

MBS



MBS Equine Universal Adhesive

Technical Datasheet

The MBS Equine Universal Adhesive is a two-component, 10:1 mix ratio product primarily designed for horseshoe applications specifically for the repair and rebuild of hooves as well as for bonding aluminium and steel shoes. The elastomeric nature of the MBS Equine Universal closely matches the movement of a hoof during the transition from a loaded to an unloaded state providing excellent tensile strength and an excellent bond to the cleaned and prepared hoof material. Because of the high tensile strength, MBS Equine can be used to effectively repair quarter cracks, sand cracks etc.

↗ **Excellent tensile strength**

↗ **Excellent environmental resistance**

↗ **Flexibility matches flex of the hoof**

↗ **Exceptional fatigue, impact, and shock load**

↗ **Quick curing time**

resistance

Characteristics	Part A (Adhesive)	Part B (Activator)	Mix (Part A + B)
Colour	Off White	Black	Black
Mix ratio by volume	10	1	-
Mix ratio by weight	9.0	1	-
Density, g/cc	1.01	1.12	1.02
Density lb/gallon	8.40	9.35	8.51
Viscosity, cps	175,000 – 275,000	120,000 – 180,000	-

Typical Physical Properties @ 75°F (24°C)	Result
Tensile Strength psi (MPa)	1,700 – 2,200 (12 – 15)
Maximum Tensile Elongation (%)	40 - 60
Tensile Strength ³ psi (MPa)	30,000 – 40,000 (207 – 276)
Lap Shear Strength psi (MPa)	2,300 – 2,800 (16 – 19)
Service Temperatures °C	-40 to 82

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SAFETY AND HANDLING:

Please read the Material Safety Data Sheet before handling or using this product. Adhesive components contain methyl methacrylate monomer and are flammable. Always use in a well-ventilated area. Floor-level extraction and large quantities of moving air greatly facilitate ventilation. Both materials must be stored in a cool place away from sources of heat and open flames or sparks. Keep containers closed when not in use. Prevent contact with skin and eyes. In case of skin contact, wash with soap and water. In case of eye contact, flush with water for 15 minutes and seek medical assistance.

MIXING & APPLICATION:

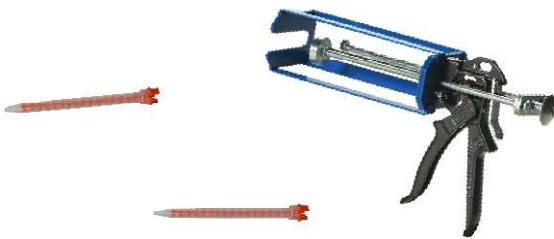
The chemical curing reaction that occurs when components A and B are mixed generates heat (exotherms). The amount of heat generated is dependent on the mass and thickness of the mixed product. Large masses over 0.375 inch (10 mm) thick can develop heat in excess of 121°C and can generate vapours that should be avoided.

CURING:

Working time is the approximate time after mixing components A and B, depending on bonding conditions, that the adhesive remains fluid and bondable. Fixture time is the approximate time after mixing components A and B required for the adhesive to react to the partial state of cure necessary to allow careful movement, standing on, or unwrapping of hoof area. Hoof repair and shoe fix can generally be ridden on when 80 percent of full strength is developed. The time to achieve 80% cure is approximately 2-3 times that required for fixturing. The working and fixture times presented in this bulletin are based on laboratory tests performed at 24°C. Higher temperatures speed the curing reaction and reduce working time. The reverse is true for lower temperatures. If significant variation in temperatures or application at very high or low temperatures is anticipated.

DISPENSING EQUIPMENT:

Dispensing from disposable cartridges or meter-mix dispensing equipment with static nozzle is highly recommended. Both methods employ convenient static motionless mixer technology. Product supplied in pre-measured cartridges is dispensed from approved manual applicator guns.



CLEAN UP:

Adhesive components and mixed adhesive should be removed from mixing and application equipment with a suitable industrial solvent or cleaner before the mixed adhesive cures. Once the adhesive cures, soaking in a strong solvent or paint remover will be required to soften the adhesive for removal. Any clean-up of the bonded assembly using industrial solvents is not recommended as it could affect the cure. Once cured excess material on the hoof and shoe area can be removed using a rasp file or sanded.

SHELF LIFE & STORAGE CONDITIONS:

The shelf life of adhesive and activator in unopened containers is six (6) months from the date of manufacture. Shelf life is based on a continuous, steady-state storage temperature of between 18°C and 27°C. Exposure to temperatures below 18°C or above 27°C will impact the product performance and viscosity. Exposure to temperatures above 27°C will rapidly reduce the stated shelf life of the product.

PRODUCT APPLICATION & USE:

To ensure consistent performance, product temperatures must be held reasonably constant between 18°C and 27°C. Substrate preparation, adhesive/activator ratio, application temperature, humidity and a variety of other environmental and end-user application factors are beyond the control of MBS; therefore, the end user is solely responsible for determining whether the product is fit for a specific purpose and suitable for the user's product, design, and final application requirements.

IMPORTANT NOTES

A. SUBSTRATE AND APPLICATION COMPATIBILITY

This information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process. Such information is, to the best of the company's knowledge and belief, accurate and reliable as of the date indicated. However, no warranty, guarantee or representation is made to its accuracy, reliability, or completeness. It is the user's responsibility to satisfy themselves as to the suitability of such information for their particular use.

B. SURFACE PREPARATION

The need for surface preparation must be determined by comparative testing of prepared and unprepared substrates to ensure that unprepared bonding is equivalent to or acceptable for the application relative to prepared bonding. Initial bonding tests must be followed up with simulated or actual durability tests to ensure that surface conditions do not lead to degradation of the bond over time under service conditions. Subsequent changes in substrates or bonding conditions will require re-testing.

C. TECHNICAL ASSISTANCE

Contact David Horn on 07982 905899 our representative for questions or assistance with the selection of adhesives and methods for evaluating adhesives for your intended application.