

Square Scrub Grip Face History

One of the more challenging issues we have had with our machines is the grip face. Grip faces are expected to do a very simple thing. Hold the pad to the bottom plate. This seems simple and it is simple. However, simple is not always easy. Gripping the pad while trying to move at 3450 rpm is quite a challenge.

What makes a perfect grip face? The ability to grip a pad for sure. What about sandpaper? Yes, it needs to grip sandpaper. It also needs to grip the Blue Tile & Grout Pad and the Microfiber Carpet Cleaning Pad. So, for it to be the perfect grip face it needs to grip just about anything we want to spin on a floor.

The grip face also needs to turn loose of the pad as well. This can get really tricky. So it needs to grip great, but not too great? What a challenge for such a simple item. It must also grip the entire pad. On our equipment, the entire surface of the pad does the same amount of work. It is important that the entire area be gripped and transfer energy to the floor.

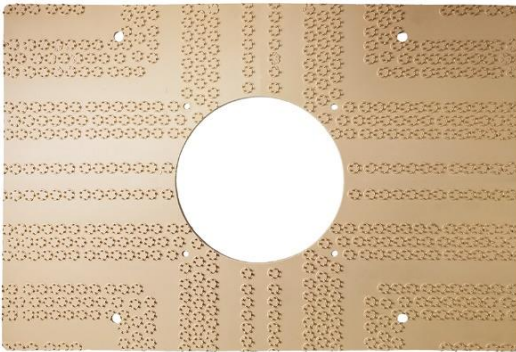
The next issue with the grip face is the adhesive that holds the grip face to the bottom aluminum driver plate. There are numerous types of glues in the world. Most glues will not stand up to the chemicals used in floor finish stripper products. These chemicals are very aggressive. Most have a very high pH, and many contain alcohols that attack floor finish as well as adhesives. This adhesive needs to stick great to the aluminum plate and at the same time it must adhere to the polyethylene grip face material. We tested many pressure sensitive adhesives until we finally found one that was a nice fit for our machines.

During the last 10 years, Square Scrub has used four different grip face materials in production units. Each was a different color, so it is easy know which one you have or had. At the time, each material was the best we had found. Thankfully, we never gave up searching for a better material.

Even our newest grip face requires care! Do not store the machine without a good pad under the machine. Inspect the pad often to verify it is in good condition and still covering the entire bottom of the grip face. Read the instructions in the owner's manual please! We will continue to look at grip face options. The bar is very high now with this newest silver option.

Tan Grip Face

The first grip face we used was a light tan material. It started life as a round 24" circle with a 6" hole in the center. It was designed to be used with a round rotary floor machine. It has very few large soft teeth on it. These teeth are made of a soft plastic that allows them to easily bend. The teeth are spaced out in about a $\frac{3}{8}$ " round circle with 6 teeth on the edge of each circle. The design left very large gaps of area with no teeth at all providing no grip for the pad. No grip means little or no work being sent to the floor from that part of the pad. This tan colored grip face required us to cut the material into 6" circles to fill the hole in the center. It only has an average of 14 teeth per square inch. Large sections of the material had no teeth at all.



Pros:

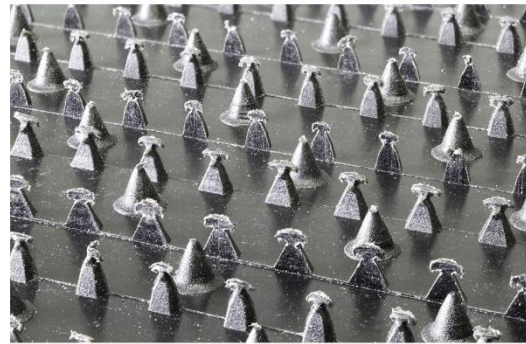
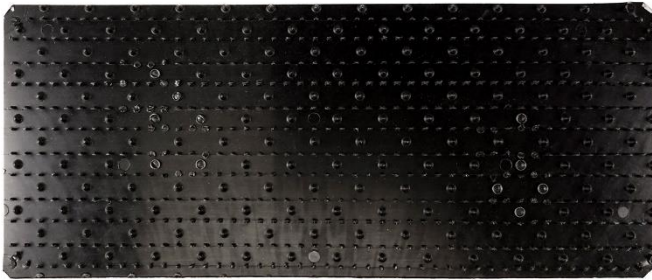
- The harpoon fish hook teeth were long enough at .10" to grip stiff pads like black and purple stripping pads.
- The adhesive that came with the face was very chemical resistant.

Cons:

- The material was very soft, and the teeth bent easily.
- Storing the machine upright would damage the teeth.
- Very few teeth per inch, so not much energy got to the floor to do work.
- 2 pieces were needed to cover the bottom of our 20" machines.
- 4 pieces were needed to cover the bottom of our 28" machines.

Black Grip Face

The second grip face was black. It started life as a round 21” circle with a 6” hole in the center. This was not large enough to completely cover the bottom of our 20” machines, so we had to use multiple pieces for full coverage. Like the tan grip face, it was designed for use on a round rotary style machine. It had an average of 21 teeth and pins combined per square inch. The pins did not have hooks on them so they did not really hold a pad at all. So that left only about 15 teeth per inch to hook into the pad and hang on to it. It did have evenly spaced teeth and pins. The black material is stiffer than the tan and did not crush as easily. The teeth were about half the height of the tan teeth at 0.07” tall, but there were more of them. It gripped better but still not great. This grip face also had a good adhesive.



Pros:

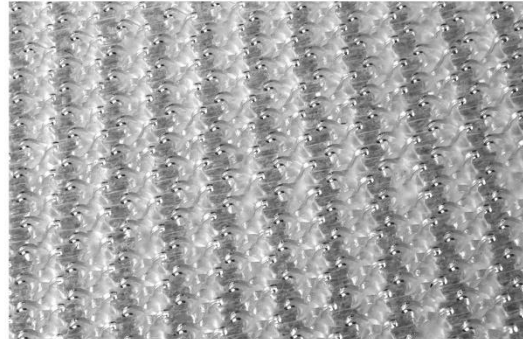
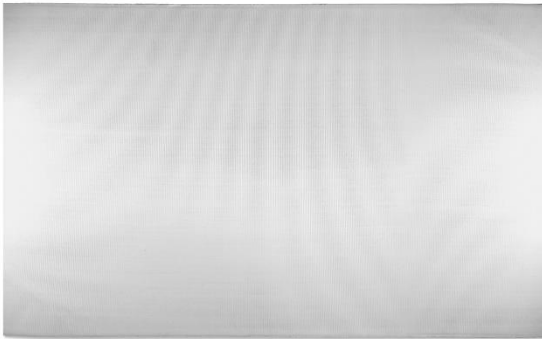
- Closer to full coverage than the tan face.
- More teeth per inch that gripped better and transferred more energy to the work on the floor.

Cons:

- Made of a soft material.
- Required even more separate parts to provide full coverage of our machines.
- The separate parts were more likely to come loose from chemical exposure.

White Grip Face

The third grip face was white. It starts life as a 1,200-yard-long roll of material. The single piece of material was a huge improvement over the tan and black grip faces. It left no gaps between pieces. The white material has a shorter single sided harpoon fish hook hook height at .028" but had 4200% more teeth per square inch at 920 teeth per inch. This allowed new perfect energy transfer to the floor. This face gave us the best working results we had ever seen.



Pros:

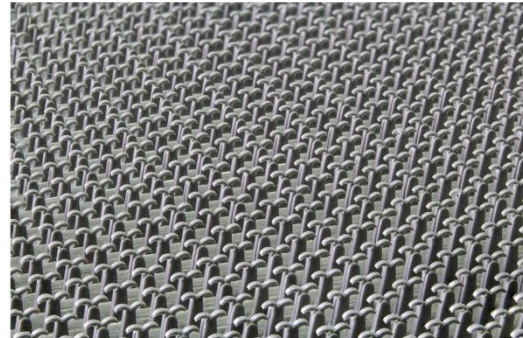
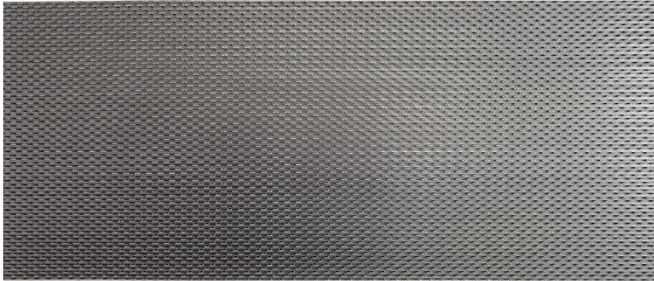
- Great energy transfer.
- All the work from the motor went directly into the pad and on the floor
- One single sheet of material covered the entire bottom plate of the machines
- It was drastically less costly than the black and the tan grip faces.

Cons:

- The shorter teeth could not grip stiffer woven pads at all, so the thin white driver pad had to be used with all pads.
- If an operator attempted to use the machine without a driver pad the teeth were destroyed very quickly.

New Silver Grip Face

The fourth and newest grip face is gray or silver. It starts life as a 1,200-yard-long roll of material. The rolls again allow for a single sheet of material that covers the entire bottom of the aluminum driver plate. The single sheet is great with no gaps to allow chemicals to attach the adhesive. This material is applied to the same adhesive material that proved itself with the white grip face. The silver grip face is by far the very best of all the materials. It has teeth as tall as the tan grip face at .10" tall. The teeth have a two-sided harpoon tooth design that really grips well directly to heavy black and purple pads. With 130 teeth per square inch, it falls between the black and the white count wise. It provides excellent energy transfer with a long tooth, two hooks even full coverage on the entire face. The material is pretty stiff and resists the teeth from being bent over. By far the very best material we have so far. Sadly the cost had gone back up to almost that of the tan and black faces of years ago. Still a wonderful improvement for our equipment.



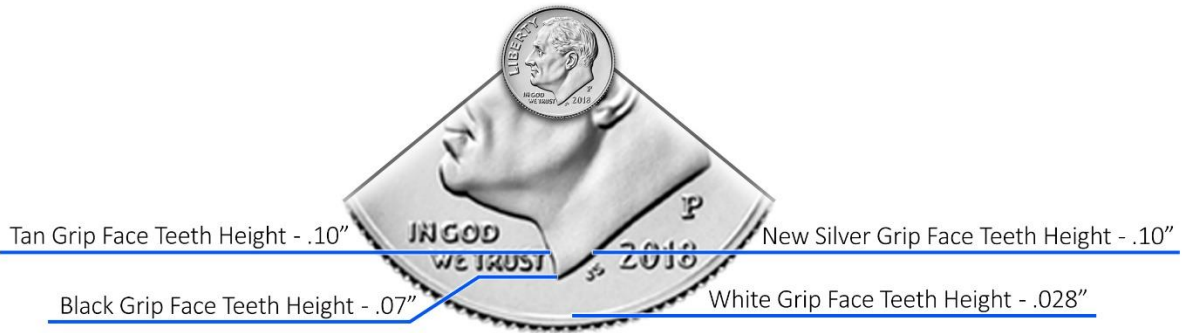
Pros:

- Full single piece coverage.
- Long double hook tooth design.
- Stiff hook material resistant to bending.

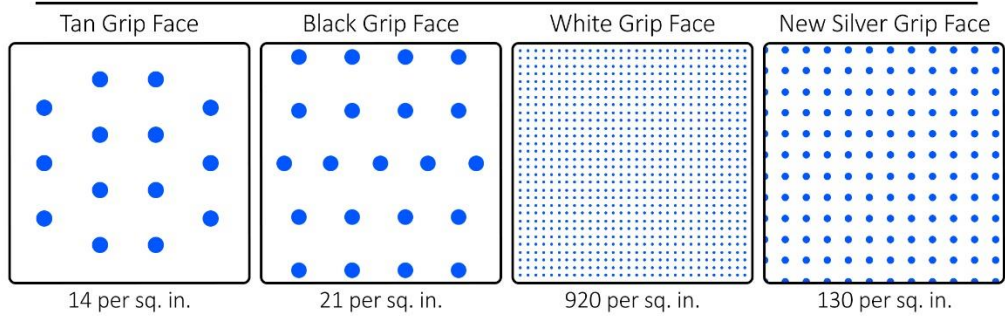
Cons:

- Almost as costly as the tan and black grip faces.
- Still not perfect. It can be destroyed if not cared for properly.

Grip Face Teeth Height



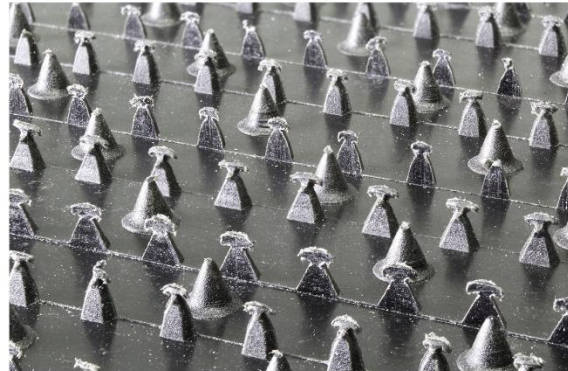
Grip Face Teeth Per Square Inch



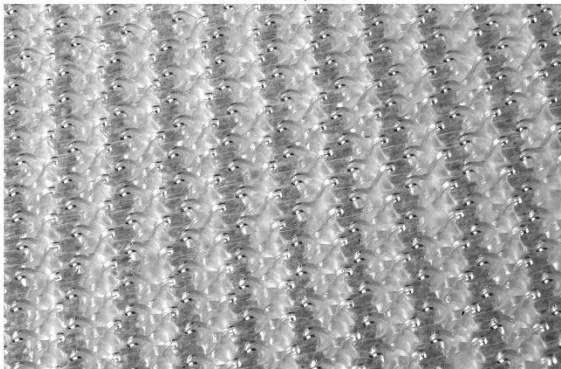
Tan Grip Face



Black Grip Face



White Grip Face



New Silver Grip Face

