

Issued November 1989
(INFO5050.DOC)

Information Sheet No. B548/5
(supersedes Sheet No. B548/4)

PA5050 ADHESIVE

DESCRIPTION

BOSTIK PA5050 ADHESIVE is a single part, solvent-borne, polyurethane adhesive used in footwear manufacture. It has been specifically developed for bonding thermoplastic rubber (TR) moulded units and soles but can also be used on other soling materials.

MATERIALS BONDED/APPLICATIONS

BOSTIK PA5050 ADHESIVE is used for bonding TR moulded units, and soles cut from TR materials, to leather, PVC, fabric, poromeric and PU coated shoe upper materials.

BOSTIK PA5050 ADHESIVE is fast drying and is particularly suitable for cementing all types of uppers on a moving track system where drying times may be short. It is therefore suitable in most cases where a single adhesive system is required, but can be used in conjunction with other BOSTIK polyurethane adhesives if preferred.

BOSTIK PA5050 ADHESIVE can also be used for bonding:-

- a) resin rubber soles if these are first treated with BOSTIK M5077 PRIMER (see Information Sheet No. B507).
- b) PVC and PU soling when prepared in the normal way.
- c) leather soles providing a double coat of adhesive is used.

NOTE: BOSTIK PA5050 ADHESIVE should be used with approved soling compounds only. Therefore, before selecting a particular TR soling compound and commencing factory production in quantity, the soling material should be fully tested with the adhesive system to ensure a satisfactory level of adhesion is being attained.

BONDING INSTRUCTIONS

Surface Preparation

TR Material: wipe with BOSTIK H (6009) CLEANER/THINNER and allow to dry for approximately 10 minutes before application of BOSTIK PA5050 ADHESIVE.

PVC Soling: wipe with BOSTIK G (6453) CLEANER/THINNER or BOSTIK M501 CLEANER/THINNER. Approximately 12 pairs of soles at a time should be treated before adhesive application.

/Continued....

Every endeavour has been made to ensure that the information given herein is true and reliable but it is given only for the guidance of our customers. The Company cannot accept any responsibility for loss or damage that may result from the use of the information, due to the possibility of variations of processing or working conditions and of workmanship outside our control. Users are advised to confirm the suitability of this product by their own tests.

The word BOSTIK is a trade mark registered in the United Kingdom and many other countries.

Bostik Ltd., Emhart Fastening Systems Group, Leicester, LE4 6BW, England.
Telephone 0533 510015. Telex 34625. Fax 0533 531943.

EMHART BOSTIK

Leather and PVC uppers, PU units: roughen with a wire brush. Alternatively, wipe PVC uppers with BOSTIK G (6453) CLEANER/THINNER and wipe PU units twice with BOSTIK 6457 CLEANER/THINNER.

Application and Bonding

BOSTIK PA5050 ADHESIVE is applied by brush or cementing machine to the prepared surfaces.

At normal room temperatures drying times of at least 30 minutes for adhesive coated soles* and ten minutes for upper materials are recommended. These times can be reduced by forced drying.

* On soft TR materials a minimum drying time of 1 hour is advised.

A tack retention time (see later) on soles of seven days should not be exceeded if adhesive coated uppers are left over a weekend.

Bonding is effected using heat and pressure. The adhesive on one of the coated surfaces to be bonded together, usually the soling material, is reactivated by heating to a temperature of 85 to 90°C, using a modern flash (high intensity) heat activating unit.

TACK RETENTION TIMES

Minimum on upper - 10 minutes (room temperature drying)

Maximum on upper - 3 days

Minimum on sole - 1 hour (room temperature drying)

Maximum on sole (sole heated) - 7 to 14 days.

N.B. The maximum time of 14 days on soles relates to uppers left for not longer than 4 hours after adhesive coating whilst the lower time of 7 days on soles relates to uppers left for 1 to 3 days.

CLEANER/THINNER

Use BOSTIK A (M574) CLEANER/THINNER generally for removing excess adhesive and cleaning application equipment.

Use BOSTIK G (6453) CLEANER/THINNER for the solvent wiping of uppers and soles, BOSTIK M501 CLEANER/THINNER being the alternative.

Use BOSTIK UV(6457) CLEANER/THINNER for cleaning PU units.

TYPICAL ADHESIVE CHARACTERISTICS

| | |
|----------------|--|
| Physical Form: | Mobile liquid |
| Colour: | Natural (translucent), black version also available |
| Odour: | Predominantly ketonic |
| Chemical Type: | Polyurethane solution |

/Continued.

| | |
|------------------------------|--------------------------------------|
| Solvent: | Mixture of acetone and ethyl acetate |
| Viscosity: | Approximately 3.3 Pa s (33 poise) |
| Solids Content: | 19% approximately |
| Specific Gravity: | 0.9 approximately |
| Flammability: | Highly flammable |
| Flash Point: (Closed Cup) | In the group -18 to -7°C |

PACKAGING

1 litre and 5 litre tins, 25 and 200 litre drums.

SUBSTANCE IDENTIFICATION NUMBER

UN 1133 (Packing Group 2)

STORAGE & TRANSPORTATION

Store in a dry flameproof area between 5 and 25°C.

Subject to The Highly Flammable Liquids and Liquefied Petroleum Gases Regulations 1972 and The Petroleum (Inflammable Liquids) Order 1971.

SHELF LIFE

1 year from date of manufacture under the above conditions of storage.

MATERIAL SAFETY DATA

| | | |
|----------------------------------|--|--|
| Hazardous Ingredients: | Acetone Ethyl acetate | <u>Wt. %</u> More than 25 11 to 25 |
| Boiling Point: (range) | Approx. 55 to 80°C | |
| Auto-ignition Temperature: | Approx. 425°C | |
| Flammable Limits: (by volume) | LEL approx. 2% UEL approx. 13% | |
| Volatiles: (by weight) | Approx. 81% | |
| Solubility in Water: | Partially miscible | |
| Material Stability: | Stable in unopened containers at recommended storage temperatures | |

For detailed safety and handling advice refer to BASA booklet "SAFE HANDLING OF ADHESIVES AND SEALANTS IN INDUSTRY" with particular reference to the section headed "Solvent-borne adhesives, sealants, primers, thinners and cleaners".

LOCATION: ACCESSORIES

5050

FIRE HAZARD: HIGHLY FLAMMABLE. FLASHPOINT: -18 to -7°C.

MAY CAUSE EXPLOSIVE MIXTURE WITH AIR.

EXTINGUISHING MEDIA: CO₂, FOAM OR DRY POWDER. DO NOT USE WATER, THIS MAY CAUSE ADHESIVE OR SEALANT TO SPREAD ON TOP OF WATER.

HAZARDOUS DECOMPOSITION PRODUCTS: ACETONE
ETHYL ACETATE

TOXIC DATA: SOLVENT VAPOUR

SAFETY EQUIP/CLOTHING: SUITABLE RESPIRATORY EQUIPMENT OR GOOD VENTILATION.
SOLVENT RESISTANT GLOVES
PROTECTIVE OVERALL OR APRON WHERE SPLASHING MAY OCCUR.
EYE PROTECTION " " " "

ST AID SKIN CONTACT: MAY BE ABSORBED THROUGH SKIN AND ACT AS SYSTEMIC POISONS.
WIPE OFF SMALL SCALE CONTAMINATION WITH PAPER TOWEL. MORE SEVERE -
DRENCH SKIN IMMEDIATELY WITH WATER. USE RESIN-REMOVING CLEANSER
FOLLOWED BY SOAP AND WATER.

EYE CONTACT: MAY CAUSE PERMANENT DAMAGE. WASH WITH COPIOUS AMOUNTS OF WATER
FOR AT LEAST 10 MINUTES WHILST OBTAINING MEDICAL ASSISTANCE.

INHALATION: VAPOURS HARMFUL. REMOVE AFFECTED PERSON TO FRESH AIR. KEEP
PATIENT WARM AND AT REST. OBTAIN MEDICAL ASSISTANCE. IF BREATHING
STOPS GIVE ARTIFICIAL RESPIRATION. SEND TO HOSPITAL.

INGESTION: WITH CAUSE IRRITATION TO MOUTH, THROAT AND DIGESTIVE TRACT.
THERE IS A RISK OF INVOLUNTARY VOMITING.

OBTAIN IMMEDIATE MEDICAL ASSISTANCE. DO NOT CAUSE VOMITING.

SPILLAGE: CONFINE USING EARTH, SAND OR ANY OTHER INERT, NON-COMBUSTIBLE
MATERIAL (NOT SAW-DUST). DO NOT ALLOW TO CONTAMINATE DRAINS.
TO CONFINE VAPOUR COVER TOTAL AREA WITH BLANKET OF FOAM OR
PROPRIETARY TREATMENTS. EVACUATE PERSONNEL. ELIMINATE ALL SOURCES
OF IGNITION. REMOVE ABSORBENT AND STORE IN SEALED CONTAINERS
PENDING DISPOSAL.
ONLY SPARK PROOF TOOLS SHOULD BE USED FOR THE REMOVAL OR ABSORBED
MATERIALS.

STORAGE: STORE UNDER DRY CONDITIONS in SEALED CONTAINERS, WITHIN TEMPS OF
5 - 20°C.

DISPOSAL: RE-SEAL EMPTY CONTAINERS. DISPOSE IN LAND-FILL SITES BY AUTHORISED
WASTE DISPOSAL CONTRACTORS.