

Technical Data Sheet for PUR Adhesive **Sinohesive® TZ8101**

1. Product Description

Profile **Sinohesive® TZ8101** is a kind of pre-polymer with solid content of 100%, its melt can generate chemical reaction and physical penetration with the surface of common substrate (paper, wood, plastic, etc.), which has excellent adhesion after curing. It needs to use special melting equipment which can isolate moisture to provide glue. Typical coat application methods include roller , spray, slot die , etc.

Application Including but not limited to the applications as below:

- Brochures
- Gluing off sewn books

Features **Sinohesive® TZ8101** is suitable for adhesion between various materials, its main advantages are as follows:

- After cured, the glue film is tough and strong, with excellent heat resistance (up to 155℃), cold resistance (low to -35℃), water resistance and chemical resistance
- It can maintain stable viscosity for a long time in the glue pot.
- Curing fast, book blocks can be cut in a very short time.
- Environmentally friendly, health and safety: zero VOC, completely excluding aldehyde, ketone, benzene, hydrocarbons, and other harmful substances.

Characteristic **Sinohesive® TZ8101**

Solid Content	100%
Composition	Isocyanate prepolymer
Status @ 25℃	Light white solid
Density @ 25℃	1.24 g/cm ³
Viscosity	@ 100℃, 6500—7500 mPa.s @110℃, 4500—5500 mPa.s @130℃, 2800—3500 mPa.s
Application Temp.	100—130℃



Open Time	About 5 min. (temperature/substrate dependent)
Shelf Life	12 months under unopened statues between -30 ~ 30℃
Packaging	5 Gal. Pail and 55 Gal. Drum

2. Application guidelines

- Opening**
- Lift the lid of the metal drum of this product at first; Then straighten the lined aluminum liner, cut it at the lower edge of the lateral seal of the aluminum liner, then fold it to the outside of the iron barrel, and wrap with tape tightly and fix the liner. Place this opened pail or drum under the plate of the melter as soon as possible, and press down the plate until the plate fully touches the upper surface of the glue. After heating for 3-15 minutes, start the pump of the melter and pumpout the air bubbles until there are no bubbles in the glue melt.
- Melt Temp.**
- Suggested the temperature of the glue system set between 100-130 ℃, and should avoid excessive heating for a long time,
 - tank / Melter: 100 – 105℃
 - hose:100 – 105℃
 - Rollers: 110 — 120℃
 - Nozzle: 125— 130℃
 - Revers spinner: 125—130℃
- Pretreatment**
- All kinds of pollutants on the surface of substrate, such as oil, dust and water droplets, will affect the final adhesion performance. Therefore, the surface of substrate must be clean and dry to ensure no contaminants on the surface.
 - Polyolefin materials must be corona treated or oxidized.
 - If the surface of the substrate temperature below 15 ℃, should be preheated to 30-45 ℃.
- Coating Weight**
- Recommended the coating weight should be between 20 - 100 g/m². The type of substrate, operation status of equipment, requirements of downstream customers and cost economy should be considered comprehensively.
 - It is recommended that customers find out the best coating weight through sufficient tests before the formal batch production, so as to achieve the best balance between quality, performance and cost.





Assembly

- After coating, should to do assemble as soon as possible, and **don't** exceed the open time of glue;
- The open time is affected by the coating temperature, coating thickness, substrate temperature and thermal conductivity, and environment temperature.
- After assembly, sufficient pressure should be applied to the product in a timely manner, make the glue spread as far as possible and permeate into the substrate. The press time depends on the application, usually 0.3—3.0 seconds.

Curing Condition

- In order to achieve full curing, after laminating products should be placed in a suitable temperature and humidity (for example, the temperature of 25 °C and 50% RH humidity, or more) conditions.
- If the glue film thickness is 0.5 mm or thinner, under the above conditions, curing will be completed within 7 days. At lower temperatures and humidity, it will take longer to complete curing.
- The curing process will vary with the thickness of the coating, the moisture content of the substrate, the permeability, and the ambient temperature and humidity.

Clean

- For cleaning of rollers after work, it is suggested to use the special cleaning agent provided by our company **Sinohesive® ZC9103**.
- The spilled and dripping glue should be cleaned as soon as possible with a cloth dipping in common organic solvent after it has been cooled and not solidified. The cured glue will be difficult to remove, unless it is soaked in a highly corrosive solvent for a long time.

3. Storage And Transport

Shelf Life

- The shelf life is 12 months if this glue product storage at -30 °C to 30 °C in a unopened original container.
- Once the original container is opened, the unused glue must be carefully sealed, protected with dry air or nitrogen, and used as soon as possible.

Attention

- Since **Sinohesive® TZ8101** is a prepolymer with a certain activity, it is recommended not to have long-term direct contact with the skin. As the polymer cross-links with moisture in the air, it should be cleaned before curing.





Transport

- Please refer to the safety instructions (MSDS)

4. Others

Disclaimer

- The performance of the glue is a key factor for the final performance of the product, but it is not the only factor. For example, the body strength, moisture content, surface oil and so on of substrates will affect the strength; Temperature and humidity in the curing environment, water permeability and air permeability of the base material will affect the curing speed and product appearance. Since the above factors are beyond our control when you use our glue products, we cannot guarantee the bonding quality of each specific final product. We strongly suggest that before mass production, please select the equipment, base material, operators and our glue products to conduct sufficient tests together, and determine the next step action plan according to the test results, and gradually enlarge the batch scale.

Technical support

- If you need to know more about this product, other products of our company, new product development, etc., please contact our technical support team or business team, or visit our website at www.sino-adhesive.com

