Dixon® Hose Coupling Workshops

In an effort to provide our customers with information regarding the proper and safe methods of assembling hose and couplings, Dixon® offers Hose Coupling Workshops suitable for a company's sales force and shop personnel.

Classes consist of lectures and/or hands-on demonstrations of coupling selection, hose preparation, coupling installation, assembly testing and maintenance procedures. Morning, afternoon and all day classes are available. For more information, please contact Dixon® at 800.355.1991.

We encourage you to share this information with anyone who may be affected by the selection, installation, maintenance or use of any hose assembly. Always use quality products to **Be Safe**.

Solutions on Site Vans by Dixon®

Our Solutions on Site (SOS) vans are outfitted with product samples, videos, literature and products representative of what Dixon® provides to specific markets. Call 800.355.1991 for additional information.

Best Practices Safety Assessment

Dixon®, in partnership with your industrial hose supplier, is pleased to offer a hose and coupling safety survey of your plant, at no cost to you, to assist in your efforts to make your facility as safe, efficient and productive as possible.

Today, plant safety is an enormous, ongoing endeavor in which it is impossible to be an expert in every field.

The use of damaged or misapplied hose couplings and related items occurs. To the untrained eye, these hazards may continue to exist until an accident happens, threatening not only plant machinery, but also the well-being of plant personnel.

Our program includes a visual inspection of hose assemblies and related accessories in your plant by trained technicians. A professionally written report containing our observations and recommendations for corrective action is subsequently provided to augment your own ongoing safety program. If desired, photographs of the areas of concern can be supplied with the report. As a follow-up, the program offers an educational hands-on seminar directly relating to the safety concerns in your facility.

Plant safety is coming under increasing scrutiny by various regulatory agencies. Let trained Dixon® personnel assist you in establishing and maintaining safety compliance in your plant.

The safety report is completely confidential and will only be shown to authorized plant personnel. For more information, please contact Dixon® at 800.355.1991.

Be Safe

Hose assemblies must be inspected prior to each use. Worn out fittings, attachment devices, hose and accessory items must be replaced. Retaining devices (safety devices) such as clips, cables or chains must be used. Clamps must be checked regularly to the specified torque found in Dixon® literature. Under no circumstance should any coupling be disconnected while under pressure unless the coupling is specifically designed to do so. Disconnecting couplings under pressure could result in serious injury or death, and destruction to property and equipment.

For all hose assemblies in use:

B*eware* - Hose assemblies when used improperly or in the wrong application can be dangerous. The maximum working pressure shown on the hose is not an indication of the working pressure of the assembly. Based on the hose, fittings and attachment method used, all assemblies should be permanently marked with the designed working pressure and the intended media. The assembly working pressure should be permanently displayed. Hose assemblies must be used for the intended service only. Never alter manufactured product or substitute component parts.

E*liminate* - hazardous conditions by inspecting, maintaining and testing hose assemblies. Dixon® recommends that all hose assemblies be tested in accordance with the hose manufacturer's specifications. The application determines the regularity of the re-testing schedule.

S*ecure* - and inspect hose, fittings, clamping devices and safety accessories before each use. Never take for granted that the coupling or attachment devices are properly installed.

A*lways* - inspect and re-tighten the bolts of any bolt style clamping device to the manufacturer's torque specifications.

F*ittings* - hose and clamping devices that are worn out or damaged must be removed from service.

E*ducate* - your employees about the proper use, care and potential hazards of hose assemblies. Take advantage of Dixon®'s free Best Practices Safety Assessment and the follow up Training Seminar to aid you in setting up your own inspection program. Any questions on applications, use or assembly call 800.355.1991 or email engineering@dixonvalve.com.

S.T.A.M.P.E.D.

When fabricating and specifying hose assemblies ask the following questions:

S*ize*: What is the ID (Inside Diameter) of the hose? What is the OD (Outside Diameter) of both ends of the hose? What is the overall length of the assembly required?

T*emperature*: What is the temperature range of the media (product) that is flowing through the hose assembly? What is the temperature range of the environment that surrounds the outside of the hose assembly?

A*pplication*: How is the hose assembly actually being used? Is it a pressure application? Is it a vacuum (suction) application? Is it a gravity flow application? Are there any special requirements that the hose assembly is expected to perform? Is the hose being used in a horizontal or vertical position? Are there any pulsations or vibrations acting on the hose assembly?

M*edia*: What is the media/material that is flowing through the hose assembly? Being specific is critical. Check for: abrasive materials, chemical compatibility, etc.

P*ressure*: What is the maximum pressure including surges (or, maximum vacuum) that this hose assembly will be subjected to? Always rate the maximum working pressure of your hose assembly by the lowest rated component in the system.

E*nds*: What couplings have been requested by the user? Are they the proper fittings for the application and hose selected?

D*ixon®*: Dixon® recommends that, based on the hose, fittings and attachment method used, all assemblies be permanently marked with the designed working pressure and intended media. Do not use other manufacturer's fittings or ferrules with Dixon® products due to the differences in dimensions and tolerances. We also recommend that all hose assemblies be tested frequently. *Be Safe*: Any questions on application, use or assembly call 800.355.1991 or email engineering@dixonvalve.com.

The images shown on these two pages are provided to assist in coupling and clamp or ferrule identification for the pressure recommendation chart.

Couplings

1

Dixon® Cam & Groove

2

Boss™ Couplings

3

Air King™ Universal

4

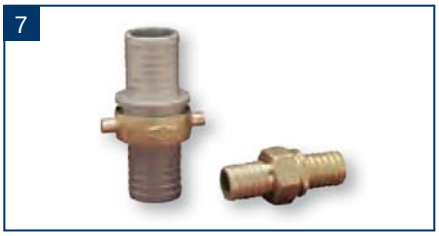
King™ Machined Medium Shank

5

King™ Machined Long Shank

6

Machined Short Shank

7

Cast Short Shank

8

Push-On

9

Reusable Brass

10

Holedall™ Swage / Crimp

11

Holedall™ Internal Expansion

12

Flow Chief / Sanitary

13

Holedall™ Internal Expansion Petroleum

14

King Crimp™ Couplings

⚠WARNING

1. The chart is intended as a guide only. It only applies to metal couplings as shown for ambient temperature **70°F (21°C)** applications with true ID hose. It assumes new Dixon® supplied couplings, new Dixon® supplied clamps, new quality hose and proper installation by a qualified assembler using Dixon® procedures and equipment. Temperature can affect the coupling retention. For questions relating to temperatures other than ambient **70°F (21°C)** contact the hose manufacturer or Dixon® at 800.355.1991.
2. This chart does not apply to non-Dixon® products, with used hose, in non-approved or unsupported applications or in non-standard assemblies.
3. Do not use this chart if it conflicts with the hose manufacturer's recommendations.
4. All hose assemblies should be pressure tested to hose manufacturers or Rubber Manufacturers Association (RMA) specifications prior to being put into service.
5. Our test experience indicates that coupling retention can vary with changes in hose design. For pressure ratings other than those listed and shown, or if questions arise, please call Dixon® at 800.355.1991 for assistance.
6. All hose assembly components must be compatible with the materials and environments with which they are to come in contact.
7. Dixon® recommends that all hose assemblies be marked with the assembly working pressure and media of the intended application. Under no circumstances should the assembly working pressure exceed the working pressure of the lowest rated component (coupling, clamp, ferrule or hose).
8. For further safety information refer to page M-3.

Clamps and Ferrules

A

Boss™ Interlocking Clamps

B

Air King™ Interlocking Clamps

C

Light Duty Ferrules

D

Band & Buckle

E

Preformed Clamps

F

Double Bolt Clamps

G

Swage / Crimp

H

Internal Expansion

I

Internal Expansion Petroleum

J

King Crimp™ Sleeve

K

King Crimp™ Ferrule

Pressure Recommendations

Mark hose assembly with pressure from this chart or hose working pressure, whichever is lower.
All pressure recommendations are in pounds per square inch (PSI).

1. This chart is intended as a guide only. It only applies to metal couplings as shown for ambient temperature 70°F (21°C) applications with true ID hose. It assumes new Dixon® supplied couplings, new Dixon® supplied clamps, new quality hose and proper installation by a qualified assembler using Dixon® procedures and equipment.
   Temperature can affect the coupling retention. For questions relating to temperatures other than ambient 70°F (21°C) contact the hose manufacturer or Dixon® at 800.355.1991.
2. This chart does not apply to non-Dixon® products, with used hose, in non-approved or unsupported applications or in non-standard assemblies.

Instructions continue at the top of the next page.

Hose (rubber covered)	DPL sect.	Group ID - Couplings	Couplings	Group ID - Clamps & Ferrules	Clamps & Ferrules	Assembly Procedure	1/4"	3/8"	1/2"	5/8"	3/4"
Air *textile reinforced rubber lined*	E	3	Air King™ Universal	E	Preformed Band Clamp	2102			150	150	150
	E	3	Air King™ Universal	G	Swage/Crimp	2306			150		150
	E	3	Air King™ Universal	C	Light Duty Ferrules	2307			150		150
	F	6	Machined - Short Shank	C	Light Duty Ferrules	2304	200	150	150	100	100
	F	6	Machined - Short Shank	E	Preformed Band Clamp	2100-2101			150	100	100
	G	9	Reusable - Brass	N/A	n/a	2305	250	250	250		
	F	4	King™ Machined - Medium Shank	E	Preformed Band Clamp	2100-2101			250	200	200
	F	5	King™ Machined - Long Shank	E	Preformed Band Clamp	2100-2101			300	300	300
	F	14	King™ Crimp ST - Ferrule	K	King Crimp™ Ferrule	4201					
Air *textile or wire reinforced rubber lined*	E	3	Air King™ Universal	B,A	Air King™ or Boss™ Interlocking Clamp	2000		150	150		150
	E	3	Air King™ Universal	G	Swage/Crimp	2306			150		150
	E	3	Air King™ Universal	C	Light Duty Ferrules	2307			150		150
	D	2	Boss™ Couplings	A	Boss™ Interlocking Clamp	2000-2004	600	600	600		600
	K	10	Holedall™ Swage/Crimp	G	Swage/Crimp	see Ram Manual	600	600	600		600
	F	14	King Crimp™ ST - Ferrule	K	King Crimp™ Ferrule	4201					
Asphalt & Hot Tar	D	2	Boss™ Couplings	A	Boss™ Interlocking Clamp	2001-2002					
Chemical *plastic lined for liquid service*	F	4	King™ Machined - Medium Shank	E	Preformed Band Clamp	2100-2101			125		125
	F	4	King™ Machined - Medium Shank	D	Band & Buckle	2104					
	F	5	King™ Machined - Long Shank	E	Preformed Band Clamp	2100-2101			150		150
	F	5	King™ Machined - Long Shank	D	Band & Buckle	2104					
	A	1	Boss-Lock™ Cam & Groove	E	Preformed Band Clamp	2100-2101			150		150
	A	1	Boss-Lock™ Cam & Groove	D	Band & Buckle	2104					
	A	1	Boss-Lock™ Cam & Groove	G	Swage/Crimp	see Ram Manual					250
	K	10	Holedall™ Swage/Crimp	G	Swage/Crimp	see Ram Manual			600		600
	F	14	King Crimp™ ST - Ferrule	K	King Crimp™ Ferrule	4201					
	F	14	King Crimp™ ST - Sleeve	J	King Crimp™ Sleeve	4200					
	A	14	King Crimp™ Cam & Groove - Ferrule	K	King Crimp™ Ferrule	4201					
	A	14	King Crimp™ Cam & Groove - Sleeve	J	King Crimp™ Sleeve	4200					
Chemical *rubber lined for liquid service*	F	4	King™ Machined - Medium Shank	E	Preformed Band Clamp	2100-2101			125		125
	F	4	King™ Machined - Medium Shank	D	Band & Buckle	2104					
	F	5	King™ Machined - Long Shank	E	Preformed Band Clamp	2100-2101			150		150
	F	5	King™ Machined - Long Shank	D	Band & Buckle	2104					
	A	1	Boss-Lock™ Cam & Groove	E	Preformed Band Clamp	2100-2101			150		150
	A	1	Boss-Lock™ Cam & Groove	D	Band & Buckle	2104					
	A	1	Boss-Lock™ Cam & Groove	G	Swage/Crimp	see Ram Manual					250
	D	2	Boss™ Couplings	A	Boss™ Interlocking Clamp	2000-2004			600		600
	K	11	Holedall™ Internal Expansion	H	Internal Expansion	see Ram Manual					
	F	14	King Crimp™ ST - Ferrule	K	King Crimp™ Ferrule	4201					
	F	14	King Crimp™ ST - Sleeve	J	King Crimp™ Sleeve	4200					
	A	14	King Crimp™ Cam & Groove - Ferrule	K	King Crimp™ Ferrule	4201					
	A	14	King Crimp™ Cam & Groove - Sleeve	J	King Crimp™ Sleeve	4200					
	K	10	Holedall™ Swage/Crimp	G	Swage/Crimp	see Ram Manual			600		600
Food Grade *conforming to 3A*	K	12	Flow Chief Sanitary	H	Internal Expansion	see Ram Manual					
Food Grade *rubber lined*	F	4	King™ Machined - Medium Shank	E	Preformed Band Clamp	2100-2101			125		125
	F	4	King™ Machined - Medium Shank	D	Band & Buckle	2104					
	A	1	Boss-Lock™ Cam & Groove	E	Preformed Band Clamp	2100-2101			150		150
	A	1	Boss-Lock™ Cam & Groove	D	Band & Buckle	2104					
	A	1	Boss-Lock™ Cam & Groove	G	Swage/Crimp	see Ram Manual					250
	K	11	Holedall™ Internal Expansion	H	Internal Expansion	see Ram Manual					
	K	10	Holedall™ Swage/Crimp	G	Swage/Crimp	see Ram Manual			600		600
	F	14	King Crimp™ ST - Ferrule	K	King Crimp™ Ferrule	4201					
	F	14	King Crimp™ ST - Sleeve	J	King Crimp™ Sleeve	4200					
	A	14	King Crimp™ Cam & Groove - Ferrule	K	King Crimp™ Ferrule	4201					
	A	14	King Crimp™ Cam & Groove - Sleeve	J	King Crimp™ Sleeve	4200					

3. Do not use this chart if it conflicts with the hose manufacturer's recommendations.
4. All hose assemblies should be pressure tested to hose manufacturers or Association for Rubber Products Manufacturer's (ARPM) specifications prior to being put into service.
5. Our test experience indicates that coupling retention can vary with changes in hose design. For pressure ratings other than those listed and shown, or if questions arise, please call Dixon® at 800.355.1991 for assistance.
6. All hose assembly components must be compatible with the materials and environments with which they are to come in contact.
7. Dixon® recommends that all hose assemblies be marked with the assembly working pressure and media of the intended application. Under no circumstances should the assembly working pressure exceed the working pressure of the lowest rated component (coupling, clamp, ferrule or hose).
8. For further safety information refer to page M-3.

Procedures can be found at dixonvalve.com or requested by calling 800.355.1991.

Hose (rubber covered)	1"	1¼"	1½"	2"	2½"	3"	4"	5"	6"	Notes
	150									(2) bands on ⅝" or larger; Must use mating Dixon® Air King™ fittings with safety clip installed.
	150									Coupling and ferrule are sold assembled. Must use mating Dixon® Air King™ fittings with safety clip installed.
	150									(14) Coupling and ferrule are sold separately. Must use mating Dixon® Air King™ fittings with safety clip installed.
Air	100									
textile reinforced	100									
rubber lined										(2) bands on ½" to 1"
	150									
	300									
	400		350	300		300	300		230	(13) crimp length would be full length
	150									Must use mating Dixon® Air King™ fittings with safety clip installed.
	150									Coupling and ferrule are sold assembled. Must use mating Dixon® Air King™ fittings with safety clip installed.
Air	150									(14) Coupling and ferrule are sold separately. Must use mating Dixon® Air King™ fittings with safety clip installed.
textile or wire reinforced	600	600	600	600	450	450	250		250	
rubber lined	600	600	600	600	600	600	500	450	400	
	400		350	300		300	300		230	(13) crimp length would be full length
Asphalt & Hot Tar	200	200	200	200	200	200	200			Consult Dixon®
	125	125	125	75	75	50	50			(3) bands on 3" & 4"; (2) bands on 1½" to 2½"; (1) band on the rest
		125	125	75	75	50	50			(3) bands on 3" & 4"; (2) bands on 1½" to 2½"; (1) band on the rest
	150	150	150	125	100	75	75			(5) bands on 3" & 4"; (4) bands on 2" & 2½"; (3) bands on 1¼" & 1½"; (2) bands on the rest
		150	150	125	100	75	75			(5) bands on 3" & 4"; (4) bands on 2" & 2½"; (3) bands on the rest
	250	250	250	250	150	125	100			
Chemical		250	250	250	150	125	100			
plastic lined	250		250	250		125	100			Requires properly matched stem and ferrule.
for liquid service	600	600	600	600	600	600	500			
	400		350	300		300	300		230	(13) crimp length would be full length
	400		300	250		200	175		75	(13) crimp length would be full length
	250		250	250		150	150		75	(13) crimp length would be full length
	250		250	250		125	110		75	(13) crimp length would be full length
	125	125	125	75	75	50	50			(3) bands on 3" & 4"; (2) bands on 1½" to 2½"; (1) band on the rest
		125	125	75	75	50	50			(3) bands on 3" & 4"; (2) bands on 1½" to 2½"; (1) band on the rest
	150	150	150	125	100	75	75			(5) bands on 3" & 4"; (4) bands on 2" & 2½"; (3) bands on 1¼" & 1½"; (2) bands on the rest
		150	150	125	100	75	75			(5) bands on 3" & 4"; (4) bands on 2" & 2½"; (3) bands on the rest
	250	250	250	250	150	125	100			
		250	250	250	150	125	100			
Chemical	250		250	250		125	100			Requires properly matched stem and ferrule.
rubber lined	600	600	600	600	450	450	250			
for liquid service	800	800	800	800	600	600	500			Consult factory for ratings on IXF48-3 to IXF48-5 & IXF64-2 to IXF64-5 ferrules. Internal Expansion is NOT recommended for XLPE, UHMWPE & Gum Rubber lined hoses.
	400		350	300		300	300		230	(13) crimp length would be full length
	400		300	250		200	175		75	(13) crimp length would be full length
	250		250	250		150	150		75	(13) crimp length would be full length
	250		250	250		125	110		75	(13) crimp length would be full length
	600	600	600	600	600	600	500			
Food Grade *conforming to 3A*			250	250		250				Use Stainless Steel Food Grade Ferrule ONLY.
	125	125	125	75	75	50	50	25	25	(4) bands on 6"; (3) bands on 3" to 5"; (2) bands on 1½" to 2½"; (1) band on the rest
		125	125	75	75	50	50	25	25	(4) bands on 6"; (3) bands on 3" to 5"; (2) bands on 1½" to 2½"; (1) band on the rest
	250	250	250	250	150	125	100	75	75	(3) bands on 6"; (2) bands on the rest
		250	250	205	150	125	100	75	75	(3) bands on 6"; (2) bands on the rest
	250		250	250		125	100			Requires properly matched stem and ferrule.
Food Grade	250		250	250	250	250	200			
rubber lined	600	600	600	600	600	600	500	450	400	
	400		350	300		300	300		230	(13) crimp length would be full length
	400		300	250		200	175		75	(13) crimp length would be full length
	250		250	250		150	150		75	(13) crimp length would be full length
	250		250	250		125	110		75	(13) crimp length would be full length

Pressure Recommendations

Hose (rubber covered)	DPL sect.	Group ID - Couplings	Couplings	Group ID - Clamps & Ferrules	Clamps & Ferrules	Assembly Procedure	1/4"	3/8"	1/2"	5/8"	3/4"
Material Handling *rubber lined*	F	7	Cast Short Shank	E	Preformed Band Clamp	2100-2101					
	F	7	Cast Short Shank	D	Band & Buckle	2104					
	F	4	King™ Machined - Medium Shank	E	Preformed Band Clamp	2100-2101					
	F	4	King™ Machined - Medium Shank	D	Band & Buckle	2104					
	F	5	King™ Machined - Long Shank	E	Preformed Band Clamp	2100-2101					
	F	5	King™ Machined - Long Shank	D	Band & Buckle	2104					
	A	1	Boss-Lock™ Cam & Groove	E	Preformed Band Clamp	2100-2101					
	A	1	Boss-Lock™ Cam & Groove	D	Band & Buckle	2104					
	A	1	Boss-Lock™ Cam & Groove	G	Swage/Crimp	see Ram Manual					
	K	10	Holedall™ Swage/Crimp	G	Swage/Crimp	see Ram Manual					
	K	11	Holedall™ Internal Expansion	H	Internal Expansion	see Ram Manual					
	F	14	King Crimp™ ST - Ferrule	K	King Crimp™ Ferrule	4201					
	F	14	King Crimp™ ST - Sleeve	J	King Crimp™ Sleeve	4200					
	A	14	King Crimp™ Cam & Groove - Ferrule	K	King Crimp™ Ferrule	4201					
	A	14	King Crimp™ Cam & Groove - Sleeve	J	King Crimp™ Sleeve	4200					
Material Handling *no helical wire rubber lined*	F	7	Cast Short Shank	F	Double Bolt Clamp	2201					
	F	4	King™ Machined - Medium Shank	F	Double Bolt Clamp	2201					
	F	5	King™ Machined - Long Shank	F	Double Bolt Clamp	2201					
	F	14	King™ Crimp ST - Ferrule	K	King Crimp™ Ferrule	4201					
	F	14	King™ Crimp ST - Sleeve	J	King Crimp™ Sleeve	4200					
	A	14	King™ Crimp Cam & Groove - Ferrule	K	King Crimp™ Ferrule	4201					
	A	14	King™ Crimp Cam & Groove - Sleeve	J	King Crimp™ Sleeve	4200					
Material Handling *cement rubber lined*	D	2	Boss™ Couplings	A	Boss™ Interlocking Clamp	2000-2004					
	K	10	Holedall™ Swage/Crimp	G	Swage/Crimp	see Ram Manual					
	K	11	Holedall™ Internal Expansion	H	Internal Expansion	see Ram Manual					
Petroleum Transfer	F	4	King™ Machined - Medium Shank	E	Preformed Band Clamp	2100-2101			125		125
	F	4	King Machined - Medium Shank	D	Band & Buckle	2104					
	F	5	King Machined - Long Shank	E	Preformed Band Clamp	2100-2101			150		150
	F	5	King™ Machined - Long Shank	D	Band & Buckle	2104					
	A	1	Boss-Lock™ Cam & Groove	E	Preformed Band Clamp	2100-2101			150		250
	A	1	Boss-Lock™ Cam & Groove	D	Band & Buckle	2104					
	A	1	Boss-Lock™ Cam & Groove	G	Swage/Crimp	see Ram Manual					250
	K	11	Holedall™ Internal Expansion	H	Internal Expansion	see Ram Manual					
	K	10	Holedall™ Swage/Crimp	G	Swage/Crimp	see Ram Manual			600		600
	F	14	King Crimp™ ST - Ferrule	K	King Crimp™ Ferrule	4201					
	F	14	King Crimp™ ST - Sleeve	J	King Crimp™ Sleeve	4200					
	A	14	King Crimp™ Cam & Groove - Ferrule	K	King Crimp™ Ferrule	4201					
	A	14	King Crimp™ Cam & Groove - Sleeve	J	King Crimp™ Sleeve	4200					
Air Craft Refueling *conforming to API 1529*	K	13	Holedall™ Petroleum Internal Expansion	I	Internal Expansion (Petroleum)	see Ram Manual					
Push-On	G	8	Push-On	N/A	n/a	2001-2002	350	350	350	350	350
Steam	D	2	Boss™ Couplings	A	Boss™ Interlocking Clamp	2000-2004			250		250
Water	E	3	Air King™ Universal	E	Preformed Band Clamp	2100-2101			150	150	150
	E	3	Air King™ Universal	B,A	Air King™ or Boss™ Interlocking Clamp	2000-2001		150	150		150
	E	3	Air King™ Universal	C	Light Duty Ferrules	2307			150		150
	F	6	Machined - Short Shank	E	Preformed Band Clamp	2100-2101			150	100	100
	F	6	Machined - Short Shank	C	Light Duty Ferrules	2304	200	150	150	100	100
	F	7	Cast Short Shank	E	Preformed Band Clamp	2100-2101			150	100	100
	F	7	Cast Short Shank	D	Band & Buckle	2104					
	F	4	King™ Machined - Medium Shank	E	Preformed Band Clamp	2100-2101			250	200	200
	F	5	King™ Machined - Long Shank	E	Preformed Band Clamp	2100-2101			300	300	300
	A	1	Boss-Lock™ Cam & Groove	E	Preformed Band Clamp	2100-2101			150		250
	A	1	Boss-Lock™ Cam & Groove	D	Band & Buckle	2104					
	A	1	Boss-Lock™ Cam & Groove	G	Swage/Crimp	see Ram Manual					250
	D	2	Boss™ Couplings	A	Boss™ Interlocking Clamp	2000-2002	600	600	600		600
	K	10	Holedall™ Swage/Crimp	G	Swage/Crimp	see Ram Manual	600	600	600		600
	F	14	King Crimp™ ST - Ferrule	K	King Crimp™ Ferrule	4201					
	F	14	King Crimp™ ST - Sleeve	J	King Crimp™ Sleeve	4200					
	A	14	King Crimp™ Cam & Groove - Ferrule	K	King Crimp™ Ferrule	4201					
	A	14	King Crimp™ Cam & Groove - Sleeve	J	King Crimp™ Sleeve	4200					
Water *no helical wire*	F	7	Cast Short Shank	F	Double Bolt Clamp	2201					
	F	4	King™ Machined - Medium Shank	F	Double Bolt Clamp	2201					
	F	5	King™ Machined - Long Shank	F	Double Bolt Clamp	2201					
	F	14	King™ Crimp ST - Ferrule	K	King Crimp™ Ferrule	4201					
	F	14	King™ Crimp ST - Sleeve	J	King Crimp™ Sleeve	4200					
	A	14	King™ Crimp Cam & Groove - Ferrule	K	King Crimp™ Ferrule	4201					
	A	14	King™ Crimp Cam & Groove - Sleeve	J	King Crimp™ Sleeve	4200					

Hose (rubber covered)	1"	1¼"	1½"	2"	2½"	3"	4"	5"	6"	Notes
			75	75	50	50	50	25	25	(4) bands on 6"; (3) bands on 3" to 5"; (2) bands on 1½" to 2½"
			75	75	50	50	50	25	25	(4) bands on 6"; (3) bands on 3" to 5"; (2) bands on 1½" to 2½"
			125	75	75	50	50	25	25	(4) bands on 6"; (3) bands on 3" to 5"; (2) bands on 1½" to 2½"
			125	75	75	50	50	25	25	(4) bands on 6"; (3) bands on 3" to 5"; (2) bands on 1½" to 2½"
			150	125	100	75	75			(5) bands on 3" & 4"; (4) bands on 2" & 2½"; (3) bands on the rest
			150	125	100	75	75			(5) bands on 3" & 4"; (4) bands on 2" & 2½"; (3) bands on the rest
			250	250	150	125	100	75	75	(3) bands on 6"; (2) bands on the rest
Material Handling			250	250	150	125	100	75	75	(3) bands on 6"; (2) bands on the rest
rubber lined			250	250		125	100			Requires properly matched stem and ferrule.
			600	600	600	600	500	450	400	
			800	800	600	600	500		400	Consult factory for ratings on IXF48-3 to IXF48-5 & IXF64-2 to IXF64-5 ferrules. Internal Expansion is NOT recommended for XLPE, UHMWPE & Gum Rubber lined hoses.
	400		350	300		300	300		230	(13) crimp length would be full length
	400		300	250		200	175		75	(13) crimp length would be full length
	250		250	250		150	150		75	(13) crimp length would be full length
	250		250	250		125	110		75	(13) crimp length would be full length
			75	75	50	50	50	25	25	(3) double bolt clamps on 5" & 6"; (2) double bolt clamps on 3" to 4"; (1) double bolt clamp on the rest
			125	75	75	50	50	25	25	(3) double bolt clamps on 5" & 6"; (2) double bolt clamps on 3" to 4"; (1) double bolt clamp on the rest
Material Handling			150	125	100	75	75			(3) double bolt clamps on all sizes
no helical wire	400		350	300		300	300		230	(13) crimp length would be full length
rubber lined	400		300	250		200	175		75	(13) crimp length would be full length
	250		250	250		150	150		75	(13) crimp length would be full length
	250		250	250		125	110		75	(13) crimp length would be full length
Material Handling	600	600	600	600	450	450	250		250	Cement will erode ID
cement	600	600	600	600	600	600	500	450	400	Cement will erode ID
rubber lined	800	800	800	800	600	600	500		400	Cement will erode ID Consult Dixon® for ratings on IXF48-3 to IXF48-5 & IXF64-2 to IXF64-5 ferrules.
	125	125	125	75	75	50	50	25	25	(4) bands on 6"; (3) bands on 3" to 5"; (2) bands on 1½" to 2½"; (1) band on the rest
		125	125	75	75	50	50	25	25	(4) bands on 6"; (3) bands on 3" to 5"; (2) bands on 1½" to 2½"; (1) band on the rest
	150	150	150	125	100	75	75			(5) bands on 3" & 4"; (4) bands on 2" & 2½"; (3) bands on 1¼" & 1½"; (2) bands on the rest
		150	150	125	100	75	75			(5) bands on 3" & 4"; (4) bands on 2" & 2½"; (3) bands on the rest
	250	250	250	250	150	125	100	75	75	(3) bands on 6"; (2) bands on the rest
		250	250	250	150	125	100	75	75	(3) bands on 6"; (2) bands on the rest
Petroleum Transfer	250		250	250		125	100			Requires properly matched stem and ferrule.
	800	800	800	800	600	600	500		400	Consult factory for ratings on IXF48-3 to IXF48-5 & IXF64-2 to IXF64-5 ferrules.
	600	600	600	600	600	600	500	450	400	
	400		350	300		300	300		230	(13) crimp length would be full length
	400		300	250		200	175		75	(13) crimp length would be full length
	250		250	250		150	150		75	(13) crimp length would be full length
	250		250	250		125	110		75	(13) crimp length would be full length
Air Craft Refueling *conforming to API 1529*	300	300	300	300	300	300	300			
Push-On										Push-On fittings should ONLY be used on Push-On hose.
Steam	250	250	250	250	250	250	250		250	
	150									(2) bands on ⅝" or larger; Must use mating Dixon® Air King™ fittings with safety clip installed. Band & Buckle is NOT recommended for 1½" and smaller.
	150									Must use mating Dixon® Air King™ fittings with safety clip installed. Band & Buckle is NOT recommended for 1½" and smaller.
	150									(14) Coupling and ferrule are sold separately. Must use mating Dixon® Air King™ fittings with safety clip installed.
	100									(1) band; Band & Buckle is NOT recommended for 1½" and smaller.
	100									
	100	75	75	75	50	50	50	25	25	(4) bands on 6"; (3) bands on 3" to 5"; (2) bands on 1½" to 2½"; (1) band on the rest
		75	75	75	50	50	50	25	25	(4) bands on 6"; (3) bands on 3" to 5"; (2) bands on 1½" to 2½"; (1) band on the rest
	150	150	125	75	75	50	50	25	25	(4) bands on 6"; (3) bands on 3" to 5"; (2) bands on 1½" to 2½"; (1) band on the rest
Water	300	300	150	125	100	75	75			(5) bands on 3" & 4"; (4) bands on 2" & 2½"; (3) bands on 1¼" & 1½"; (2) bands on the rest
	250	250	250	250	150	125	100	75	75	(3) bands on 6"; (2) bands on the rest
		250	250	250	150	125	100	75	75	(3) bands on 6"; (2) bands on the rest
	250		250	250		125	100			Requires properly matched stem and ferrule.
	600	600	600	600	450	450	250		250	
	600	600	600	600	600	600	500	450	400	
	400		350	300		300	300		230	(13) crimp length would be full length
	400		300	250		200	175		75	(13) crimp length would be full length
	250		250	250		150	150		75	(13) crimp length would be full length
	250		250	250		125	110		75	(13) crimp length would be full length
			75	75	50	50	50	25	25	(3) double bolt clamps on 5" & 6"; (2) double bolt clamps on 3" to 4"; (1) double bolt clamp on the rest
			125	75	75	50	50	25	25	(3) double bolt clamps on 5" & 6"; (2) double bolt clamps on 3" to 4"; (1) double bolt clamp on the rest
			150	125	100	75	75			(3) double bolt clamps on all sizes
Water	400		350	300		300	300		230	(13) crimp length would be full length
no helical wire	400		300	250		200	175		75	(13) crimp length would be full length
	250		250	250		150	150		75	(13) crimp length would be full length
	250		250	250		125	110		75	(13) crimp length would be full length

⚠WARNING

The data on the following pages has been compiled from generally available sources and should not be relied upon without consulting and following the specific recommendations of the manufacturer regarding particular coupling materials.

Ratings

Metal	Non-Metal	Gasket/Seal Material
1 = Excellent 2 = Good 3 = Fair X = Not Recommended - = Contact Dixon®	A = Acceptable X = Not Recommended - = Contact Dixon®	T = PTFE V = FKM E = EPDM, EPR N = Neoprene B = Buna N

1. Ratings given are based at **70°F (21°C)**. Chemical compatibility varies greatly with temperature. For applications at temperatures other than **70°F (21°C)**, contact Dixon® for recommendations at 800.355.1991 or email engineering@dixonvalve.com.
2. Gasket / seal materials are not necessarily listed in order of preference.
3. Chemical resistance of a material does not necessarily indicate the suitability of a fitting in a given application due to variables such as improper clamp and coupling application, special hose construction, gasket material, etc.

Special caution should be taken when handling hazardous materials.

AGENT	Aluminum	Brass	Bronze	Hastelloy, C-276	Malleable Iron Carbon Steel	Monel	Stainless Steel,304	Stainless Steel,316	Nylon	Polypropylene	Seal Material
Acetate Solvents (Crude)	1	X	X	1	2	2	1	1	A	X	T
Acetate Solvents (Pure)	1	1	1	1	X	1	1	1	A	X	T
Acetic Acid (80%)	3	X	X	1	X	1	1	1	X	X	TEVNB
Acetic Acid (50%)	2	X	X	1	X	2	2	1	X	X	TEVNB
Acetic Acid (20%)	2	X	X	1	X	2	2	1	X	X	TEVNB
Acetic Acid (10%)	2	X	2	1	X	2	1	1	X	X	TEVNB
Acetic Anhydride	2	X	2	1	2	2	2	2	X	X	TNB
Acetone	1	2	2	1	2	1	1	1	A	X	TE
Acetylene	1	X	X	2	2	2	1	1	X	X	TEVNB
Alcohols											
Amyl Alcohol	2	2	2	2	2	1	2	2	A	A	TEVNB
Benzyl Alcohol	2	2	2	2	2	1	1	1	X	A	TVB
Butyl Alcohol	1	2	1	2	2	1	1	1	A	A	TEVN
Diacetone Alcohol	1	1	2	1	2	1	2	2	X	A	TE
Ethyl Alcohol	1	2	2	1	2	2	2	2	X	A	TEVNB
Hexyl Alcohol	-	-	-	1	-	-	-	-	A	-	-
Isobutyl Alcohol	-	-	-	-	-	-	-	-	A	-	-
Isopropyl Alcohol	2	2	2	2	2	2	2	2	A	A	TEVNB
Methyl Alcohol (Methanol)	2	2	2	1	2	2	2	2	A	A	TENB
Octyl Alcohol	-	-	-	-	-	-	-	-	A	-	-
Propyl Alcohol	2	2	2	1	2	2	1	1	X	A	TEVNB
Aluminum											
Aluminum Chloride (Aqu.)	X	X	X	1	X	X	X	X	A	A	TEVNB
Aluminum Fluoride (Sat.)	2	-	-	-	X	2	X	2	X	A	TEVNB
Aluminum Nitrate (Sat.)	3	X	-	-	X	-	2	2	A	A	TEVNB
Aluminum Potassium Sulfate (Alum)	2	2	2	2	X	2	X	2	X	A	TEVNB
Aluminum Sulfate (Sat.)	X	X	2	2	X	2	-	2	A	A	TEVNB
Ammonia											
Ammonia Anhydrous	1	X	X	2	1	1	2	1	A	X	TENB
Ammonia Gas	X	X	X	1	1	X	1	1	A	X	TENB
Ammonia Nitrate	-	-	-	-	-	-	-	-	X	-	-
Ammonium											
Ammonium Biflouride	-	X	-	2	X	2	-	-	X	A	TEVB
Ammonium Carbonate (Sat.)	2	X	X	2	2	2	2	2	A	A	TEVNB
Ammonium Casenate	-	-	-	-	-	-	-	-	A	-	-
Ammonium Chloride (Sat.)	X	X	2	2	X	2	X	X	A	A	TEVNB
Ammonium Hydroxide (Sat.)	2	X	X	2	1	X	2	2	A	A	TEVNB
Ammonium Nitrate	2	X	X	-	X	X	-	-	A	A	TENB
Ammonium Phosphate (10-40%)	X	X	X	-	X	2	1	2	A	A	TEVNB
Ammonium Sulfate (10-40%)	X	X	3	2	X	2	X	2	A	A	TEVNB
Aniline	-	X	2	2	X	2	1	1	X	X	TV
Arsenic Acid	X	X	2	2	X	X	2	2	X	A	TEVNB
Asphalt	-	-	-	-	2	-	-	2	X	X	TV
Barium											
Barium Carbonate (Sat.)	X	2	2	2	2	2	2	2	A	A	TEVNB
Barium Chloride (Sat.)	-	2	2	1	-	2	X	-	A	A	TEVNB
Barium Hydroxide (Sat.)	X	2	X	2	2	1	2	2	A	A	TEVNB
Barium Sulfate	2	2	2	-	X	2	2	2	A	A	TEVNB
Barium Sulfide	X	X	X	-	2	X	2	2	A	A	TEVNB
Beer	1	2	2	1	2	1	1	1	A	A	TEVNB
Benzaldehyde	2	2	2	2	X	2	2	2	X	X	TE
Benzene, Benzol	1	2	2	2	2	2	2	2	A	X	TV
Benzine	-	-	-	-	-	-	-	-	A	X	-
Benzoic Acid	2	2	2	-	X	2	2	2	X	X	TVN
Black Liquor	X	X	X	X	-	2	2	2	X	A	TEVNB
Bleach (12.5% Active Chlorine)	X	-	-	1	X	-	-	X	X	A	TEVN
Borax	X	2	2	1	2	1	1	1	X	A	TEVNB
Boric Acid	1	X	2	1	X	2	-	-	X	A	TEVNB
Brine Acid	-	2	2	1	-	-	-	-	X	A	TEVNB
Bromic acid	X	X	X	-	-	X	-	-	X	A	TEVN
Bromine Liquid	2	-	-	-	-	-	X	X	X	X	TV
Butadiene, Butylene	2	2	2	2	2	1	2	2	X	X	TVNB
Butane	2	2	2	2	1	1	2	2	X	X	TV
Butyl Acetate	1	2	2	2	2	2	2	2	A	X	T
Butyric Acid	2	2	X	1	X	2	2	2	A	A	TV

Ratings given are based at **70°F (21°C)**.

Corrosion Resistance of Coupling Material

AGENT	Aluminum	Brass	Bronze	Hastelloy, C-276	Malleable Iron Carbon Steel	Monel	Stainless Steel,304	Stainless Steel,316	Nylon	Polypropylene	Seal Material
Calcium											
Calcium Bisulfate	X	-	X	-	X	X	X	2	X	A	T
Calcium Bisulfide	-	-	-	-	-	2	-	2	A	A	TVB
Calcium Bisulfite	X	X	2	2	X	X	-	2	X	A	TVNB
Calcium Bromide	X	2	2	-	X	2	1	X	X	X	T
Calcium Carbonate	X	2	2	2	2	2	1	2	A	A	TEVB
Calcium Chloride (Sat.)	-	2	-	1	2	2	-	-	A	A	TEVNB
Calcium Hydroxide (Sat.)	X	2	X	-	2	2	2	2	A	A	TEVNB
Calcium Hypochlorite (Sat.)	X	X	X	-	X	X	X	2	X	A	TEV
Carbon											
Carbon Bisulfide	1	X	2	2	2	X	2	2	A	X	TV
Carbon Dioxide (Dry)	1	1	2	1	2	1	2	2	A	A	TENB
Carbon Dioxide (Wet)	1	X	-	2	3	-	2	2	X	A	TENB
Carbon Disulfide	1	X	2	2	2	X	2	2	A	X	TV
Carbon Monoxide	1	1	1	1	2	1	1	1	A	A	TEVNB
Carbon Tetrachloride	X	-	1	1	2	1	1	-	A	X	TV
Carbonic Acid	1	2	2	1	2	3	2	2	X	A	TEVNB
Castor Oil	2	2	2	1	2	1	2	2	X	A	TEVNB
Caustic Potash	X	-	-	1	X	-	-	2	A	A	TEVNB
Caustic Soda (see Sodium Hydroxide)											
Cellosolves	2	2	2	2	2	2	2	2	X	A	TE
Chlorine (Liquid)	-	-	-	1	2	2	-	3	X	X	TV
Chloroform	-	-	-	2	X	1	-	-	X	X	TV
Chlorosulfonic Acid	-	X	X	1	2	2	X	X	X	X	T
Clorox (Bleach, 5.5% CL)	X	-	-	-	X	-	-	2	X	-	TEVB
Chromic Acid (50%)	2	X	X	2	X	X	3	-	X	X	TVNB
Citric Acid	3	X	X	1	X	2	-	-	X	A	TEVNB
Coke Oven Gas	2	3	3	-	2	2	2	2	X	X	TEVN
Copper											
Copper Chloride	X	X	X	2	X	X	X	X	A	A	TEVNB
Copper Cyanide	X	X	X	1	-	X	2	2	X	-	TEVNB
Copper Sulfate	X	X	X	1	X	X	-	2	A	A	TEVNB
Crysylic Acid (Conc.)	2	2	X	-	2	3	2	2	X	X	TEV
Cyclohexane	2	2	2	2	2	1	2	2	A	X	TVB
Detergents	2	2	2	1	2	-	1	2	A	A	TEVNB
Dextrose	2	-	-	2	-	2	-	-	A	A	TEVNB
Diesel Fuels	1	1	1	2	2	-	1	1	A	X	TVB
Diethylamine	2	-	X	-	X	1	2	2	X	A	TN
Disodium Phosphate	-	-	-	-	1	-	-	1	A	A	TEV
Ethers	2	2	2	2	2	2	1	1	A	X	TB
Ethyl											
Ethyl Acetate	-	-	2	2	2	2	2	2	A	X	T
Ethyl Chloride	-	-	2	2	2	2	-	1	A	X	TEVB
Ethylene											
Ethylene Chloride	-	-	-	-	2	2	-	-	A	X	TV
Ethylene Dichloride	-	2	X	2	2	1	2	2	A	X	TV
Ethylene Glycol	1	2	2	1	2	2	2	2	A	X	TEVNB
Ethylene Oxide	X	X	X	1	3	2	2	2	X	X	T
Fatty Acids	1	3	3	1	X	2	-	1	A	A	TVNB
Ferric											
Ferric Chloride	X	X	2	2	X	X	X	X	X	A	TEVNB
Ferric Hydroxide	-	-	-	1	-	2	1	1	A	-	TEVNB
Ferric Nitrate (10-50%)	X	X	X	-	X	X	2	2	X	A	TEVNB
Ferric Sulfate	X	X	X	-	X	2	-	-	X	A	TEVNB
Ferrous											
Ferrous Chloride (Sat.)	X	X	2	2	-	X	X	X	X	A	TEVNB
Ferrous Sulfate	2	2	2	2	X	2	2	-	X	A	TEVNB
Fluboric Acid	X	-	-	1	1	2	-	-	X	A	TEVNB
Formaldehyde (50%)	-	2	2	2	X	2	1	1	X	A	TEN
Formic Acid (Anhyd.)	1	X	2	1	X	2	-	-	X	A	TEVN
Freon											
Freon 11	2	2	2	-	X	1	2	2	X	X	TVNB
Freon 12	2	2	2	1	X	2	2	2	X	X	TVNB
Freon 22	2	2	2	2	X	2	2	2	X	X	TN
Fruit Juices	2	2	3	1	X	1	2	2	A	A	TVNB
Fuel Oil	2	2	2	2	2	2	2	2	A	X	TVNB
Furfural	2	2	2	2	2	2	2	2	A	X	TEN

AGENT	Aluminum	Brass	Bronze	Hastelloy, C-276	Malleable Iron Carbon Steel	Monel	Stainless Steel,304	Stainless Steel,316	Nylon	Polypropylene	Seal Material
Gasoline											
Refined Gasoline	2	2	2	2	2	2	2	2	A	X	TVNB
Sour Gasoline	X	2	2	2	2	X	2	2	A	X	TVNB
Gelatin	2	2	2	-	X	2	2	2	A	A	TEVNB
Glucose	2	2	2	-	2	2	2	2	A	A	TEVNB
Glue	2	2	2	1	2	2	-	2	-	A	TEVNB
Glycerine	1	1	2	1	2	1	1	1	A	A	TEVNB
Glycols	2	2	2	-	2	2	2	2	A	A	TEVNB
Green Liquor	-	-	-	-	2	-	-	-	-	A	TEVNB
Heptane	2	2	2	1	2	2	2	2	A	X	TVNB
Hexane	2	2	2	1	2	2	1	1	A	X	TVNB
Hydrobromic Acid (50%)	X	X	X	2	X	X	X	X	X	A	TEV
Hydrobromic Acid (20%)	X	X	X	1	X	X	X	X	X	A	TEV
Hydrochloric Acid (20%)	X	X	X	1	X	3	X	X	X	A	TEVNB
Hydrochloric Acid (38%)	X	X	X	1	X	X	X	X	X	A	TEVN
Hydrocyanic Acid	2	X	X	2	2	2	2	2	X	A	TEVN
Hydrofluosilicic Acid (10-50%)	X	2	X	2	X	2	X	2	X	-	TEVNB
Hydrogen											
Hydrogen Peroxide (50%)	-	X	X	2	X	2	-	-	X	A	TEV
Hydrogen Sulfide (Aqu.)	-	-	-	2	-	2	X	2	X	A	TE
Hydrogen Chloride (Dry Gas)	X	2	-	1	2	1	-	-	X	A	TEVN
Hydrogen Gas	1	1	1	1	-	1	1	1	X	A	TEVNB
Hypochlorous Acid	X	X	X	2	X	X	X	X	X	X	TEV
Iodine	1	X	X	-	X	1	X	X	X	A	TEV
Isopropyl Ether	-	2	2	-	-	2	1	2	A	X	T
Jet Fuel (JP4, JP5)	2	1	2	1	2	2	2	2	X	X	TV
Kerosene	2	2	2	2	2	2	2	2	X	X	TVNB
Ketones	2	2	2	1	2	2	2	2	A	X	T
Lactic Acid (25%)	3	2	2	1	X	X	-	-	A	A	TEVN
Lactic Acid (80%)	2	2	X	2	X	-	-	-	A	A	TEVN
Lard Oil	2	-	2	1	3	2	2	2	A	A	TVB
Lead											
Lead Acetate	X	X	X	2	X	2	2	2	X	A	TENB
Lead Chloride	X	-	-	2	-	-	2	2	X	-	TVNB
Lead Sulfate	X	-	-	2	X	2	2	2	X	-	TEVNB
Lime Sulphur	X	X	X	-	X	2	2	2	X	A	TEVN
Linoleic Acid	2	X	3	2	X	2	2	2	X	A	TVB
Linseed Oil	2	2	2	2	2	2	2	2	A	A	TVNB
Lubricants (Oil)	2	1	-	-	2	2	2	2	A	X	TVNB
Magnesium											
Magnesium Carbonate	2	-	-	-	-	2	2	2	X	A	TEVNB
Magnesium Chloride	X	X	2	1	-	-	-	-	X	A	TEVNB
Magnesium Hydroxide	2	2	2	1	2	2	1	1	X	A	TEVNB
Magnesium Nitrate	2	2	2	1	2	2	2	2	X	A	TEVNB
Magnesium Oxide	-	-	-	-	-	-	-	-	X	-	-
Magnesium Sulfate	2	-	2	-	-	1	2	2	X	A	TEVNB
Maleic Acid	-	2	3	2	X	-	-	2	X	A	TEV
Mercuric											
Mercuric Chloride	X	X	X	-	X	X	X	-	X	A	TEVB
Mercuric Cyanide	X	X	X	2	X	2	2	2	X	A	TEVB
Mercury	X	X	X	1	2	-	1	1	A	A	TEVNB
Methane	1	1	2	1	2	1	1	1	A	X	TEVNB
Methanol	2	2	2	1	2	2	2	2	A	A	TENB
Methyl											
Methyl Bromide	X	-	-	-	2	-	2	2	X	X	TV
Methyl Ethyl Ketone	2	2	2	2	2	2	2	2	A	X	TE
Methyl Isobutyl Ketone	2	2	2	2	2	2	2	2	A	X	T
Methyl Methacrylate	2	-	-	-	X	-	2	2	X	A	T
Methylene Chloride	-	2	2	X	2	-	-	-	A	X	T
Milk	1	X	X	1	2	X	1	1	A	A	TEVNB
Mineral Oil	2	1	-	-	2	1	1	2	A	A	TVNB
Muriatic Acid	X	-	-	1	-	X	X	X	X	A	TV
Napthalene	2	2	2	2	2	2	1	1	A	A	TV
Naptha	2	2	2	2	2	2	2	2	A	X	TVB

Ratings given are based at **70°F (21°C)**.

AGENT	Aluminum	Brass	Bronze	Hastelloy, C-276	Malleable Iron Carbon Steel	Monel	Stainless Steel,304	Stainless Steel,316	Nylon	Polypropylene	Seal Material
Nickel											
Nickel Chloride	X	X	X	-	X	2	-	-	X	A	TEVNB
Nickel Sulfate	X	X	-	2	-	-	2	2	X	A	TEVNB
Nitric											
Nitric Acid (100%)	1	X	X	2	X	X	2	-	X	X	TV
Nitric Acid (50%)	X	X	X	1	X	X	2	-	X	X	TV
Nitric Acid (30%)	X	X	X	1	X	X	1	-	X	X	TV
Nitrobenzene	1	2	2	-	2	2	2	2	A	A	T
Oils											
Castor Oil	2	2	2	1	2	1	2	2	A	A	TEVNB
Coconut Oil	2	-	2	-	3	2	2	2	A	A	TVB
Corn Oil	2	2	2	-	2	2	-	2	A	A	TVNB
Cotton Seed Oil	2	2	2	-	2	1	2	2	A	A	TVNB
Fuel Oil	2	2	2	2	2	2	2	2	A	X	TVNB
Linseed Oil	2	2	2	2	2	2	2	2	A	A	TVNB
Mineral Oil	2	1	-	-	2	1	1	2	A	A	TVNB
Silicon Oil	2	1	2	-	2	-	2	2	A	A	TEVB
Vegetable Oil	2	2	2	1	2	1	1	1	A	X	TVNB
Oleic Acid	2	3	2	2	2	1	-	1	A	X	TB
Oleum	2	X	X	-	2	X	2	2	X	X	TV
Oxalic Acid (Sat.)	2	-	2	2	X	2	X	X	X	A	TEV
Oxygen	2	2	2	-	2	2	2	2	X	X	TEVNB
Palmitic Acid (Sat.)	2	3	2	-	3	2	2	2	X	A	TVB
Paraffin	2	2	2	2	2	2	2	2	A	A	TVNB
Perchloroethylene	2	2	2	2	2	1	-	-	X	X	TV
Petrolatum	2	-	2	-	3	2	2	2	A	-	TVNB
Phenol (Carbolic Acid)	1	1	X	1	2	1	-	1	X	X	TV
Phosphoric Acid											
Phosphoric Acid (25-50%)	X	X	2	1	X	X	-	-	X	A	TEVN
Phosphoric Acid (50-85%)	X	X	X	1	X	3	-	-	X	A	TEV
Photographic Solutions	-	-	-	-	X	1	1	1	X	X	TVNB
Phthalic Anhydride	-	2	2	1	2	1	1	1	X	X	TEV
Picric Acid	1	X	X	2	X	X	2	2	X	-	TEVNB
Plating Solutions											
Brass Plating Solution	-	-	-	1	-	-	-	2	X	A	TEVNB
Cadmium Plating Solution	-	-	-	1	-	-	-	2	X	A	TEVNB
Chrome 40% Plating Solution	X	2	2	1	X	X	2	2	X	A	TEVN
Copper (Cyanide) Plating Solution	-	-	-	1	-	-	-	-	X	A	TEVNB
Gold Plating Solution	-	-	-	1	-	-	-	1	X	A	TEVNB
Iron Plating Solution	-	-	-	-	-	-	-	-	X	A	TEVB
Lead Plating Solution	-	-	-	-	-	-	1	1	X	A	TEVNB
Nickel Plating Solution	-	-	-	1	-	-	1	1	X	A	TEVNB
Silver Plating Solution	-	-	-	1	-	-	1	1	X	A	TEVNB
Tin Plating Solution	-	-	-	1	-	-	-	3	X	A	TEVNB
Zinc Plating Solution	-	-	-	1	-	-	-	-	X	A	TEVNB
Potassium											
Potassium Acetate	X	X	X	-	2	-	-	-	A	A	TEVB
Potassium Bicarbonate (30%)	X	2	-	2	2	2	1	1	A	A	TEVNB
Potassium Carbonate (50%)	X	2	X	2	2	2	1	1	A	A	TEVNB
Potassium Chlorate (30%)	2	X	X	-	2	2	2	1	X	A	TEVNB
Potassium Chloride (30%)	X	X	2	-	2	1	-	-	A	A	TEVNB
Potassium Chromate (30%)	2	2	2	2	-	2	2	2	X	A	TEVB
Potassium Cyanide Solution (30%)	X	X	X	2	2	2	2	2	X	A	TEVNB
Potassium Dichromate (30%)	1	2	2	2	2	2	1	1	X	A	TEVB
Potassium Hydroxide (90%)	X	X	X	2	-	2	X	-	X	A	TENB
Potassium Nitrate (80%)	1	2	2	2	2	2	2	2	X	A	TEVNB
Potassium Permanganate (20%)	2	2	2	1	2	2	2	2	X	A	TEVN
Potassium Sulfate (10%)	1	2	2	1	2	1	1	1	A	A	TEVNB
Propane	1	1	1	2	2	1	2	2	X	X	TVB
Propylene Gylcol	2	2	2	2	2	2	2	2	A	A	TVNB
Propylene Oxide (90%)	-	-	-	-	-	-	1	1	X	X	TE
Pyridine	2	2	2	-	2	2	2	2	A	X	T
Pyrogallic Acid	2	2	2	2	2	2	2	2	X	X	TVNB
Silver Nitrate	X	X	X	-	X	X	2	1	X	A	TEVNB
Soap Solutions	2	2	2	1	2	2	2	2	A	A	TEVNB

Ratings given are based at **70°F (21°C)**.

AGENT	Aluminum	Brass	Bronze	Hastelloy, C-276	Malleable Iron Carbon Steel	Monel	Stainless Steel,304	Stainless Steel,316	Nylon	Polypropylene	Seal Material
Sodium											
Sodium Acetate	1	2	2	-	X	2	2	2	A	A	TEN
Sodium Bicarbonate (20%)	2	2	2	1	3	1	1	1	A	A	TEVNB
Sodium Bisulfate	X	-	2	2	2	-	-	-	A	A	TEVNB
Sodium Bisulfite	X	2	X	2	X	-	-	-	A	A	TEVNB
Sodium Borate	2	2	2	2	3	2	2	2	A	A	TEVNB
Sodium Perborate (10%)	2	X	2	2	2	2	2	2	X	A	TEVNB
Sodium Carbonate	X	2	-	2	2	1	-	2	A	A	TEVNB
Sodium Chlorate (50%)	2	2	2	1	X	1	2	2	X	A	TEVNB
Sodium Cyanide	X	X	X	2	2	X	-	-	A	A	TEVNB
Sodium Dichromate	2	X	X	1	2	-	2	2	X	A	TE
Sodium Hydroxide (70%)	X	X	X	1	3	1	2	2	X	A	TENB
Sodium Hydroxide (50%)	X	X	3	1	3	1	1	-	X	A	TENB
Sodium Hydroxide (30%)	X	2	3	2	2	1	1	1	X	A	TENB
Sodium Chloride (30%)	X	2	2	2	2	1	-	-	X	A	TEVNB
Sodium Hypochlorite	X	X	X	-	X	X	-	-	X	A	TEV
Sodium Metaphosphate	X	X	2	-	X	2	2	2	X	X	TEVNB
Sodium Nitrate (40%)	1	2	-	-	2	2	1	1	A	A	TENB
Sodium Perborate (10%)	2	X	2	2	2	2	2	2	X	A	TEVNB
Sodium Peroxide (10%)	2	X	X	2	2	2	2	2	X	A	TEVNB
Sodium Silicate	1	2	2	2	2	2	2	2	A	A	TEVNB
Sodium Sulfate	-	2	2	2	2	-	-	1	A	A	TEVNB
Sodium Sulfide (50%)	X	X	X	2	2	2	-	2	X	A	TEVNB
Sodium Thiosulphate	2	X	X	2	X	2	2	2	A	A	TEVNB
Stannic Chloride	X	X	X	-	X	X	X	X	X	A	TEVNB
Stannous Chloride	X	X	X	2	X	-	X	-	X	X	TEVNB
Steam	-	-	-	-	-	-	-	-	X	-	-
Stearic Acid	2	3	2	1	3	3	2	1	A	A	TVNB
Stoddard's Solvent	2	2	2	1	2	2	2	2	X	A	TVB
Sugar Liquors (Cane)	1	2	1	-	2	2	2	2	A	A	TEVNB
Sugar Liquors (Beet)	1	2	1	-	2	1	1	1	A	A	TEVNB
Sulfate Liquors	2	X	X	2	3	2	-	2	X	A	TVNB
Sulfite Liquors	X	X	-	1	X	X	2	2	X	X	TVNB
Sulfur Chloride	X	-	X	2	X	X	-	-	X	X	TV
Sulfur Dioxide (Dry)	2	2	2	2	1	2	-	2	X	A	TE
Sulfur Trioxide	2	2	X	2	2	2	-	2	X	X	TEV
Sulfuric Acid (TO 10%)	X	2	X	1	X	X	X	X	X	A	TEVNB
Sulfuric Acid (100%)	X	X	X	1	2	X	-	-	X	X	TV
Sulfurous Acid	2	2	X	-	X	X	X	-	X	A	TV
Tannic Acid	X	-	X	-	X	2	2	2	X	A	TEVNB
Tanning Liquors	1	-	2	1	-	-	1	1	X	A	TVNB
Tartaric Acid	-	-	2	2	-	-	1	1	A	A	TVNB
Titanium Tetrachloride	X	X	X	2	2	2	-	2	X	X	TV
Toluene	1	1	1	1	1	1	1	1	A	X	TVB
Tetrahydrofuran	X	-	2	1	1	-	1	2	A	X	T
Tomato Juice	2	-	3	2	3	2	2	2	X	A	TEVNB
Trichloroethylene	1	-	2	1	2	-	-	-	A	X	TV
Triethanolamine	2	X	2	2	2	2	2	2	A	X	TEVN
Triethylamine	-	-	-	-	-	2	2	2	A	X	TVB
Trisodium Phosphate (10%)	X	2	-	1	2	2	1	1	A	A	TVNB
Turpentine	2	X	2	2	2	1	1	1	X	X	TVB
Urea (50%)	2	-	2	-	2	2	2	2	A	A	TEVNB
Urine	-	-	-	-	2	-	1	1	X	A	TEVNB
Vinegar	X	X	2	2	2	2	2	2	X	A	TEVN
Water Acid (Mine)	X	X	X	1	X	-	-	-	X	A	TEVNB
Water (Distilled)	X	2	2	1	X	X	2	2	A	A	TEVNB
Water (Sea)	2	2	2	1	X	2	2	2	A	A	TEVNB
Whiskey	X	2	2	1	2	2	1	1	X	A	TEVNB
White Liquor (Pulp)	2	-	X	2	X	X	2	2	X	A	TEVNB
Wine	X	2	2	1	X	2	1	1	X	A	TEVNB
Xylene	2	2	2	1	2	2	2	2	A	X	TV
Zinc											
Zinc Chloride	X	X	X	2	X	-	X	2	A	A	TEVNB
Zinc Nitrate	-	-	-	-	-	-	2	2	X	A	TEVNB
Zinc Sulfate (50%)	X	2	2	2	X	2	1	1	X	A	TEVNB

Ratings given are based at **70°F (21°C)**.