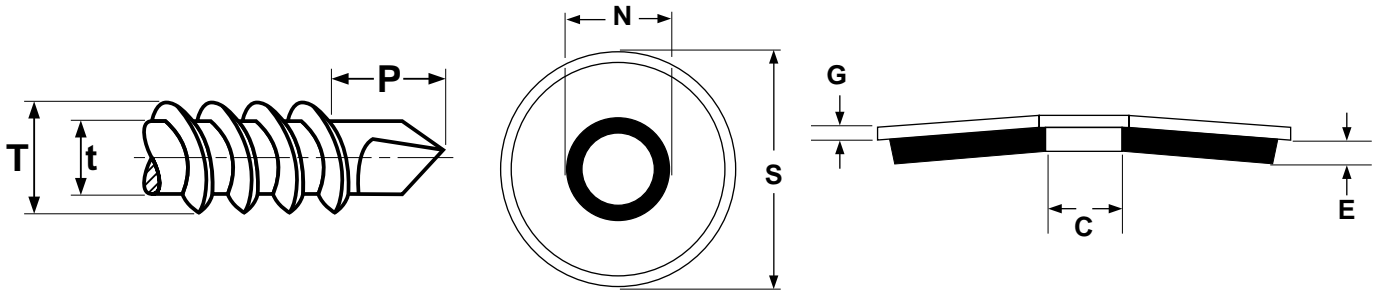


With Neo-EPDM Washers

# Self-Drilling

# Self-Tapping Screws



| SELF-DRILLING SCREWS, TYPE BSD       |                  |                |      |                |      |                      |        |  |                 |                 |                 |   | SAE J78-1998 |
|--------------------------------------|------------------|----------------|------|----------------|------|----------------------|--------|--|-----------------|-----------------|-----------------|---|--------------|
| Nominal Size or Basic Screw Diameter | Threads Per Inch | T              |      | t              |      | P                    |        | Minimum Practical Nominal Screw Lengths, Formed Points |                 |                 |                 | Minimum Torsional Strength, lb.-in. (STEEL SCREWS ONLY) |              |
|                                      |                  | Major Diameter |      | Minor Diameter |      | Protrusion Allowance |        | 90° Head, #2 Pt  | Csk Head, #2 Pt | 90° Head, #3 Pt | Csk Head, #3 Pt |   |              |
|                                      |                  | Max            | Min  | Max            | Min  | #2 Pt.               | #3 Pt. |  |                 |                 |                 |   |              |
| 8                                    | .1640            | 18             | .166 | .161           | .122 | .116                 | .211   | .251   | 3/8             | 7/16            | 7/16            | 1/2   | 42           |
| 10                                   | .1900            | 16             | .189 | .183           | .141 | .135                 | .235   | .300   | 7/16            | 1/2             | 1/2             | 9/16  | 61           |
| 12                                   | .2160            | 14             | .215 | .209           | .164 | .157                 | .283   | .353   | 1/2             | 5/8             | 1/2             | 5/8   | 92           |
| 1/4                                  | .2500            | 14             | .246 | .240           | .192 | .185                 | .318   | .393   | 1/2             | 5/8             | 1/2             | 5/8   | 150          |

| NEO-EPDM WASHERS USED WITH SELF PIERCING & SELF DRILLING SCREWS |                                   |      |                                  |      |                            |                                 |      |                           |      |  |
|---|-----------------------------------|------|----------------------------------|------|----------------------------|---------------------------------|------|---------------------------|------|--|
| For Use with Screw of this Nominal Diameter                     | S                                 |      | N                                |      | G                          | C                               |      | E                         |      |  |
|   | Outside Diameter of Steel Section |      | Inside Diameter of Steel Section |      | Thickness of Steel Section | Inside Diameter of EPDM Section |      | Thickness of EPDM Section |      |  |
|   | Max                               | Min  | Max                              | Min  | Ref                        | Max                             | Min  | Max                       | Min  |  |
| 8   | .507                              | .491 | .212                             | .196 | .031                       | .149                            | .126 | .087                      | .070 |  |
| 10  | .507                              | .491 | .212                             | .196 | .031                       | .149                            | .126 | .087                      | .070 |  |
| 12  | .558                              | .542 | .243                             | .227 | .031                       | .197                            | .172 | .087                      | .070 |  |
| 14  | .617                              | .601 | .275                             | .259 | .031                       | .232                            | .208 | .087                      | .070 |  |

NOTE: There is no single standard for Neo-EPDM washers. These values are offered as a guide; deviations from these specifications may occur.

|                                 |   |
|---------------------------------|---|
| <b>Description</b>              | A hex washer head tapping screw with spaced threads and a drill point which drills its own hole. Beneath the head is a thin conically-shaped circular steel washer, bonded to a similarly shaped rubber-like piece which has a slightly smaller outside and inside diameter. When these washers are assembled (rubber side down) to self-piercing or self-drilling screws, those fasteners become "sealing screws".   |
| <b>Applications/ Advantages</b> | When properly assembled, this washer: (a) offers protection against leakage; (b) provides load bearing qualities superior to that of a regular flat washer; (c) reduces the chance of the fastening becoming loose due to vibration; (d) minimizes damage to the mating surface caused by contact with a steel washer. Self-drilling sealing screws may be used to attach roofing or metal walls to steel frames. Consult a self-drilling screw selection chart for the correct size. |
| <b>Material</b>                 | Screw: AISI 1016 - 1024 or equivalent steel<br>Steel Section of washer: 20 gauge steel<br>Elastic Section of washer: Style 40 EPDM sheet  |
| <b>Heat Treatment</b>           | Screws shall be quenched in liquid and then tempered by reheating to 625°F minimum.   |
| <b>Case Hardness</b>            | Screw: Rockwell C52 -58<br>Washer: EPDM material: Shore A 65 - 75 (Durometer scale)   |
| <b>Case Depth of Screw</b>      | No. 4 and 6 diameter: .002 - .007<br>No. 8 thru 12 diameter: .004 - .009<br>1/4" diameter and larger: .005 - .011   |
| <b>Core Hardness of Screw</b>   | Rockwell C32 - 40 (after tempering)   |
| <b>Plating</b>                  | See Appendix-A for plating information.   |