

## TECHNICAL DATA SHEET

## 9210T (Thermal Adhesive)

### One-Component

#### OVERVIEW

9210T Thermal Adhesive is a type of thermally conductive glue used for electronic components and heat sinks. It's commonly used to bond integrated circuits to heatsinks where there are no other mounting mechanisms available. The thermally conductive material can vary including metals, metal oxides, silica 'or' ceramic microspheres.

#### FEATURES & BENEFITS

- Good adhesion to most common substrates;
- Neutral cure; no corrosion to the substrates;
- Excellent chemical resistant and weather ability;
- Excellent electrical insulation properties;
- Easy-to-use one component system;
- Excellent adhesion;
- Excellent high and low temperature resistance; from -50 to 200°C operation.
- Excellent self-extinguished ability.

#### APPLICATIONS

- The bonding for electrical and electronic appliances;
- A water proof adhesion for electrical equipments;
- The adhesion for equipments to keep out water and dust;
- Used for the insulation and shock absorption of equipments;
- The bonding and fixation to the equipments which require cold and heat resistance and flame retardant.

#### HANDLING AND SAFETY

- For the uncured products have irritation to the skin and eyes, please do not contact with skin for a long time. Wear safety glasses and protective glove before handling uncured adhesive. Avoid the entry of eyes, in case of the contact, please flush with water for at least 15 minutes immediately; and contact a physician. In case of skin contact please clean with rag and etc. wash thoroughly with soap;
- The substrate surface should be thoroughly cleaned with a suitable solvent such as alcohol, xylene and etc. According the substrates variation, use suitable primer if needed;
- Adequate ventilation should be maintained in the working area;
- The product is developed for industrial use only;
- This product releases alcohol vapors as the by-product of cure.

#### TYPICAL PROPERTY DATA

Property	Unit	ASTM	Value	Range
Typical uncured properties			W*1	—
Appearance				
Tack-free time (25°C/50%)	min		10	<15
Viscosity (23°C)	CP	6#, 10rpm	210,000	—
Extrusion	G	YSA-CI-H07*2	5	2.0~10
Corrosion (Cu)		MIL-A 46146B	None	—

#### Typical cured properties week, 25°C/50% RH

Specific gravity	G/ML	D792	2.2	2.0~2.4
Hardness	Shore A	D2240	75	>60
Tensile strength	Mpa	D412	2.1	>1.8
Elongation	%	D412	120	>80
Adhesive strength	Mpa (Al)	D1002	2.1	>1.5
Volume resistivity	Ω·cm	D257	1.2×10 <sup>14</sup>	>10 <sup>13</sup>
Dielectric strength	KV/mm	D149	25	>20
Dielectric content	50Hz	D150	3	2.5~4.0
Dielectric loss	50Hz	D150	0.015	<0.04
D3-D10 content	ppm		<100	—
Shelf life (<25°C)	month		6	—
Thermal Conductivity	W/M.K.	D5470	1.0	>1.0

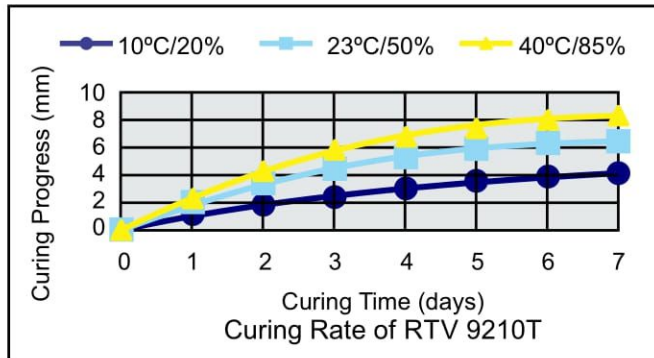
\*1 W refers white version, while G refers grey version ;

\*2 is KOOTAI internal standard.

#### ADHESION PERFORMANCE

Substrate	Performance	Adhesive Strength (Mpa)
Copper	Excellent	1.8
Aluminum	Excellent	2.1
Stainless Steel	Excellent	2.0
Brass	Excellent	2.0
ABS	Excellent	1.8
PET	Excellent	2.0
PCB	Excellent	1.9
PC	Good	1.1
PE	Poor	0.6
PP	Poor	0.6
Glass	Excellent	2.0

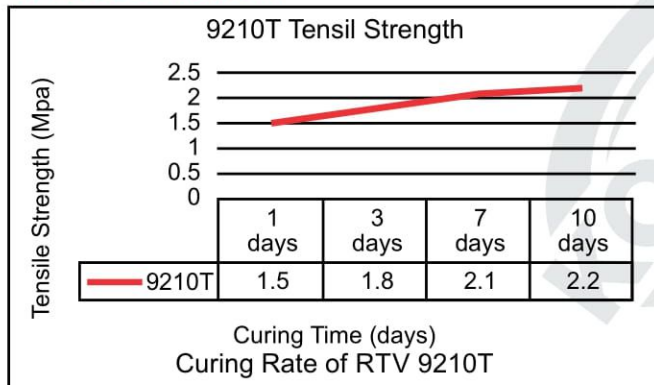
## CURING RATE



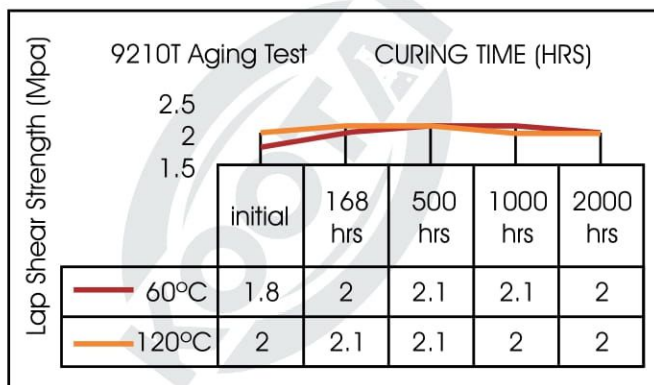
## CURING SPEED

Curing Condition	1 days	2 days	3 days	4 days	5 days	6 days	7 days
10°C / 20%	1.1mm	1.8mm	2.4mm	3mm	3.5mm	3.9mm	4.1mm
23°C / 50%	2mm	3.4mm	4.4mm	5.3mm	5.9mm	6.3mm	6.5mm
40°C / 85%	2.3mm	4.3mm	5.9mm	6.9mm	7.6mm	8.1mm	8.4mm

## TENSILE STRENGTH



## AGING TEST



## SOAKED (WATER) TEST

Condition	Dielectric Strength (KV/mm)	Volume resistivity ( $\Omega \cdot \text{cm}$ )	Surface resistivity ( $\Omega \cdot \text{cm}$ )
Initial	25.5	$1.2 \times 10^{14}$	$1.3 \times 10^{13}$
Soaked 16 hours	24.8	$1.0 \times 10^{14}$	$1.6 \times 10^{13}$

## PACKAGING SPECIFICATIONS

50ML, 100ML, 300ML, 2600ML & 300KG per drum, 'or' special packaging according to customer's requirements.

## STORAGE

- Please store the products in a cool and dry place, avoid direct sunlight.
- Please keep out of the reach of children.
- Shelf life is 6 months.

## PRODUCT IDENTIFICATIONS

Through ID, we identify our products. Here is the encoding rules.

Item	Formula Code	Tack-Free Time	Specific Gravity	UL	Physical State	Color
ID	2100	10	220	V0	P	W

- W=White, B=Black, G=Gray.

## OTHER INFORMATIONS

The data provided in this sheet are measured under certain conditions, in the different environment, there will be slightly different. **KOOTAI** advise user do application testing before use.

