
- Particle counts (bag and pull counts)
- Standard Tape (avg. >100K 0.3 um)
- UltraTape CR (range <1 to 100 0.3 um)
- Double bagged and sealed in a Cleanroom to assure Cleanroom delivery

# **Tape Selection Criteria:**

- Application surface
- Temperature
- Permanent vs. removable (time applied)
- Chemically resistant
- Cleanliness particle free
- Residue Free
- Anti-Static or Conductive
- Color

#### **Tape Applications:**

- Circuit Board Masking
- Cleanroom
  - o Box sealing
  - Plastic tenting
  - Pipe wrap
  - Floor marking
  - o ESD Tape
- Medical / pharmaceutical
  - Autoclavable
  - Surface Protection
  - Sterilization indicator
- High Temp

## **Glossary Of Technical Terms:**

**Adhesion:** (Peel Adhesion) How well the tape sticks to a surface. Usually measured in ounces of pull (force) required to remove a one-inch wide strip of tape from a steel plate (i.e., adhesion to steel). Usually measured in ounces/inches. The same tape usually adheres differently to different surfaces.

Adhesion to Backing: The force necessary to peel the tape from its own backing (i.e. to unwind the tape).

**Adhesive:** The most common type of adhesive is a blend of rubber and resins. Other pressure sensitive adhesives are acrylics and silicone. Acrylics are highly solvent and weather-resistant while silicones have a high resistance to heat.

**Backing:** The material on which the adhesive is carried (i.e., paper, cloth, film, vinyl, etc.).

**Carrier:** Sometimes used to refer to the backing material, particularly in double-faced pressure-sensitive tapes.

**Classic Clean:** Ideal for keeping products safe from excess environmental contamination. Suitable for Class 100,000 to Class 1,000 cleanrooms.

**Conformability:** The ability to be applied to irregular surfaces. This property is related to the elongation (stretch) of the backing.

**Creeping:** The ability of certain plastic tapes to shrink back to their original length after being stretched (i.e., vinyl). Also called elastic memory.

**Elongation:** (Ultimate) The percentage of stretch at the breaking point of the tape.

**Liner:** The material used between tape layers to prevent adhesion of the tape to itself—usually used for double-coated tapes.

**Quick-Stick:** The adhesive adheres immediately to the surface when applied. Rubber adhesive have good quick-stick properties.

**Pressure-Sensitive Adhesive:** A sticky substance which adheres by application of pressure alone, and does not require the use of water, heat, or solvents.

**Release Coating:** A thin layer of a waxy substance, which reduces the adhesion to backing (i.e. reduces the unwind strength).

**Residues:** Adhesive transferred from the tape to the surface applied. Heat, moisture, sunlight, reactions to the surface, creeping, tape age, and many other factors influence the potential to residue.

**Tack:** The property of the adhesive, which is defined by the stickiness (i.e., high-tack, medium-tack, low-tack).

**Telescoping:** Deformation of the roll due to the winding force exceeding the adhesion to backing. The tape roll begins looking like a "telescope". Smaller widths telescope more than larger widths. Heat accelerates. **Tensile Strength:** Force needed to break the tape, frequently expressed as oz/inch.

**UltraClean:** Denotes UltraTape exclusive UltraClean Certification. Suitable for Class 100 to Class 1 cleanrooms. UltraTape's web cleaning system dissipates the static layer, allowing both sides of the label stock to be cleaned.