Application Guidelines

For tape-attached exterior trim

11/19/2020

3M intends this document to serve as a general guideline for creating an OEM processing standard. 3M is available to assist with the validation of a new process or with periodic checks of an existing process.

Installation Area

The installation area should be clean. Any lubricants, skin oil, airborne dust, etc. may contaminate the body or the trim component adhesive and reduce the bond of the tape.

Body Surface

Solvent wash method - one commonly used solvent system is a 50/50 solution of Isopropanol (rubbing alcohol) and water.

- Use clean, lint-free wiping cloths or disposable wipes, and change at least every hour or when visually soiled.
- Reprocessed rags should not be used as they may contain waxes, residual solvents or other contaminants.
- **Care should be taken**, especially with automatic wiping, that the cleaning cloth does not rub against tires or any other surface that might contaminate the body surface.
- The 50/50 isopropanol and water mixture should not be less than 50% isopropanol, but may have a higher concentration as long as the body surface is properly cleaned before the mixture flashes off.
- If possible, avoid applying the trim component after a water test operation. This operation often involves surfactants and dirty water that adversely affect adhesion.

After solvent washing, the body surface should be thoroughly dried.

- This can be accomplished by wiping or through evaporation.
- Evaporation can be accomplished by dryers (body heaters) or by time.
- For wiping, use clean lint-free cloths or disposable wipes.

- Change cloths at least every hour or when soiled.
- Reprocessed rags should not be used.

Note: There should be no production operation which could contaminate the body surface between cleaning and the trim component application.

Ensure optimum application surface.

- Optimum surface temperatures vary depending on the paint and adhesive systems. NEVER allow the body temperature to be below 60°F at application.

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Trim Component Ensure optimum trim component temperature

The component temperature is a more critical process variable than body surface temperature. Elevated component temperatures widen the process window in these ways.

- A heated trim component is typically more pliable and therefore conforms easier to the vehicle body.
- **Heat is not required for 3M pressure-applied adhesives.**
- **The recommended adhesive surface temperature range for 3M acrylic auto- motive adhesives is:15.6° - 43.3°C (60° - 110°F).**

When considering whether or not component heaters are required, be sure to take these variables into account:

- Ambient temperature of the component storage area.
- Expected ambient plant temperature.
- Component dwell time at ambient (J.I.T.,etc.).
- Location in the assembly process.
- Component geometry and fit to the sheet metal.
- Component material and its properties (flex modulus, CLTE, etc.).
- Expected component and sheet metal tolerance and resulting match.

Place the trim component to the vehicle.

This can be accomplished automatically with fixtures, or manually. Proper alignment helps to ensure the proper location of the trim component. Proper location is **absolutely critical** because the contour of the molding is designed to match a specific area and contour of the sheet metal. Manual installation increases the chance for misplacement.

Remove the liner from the tape. Do this immediately prior to applying the trim component to the vehicle, being careful to keep contaminants off the adhesive.

Contaminated moldings should not be used.

Apply FIRM PRESSURE to the trim component to prevent the entrapment of air between the tape and the body.