

CTECH Adhesives UV PSA 19-177-5A

Technical Data Sheet
Pressure Sensitive Adhesive
UV/Visible Light Cure Adhesive

PRODUCT DESCRIPTION

The CTECH Adhesives PSA series are proprietary one-part, solvent free adhesives that are processed at ambient temperatures. This distinguishes them from solvent carried or “UV hot melt” technologies offered by competition.

These products offer two distinct curing advantages. The adhesive can be cured first which then allows for assembly of the parts at some future point. This provides the ability to bond any substrate; clear, translucent or opaque. This material can also be cured through previously assembled clear or translucent substrates in the traditional UV curing mode. This adhesive can bond a wide range of substrates including PE, PP, Delrin and most plastics, metals, glass or ceramics. It can be sprayed, roll coated, screen or stencil printed, valve dispense or brush applied.

The CTECH Adhesives PSAs are distinguished from any other light curable PSA by the broad process latitude for curing dose, film thickness and age. The product line is available in a range of viscosity that can be applied at room temperature and can be tailored for tack, peel and creep performance.

CTECH Adhesives 19-177-5A cures rapidly to a high tack, crystal clear PSA with low residual odor and stable properties when stored under release liners.

Typical Physical Properties

Uncured:

Chemical Class.....	Acrylic
Color.....	Clear
Components.....	Single
Non-Volatile Materials.....	.99+%
VOC.....	< 1%
Flashpoint.....	>212°F
Viscosity	1200 cps
Specific gravity.....	1.07
Shelf life.....	12 mos
Solubility.....	ketones, oxygenated solvents

Cured:

Color.....	Clear
Refractive Index.....	1.50

Uses and applications.

- Sign making and other graphic assembly
- Touch pad, membrane pad and other keypads
- Automotive interiors – trim, graphics, light panels
- Lamination of foam, foils, any plastic film, felt, mesh etc
- Form-in-place gaskets and O-rings
 - replace die cut forms
 - replace press-fit, snap-fit tabs on parts for lower cost molded parts
- Traditional tapes and films replacing solvent and water carried PSAs

Features and Benefits.

- Solvent-free, 100% solids formulation for low environmental impact
- Reusable for low waste
- Long shelf life un-cured to optimize inventory

CTECH Adhesives LLC
Solutions for the Specialty Adhesives & Coatings Industry

- Long shelf life of cured films to optimize finished goods
- UV curable for instant processing and shipping of products
- Any application method can be used so that the benefits of a PSA can be realized for any shape, configuration and substrate
- Films/beads from 0.1 – 20 mils for many different uses in addition to PSA films
- Superb manufacturing latitude creates a high quality process
- Unsurpassed combination of peel and creep resistance maximizes the uses of Tru Bond PSA
- Sensitive to visible wavelengths for curing through UV blocked / translucent substrates
- Cures to crystal clear, optically transparent PSA that maintains clarity for years

Performance of Cured Product.

Peel Force. PSTC-1 Test. 3-mil adhesive on PET film. Cured with Fusion Systems D bulb. Assembled to steel laps [QPanel RS-14] and then tested at 24 hours. 90° peel test [Convert to N/10 mm by multiplying by 1.75] Substrate Peel – pounds per linear inch (pli)

Dose, mJ/cm2	500	1000	1500
Peel, pli	7.4	6.2	5.8

Properties Versus Film Thickness at Optimal UV Doses						
Nominal Film Thickness, mil	0.5	0.5	1	3	6	6
Peel, pli	2.8	3.9	6.4	7.4	15.0	13.8
Dose, mJ/cm2	250	350	350	500	700	1200

Loop Tack. PSTC-16. The value in grams required to separate a 1-inch wide 3-mil film on Mylar after a load-free attachment to steel. These values are useful to establish process trends and relative properties between different products.

Dose, mJ/cm2	500	1000	1500
Loop tack, grams	1330	1050	725

Rolling Ball Tack. PSTC-6. The distance in millimeters that a ball bearing rolls onto a 3-mil film before stopping after coming down a standard height and incline. These values are useful to establish process trends and relative properties between different products.

Dose, mJ/cm2	500	1000	1500
RB Tack, mm	6.0	11.5	20.5

PROCESSING

ITW Devcon products are easily applied by syringe dispense or specialty valve spray units. The materials cure extremely fast in bondlines, e.g. where the surfaces are not exposed to air, with UV or Visible radiation. Exposure doses range from 0.25 - 2 J/cm² depending on the intensity of the lamps and configuration of the assembly.

Precautions:

Please refer to the appropriate material safety data sheet (MSDS) prior to using this product.

Warranty:

Devcon will replace any material found to be defective. Because the storage, handling and application of this material is beyond our control, we can accept no liability for the results obtained.

Disclaimer:

All information on this data sheet is based on laboratory testing and is not intended for design purposes. ITW Devcon makes no representations or warranties of any kind concerning this data.

For technical assistance, please call 1-800-933-8266

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