

Lapping Compounds

All Lapping Compounds Are Not Created Equal

Foley United holds a distinctive place in the history of lapping compounds. We manufactured the first gel based products, and have the only products to be patented. Others have tried to copy the unique features found in all Foley United products, i.e., **Diamonite** and **Razor Sharp**, but none even come close to giving the results they do, and here are the reasons why:

“The Suspension Agent”

In its conception, every major polymer was tested, including Hydroxypropylcellulose, which is commonly used by other manufacturers. BUT, they all came up short, lacking the characteristics needed for Foley United standards, so we custom blended a polymer that would give us the unique features we were looking for.

- I. The polymer we developed permanently suspends the abrasive when not in use, but loses its viscosity or thickness, and lubricity when actually backlapping. This feature increases its efficiency, and allows prolonged storage with no separation.
- II. The residue is easily removed from the cutting unit when allowed to stand around for any time. To accomplish this we have added:
 - a. A humectant that tends to draw and hold moisture from the air.
 - b. A wetting and re-wetting agent that re-softens any dried or hardened residue in a matter of minutes and allows the user to wash it off with garden hose pressure.
- III. The molecular structure of our polymer gives it a spring action that literally self feeds the compound onto the blade of the reel, and creates a clinging action so that no compound is lost or spun off, during the lapping process. Because of this unique feature, you apply a small amount initially, and then simply redistribute the compound from time to time reducing the amount needed by at least 50%.
- IV. A preservative has also been added to the gel allowing it to be stored for months and not decompose. It is still biodegradable and environmentally safe when used, and no harm will ever occur to grasses if our compound comes in contact with them.
- V. Finally, these compounds can be frozen and thawed time and time again without causing any damage or reducing their efficiency.

“The Abrasives”

There are two commonly used abrasives in the market today:

Aluminum Oxide - This is the least effective, and slower cutting

Silicon Carbide - This is more expensive, faster cutting and better suited for backlapping uses.

There are also two forms of Silicon Carbide available:

1) Natural - normally dark brown or black in color and is generally not consistent enough to be used in commercial applications. But, because it is very cheap, it will be used where quality is not a concern, or is used in noncommercial applications.

2) Synthetic Silicon Carbide - is made in electric furnaces by reacting silicon dioxide and carbon at very high temperatures creating a mass of synthetic silicon carbide, is the most desirable abrasive available. The mass created by this reaction has several layers of purity, from its center which is pure, having no carbon residue and is light green in color, to the outer perimeter which has not been totally reacted, leaving some carbon particles and is black in color.

Foley United uses only synthetic silicon carbide in their lapping compounds to assure effective and consistent performance, and there are two grades.

I. “**Diamonite**” lapping compound. Light green in color because of the virgin, pure synthetic silicon carbide used. Tests have shown that it can cut up to four times longer than lapping compounds using black silicon carbide.

II. “**Razor Sharp**” lapping compound. This product is made from black synthetic (only) silicon carbide, but incorporates Foley United’s exclusive polymer, making it the best of all the economical lapping compounds being sold.



*Setting the Standard with the
World's Most Valued Grinders.*

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