

**HOLDEN**

Holden Limited
Engineering Department

MATERIAL SPECIFICATION

NUMBER : HN 2389
SHEET : 1 of 5
RELEASE : May, 2002
REVISION :

NAME: ADHESIVE – CYANOACRYLATE, TOUGHENED

1. SCOPE

This specification describes the requirements for a 1-part, moisture curing, rubber toughened, cyanoacrylate adhesive. This adhesive is to be used for adhering aluminium to rubber. This adhesive is used in the construction of auto and manual brake pad assemblies. This adhesive may be deemed suitable for use in other applications where approval has been given by Holden Materials Engineering.

2. REFERENCES

HN 1000 GMW3059

3. REQUIREMENTS

3.1 Shelf Life

The material shall be satisfactory for use after ageing in the original container for 90 days at 35 °C.

3.2 Heat Ageing Durability

Samples of finished parts shall be exposed to dry heat in an air circulating oven as designated below. The parts shall be complete, and shall meet all appearance and dimensional requirements prior to testing. Where possible, the parts shall be mounted to closely simulate production installation conditions in accordance with applicable assembly instructions.

3.2.1 Heat, Age, Time & Temperature Conditions

The test temperature shall be 85 °C ± 2 °C for 7 days.

3.3 Temperature/Humidity Cycle

The parts or assemblies shall be subjected to the following heat/cold and humidity cycles. The parts or assemblies shall be complete, and shall meet all appearance and dimensional requirements prior to testing. Where possible, the part or assembly shall be mounted to closely simulate production installation conditions in accordance with applicable assembly instructions.

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THE COMPANY'S PRODUCTS THE RECIPIENT IS RESPONSIBLE TO CONFIRM
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3. REQUIREMENTS (cont.)

3.3 Temperature/Humidity Cycle (cont.)

3.3.1 Heat/Cold Cycle Conditions

For cycle test conditions refer to Table 3.

TABLE 3

TEMPERATURE/HUMIDITY CYCLE TEST FOR TYPE 3 and TYPE 5	
ENVIRONMENT	TIME, HOURS
In 70 ± 2 °C	72
In 38 ± 2 °C/95 ± 5% R.H.	24
In 0 °C	8
In 70 ± 2 °C	40
In 38 ± 2 °C/95 ± 5 % R.H.	24
In 0 ± 2 °C	8

3.4 Continuous Humidity Test

Parts or assemblies shall be mounted as in 3.3 and exposed to 38 °C ± 2 °C and 95 ± 5 % RH for 7 days.

3.4.1 Requirements after Heat Test, Cycle Tests and Continuous Humidity Test

The finish of the parts after testing shall not exhibit any surface deterioration, change in colour, (less than 4 on the British Grey Scale), change in gloss, no apparent loss of adhesion; or any other defect which will affect appearance or serviceability of the part or assembly.

Furthermore, there shall be no objectionable variation in any dimensions of the part after conditioning, and all functional requirements must conform with Engineering design intent.

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