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TECHNICAL DATA SHEET

KOYO BOND KR-134

AQUEOUS POLYMER - ISOCYANATE ADHESIVE

PRODUCT IDENTIFICATION

General or Generic ID	:	Aqueous Polymer Emulsion
Hazard Classification	:	Not Applicable

CHEMICAL / PHYSICAL PROPERTIES

Physical State	:	Liquid
Typical Viscosity	:	100 ps at 25°C
Non-Volatile Content	:	60%
Solvent	:	None
Solubility in Water	:	Soluble in Water
Specific Gravity	:	1.26
Vapor Density (Air = 1)	:	Heavier than air

FIRE / EXPLOSION HAZARD DATA

Flash Point	:	Not Applicable
Explosive Limit	:	Unavailable
Boiling Point	:	100°C

REACTIVITY

Hazardous Polymerization	:	Cannot Occur
Stability	:	Unavailable
Incompatibility	:	Avoid contact with strong alkalies, strong mineral acid

PROTECTIVE EQUIPMENT VENTILATION

Use with adequate ventilation and wear a mask, goggles and clean rubber gloves to avoid contact with eyes and skin

EMERGENCY ACTION

If on skin	:	Thoroughly wash exposed area with soap and water, if irritation or rash develops, get medical attention
If in eyes	:	Flush with large amount water, lifting upper and lower lids occasionally.
If swallowed	:	Immediately drink two glasses of water and induce vomiting by placing Finger at back of throat. Get medical attention immediately.

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CERTIFICATE NO. JKT 402557

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Koyo Bond KR-134 combined with Crosslinker AJ-1 is specially developed grade for lamination on hard wood such as rubberwood, ramin ,perpok ,meranti, oak, ash, etc. KR-134 has excellent adhesion strength including water, heat, solvent resistance.

1. Characteristic Properties of KR-134

a. KR-134 requires no heat for curing under ambient temperature
b. KR-134 requires only a short time for pressing. Required press time varies depending on species of wood, ambient temperature and moisture content of wood, but is generally between 30 and 60 minutes.
c. KR-134 has neutral range of pH value. Therefore, contamination of wood can be avoided in most cases.
d. KR-134 is water based adhesive which allows cleaning of equipment and tools simply by water. In addition, it does not contain any dangerous chemicals like phenol, heavy metal and formaldehyde.
e. Cured KR-134 is tough but somewhat soft and flexible property that gives less damages to blades of sew and other equipment in the processes followed.

2. Physical Properties of KR-134 and Crosslinker AJ-1

	KR – 134	AJ - 1
Appearance	White Fluid	Dark Brown Fluid
Viscosity at 25°C (ps)	100 ± 30	0,5 ±0,2
Solid Content (%)	60 ± 3	-
pH	7,5 ± 0,5	-

3. Sorage and Handling

Store inside warehouse to avoid direct sunlight. Keep in tightly close container in a cool but frost-free place.
Storage life is 6 months.

4. Standard Packing

a. Resin

Weight (Kg)	Packing
20	Dus/Box
220	Drum
1100	IBC Tank

b. Crosslinker

Weight (Kg)	Packing
3	Jerigen
35	Pail
220	Drum

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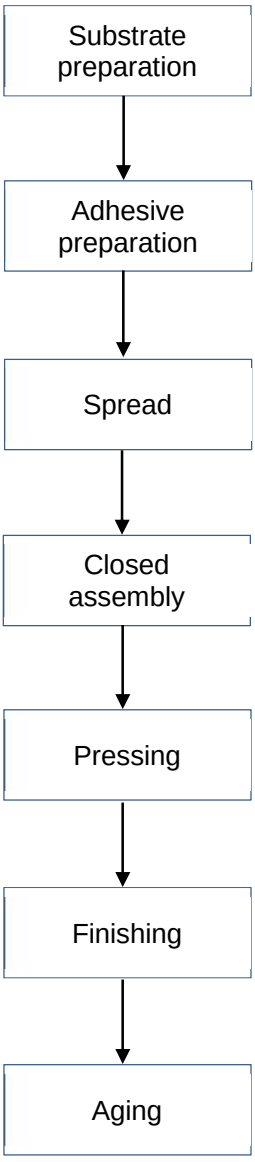
5. Process Flow Chart



Thickness accuracy : with 0,1 mm
Moisture content : less than 12%

KR–134 / AJ-1 = 100/15

Roll Spreader
Spreader rate : 250 – 300 g/m²

Less than 5 minutes at 30°C

10 – 15 kg/cm² for 60-120 minutes

Pressure and press time should be adjusted counting on various conditions. Visual observation on the edge should be carried out to ensure that some glue is squeezed from the edge

After overnight pre-aging in ambient conditions

Curing is completed in 3-5 days

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6. Typical Bonding Conditions for Typical Wood Species

	Board – leaf tress		Needle – leaf tree
Wood Species	Birch Oak White ash Beech Hard maple	Matoa Rubber Alder Elm	Pine Cedar Spruce Douglas fir Hemlock Agatis
Press time	30 – 60 minutes		30 – 60 minutes
Pressure	15 kg/cm²		7 – 8 kg/cm²

Note :
* For so called "hard-to-Bond wood species" like teak, kalin, sungkai, KR-134 may not have enough adhesion strength. Please refer to the brochure of KR-7800/AJ-1
* Actual press time should be determined by experiments.
* Process condition should be adjusted depending on wood, machine, ambient temperature and humidity, etc.

Future information and sample will be provided upon request. Bonding condition consultation and evaluation test of your product are very welcomed to test in our lab. For any assistance please contact to our company contact number as above

June 10, 2020