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# WaterMaster® CD Fire Hydrant Installation, Operation, and Maintenance Manual



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WaterMaster® CD Fire Hydrant Installation, Operation, and Maintenance Manual

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Now Available  
350 psi rated fire hydrants



**Made in the USA**  
Meets American Iron and Steel (AIS) requirements—please contact your Sales Representative for Buy America requirements prior to ordering.

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## YOUR EJ FIRE HYDRANT

EJ fire hydrants set the standard for reliability and ease of maintenance. This installation, operation, and maintenance manual will help ensure proper performance for years to come.

This fire hydrant is Made in the USA and comes standard with a 10-year limited warranty.

Please contact your EJ Sales Representative for more information.



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## RECEIVING INSPECTION

### Specification/Job Inspection:

EJ recommends that AWWA M17 (Installation, Field Testing, and Maintenance of Fire Hydrants) should be followed for all inspection criteria. At a minimum hydrants should be inspected at the time of delivery to verify compliance with specifications and to check for damage during shipment.

Specifications to be checked during the initial inspection include:

1. Model number and depth of bury.
2. Type of inlet connection.
3. Check direction of opening for compliance with other hydrants in the system.
4. Size and shape of operating nut and all nozzle cap nuts.
5. Check that drains comply with specifications (Auto-Drain or Plugged).
6. Nozzle threads should be checked dimensionally or checked with actual fire department hose couplings.
7. Make certain that all equipment to be used with this hydrant can be properly connected.

8. If this hydrant is to be placed in storage, make certain the inlet is kept free of foreign material and is kept face down to prevent water from collecting in the inlet.

*Note: This set of inspection guidelines is also attached to each fire hydrant. Manufacturer will not be responsible for failure resulting from improper handling, inspection or installation.*

### Inspection for Shipping Damage:

- Make sure no dirt or stones are in the inlet that would damage the valve seat prior to operating the hydrant.
- Operate the hydrant to the fully open and closed position. Hydrant should operate freely ensuring no damage occurred during shipping.
- Check outlet nozzles and bolting for loosening or damage as a result of rough handling during shipping and storage. Damaged nozzles and bolting may cause leakage during a pressure test.

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## HANDLING AND STORAGE INSTRUCTIONS

- Hydrants should be stored on pallets or blocking with the inlet facing down and valve closed to prevent damage from freezing water.
- Whenever possible, hydrants in storage should be protected from weather and the elements.
- Hydrants should be lifted using a sling of appropriate design.
- Never lift hydrants using cap chains.
- Hydrants should not be rolled, particularly on hard surfaces, to prevent damage to the nozzles.
- Do not drop or roll hydrants off from pallets or trucks. Damage to the safety flanges could result.

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## PRE-INSTALLATION INSPECTION

- Prior to installation, the hydrant valve and nozzle caps should be closed to prevent the entry of foreign matter.
- Hydrants should be stored with the inlets facing down.
- Hydrants should be re-inspected just before installation.

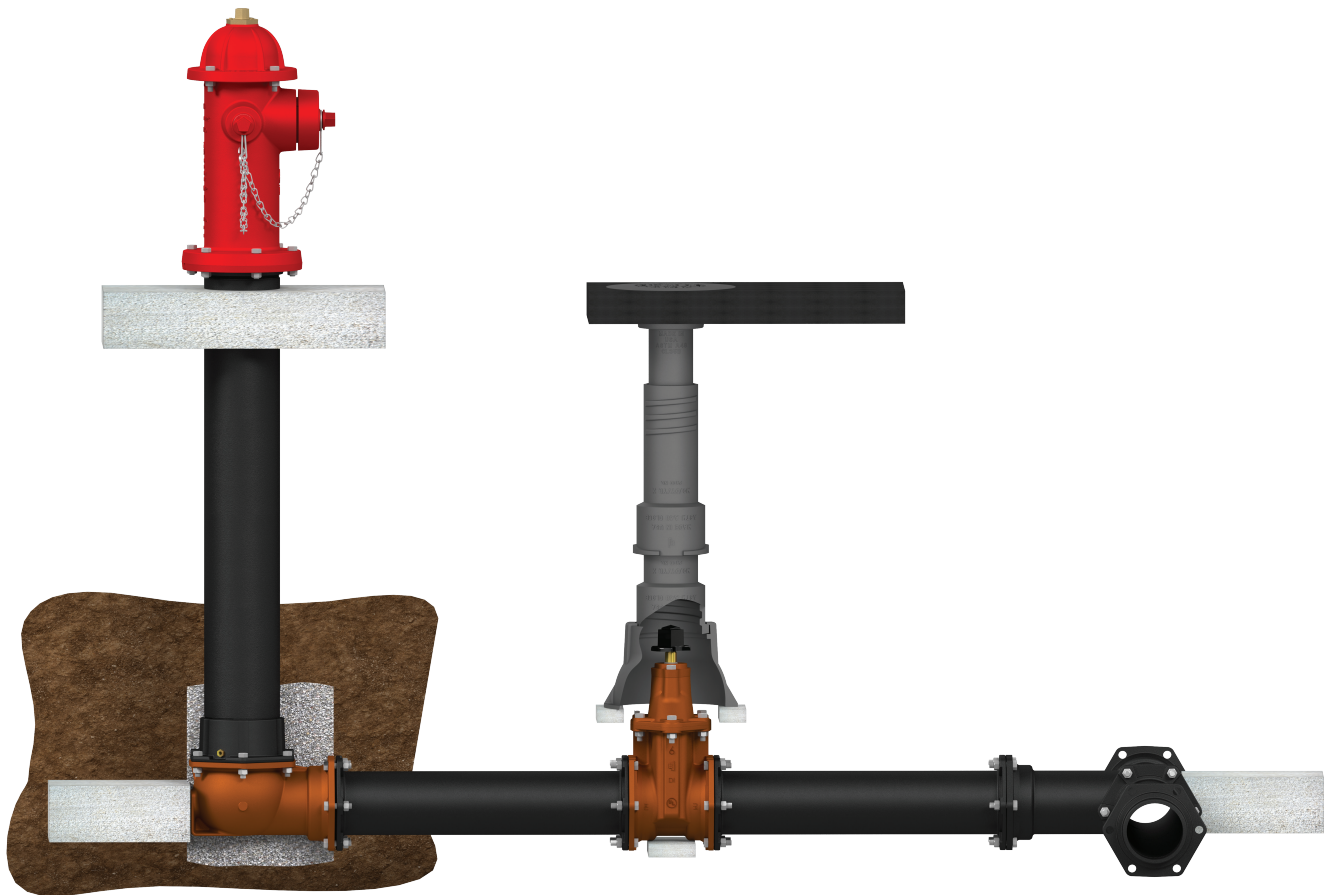
*Note: EJ will not be responsible for failure resulting from improper handling, inspection, or installation.*

## HYDRANT INSTALLATION

EJ recommends that AWWA M17 (Installation, Field Testing, and Maintenance of Fire Hydrants) should be followed during installation.

1. Rotate the bonnet to orient the nozzles properly with respect to the curb line.
2. Set the hydrant so that the bury line is at ground level.
3. In loose soils, traffic style hydrants may require a concrete collar (See AWWA M17) to insure the swivel flanges will properly break if struck by a vehicle.
4. Use a firm footing under the hydrant shoe and provide a thrust block or restrain the hydrant shoe as required. Make certain not to plug the automatic drain outlet with concrete.
5. Provide for adequate carry-off of hydrant barrel drainage. If necessary, excavate soil adjacent and below drain outlet and place at least one-third cubic yard of clean stone to a level several inches above the automatic drain outlet. Cover the stone with an impervious material before backfilling.
6. If the water table in the area could be higher than the automatic drain outlet, it may be necessary to plug the automatic drain outlet.
7. Prior to pressurization, check all bolts, nuts and drain plugs for tightness.
8. Open and close hydrant fully to ensure proper working order.
9. Do not pressure test hydrants with automatic drains at the same time as the water main, because of the allowable leakage through the automatic drains. The water main should be tested with all hydrants fully closed.
10. Flush hydrant thoroughly to remove any foreign material in the hydrant or water main.
11. Operate hydrant only in the fully open or fully closed position.
12. To ensure proper operation and drainage, fully open and close hydrant a minimum of twice a year.

*Note: The above-listed items are only a partial listing of installation guidelines. Reference AWWA Manual M17 and AWWA Standard C600 for complete information on installation, field testing and maintenance of fire hydrants.*



## HYDRANT TESTING

ANSI/AWWA C502 permits dry-barrel hydrants with unplugged drain outlets to have an allowable leakage of 5 fluid oz/min. (0.25 ml/s) through the drain valve. Therefore, the main valve should not be opened at the same time that the water main is tested.

The auxiliary valve should be closed during the water main tests (see AWWA C600). It is recommended that hydrant is installed and, before backfilling, while under pressure testing the water main the hydrant should be tested as follows.

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## PRESSURE TEST AT MAIN PRESSURE

1. Remove the highest pumper-nozzle cap and open the hydrant valve a few turns. Allow water to reach the bottom of the nozzle.
2. Replace the pumper-nozzle cap and leave it loose to permit all air to escape.
3. After all air has escaped, tighten the pumper-nozzle cap.
4. Open hydrant completely (opening the hydrant fully before all the air has escaped will compress the air and cause a safety hazard).
5. Check for leakage at flanges, outlet nozzles, and the o-rings around the stem.
6. If leakage is noted, repair or replace the faulty components or the entire hydrant.
7. Repeat the test until results are satisfactory.

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## PRESSURE TEST AT PRESSURES ABOVE MAIN PRESSURE

1. Connect a pressure-test pump to one of the hydrant's hose nozzles (or lowest pumper nozzle).
2. Open the highest pumper-nozzle cap. Open the hydrant valve a few turns. Allow the hydrant to fill until water is at the bottom of the nozzle.
3. Replace the pumper-nozzle cap and leave it loose to permit all air to escape.
4. After all air has escaped, tighten the pumper-nozzle cap.
5. Open the hydrant completely.
6. Close the auxiliary valve.
7. Pump up to test pressure per local requirements.
8. Check for leakage at flanges, nozzles and the packing or o-rings around the stem.
9. Repair or replace the hydrant, if necessary.
10. Repeat the test until results are satisfactory.
11. Remove test equipment and close hydrant.
12. Open the auxiliary valve.

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## DRAINAGE TEST FOR DRY-BARREL HYDRANT

1. Following the pressure test, close the hydrant main valve.
2. Remove one hose-nozzle cap and place the palm of one hand over the hose-nozzle opening.
3. Drainage should be sufficiently rapid to create a noticeable suction.
4. If the hydrant fails the drainage test, open the hydrant 3 turns with the nozzle caps on to create a pressure that will clear the drain valve.
5. If this fails, then the drain-valve assembly should be removed and inspected. If the drain valve is clear, then the problem may be that the drain outlet is plugged from outside the hydrant. Repair will require digging down around the outside of the hydrant and clearing the drain outlet.
6. Repair and repeat the test until results are satisfactory.



## PLACING THE HYDRANT IN SERVICE

The following steps are recommended for placing a hydrant in service:

1. After testing and backfilling, the hydrant should be flushed and tested to be sure that it is bacteriologically safe before it is put into service. Flushing is important to remove/dilute chlorine and/or other corrosive chemicals.
2. Tighten the nozzle caps after allowing time for the hydrant to drain. Back them off slightly so they will not be excessively tight, but tight enough to prevent their removal by hand.
3. Clean the hydrant exterior to remove dirt accumulated during installation. If necessary for protection or appearance, the exposed portion of the hydrant should be painted with one or more coats of the utility's standard paint.

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## HYDRANT OPERATION

1. Remove nozzle caps as needed. Caps should be snug but not require excessive force to remove from nozzle. Once the cap starts to turn, it should free up and turn easily. If it does not, this may be an indication that the hydrant is still under pressure. Cap should be loosened and allowed to leak until the pressure is released and the cap can be removed easily.
2. Attach wrench to the operating nut of the hydrant. Open hydrant slowly for one to two turns. Then as the valve starts to open, continue opening at a steady rate until fully open.
6. To shut down the hydrant simply turn the operating nut in the direction to close hydrant. Hydrants should be closed in a slow and steady manner such that the flow of water is not stopped so suddenly that water hammer is created.
7. If the hydrant is equipped with automatic drains, check that the water has drained completely prior to attaching hydrant caps. Caps should only be tightened firmly enough to prevent removal by hand.

*Note: Chatter happens when excessive air bubbles pass the valve seat when partially open. In order to minimize the chances of chatter, do not hesitate while turning to hydrant open. Air release valves or other means should be taken in the piping system to prevent the air from being trapped in the line.*

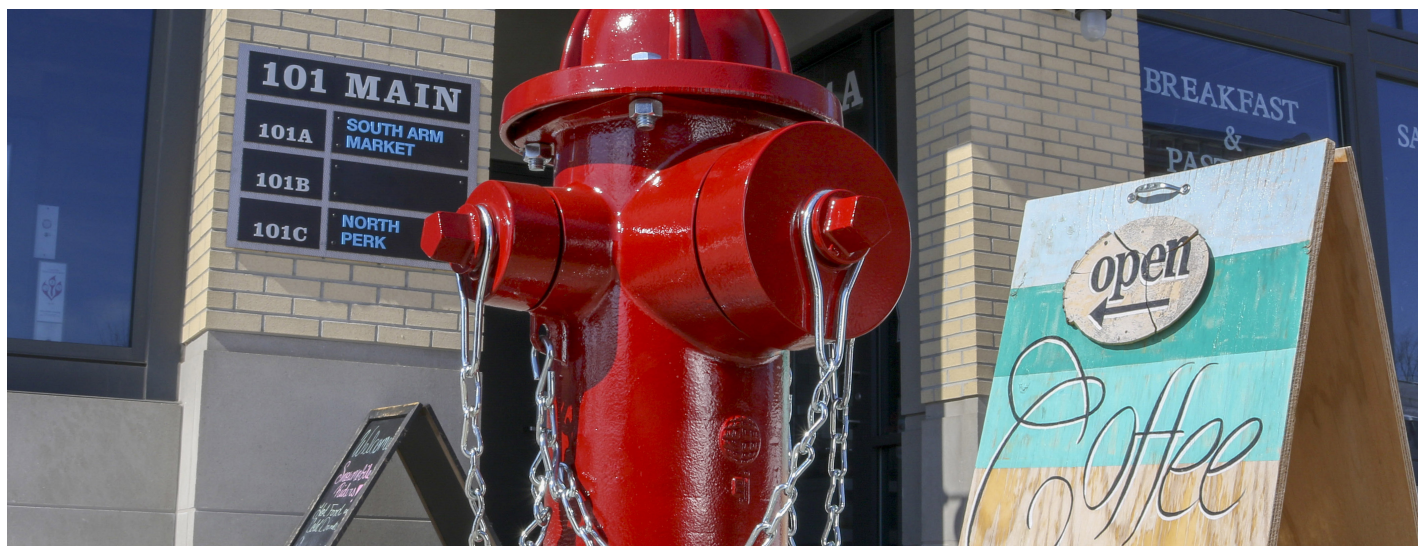
3. Never leave the main valve of a WaterMaster® fire hydrant partially open as a throttling valve. This will leave the drains open and cause excessive amounts of water to be released, possibly undermining the hydrant.
4. An isolation valve should be connected to the hose nozzle each time the hydrant is used for purposes other than fire fighting. This allows the user to control the flow without moving the main valve. Quarter turn valves should not be used since rapid shut off can cause water hammer.
5. Meters and diverters that are excessively heavy require the use of support to prevent damage to the hydrant and nozzles. Back flow prevention measures should also be taken.



## HYDRANT MAINTENANCE

### Annual Fire Hydrant Inspection Procedure

1. Check the hydrant for appearance and corrosion. Paint as needed.
2. Check to see whether the hydrant needs to be raised (because of a change in the ground-surface grade). Low nozzle caps may impede the full rotation of the wrench during removal thereby increasing the time required to connect to the hydrant.
3. Remove nozzle cap and check for main-valve leakage.
4. Check for the presence of water or ice in the hydrant barrel.
5. Replace the nozzle cap. Leave it loose enough to allow air to escape.
6. Open the hydrant only a few turns. Allow air to vent from the nozzle cap.
7. Tighten the nozzle cap.
8. Open the hydrant fully. Check for ease of operation. If the hydrant operates with difficulty, lubricate operating nut as needed.
9. With the hydrant fully open, check for leakage at flanges, around outlet nozzles and around the operating nut. Repair as needed.
10. Close the hydrant completely. Hydrant closes with pressure and should not require more than 50 ft-lbs of torque.
11. Remove nozzle cap.
12. Open the hydrant and flush to remove foreign material from the hydrant interior and water main lead.
13. Close the hydrant. Check the operation of the drain valve by placing the palm of one hand over the hose nozzle. Drainage should be sufficiently rapid to create noticeable suction. For hydrants without auto drains, pump the water from the barrel.
14. Check the main valve for leakage.
15. Remove all nozzle caps, clean threads, check the condition of the gaskets, and lubricate the threads with food grade anti-seize. Check the ease of operation of each cap.
16. Check nozzle cap chains or cables for free action on each cap. If the chains or cables bind, open the loop around the cap until they move freely. This will keep the chains or cables from kinking when the cap is removed during an emergency.
17. Replace the caps. Leave them tight enough to prevent their removal by hand but not over tightened, possibly causing damage or delays during fire service.
18. Check the lubrication of operating-nut threads. Lubricate with Lubriplate FGL-2 food grade grease.
19. If an auxiliary valve is ahead of the hydrant, exercise it fully closed then leave it in the open position.
20. On traffic-model hydrants, check the breakaway flanges for damage.
21. See AWWA M17 (Installation, Field Testing, and Maintenance of Fire Hydrants) for additional details and information.





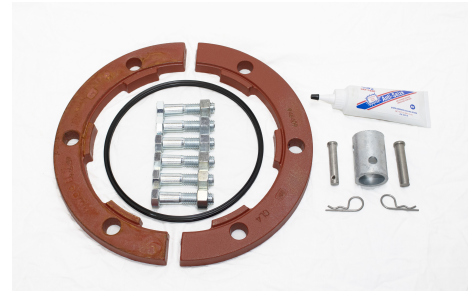
## CD HYDRANT REPAIR INSTRUCTIONS



Fire Hydrant Shutoff Drips Repair Kit



Fire Hydrant Seat Repair Kit



Fire Hydrant Flange Repair Kit



### Step 1

Remove four bolts and nuts from joint at base of bonnet. Turn operating nut in the direction of opening until bonnet stops upward movement (unscrew clockwise for open-right hydrants; unscrew counter clockwise for open-left hydrants). Lift bonnet to remove from upper standpipe (5CD bonnet is 33 lb; 4.5CD bonnet is 28 lb).



### Step 2

Insert seat wrench over operating stem top and engage on drive-loc pins. Turn counter clockwise to unscrew valve assembly.



### Step 3

Lift out entire valve and stem assembly. All parts including brass valve seat are thus removed. No friction points left in standpipe or bottom inlet.



### Step 4

Remove valve washer from stem by turning it counter clockwise. Seating valve rubber or other parts can now be easily replaced as needed. Seating valve rubber can be used for both 250 and 350 psi hydrants depending on its orientation. It is clearly labeled to show which side needs to face up for the pressure rating intended.



### Step 5

Re-assemble valve and stem assembly. Tighten valve washer clockwise (250 ft. lb). Apply appropriate food grade grease to threads of bronze valve seat.



### Step 6

Re-insert valve assembly with seat wrench into standpipe. Tighten clockwise (75 ft. lb). Lift bonnet onto stem. Turn operating nut in the direction of closing until bonnet stops downward movement and is tight.

### Step 7

Replace four bonnet flange bolts and nuts.



## CD HYDRANT EXTENSION INSTRUCTIONS



Fire Hydrant Extension Kit



Instructions are for 5CD250, 5CD350 and 4.5CD350 hydrants.



### Step 1

Remove four bolts and nuts from joint at base of bonnet. Turn operating nut in the direction of opening until the bonnet stops upward movement (unscrew clockwise for “open right” hydrants; unscrew counter clockwise for “open left” hydrants). Lift bonnet to remove from nozzle standpipe (5CD bonnet is 33 lb; 4.5CD bonnet is 28 lb).



### Step 2

Remove six bolts and nuts and swivel flanges from joint at base of nozzle standpipe. Lift nozzle standpipe to remove from standpipe lower section (5CD nozzle standpipe is 77 lb; 4.5CD nozzle standpipe is 70 lb). Remove operating stem top and stem coupling.



### Step 3

Install hydrant extension kit parts (non-breakaway stem coupling, extension flanges, extension stem, Quad-Ring® gasket, standpipe extension and six flange bolts and nuts).



### Step 4

Replace breakaway stem coupling (breakaway coupling is always to be installed 2" above groundline), operating stem top and Quad-Ring. Lightly grease top and bottom surfaces of the Quad-Ring. Lift nozzle standpipe onto standpipe extension. Replace swivel flanges and six flange bolts and nuts.



### Step 5

Replace and grease bonnet Quad-Ring. Lift bonnet onto nozzle standpipe. While lowering the bonnet onto stem, take care not to damage the Quad-Ring inside the cast well in the bonnet. Turn operating nut in the direction of closing until bonnet stops downward movement and is tight.



### Step 6

Replace four bonnet flange bolts and nuts.

## FIRE HYDRANT TROUBLESHOOTING GUIDE

### General Problems

#### Problem: Fire Hydrant is Difficult to Open/Close

- Foreign material may be in the operating nut threads or stuck in the valve seat.
  - Remove the hold down nut (hold down nut wrench EJ part # 91970) and the operating nut and check operating nut and upper stem threads for damage. Verify that there are two thrust washers (one below and one above the thrust collar) installed on the operating nut.
  - Inspect cavity for corrosion and water. If water is present, proceed to step 3. If threads and stem look in good condition, proceed to step 4.
  - Lubricate with food grade grease and thread operating nut back on to upper stem threads and replace operating hold down nut. Re-check operation.
- There may not be any grease in the reservoir.
  - Remove upper bonnet assembly. Check for damaged o-rings in bonnet reservoir. Inspect bonnet/upper brass stem sleeve for damage. Replace o-rings/ upper stem as required. Lubricate operating stem threads. Re-assemble upper bonnet.
- Check seat for damage or foreign material.
  - Remove stem and valve seat assembly using seat drive tool (EJ part # 91984). Replace as needed. Before reinstalling the stem and seat assembly, flush the hydrant by opening the isolation valve (in front of the hydrant) to remove any foreign materials, or air that may be hampering the opening/closing of the hydrant.
- Make sure seat and stem assembly are lubricated with food grade grease.
  - Reinstall stem into the lower barrel with stem drive tool. Lubricate stem operating thread. Quad ring gasket must be in the groove, cast into the upper barrel. Slide the upper bonnet back over the operating stem, ensuring not to damage the grease reservoir o-rings.
  - Re-install the operating and hold down nut onto the upper bonnet. Re-check operation.

#### Problem: Fire Hydrant Opens, but Will Not Close

- The stem coupling may be broken or damaged.
  - Remove the bonnet. Replace stem coupling. Clean and lubricate operating nut and stem threads then reassemble.
- Check to see if stem coupling pin is missing or broken and replace if so.
- Stem length for bury depth may be incorrect.
  - Check length of stem and replace with correct length.

#### Problem: Low Fire Hydrant Flow, or Fire Hydrant Will Not Open

- Debris in shoe may be preventing hydrant from opening fully (see Difficult Open/Close #4).
- Operating stem may be too short. Check length of stem and replace with correct length.

#### Problem: Operating Nut Turns, but Fire Hydrant Will Not Open

- Either the stem coupling pin is missing or the coupling is broken. Remove bonnet from hydrant, replace stem coupling. Clean and lubricate the operating nut with food grade grease then reassemble.

#### Problem: Stem and Seat Assembly are Difficult to Remove

- Debris, such as stones may be embedded in the seat. Remove the bonnet and loosen the threads on the valve seat assembly. Place two pieces of wood (i.e. 2x4) across the bonnet flange on either side of the stem and replace bonnet. Turn the operating nut as if you are closing the hydrant. If the seat assembly is unthreaded, you should be able to pull the rubber seat through the throat of the hydrant.

### Leaking

#### Problem: Leakage Past the Seating Valve

- Most likely damage to the rubber seat or the bronze seat. Remove or replace either one or both (see Difficult Open/Close #4).
- Tighten lower valve washer to stop leakage through the center stem hole opening on the rubber seat.
- If lower stem too long. Replace with correct length.

#### Problem: Leakage at Operating Nut

- The grease reservoir o-rings may be damaged or missing (see Difficult Open/Close #3).

#### Problem: Drains Leaking When Hydrant is Fully Open

- The rubber inserts may be damaged or pulled out of the drip. Remove the valve seat (see Difficult Open/Close #4) and check the chamfer on the automatic drain hole on the bronze seat. If there is a small chamfer or it is missing a chamfer, replace with a new seat. Install new inserts and cycle the hydrant.
- If leaking continues and all the above is not the cause, check for a damaged or missing o-ring between the shoe and the lower flange.

#### Problem: Drains Leaking When Hydrant is Closed

- Rubber valve seat may be damaged. Remove stem and seat assembly and replace rubber valve seat.
- If leaking continues and all the above is not the cause, check for a damaged or missing o-ring between the shoe and the lower flange.



#### Problem: Leakage Past the Nozzles

1. Remove nozzles and check alignment of o-rings. Make sure the o-ring has not been cut or damaged. Make sure to lubricate the o-ring with food grade grease upon installation.
2. When the nozzle is properly installed, the nozzle set screw will be seen and locked into the nozzle lug insertion opening. The set screw should be flush with the inside of the nozzle.
3. Check cap gaskets for damage and replace as needed.

#### Chattering/Slamming Fire Hydrants

1. Stem coupling may be deformed.
  - Replace stem coupling and pins.
2. More than one extension stem might have been installed in the hydrant.
  - Replace multiple stems with one extension stem.
3. Valve washer might be loose.
  - Check and re-tighten (see Difficult Open/Close #4).
4. Check drip channels for foreign material and inserts for damage. Replace parts as needed.
5. Air may be in water main.
  - Remove hydrant bonnet and stem. Flush hydrant by opening valve in front of hydrant

Note: Follow General Problem #3

#### Nozzle Stand Pipe/Bonnet is Facing the Wrong Direction

1. Loosen the bolts and nuts on the breakaway flanges while the water main pressure is still on. Remove stem tension by turning the operating nut in the open direction. This will lift the upper stand pipe enough to be positioned in the desired location. Turn the operating nut in the closed direction to lower the upper stand pipe then tighten the bolts and pressurize the upper stand pipe to make sure there are no leaks.

#### Nozzle is Difficult to Remove

1. Loosen nozzle set screw and use nozzle wrench (EJ part # 91893, 91894 or 91895) to remove nozzle. Turn clockwise (turn to the right) to remove.

#### Seat O-ring Being Cut When Reinstalling Valve Seat

1. Remove all grease from the seat, especially the grooves that hold the o-rings. Replace the o-rings and put a little grease on just the threads of the seat.

Note: Caution should be taken while handling the brass seat because of the sharp brass threads.





## RECOMMENDED SPECIFICATIONS

### Testing and Performance

- Hydrants shall meet ANSI/AWWA C502 (latest version).
- Rated working pressure shall be 250 or 350 psi.
- Each hydrant shall be hydrostatically tested at 500 or 700 psi.
- Hydrants shall meet or exceed the requirements of UL 262 and FM 1510.
- All castings shall be made and assembled in the USA.
- Hydrants shall be NSF/ANSI 61 & 372 Certified

### General Design

- Hydrants shall have a full 5 1/4" valve opening.
- Nozzles shall be quarter turn integral lug style secured with a stainless steel locking screw.
- Bonnet, standpipe, barrel, flanges, and inlet shall be ductile iron.
- Nozzle section shall be able to rotate 360 degrees to align pumper nozzle with the desired direction.
- Inlet/shoe and lower valve plate shall be coated with a fusion bonded epoxy meeting ANSI/AWWA C550 and NSF 61.
- All fasteners below grade shall be 304 stainless steel.
- 

### Operating Mechanism

- Operating nuts shall be one piece and made from high strength manganese bronze.
- Low friction thrust washers shall be above and below the thrust collar of the operating nut.
- Actuating threads shall be Acme type and permanently lubricated with food grade grease.
- Lubrication reservoir shall be sealed by dual o-rings.
- Travel stop nuts should not be threaded onto stem.

### Breakaway Section

- Breakaway flanges shall be on the bottom of the joint to prevent pieces from falling in when broken.
- O-rings shall be the Quad-Ring®-seal type and be installed in a groove on the bottom of joint so that taping or gluing to standpipe or extension is not required.
- Upper standpipe and extensions shall be self centering.

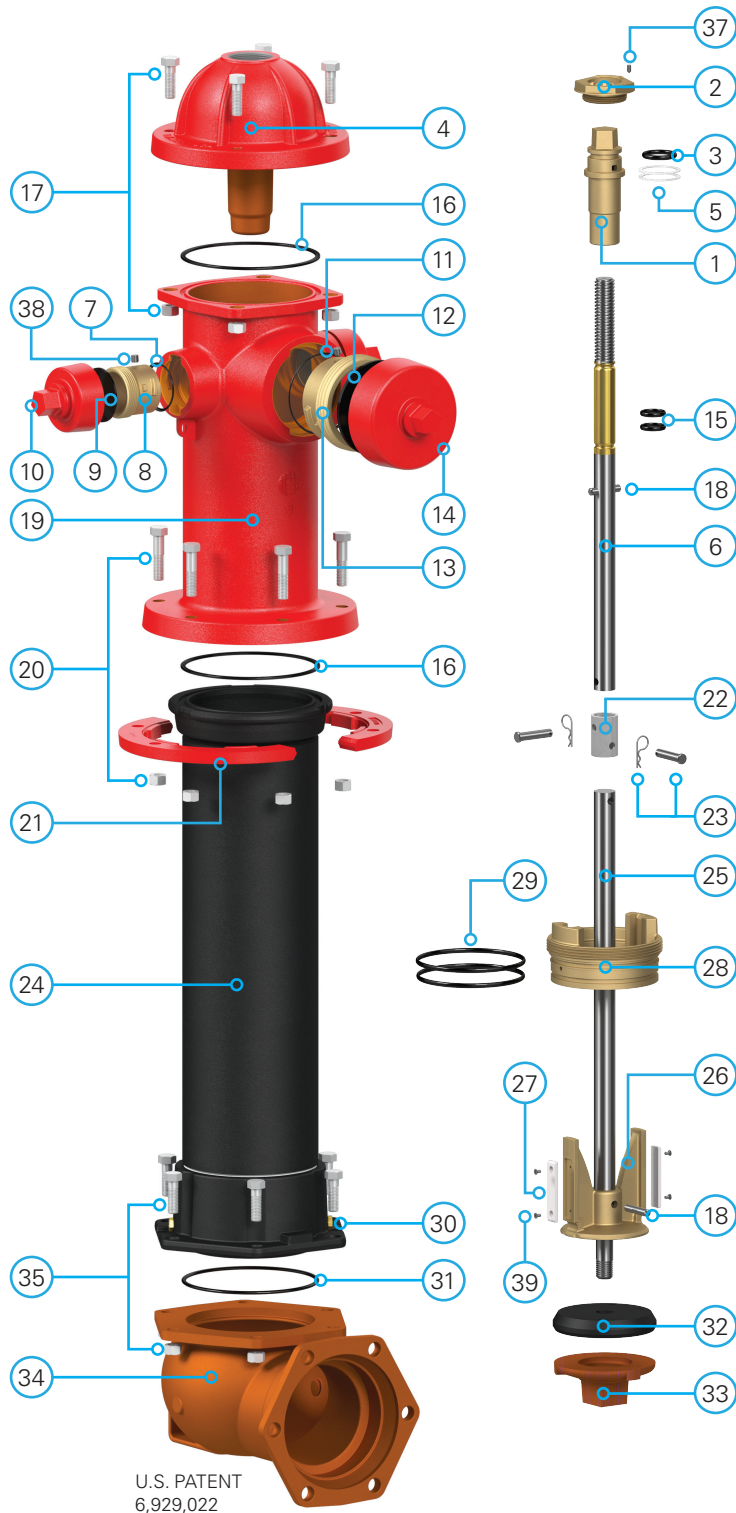
### Valve and Drain Mechanism

- Heavy duty drip shutoff (top plate) and valve seat shall be high strength manganese bronze.
- Valve seat shall be installed in a bronze seat ring.
- Drains shall be bronze lined and 3/8 inch diameter minimum.
- They shall operate without the use of springs, toggles, tubes, levers, or other intricate synchronizing mechanisms.
- Lower valve plate shall be a one piece ductile iron casting and not require a separate cap nut.
- Drains shall be open and flushed during the first 4 turns of opening the hydrant before positively closing while operating the hydrant.



# WaterMaster® 5CD250 Fire Hydrant Parts

## 250 psi Rated



WaterMaster 5CD250 Fire Hydrant Parts (3-Way Nozzle)

No.	Part Description	Qty.	Part Material
1	Operating Nut	1	Bronze
2	Hold Down Nut	1	Bronze
3	Weather Seal O-Ring	1	Rubber, Buna-N
4	Bonnet	1	Ductile Iron
5	Thrust Washers	2	Delrin
6	Operating Stem Top 24 1/4"	1	Steel with Brass Collar
7	Hose Nozzle O-Rings	2	Rubber, Buna-N
8	Hose Nozzles	2	Bronze
9	Hose Nozzle Gaskets	2	Rubber
10	Hose Nozzle Caps	2	Cast Iron
11	Pumper Nozzle O-Ring	1	Rubber, Buna-N
12	Pumper Nozzle Gasket	1	Rubber
13	Pumper Nozzle	1	Bronze
14	Pumper Nozzle Cap	1	Cast Iron
15	Reservoir O-Rings	2	Rubber, Buna-N
16	Quad-Ring®	2	Rubber, Buna-N
17	Bonnet Bolts & Nuts	4	Zinc Plated Steel
18	Drive-Loc Pins	2	Stainless Steel
19	Nozzle Standpipe	1	Ductile Iron
20	Safety Flange Bolts & Nuts	6	Zinc Plated Steel
21	Swivel Flange (Frangible)	1	Cast Iron
22	Stem Coupling (Frangible)	1	Galvanized Steel
23	Coupling Pins & Cotter Keys	2	Stainless Steel
24	Standpipe Lower Section	1	Ductile Iron with Bronze Liner
25	Operating Stem Lower	1	Steel
26	Drip Shutoff	1	Bronze
27	Inserts	2	HDPE
28	Valve Seat	1	Bronze
29	Valve Seat O-Rings	2	Rubber, Buna-N
30	Brass Drain Hole Bushings	2	Brass
31	Inlet Flange O-Ring	1	Rubber, Buna-N
32	Seating Valve Rubber	1	Rubber
33	Valve Washer	1	Ductile Iron/Epoxy
34	Bottom Inlet	1	Ductile Iron/Epoxy
35	Inlet Flange Bolts & Nuts	6	Stainless Steel
36	Chains*	3	Zinc Plated Steel
37	Set Screw 1/4-20 SS Cone Pt.	1	Stainless Steel
38	Pipe Plugs 1/4 NPTF SS HX	3	Stainless Steel
39	Insert Screws, HP	4	Stainless Steel

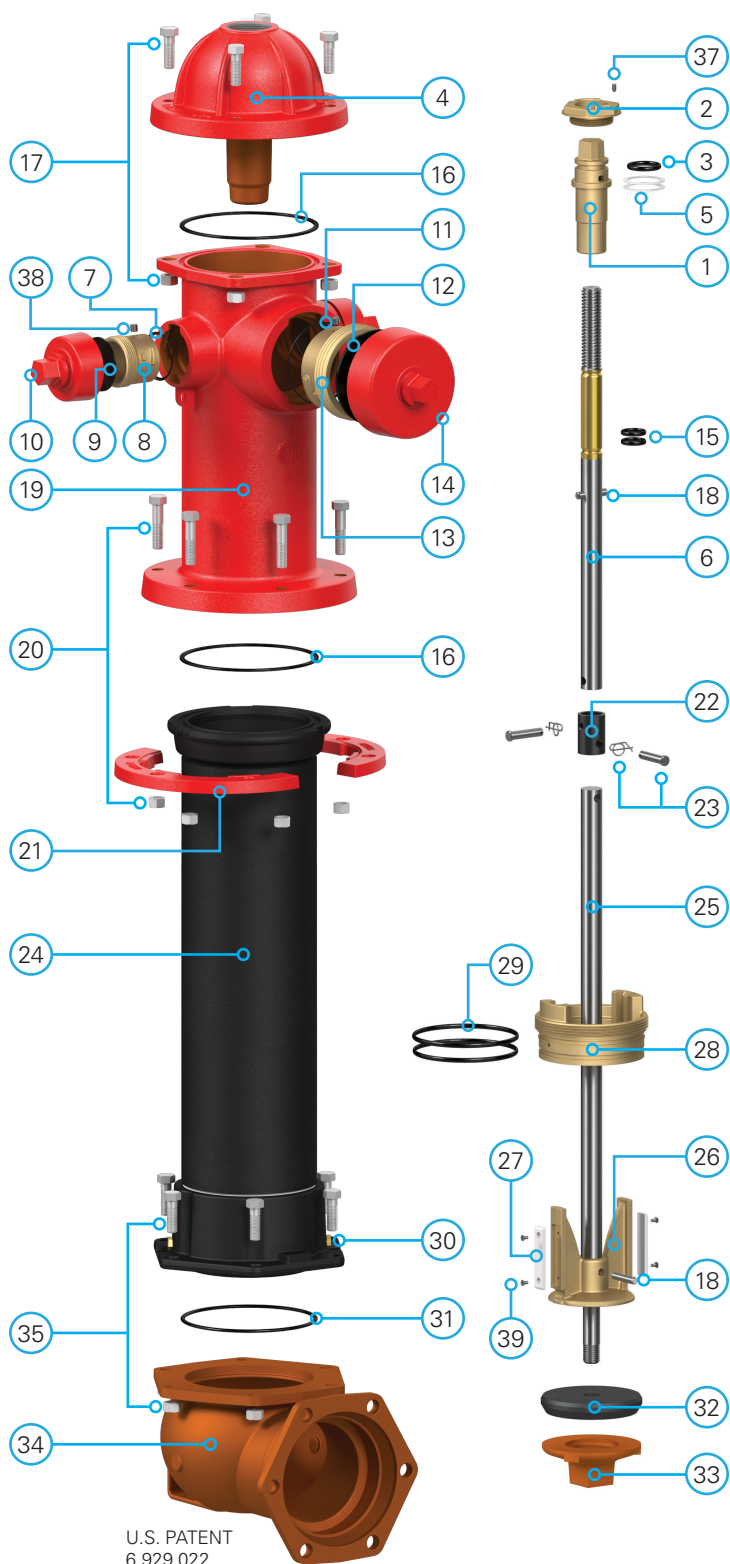
\*Not Shown

Quad-Ring is a registered trademark of Quadion Corporation.

Conforms to ANSI/AWWA Standard C502   Underwriters Laboratories Listed   Factory Mutual Approved   NSF/ANSI 61 & 372 Certified

# WaterMaster® 5CD350 Fire Hydrant Parts

## 350 psi Rated



WaterMaster 5CD350 Fire Hydrant Parts (3-Way Nozzle)

No.	Part Description	Qty.	Part Material
1	Operating Nut	1	Bronze
2	Hold Down Nut	1	Bronze
3	Weather Seal O-Ring	1	Rubber, Buna-N
4	Bonnet	1	Ductile Iron
5	Thrust Washers	2	Delrin
6	Operating Stem Top 24 1/4", HP	1	Steel with Brass Collar
7	Hose Nozzle O-Rings	2	Rubber, Buna-N
8	Hose Nozzles	2	Bronze
9	Hose Nozzle Gaskets	2	Rubber
10	Hose Nozzle Caps	2	Cast Iron
11	Pumper Nozzle O-Ring	1	Rubber, Buna-N
12	Pumper Nozzle Gasket	1	Rubber
13	Pumper Nozzle	1	Bronze
14	Pumper Nozzle Cap	1	Cast Iron
15	Reservoir O-Rings	2	Rubber, Buna-N
16	Quad-Ring®	2	Rubber, Buna-N
17	Bonnet Bolts & Nuts	4	Zinc Plated Steel
18	Drive-Loc Pins	2	Stainless Steel
19	Nozzle Standpipe	1	Ductile Iron
20	Safety Flange Bolts & Nuts	6	Zinc Plated Steel
21	Swivel Flange (Frangible)	1	Cast Iron
22	Stem Coupling (Frangible), HP	1	E-coated Steel
23	Coupling Pins & Ring Cotter, HP	2	Stainless Steel
24	Standpipe Lower Section	1	Ductile Iron with Bronze Liner
25	Operating Stem Lower, HP	1	Steel
26	Drip Shutoff, HP	1	Bronze
27	Inserts, HP	2	HDPE
28	Valve Seat	1	Bronze
29	Valve Seat O-Rings	2	Rubber, Buna-N
30	Brass Drain Hole Bushings	2	Brass
31	Inlet Flange O-Ring	1	Rubber, Buna-N
32	Seating Valve Rubber	1	Rubber
33	Valve Washer	1	Ductile Iron/Epoxy
34	Bottom Inlet	1	Ductile Iron/Epoxy
35	Inlet Flange Bolts & Nuts	6	Stainless Steel
36	Chains*	3	Zinc Plated Steel
37	Set Screw 1/4-20 SS Cone Pt.	1	Stainless Steel
38	Pipe Plugs 1/4 NPTF SS HX	3	Stainless Steel
39	Insert Screws, HP	4	Stainless Steel

\*Not Shown

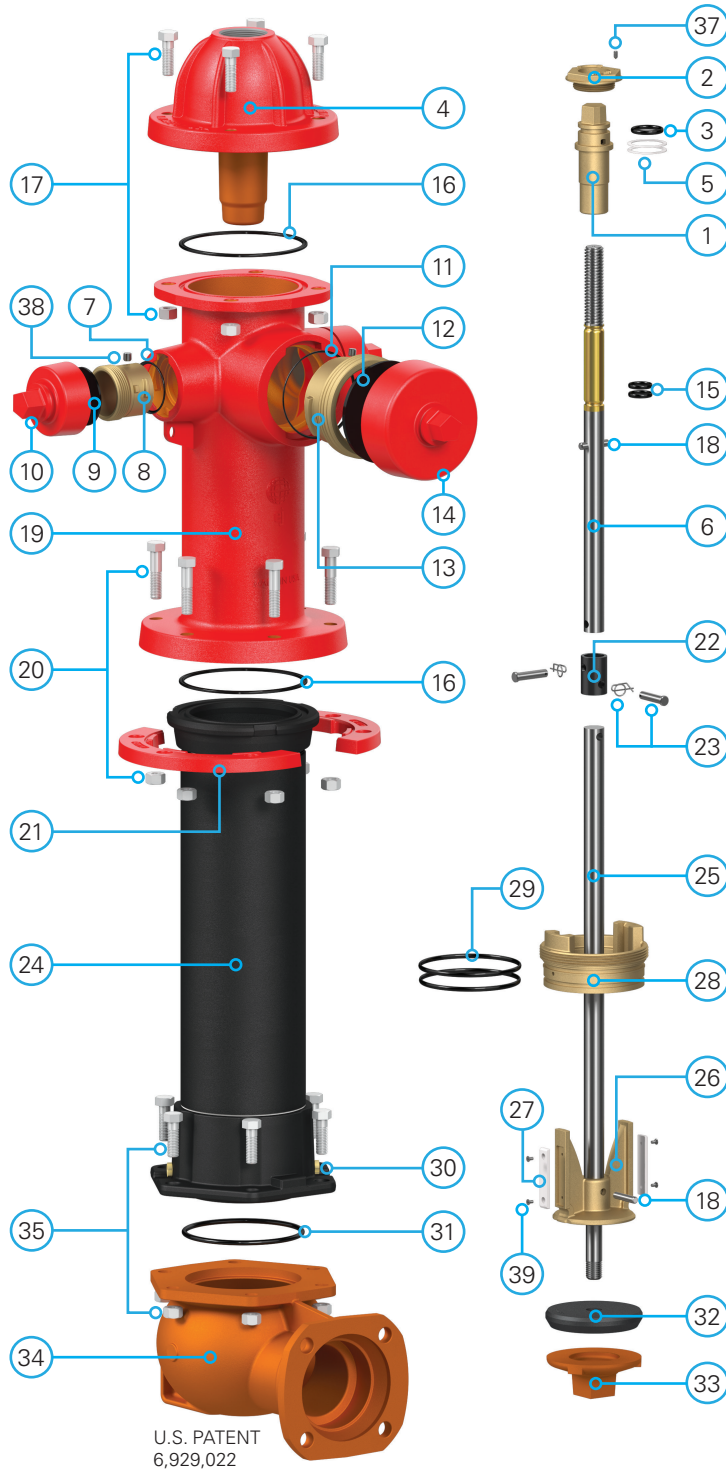
Quad-Ring is a registered trademark of Quadion Corporation.

Conforms to ANSI/AWWA Standard C502 Underwriters Laboratories Listed NSF/ANSI 61 &amp; 372 Certified



# WaterMaster® 4.5CD350 Fire Hydrant Parts

## 350 psi Rated



WaterMaster 4.5CD350 Fire Hydrant Parts (3-Way Nozzle)

No.	Part Description	Qty.	Part Material
1	Operating Nut	1	Bronze
2	Hold Down Nut	1	Bronze
3	Weather Seal O-Ring	1	Rubber, Buna-N
4	Bonnet	1	Ductile Iron
5	Thrust Washers	2	Delrin
6	Operating Stem Top 24 1/4", HP	1	Steel with Brass Collar
7	Hose Nozzle O-Rings	2	Rubber, Buna-N
8	Hose Nozzles	2	Bronze
9	Hose Nozzle Gaskets	2	Rubber
10	Hose Nozzle Caps	2	Cast Iron
11	Pumper Nozzle O-Ring	1	Rubber, Buna-N
12	Pumper Nozzle Gasket	1	Rubber
13	Pumper Nozzle	1	Bronze
14	Pumper Nozzle Cap	1	Cast Iron
15	Reservoir O-Rings	2	Rubber, Buna-N
16	Quad-Ring®	2	Rubber, Buna-N
17	Bonnet Bolts & Nuts	4	Zinc Plated Steel
18	Drive-Loc Pins	2	Stainless Steel
19	Nozzle Standpipe	1	Ductile Iron
20	Safety Flange Bolts & Nuts	6	Zinc Plated Steel
21	Swivel Flange (Frangible)	1	Cast Iron
22	Stem Coupling (Frangible), HP	1	E-coated Steel
23	Coupling Pins & Ring Cotters, HP	2	Stainless Steel
24	Standpipe Lower Section	1	Ductile Iron with Bronze Liner
25	Operating Stem Lower, HP	1	Steel
26	Drip Shutoff, HP	1	Bronze
27	Inserts, HP	2	HDPE
28	Valve Seat	1	Bronze
29	Valve Seat O-Rings	2	Rubber, Buna-N
30	Brass Drain Hole Bushings	2	Brass
31	Inlet Flange O-Ring	1	Rubber, Buna-N
32	Seating Valve Rubber	1	Rubber
33	Valve Washer	1	Ductile Iron/Epoxy
34	Bottom Inlet	1	Ductile Iron/Epoxy
35	Inlet Flange Bolts & Nuts	6	Stainless Steel
36	Chains*	3	Zinc Plated Steel
37	Set Screw 1/4-20 SS Cone Pt.	1	Stainless Steel
38	Pipe Plugs 1/4 NPTF SS HX	3	Stainless Steel
39	Insert Screws, HP	4	Stainless Steel

\*Not Shown

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## USE OF NON EJ REPLACEMENT PARTS

EJ does not support or recommend the use of any imitation part. Many independent OEM studies have documented the lesser quality of imitation replacement parts. Studies have proven that the OEM replacement parts are designed to meet defined quality and safety specifications that are not replicated on imitation parts.

The use of imitation or counterfeit replacement parts is not covered by the EJ limited warranty on that part and all adjoining parts and systems which are caused to fail by these parts.

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## MATERIAL SAFETY DATA SHEETS (MSDS)

The Hazardous Communication Standard requires that MSDS be supplied with all chemicals and mixtures, but does not require that MSDS be supplied with articles. Under the present definition of an article in the OSHA standard 1910.1200, our products meet the definition of an article when used as designed. Therefore, we do not supply MSDS on our products at this time.

## Notes



## Notes





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