

# Instructions for Use of the Turcite B and Adhesive

## Characteristics of special adhesive

1. Two-component composite adhesive, specially designed and developed for laminating machine tool guide rails, with excellent high adhesion to machine tool guide rail soft tape, cast iron, copper, aluminum, steel, stainless steel, plastic, rubber, stone, wood, glass strength.
2. All environmentally friendly raw materials that meet ROHS requirements are used for production, with low odor and no deterioration in long-term storage.
3. Product appearance color: A (adhesive) group, white group, milky white viscous liquid, B (curing agent) group, blue group, tan viscous liquid, no solvent (non-dangerous goods).
4. The adhesive has ultra-stable network resin structure, uniform material, large bonding strength, long-term oil resistance, acid and alkali resistance, good low temperature toughness, easy low temperature stirring, and easy construction operation. It can be used freely within the temperature range of 30°C-+70°C.
5. Mixing ratio: It can be mixed and used evenly according to the product ratio A: B = 1: 1, and the operation is very convenient, quick and easy. It is strictly forbidden to use the same stick to stir in group A and B. The curing speed can be adjusted arbitrarily. For example, in winter construction, the proportion of curing agent group B can be increased appropriately.
6. It is packaged with anti-counterfeit large-mouth plastic screw bottle. It should be protected from light, heat, moisture, and stored with it. The effective storage period is 1 year.
7. During the operation of the product, once the components A and B are mixed, the glue application must be completed within the initial curing time of 45 minutes, and the complete curing time is 24 hours.

## Turcite B application guide

### Where should the soft belt of guide rail be pasted on?

Generally, the guide rail soft belt can be pasted on the short guide rail of sliding guide rail to make it slide with long guide rail. For example: ordinary lathe can be pasted on slide board guide rail, tailstock guide rail and wedge iron sliding surface, while shaper should be pasted on bed guide rail.

### Operation details

**Preparation:** The bonding surface of Turcite is dark brown, and the blue-green is the friction surface. The construction site should be clean and dust-free, the ambient temperature should be 10-40 °C, and the relative humidity should be less than 75%. In order to improve the bonding strength, the roughness of bonding surface of guide rail should be Ra12.5 ~ 6.3 μm. The surface roughness of Turcite matched with guide rail should be Ra1.6 ~ 0.8 μm. if it is too smooth, it will cause vacuum adsorption, if it's too rough, it will be worn.

**Cutting:** The size of Turcite B can be larger than the bonding surface of the guide rail. For the width, the Turcite can be left more than 2-4mm to prevent slipping during pasting. For the length, the Turcite can be left more than 20-60mm, so that both ends can be tightened during pasting. For large and medium-sized equipment, positioning holes can be drilled at both ends of Turcite, so that they can be fixed with pressure plate when pasting.

**Clean:** Before bonding, rust and oil should be removed from the bonding surface of guide rail. The rust spots can be removed with abrasive cloth and sandpaper, and then cleaned with acetone and dried in the air. If the machine tool has serious oil pollution, it can be washed with sodium hydroxide (NaOH), then dried with blowtorch, and cleaned with acetone. If possible, the bonding surface of guide rail can be sandblasted, and the dark brown bonding surface of Turcite can be gently scrubbed with acetone, and then dried for standby (at least 10 minutes later, it can be used after the acetone is completely volatilized).

**Adhesive:** The special adhesive must be used at any time. First, use two sticks to mix group A and B adhesives in the bottle, and then mix them according to the weight ratio of  $A / B = 1 / 1$ . Because group B is lighter, it can be mixed according to the volume ratio of  $A / B = 1 / 1.2$ . If the ambient temperature is lower than  $10\text{ }^{\circ}\text{C}$ , in order to accelerate the curing speed, the proportion of group B can be appropriately increased, it can be mixed according to the weight ratio of  $A / B = 1 / 1.2$ . Finally, the mixed adhesive can be used after mixing evenly. Because the hardening time of 6S adhesive after mixing is 45 minutes, the application of 6S adhesive should be completed within 45 minutes after mixing. It is forbidden to use the same stick to stir in group A and B.

**Sticking:** When Turcite is just pasted on the guide rail, it needs to move back and forth, left and right slightly to make it fully contact; then squeeze from the center of Turcite to both sides with hands or tools to drive away bubbles. For large and medium-sized machine tools, the two end can also be fixed by pressing plates and screws.

**Curing:** The initial curing time is 24 hours, and the maximum bond strength is achieved after 72 hours. The curing pressure should be  $0.06 \sim 0.1\text{MPa}$ . If the thickness of Turcite is more than 2.5mm, the curing pressure can be increased appropriately. The curing pressure must be uniform, and the pressing plate fixed at both ends should be removed immediately after the pressure is applied. When the machine tool manufacturer uses it in batch, the pressing iron can be customized. In order to avoid the extruded adhesive sticking to the guide rail, a layer of oil seal paper or a layer of oil can be laid on the guide rail surface in advance.

**Processing:** After curing, first push the worktable along the guide rail direction to remove the excess adhesive, and cut the residual Turcite along the direction of the rail bonding surface, and chamfer. The oil groove of 6S Turcite is the same as that of metal guide rail. The depth of oil groove can be  $1/2 \sim 3/4$  of the thickness of Turcite. The oil groove is at least 6 mm away from the edge of Turcite.

**Storage:** The remaining Turcite should be wrapped in kraft paper and kept away from light. The remaining adhesive should be sealed tightly and kept away from light and moisture.

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