

CC-33A Adhesive for KYOWA Strain Gages

INSTRUCTION MANUAL

Thank you for purchasing this KYOWA product. Before using it, please read this instruction manual carefully. Also, keep the manual within easy reach so that you can refer to it whenever necessary.

1. Safety precautions

Be sure to observe the following safety precautions when using the adhesive.

[First-aid action]

▲ If such thing has happened that a finger is bonded to another, softly rub them together in warm water till they get apart. And if the adhesive gets in the eye, immediately wash the eye with water, then see an eye doctor. Never detach bonded fingers forcibly nor rub the eye.

[Safety precautions]

- Maintain proper ventilation while handling the adhesive. Especially when handling for a long time or a large amount of it, wear a protective mask.
- Avoid skin contact with the adhesive because it forms an immediate tenacious bond. Also, wear eyeglasses to keep the adhesive out of the eyes.
- The adhesive falls under Class 3 Petroleum (Danger Class III) in Danger Materials Class 4 provided for by the Fire Laws. Do NOT use the adhesive where there is fire.
- If a large amount of adhesive has soaked into gloves - cloth or leather - and clothing, it may suddenly generate heat to cause a burn. Take care to avoid this harm.
- To store the adhesive, keep it from the direct rays of the sun, moisture and basic materials (such as curing agents and amine).
- For disposal, seal the adhesive hermetically and have a qualified industrial disposal agent to handle as industrial waste (nonflammable).
- Keep the adhesive out of children's reach.
- Do NOT use it for other than bonding.

2. Outline

CC-33A is a cyanoacrylate instantaneous adhesive. It is suitable for bonding general-use strain gages (such as KFG and KFR) for measurement chiefly at normal temperature.

Hardening of the adhesive is complete only by giving finger pressure for a short time (60 seconds or less, normally). As such, the adhesive is very useful where continuous pressing or heating of the gage installation is difficult as with large structures or where it is wanted to measure soon after gage was bonded.

3. How to use

■ Preparing the bonding surface

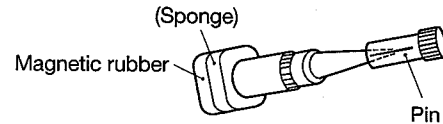
- (1) Using sand paper (#300 to 600, or thereabouts), polish the bonding surface of a measurement object to make it flat and smooth.
- (2) Clean the bonding surface of a measurement object by wiping in one direction only with industrial tissue damped with a solvent (acetone, isopropanol, etc.).
- (3) Scribe the gage guidelines on the measuring area, using a lead pencil (whose hardness is 4 to 6H) or the like.

■ Preparing the adhesive

- (1) Push the accessory magnetic rubber onto the bottom of the CC-33A container. This will prevent the container from falling.

Precaution: The bottom of the container is a screw cap. Do not turn it strongly, or it may be removed. Also, do not turn the container and magnetic rubber to assemble or disassemble them. Or otherwise, the cap may be loosened, resulting in liquid leakage.

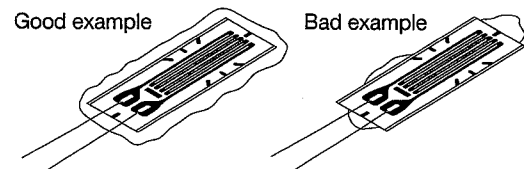
- (2) Using a fingertip, flip the liquid staying at the top of container. Then, using the accessory pin, make a hole on the top while taking care not to direct the top to your face. (The liquid may spring out.) After use, insert the pin into the hole as a cap.



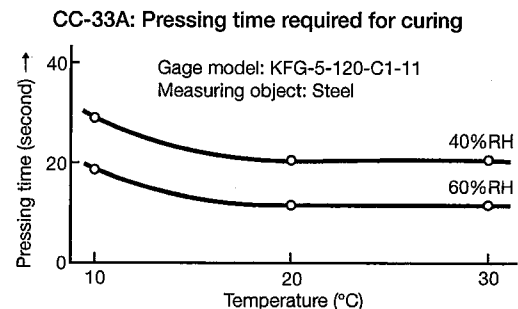
- (3) Use the accessory micronozzle as required to bond a small base gage, etc.

■ Bonding a strain gage

- (1) Apply a small amount of CC-33A to the back of the gage. (The proper amount of adhesive applied will overflow the bonded gage base as illustrated in the sketch below.)



- (2) Align the gage center mark with the scribed line, cover the gage surface with a polyethylene sheet, and give fingertip pressure to let it adhere to the measurement surface closely. Optimum pressure: 100 to 300kPa (Reference value: app. 1 to 3kgf/cm²).
- (3) Required pressing time varies according to temperature and humidity. It is normally 15 to 60 seconds. (See the diagram below.)



- (4) After pressing, leave the gage installation as it is for about 0.5 hours, and it will enable high-stability measurement. But, leave the gage installation as it is for 24 hours at least if high measuring accuracy is desired.
- (5) After use, clean the top of the adhesive container with a cloth or the like to prevent the adhesive from fastening at the top, and hermetically seal it. For storage, put the container in an aluminum bag and keep it in a dark and cool (below 10°C) place (except a freezing box).

■ Other cautions

- (1) If the temperature at the measuring area is low, give pressure for a longer time. Also, if the temperature is below 10°C, heat the measuring area preliminarily as much as possible, and use S-7 hardening agent together.
- (2) For gage bonding to polyethylene, polypropylene, etc., also use S-9 surface preparation agent.

4. General characteristics of CC-33A

Ingredients:	2-Ethyl cyanoacrylate
Appearance, etc.:	Colorless, transparent liquid w/stimulative smell
Operating temperature range after curing:	-196 to 120°C
Dilution agent:	N/A (Exfoliation agent after curing: acetone)

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