

NEOPRENE POLYMER FLAT WASHERS

| Screw Size | Nominal Dimensions | | | Alternate Part Number |
|------------|--------------------|-------|-------|-----------------------|
| | I.D. | O.D. | Thick | |
| 1/2 | .545 | .935 | .062 | COMP ASB |
| 9/16 | .578 | 1.062 | .031 | BACW10DPL916 |
| 9/16 | .578 | 1.062 | .062 | NAS1515-9 |
| 9/16 | .578 | 1.062 | .094 | NAS1515-9H |
| 5/8 | .625 | .750 | .062 | |
| 5/8 | .640 | 1.188 | .031 | NAS1515-10L |
| 5/8 | .640 | 1.188 | .062 | NAS1515-10 |
| 5/8 | .640 | 1.188 | .094 | NAS1515-10H |
| 3/4 | .750 | .950 | .062 | |
| 3/4 | .765 | 1.312 | .031 | NAS1515-12L |

| Screw Size | Nominal Dimensions | | | Alternate Part Number |
|------------|--------------------|-------|-------|-----------------------|
| | I.D. | O.D. | Thick | |
| 3/4 | .765 | 1.312 | .062 | NAS1515-12 |
| 3/4 | .765 | 1.312 | .094 | NAS1515-12H |
| 7/8 | .812 | 1.210 | .092 | |
| 7/8 | .875 | 1.125 | .062 | 50-14-2-28-9 |
| 7/8 | .890 | 1.500 | .062 | NAS1515-14 |
| 1" | 1.000 | 2.250 | .125 | 50-14-4-32-18 |
| 1" | 1.015 | 1.750 | .062 | NAS1515-16 |
| 1" | 1.110 | 1.562 | .125 | |
| 1-5/16 | 1.312 | 1.750 | .062 | 50-14-2-42-14 |

INSULATING FIBRE FLAT WASHERS

FIBRE WASHERS are made from insulating papers and boards such as: Vulcanized Fibre Boards, Fish Paper, High Density Bone, Rag Paper, etc. Commercial grade fibre per ASTM D710 is used in most of WCL's standard fibre washers. Washers are also available in Gasket materials as well as Duroids® and Friction Boards.

NAS549 washers, most frequently used for electrical insulating, are made from fiber per MIL-F-1148 Grade CH form S. Other materials of this type are listed in the Phenolic washer section on page 36.

The suffix-"F" designates thrust washers most commonly used in electrical motors and plumbing applications.

NAS70 washers shown here are made from vulcanized - grade CH form S. The DIN Standards are made of pressboard material.

Other Part Numbers - Non-government part numbers shown represent some of the many industry standards in use today.

| Screw Size | Nominal Dimensions | | | Alternate Part Number |
|------------|--------------------|------|-------|-----------------------|
| | I.D. | O.D. | Thick | |
| 0 | .057 | .444 | .062 | |
| 0 | .062 | .251 | .031 | 5602-51-32 |
| 0 | .063 | .312 | .031 | |
| M2 | .086 | .196 | .011 | DIN125A |
| 2 | .089 | .203 | .031 | |
| 2 | .090 | .220 | .031 | 5602-201-32 |
| 2 | .090 | .250 | .031 | 5602-1-32 |
| 2 | .091 | .285 | .031 | |
| 2 | .092 | .321 | .031 | WHT |
| 2 | .093 | .158 | .031 | 5602-53-32 |
| 2 | .093 | .187 | .031 | F-2, BLK, RED |
| 2 | .093 | .234 | .016 | RED |
| 2 | .093 | .593 | .062 | XP |
| 2 | .098 | .187 | .031 | |
| 2 | .098 | .187 | .047 | |
| 2 | .098 | .187 | .062 | |
| M2.3 | .098 | .236 | .020 | DIN125A |
| 2 | .098 | .250 | .031 | NAS70V099-250 |
| 2 | .098 | .250 | .047 | |

| Screw Size | Nominal Dimensions | | | Alternate Part Number |
|------------|--------------------|------|-------|-----------------------|
| | I.D. | O.D. | Thick | |
| 2 | .098 | .250 | .062 | |
| 2 | .098 | .312 | .031 | |
| 2 | .098 | .312 | .047 | |
| 2 | .098 | .312 | .062 | |
| M2.5 | .105 | .250 | .020 | DIN125A |
| 3 | .105 | .250 | .031 | NAS549-FL3 |
| 3 | .105 | .250 | .062 | NAS549-F3 |
| 3 | .110 | .250 | .031 | GRY, BLK, RED |
| 3 | .110 | .250 | .017 | 5602-9-17 |
| 3 | .110 | .250 | .062 | 5602-9-62 |
| M2.6 | .110 | .275 | .020 | DIN125A |
| 3 | .110 | .600 | .062 | GRY |
| 4 | .115 | .200 | .016 | 5602-58-16-BLK |
| 4 | .115 | .220 | .032 | BLK, BRN |
| 4 | .115 | .250 | .017 | BLK |
| 4 | .115 | .250 | .031 | 5602-9-32 |
| 4 | .115 | .250 | .062 | 5602-9-62 |
| 4 | .120 | .218 | .031 | 5602-60-32 |
| 4 | .120 | .250 | .027 | RED |

INSULATING FIBRE FLAT WASHERS

| Screw Size | Nominal Dimensions | | | Alternate Part Number |
|------------|--------------------|------|-------|-----------------------|
| | I.D. | O.D. | Thick | |
| 4 | .120 | .250 | .031 | |
| 4 | .120 | .250 | .047 | |
| 4 | .120 | .250 | .062 | |
| 4 | .120 | .312 | .031 | |
| 4 | .120 | .312 | .047 | |
| 4 | .120 | .312 | .062 | |
| 4 | .120 | .375 | .031 | |
| 4 | .120 | .375 | .047 | |
| 4 | .120 | .375 | .062 | |
| 4 | .125 | .250 | .031 | F-6, 5602-61-32 |
| 4 | .125 | .250 | .062 | F-5, 5602-61-62 |
| M3 | .125 | .275 | .020 | DIN125A |
| 4 | .125 | .312 | .031 | NAS549-FL4 |
| 4 | .125 | .312 | .045 | 5602-10-45 |
| 4 | .125 | .312 | .062 | NAS549-F4 |
| 4 | .125 | .312 | .125 | 5602-10-125 |
| 5 | .132 | .324 | .031 | 5602-63-32 |
| 5 | .136 | .250 | .062 | 5602-180-62 |
| 6 | .140 | .250 | .016 | 5602-23-16 |
| 6 | .140 | .250 | .031 | |
| 6 | .140 | .250 | .047 | |
| 6 | .140 | .250 | .062 | |
| 6 | .140 | .312 | .031 | |
| 6 | .140 | .312 | .047 | |
| 6 | .140 | .312 | .062 | |
| 6 | .140 | .375 | .031 | |
| 6 | .140 | .375 | .047 | |
| 6 | .140 | .375 | .062 | |
| 6 | .140 | .375 | .093 | 5602-12-93 |
| 6 | .140 | .500 | .050 | 5602-70-50 |
| 6 | .140 | .815 | .225 | RED |
| 6 | .144 | .375 | .031 | NAS70V144-375 |
| 6 | .144 | .502 | .031 | 5602-70-32 |
| M3.5 | .145 | .312 | .020 | DIN125A |
| 6 | .145 | .500 | .062 | RED |
| 6 | .145 | .750 | .051 | 5602-27-50 |
| 6 | .145 | .750 | .062 | 5602-27-62 |
| 6 | .150 | .375 | .032 | NAS549-FL6 |
| 6 | .150 | .375 | .062 | NAS549-F6 |
| 6 | .150 | .750 | .062 | PLN |
| 6 | .155 | .250 | .062 | BLK |
| 6 | .155 | .312 | .031 | F-8 RED |
| 6 | .155 | .312 | .062 | F-7 BLK |
| 6 | .155 | .375 | .031 | RED BLK |
| 6 | .155 | .375 | .045 | 5602-14-45 |

| Screw Size | Nominal Dimensions | | | Alternate Part Number |
|------------|--------------------|------|-------|-----------------------|
| | I.D. | O.D. | Thick | |
| 6 | .155 | .251 | .062 | 5602-30-62 |
| 6 | .160 | .500 | .125 | RED |
| 6 | .160 | .535 | .021 | BLK |
| 6 | .165 | .375 | .031 | 5602-219-32 |
| 6 | .165 | .375 | .062 | 6502-219-62 |
| 6 | .165 | .438 | .016 | RED |
| 6 | .165 | .501 | .125 | |
| 6 | .165 | .535 | .022 | 5302-75-22 |
| M4 | .169 | .354 | .031 | DIN125A |
| 8 | .171 | .312 | .031 | |
| 8 | .171 | .312 | .147 | |
| 8 | .171 | .312 | .062 | |
| 8 | .171 | .375 | .031 | |
| 8 | .171 | .375 | .047 | |
| 8 | .171 | .375 | .062 | |
| 8 | .171 | .438 | .031 | |
| 8 | .171 | .438 | .047 | |
| 8 | .171 | .438 | .062 | |
| 8 | .173 | .308 | .032 | 5602-79-32 |
| 8 | .173 | .375 | .016 | 5602-18-16 |
| 8 | .175 | .309 | .062 | 6502-79-62 |
| 8 | .175 | .325 | .031 | 5602-80-32 |
| 8 | .175 | .375 | .031 | NAS549-FL8 |
| 8 | .175 | .375 | .016 | 5602-18-16 |
| 8 | .175 | .375 | .062 | NAS549-F8 |
| 8 | .180 | .365 | .028 | RED |
| 8 | .180 | .758 | .062 | RED |
| 8 | .185 | .505 | .062 | RED |
| 8 | .188 | .312 | .031 | 5602-82-32 |
| 8 | .188 | .312 | .062 | 5602-82-62 |
| 8 | .188 | .375 | .031 | F-12, 9306, RED |
| 8 | .188 | .375 | .062 | F-11, BLK |
| 10 | .191 | .322 | .031 | 5602-85-32 |
| 10 | .191 | .322 | .062 | 5602-85-62 |
| 10 | .191 | .640 | .031 | 5602-87-32 |
| 10 | .191 | .572 | .108 | RED |
| 10 | .196 | .312 | .032 | |
| 10 | .196 | .312 | .047 | |
| 10 | .196 | .312 | .062 | |
| 10 | .196 | .375 | .032 | |
| 10 | .196 | .375 | .047 | |
| 10 | .196 | .375 | .062 | |
| 10 | .196 | .437 | .032 | F-168, 3130 |
| 10 | .196 | .437 | .047 | |
| 10 | .196 | .437 | .062 | |

INSULATING FIBRE FLAT WASHERS

| Screw Size | Nominal Dimensions | | | Alternate Part Number |
|------------|--------------------|-------|-------|-----------------------|
| | I.D. | O.D. | Thick | |
| 10 | .196 | .500 | .032 | |
| 10 | .196 | .500 | .047 | |
| 10 | .196 | .500 | .062 | |
| 10 | .196 | .505 | .093 | 5600-8-93 |
| 10 | .202 | .343 | .032 | 210-0102-00 |
| 10 | .202 | .406 | .032 | 5602-233-32 |
| 3/8 | .389 | .062 | .625 | NAS549-F616 |
| 3/8 | .389 | .625 | .094 | NAS549-FH616 |
| 3/8 | .413 | .753 | .031 | 5602-144-32 |
| M10 | .413 | .826 | .078 | DIN125A |
| 7/16 | .438 | .670 | .031 | |
| 7/16 | .437 | .687 | .062 | F-29, BLK |
| 7/16 | .453 | .750 | .031 | NAS549-FL716 |
| 7/16 | .453 | .751 | .062 | NAS549-F716 |
| 7/16 | .453 | .751 | .094 | NAS549-FH716 |
| 1/2 | .500 | .625 | .031 | F-32, RED |
| 1/2 | .500 | .625 | .062 | F-31, BLK |
| 1/2 | .500 | .750 | .031 | F-34, GRY, BLK |
| 1/2 | .500 | .750 | .062 | F-33, 9323, BLK |
| 1/2 | .505 | .689 | .032 | 5600-40-32 |
| 1/2 | .515 | .875 | .031 | NAS549-FL816 |
| 1/2 | .515 | .875 | .062 | NAS70V515-875 |
| 1/2 | .515 | .875 | .064 | NAS549-FH816 |
| 9/16 | .562 | .812 | .031 | F-37, RED |
| 9/16 | .562 | .812 | .062 | F-36, BLK |
| 9/16 | .567 | .817 | .016 | 5600-48-16 |
| 9/16 | .578 | 1.062 | .031 | NAS549-FL916 |
| 9/16 | .578 | 1.062 | .062 | NAS549-F916 |
| 5/8 | .625 | .750 | .031 | F-39, 5602-270-32 |
| 5/8 | .625 | .750 | .062 | F-38, BLK |
| 5/8 | .625 | .875 | .032 | F-41, GRY, RED |
| 5/8 | .625 | .875 | .062 | F-40, 9330, BLK |
| 5/8 | .635 | 1.250 | .031 | RED |
| 5/8 | .640 | 1.188 | .031 | NAS549-FL1016 |
| 5/8 | .640 | 1.188 | .062 | NAS549-F1016 |
| 5/8 | .640 | 1.188 | .094 | NAS549-FH1016 |
| 5/8 | .688 | .937 | .031 | F-32, RED |
| 5/8 | .688 | .937 | .062 | F-42, BLK |

| Screw Size | Nominal Dimensions | | | Alternate Part Number |
|------------|--------------------|-------|-------|-----------------------|
| | I.D. | O.D. | Thick | |
| 5/8 | .692 | .942 | .062 | 5600-60-62 |
| 3/4 | .750 | 1.000 | .031 | F-45, BLK, RED |
| 3/4 | .750 | 1.000 | .062 | F-44, BLK |
| 3/4 | .750 | 1.062 | .031 | F-47, RED |
| 3/4 | .750 | 1.062 | .062 | F-46, BLK |
| 3/4 | .755 | 1.005 | .031 | 5600-64-32 |
| 3/4 | .765 | 1.312 | .031 | NAS549-FL1216 |
| 3/4 | .765 | 1.750 | .062 | NAS549-F1216 |
| 3/4 | .765 | 1.750 | .094 | NAS549-FH1216 |
| 3/4 | .765 | 1.750 | .031 | BLK |
| 3/4 | .795 | 1.015 | .062 | BLK |
| 3/4 | .800 | .928 | .031 | RED |
| 7/8 | .812 | 1.125 | .032 | F-49 |
| 7/8 | .812 | 1.125 | .062 | F-48 |
| 7/8 | .875 | 1.187 | .031 | F-51 |
| 7/8 | .875 | 1.187 | .062 | F-50, 9334 |
| 7/8 | .875 | 1.312 | .094 | 9335 |
| 7/8 | .880 | 1.130 | .031 | 5600-72-32 |
| 7/8 | .890 | 1.500 | .031 | NAS549-FL1416 |
| 7/8 | .890 | 1.750 | .062 | NAS549-F1416 |
| 7/8 | .890 | 1.750 | .094 | NAS549-FH1416 |
| 7/8 | .937 | 1.250 | .031 | F-53 |
| 7/8 | .937 | 1.250 | .062 | F-52 |
| 1" | 1.000 | 1.312 | .031 | F-55 |
| 1" | 1.000 | 1.312 | .062 | F-54, 9336 |
| 1" | 1.005 | 1.385 | .032 | GRY |
| 1" | 1.005 | 1.500 | .062 | GRY |
| 1" | 1.005 | 2.000 | .032 | RED |
| 1" | 1.015 | 1.750 | .031 | NAS549-FL1616 |
| 1" | 1.015 | 1.750 | .062 | NAS549-F1616 |
| 1" | 1.015 | 1.750 | .094 | NAS549-FH1616 |
| 1-3/16" | 1.187 | 1.687 | .062 | RED |
| 1-3/16" | 1.187 | 2.060 | .062 | RED |
| 1-1/4" | 1.255 | 2.000 | .032 | RED |
| 1-1/4" | 1.255 | 2.250 | .062 | BLK |
| 1-1/2" | 1.505 | 2.250 | .062 | BLK |
| 1-5/8" | 1.682 | 2.140 | .062 | BLK |
| 1-3/4" | 1.755 | 2.250 | .062 | BLK |

WCL Part Numbers - Example: FW-0765-1750-031-FB-BLK

| | | | | | |
|-----------|-------------|--------------|-------------|-----------|------------|
| <u>FW</u> | <u>.765</u> | <u>1.750</u> | <u>.031</u> | <u>FB</u> | <u>BLK</u> |
| Type | I.D. | O.D. | THK | MAT | FIN |

FW = Flat Washer
 FB = Fibre
 BLK = Black