# Surface Conditioning Products

**Technical Service Bulletin**

## 3M™ SR Cutter

**Product:**
3M™ SR Cutter, No. 3 and No. 8  Plastic rotary cutting tool with an integral ¼”-28 male threaded metal mandrel for use on slow speed right angle drills common to the aerospace industry.

**Applications:**
3M™ SR Cutters are designed to remove thick layers of sealants without damaging the underling coatings and surfaces, especially in aerospace applications.  Examples of sealants are polysulfide, polythioether, polyurethane, RTV sealants and silicones.

**Advantages:**

- Minimal or no abrasion to paints, primers, or metal on aircraft.
- Mechanizes procedure (vs. hand scraping).
- No chemicals to apply, clean up, or chemical waste in addition to removed sealant.
- Less time to do the job.

**Increases Productivity**

- Sealant removal without the need to repaint/re-prime damaged coatings.
- Remove sealants and residues quickly, no waiting for chemicals to act or handling of liquid hazardous waste.
- No resharpening of blunted plastic scrapers.
- Protects painted surfaces, no more gouging or scratching with metal scrapers.

**Easy To Use**

- Thread 3M™ SR Cutter into ¼”-28 head of drill.
- For fillet seals and flat applications, place 3M™ SR Cutter at head of sealant bead to be removed so that the side of cutter contacts the sealant.  Apply firm pressure downward onto the sealant and use low rotational speed (throttle down on drill) to remove sealant from one spot without moving the drill laterally.  When the substrate is exposed, increase rotational speed of drill and move the tool laterally.  For ease of drill handling, move the drill so that cutter blades adjacent to the substrate rotate into the remaining sealant bead.
- For fastener heads, ensure that the maximum fastener diameter is less than the inner diameter of coring in the 3M™ SR Cutter.  Place cutter on top of fastener with firm pressure.  Using the drill throttle, use low speed to cut away sealant from around fastener.  It is recommended that the drill be “jogged”, or started and stopped, several times when removing sealant from around the fastener.  This will prevent buildup of unwanted frictional heat between the inner diameter of cutter and remaining sealant on fastener, which can lead to degraded sealant and cutter blunting.
- The 3M™ SR Radial Bristle Discs can be used for further sealant removal with final cleaning accomplished by a solvent wipe.

**Product Availability:**

Converted Forms: Rotary Cutters.

No. 3 (.4")

No. 8 (1")

| Description | Stock Number | UPC |
|---|---|---|
| SR CUTTER NO. 3, .4 INCH DIAMETER | 61-5001-7577-5 | 00-48011-30096-2 |
| SR CUTTER NO. 8, 1 INCH DIAMETER | 61-5001-7576-7 | 00-48011-30095-5 |

**Tools:**

Aircraft Drills such as:

| Make and Model | Right Angle | RPM |
|---|---|---|
| ARO DR023B-11-T drill | Right Angle | 1100 |
| Ingersoll-Rand – Q0859D | Right Angle | 850 |
| Dynabrade | Right Angle | 1200 |
| Dotco – 15LS285-62 | Right Angle | 1360 |
| Dotco – 15LS286-62 | Right Angle | 840 |
| Desoutter – F32-L -1200S | Right Angle | 1200 |
| Desoutter – F32-L -830S | Right Angle | 830 |

**M.O.S.:**

Maximum Operating Speed (Free Spin): 1500 RPM for No.3 Rotary Cutter.
1500 RPM for No. 8 Rotary Cutter.

**Recommended Operating Speeds:**

Drills rated at 1000 rpm or less are preferred for increasing both product life and the ease of drill handling.

**Aerospace Applications:**

- Removal of polysulfide and FIP sealants from access/inspection panels, faying surfaces on aircraft fuselage and wings.
- Removal of polysulfide sealants from airframes between aircraft skins and supporting stringers.
- Removal of polysulfide sealants from internal aircraft fuel tanks.
- Removal of silicone and RTV sealants from engine cowlings and components.
- Fuel tank repair or wing panel repair because these are primary applications.
- Polysulfide removal from aircraft cargo doors.
- Removal of sealant from fasteners and fillets.

**General Aerospace Application:**

Removal of sealant from fasteners

Cleaning fillet with the bottom of the SR Cutter

Cleaning fillet with the side of the SR Cutter

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