

## **HOSE FOR SANITARY AND HIGH PURITY APPLICATIONS**







FOOD & BEVERAGE

PHARMACEUTICAL & COSMETIC

**SPECIALTY** 

# **CRP INDUSTRIAL IS YOUR GO-TO SOURCE FOR SANITARY HOSE.**

WITH OVER 40 YEARS IN THE HOSE BUSINESS, CRP UNDERSTANDS THE CHALLENGES AND NEEDS OF CUSTOMERS ACROSS ALL INDUSTRIES.

Cranbury, NJ

Conway, SC

Ann Arbor, MI

Puebla, Mexico

### TABLE OF CONTENTS

THE CRP INDUSTRIAL SANITARY HOSE LINE
FOOD & BEVERAGE
PHARMACEUTICAL & COSMETIC
SPECIALTY
FITTINGS & ACCESSORIES
CHEMICAL COMPATIBILITY CHARTS
GUIDELINES FOR CLEANING AND SANITIZING FOOD HOSE 3

# **CRP INDUSTRIAL** IS PROUD TO OFFER A HIGH QUALITY LINE OF SANITARY HOSE.

CRP Industrial is proud to offer a complete line of hose for a wide variety of industries including dairy, brewery, cosmetic, and pharmaceutical.

We take enormous pride in our ability to listen and communicate with our customers — and in understanding exactly what they need. No matter what the issue, our highly trained customer service staff stands ready to solve any request. Because of our commitment, CRP has built a lengthy list of high profile clients.

At CRP, we pay great attention to the products we carry, the people we work with, and the way in which we conduct business. In fact, quality, service, and trust are the greatest attributes we offer. These qualities don't have a SKU and they can't be pulled off some warehouse shelf.

### QUALITY CONTROL

CRP is ISO 9001:2015 certified, so customers can rest assured that we have a quality management system in place that delivers service satisfaction from start to finish. Additionally, select hoses meet all applicable government food-safety standards.



### PROMPT TURNAROUND

For many of our customers, a speedy response is crucial. Fortunately, due to our vast selection of stock hose types and fittings, our turnaround time for orders is typically 24 to 48 hours. Of course, if time is of the essence, we may even be able to ship same day.

### **■** TOP-NOTCH SERVICE

A proud member of the FISA, IDCO, and NAHAD organizations, CRP has been an expert in hose assembly fabrication for over 40 years. Led by a team of extraordinary customer service representatives, we excel at understanding and meeting the needs of all our customers — and can even develop a custom-built product based on your specifications.









# ATC ARMORED THERMOPLASTIC COVER

### **ATC HOSE PRODUCT FEATURES**

Cleanability Bacteria and Microbe Resistant Cover

Corrugations Prevent Pooling

Ideal for CIP

Easy to Clean

Durability Abrasion Resistant Cover

Chemical and Oil Resistant Cover

Handling Flexible and Lightweight Design

**Ergonomic Features** 

Easy to Slide

Appearance Ozone Resistance to Prevent Premature Aging

UV Resistance to Hold Color Retains Original Appearance

Selection Variety of Liners, Designs, and Colors

Specialized for Specific Applications

Workhorses for Many Applications



# Food & Beverage



# CRP Industrial's Sanitary Food & Beverage hoses are the choice of experts with a taste for the best.

Featuring our Armored Thermoplastic Covers. Built from the core out on a proprietary rigid mandrel frame, CRP Industrial sanitary hoses for the Food & Beverage industry incorporate liners, plies, and covers chosen specifically for each individual application. All are phthalates-free and meet every applicable government food-safety standard in the US, Europe, and Japan — including a 3A Sanitary Standard Class II rating.

Here are just a few benefits designed into CRP Industrial Food & Beverage hoses:

- Abrasion Resistant
- Non-marking
- Corrugated profile prevents fluid ponding when the hose is on the ground
- Easy to clean glossy cover and smooth bore tube
- Mold resistant

CRP Industrial has been offering high-quality hose for over 40 years and is the leading choice of many Food & Beverage companies in North America.

For details, call CRP's US headquarters at 800.526.4066.

# **Butyl Armored Thermoplastic Cover**

8100 Series



8120 Series



Premium grade, low permeation, extra flexible suction and delivery hose for the food and beverage industry. Features easy-to-clean, abrasion-resistant cover.

### **Technical Characteristics:**

Temperature Range: -40°F / +248°F

 $(-40^{\circ}C / +120^{\circ}C)$ 

Dimensional Tolerance: ISO1307

Vacuum:: 13 psi (0.9 bar)



Premium grade, heavy duty, low permeation, extra flexible suction and delivery hose for the food and beverage industry. Features easy-to-clean, abrasion-resistant cover.

### **Technical Characteristics:**

Temperature Range: -40°F / +248°F

(-40°C / +120°C)

Dimensional Tolerance: ISO1307

Vacuum:: 13 psi (0.9 bar)

### **Hose Construction:**

Tube: Bromobutyl (BIIR), white, phthalate-free, tested in compliance with 1907/2006/CE

(REACH)

Meets FDA 21 CFR 177.2600, DM21.03.73 e seguenti, European Reglement 1935/2004/

CE, 3A Sanitary Standard Class II

Reinforcement: Synthetic plies, Galvanized wire helices

Cover: Wide corrugated, low friction UHMW cover. Non-marking, abrasion, chemical and

microbe resistant.

Color Options:

Sterilization: See cleaning and sterilizing guidelines for food and beverage hose.

CRP Part Number	Color	Inside Diameter (in)	Outside Diameter (in)	Vacuum: (psi)	Working Pressure (psi)	Burst Pressure (psi)	Weight (lbs/ft)	Bend Radius (in)
8103-100 / 8108-100		1.00	1.46	13	150	450	0.55	2.76
8103-150 / 8108-150		1.50	2.03	13	150	450	0.82	3.15
8103-200 / 8108-200		2.00	2.60	13	150	450	1.27	3.94
8103-250 / 8108-250		2.50	3.09	13	150	450	1.54	5.12
8103-300 / 8108-300		3.00	3.62	13	150	450	1.94	5.91
8103-400 / 8108-400		4.00	4.65	13	150	450	2.53	9.84

### **Hose Construction:**

Tube: Bromobutyl (BIIR), white, phthalate-free, tested in compliance with 1907/2006/CE

(REACH)

Meets FDA 21 CFR 177.2600, DM21.03.73 e seguenti, European Reglement 1935/2004/

CE, 3A Sanitary Standard Class II

Reinforcement: Synthetic plies, Galvanized wire helices

Cover: Wide corrugated, low friction UHMW cover. Non-marking, abrasion, chemical and

microbe resistant.

Color Options:

CRP Part Number	Color	Inside Diameter (in)	Outside Diameter (in)	Vacuum: (psi)	Working Pressure (psi)	Burst Pressure (psi)	Weight (lbs/ft)	Bend Radius (in)
8123-100 / 8128-100		1.00	1.52	13	250	900	0.60	4.13
8123-150 / 8128-150		1.50	2.09	13	250	900	0.87	4.72
8123-200 / 8128-200		2.00	2.66	13	250	900	1.34	5.91
8123-250 / 8128-250		2.50	3.19	13	250	900	1.75	7.68
8123-300 / 8128-300		3.00	3.72	13	250	900	2.19	8.86
8123-400 / 8128-400		4.00	4.75	13	250	900	2.84	14.76

# **Butyl Crush Resistant ATC**

8110 Series



8300 Series



Premium food and beverage hose featuring low permeation. This hose features synthetic plies that allow the hose to rebound.

#### **Technical Characteristics:**

Temperature Range: -40°F / +212°F

 $(-40^{\circ}C / +100^{\circ}C)$ 

Dimensional Tolerance: ISO1307



Premium grade suction and delivery hose specialized for fatty food products. Ideally suited for milk and dairy applications. Features easy-to-clean, abrasion-resistant cover.

### **Technical Characteristics:**

Temperature Range: -4°F / +194°F

(-20°C / +90°C)

Dimensional Tolerance: ISO1307

Vacuum:: 13 psi (0.9 bar)

### **Hose Construction:**

Tube: Bromobutyl (BIIR), white, phthalate-free, complies with 1907/2006/CE (REACH), FDA 21

CFR 177.2600, DM21.03.73 e seguenti, European Reglement 1935/2004/CE, 3A Sanitary

Standard Class II

Reinforcement: Synthetic plies, Synthetic wire helices

Cover: Wide corrugated, low friction UHMW cover. Non-marking, abrasion, chemical and

microbe resistant

Color Options:

Sterilization: See cleaning and sterilizing guidelines for food and beverage hose.

CRP Part Number	Color	Inside Diameter (in)	Outside Diameter (in)	Vacuum: (psi)	Working Pressure (psi)	Burst Pressure (psi)	Weight (lbs/ft)	Bend Radius (in)
8113-100		1.00	1.61	13	200	600	0.97	6.69
8113-150		1.50	2.17	13	200	600	0.97	6.69
8113-200		2.00	2.64	13	200	600	1.23	9.44
8113-250		2.50	3.21	13	200	600	1.66	12.2
8113-300		3.00	3.7	13	200	600	1.94	14.96

### **Hose Construction:**

Tube: Nitrile (NBR), white, phthalate-free, tested in compliance with 1907/2006/CE (REACH)

Meets FDA 21 CFR 177.2600, DM21.03.73 e seguenti, European Reglement 1935/2004/

CE, 3A Sanitary Standard Class II

Reinforcement: Synthetic plies, Galvanized wire helices

Cover: Wide corrugated, low friction UHMW cover. Non-marking, abrasion, chemical and

microbe resistant.

Color Options:

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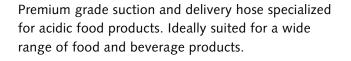
CRP Part Number	Color	Inside Diameter (in)	Outside Diameter (in)	Vacuum: (psi)	Working Pressure (psi)	Burst Pressure (psi)	Weight (lbs/ft)	Bend Radius (in)
8301-100		1.00	1.46	13	150	450	0.54	2.76
8301-150		1.50	2.03	13	150	450	0.82	3.15
8301-200		2.00	2.60	13	150	450	1.27	3.94
8301-250		2.50	3.09	13	150	450	1.54	5.12
8301-300		3.00	3.62	13	150	450	1.94	5.91
8301-400		4.00	4.65	13	150	450	2.53	9.84

# **EPDM Armored Thermoplastic Cover**

8170 Series

**SRT Butyl** 

8400 Series





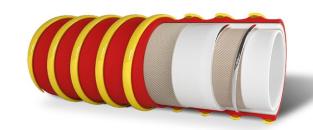
### **Technical Characteristics:**

Temperature Range: -40°F / +248°F

(-40°C / +120°C)

Dimensional Tolerance: ISO1307

Vacuum:: 13 psi (0.9 bar)



### Technical Characteristics:

suited for wine and spirits.

Temperature Range: -13°F / +176°F

Premium suction and delivery hose for transfer of food

and beverage products with low permeability tube well

(-25°C / +80°C)

Dimensional Tolerance: ISO1307

### **Hose Construction:**

Tube: EPDM, white, phthalate-free, tested in compliance with 1907/2006/CE (REACH)

Meets FDA 21 CFR 177.2600, DM21.03.73 e seguenti, European Reglement 1935/2004/

CE, 3A Sanitary Standard Class II

Reinforcement: Synthetic plies, Galvanized wire helices

Cover: Wide corrugated, low friction UHMW cover. Non-marking, abrasion, chemical and

microbe resistant.

Color Options:

Sterilization: See cleaning and sterilizing guidelines for food and beverage hose.

CRP Part Number	Color	Inside Diameter (in)	Outside Diameter (in)	Vacuum: (psi)	Working Pressure (psi)	Burst Pressure (psi)	Weight (lbs/ft)	Bend Radius (in)
8406-100		1.00	1.46	13	150	450	0.54	2.76
8406-150		1.50	2.03	13	150	450	0.82	3.15
8406-200		2.00	2.60	13	150	450	1.27	3.94
8406-250		2.50	3.09	13	150	450	1.54	5.12
8406-300		3.00	3.62	13	150	450	1.94	5.91
8406-400		4.00	4.65	13	150	450	2.53	9.84

### **Hose Construction:**

Tube: Bromobutyl (BIIR), white, phthalate-free, complies with 1907/2006/CE (REACH), FDA 21

CFR 177.2600, DM21.03.73 e seguenti, European Reglement 1935/2004/CE, 3A Sanitary

Standard Class II

Reinforcement: Synthetic plies, External thermoplastic helix

Cover: Corrugated rubber cover with thermoplastic helix

Color Options:

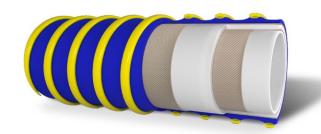
CRP Part Number	Color	Inside Diameter (in)	Outside Diameter (in)	Vacuum: (psi)	Working Pressure (psi)	Burst Pressure (psi)	Weight (lbs/ft)	Bend Radius (in)
8173-150P		1.50	-	13	150	450	0.82	3.15
8173-200P		2.00	-	13	150	450	1.09	3.94
8173-250P		2.50	-	11.5	150	450	1.32	5.12
8173-300P		3.00	-	11.5	150	450	1.72	5.91
8173-400P		4.00	-	10	150	450	2.26	7.87

# **SRT Nitrile**

8370 Series



8200 Series



Lightweight and flexible tank transfer hose designed for fatty and oily food products. Well suited for dairies.

### **Technical Characteristics:**

Temperature Range: -13°F / +176°F

(-25°C / +80°C)

2.05

7.87

Dimensional Tolerance: ISO1307



Specialized low permeation suction and delivery hose for the food and beverage industry. Developed for distilleries and food and beverage sites with aggressive cleaning procedures.

### **Technical Characteristics:**

Temperature Range: -31°F / +212°F

(-35°C / +100°C)

Dimensional Tolerance: ISO1307

Vacuum: 13 psi (0.9 bar)

### **Hose Construction:**

Tube: Nitrile (NBR), white, phthalate-free, complies with 1907/2006/CE (REACH), FDA 21 CFR

177.2600, DM21.03.73 e seguenti, European Reglement 1935/2004/CE, 3A Sanitary

Standard Class II

Reinforcement: Synthetic plies, External thermoplastic helix

Cover: Corrugated rubber cover with thermoplastic helix

Color Options:

8371-400P

Sterilization: See cl

See cleaning and sterilizing guidelines for food and beverage hose.

CRP Part Number	Color	Inside Diameter (in)	Outside Diameter (in)	Vacuum: (psi)	Working Pressure (psi)	Burst Pressure (psi)	Weight (lbs/ft)	Bend Radius (in)
8371-150P		1.50	-	13	150	450	0.81	3.15
8371-200P		2.00	-	13	150	450	1.09	3.94
8371-250P		2.50	-	11.5	150	450	1.31	5.12
8371-300P		3.00	-	11.5	150	450	1.59	5.91

### **Hose Construction:**

Tube: UHMWPE, white, phthalate-free, tested in compliance with 1907/2006/CE (REACH)

Meets FDA 21 CFR 177.1520, DM21.03.73 e seguenti, European Reglement 1935/2004/

CE, 3A Sanitary Standard Class II

Reinforcement: Synthetic plies, Galvanized wire helices, Antistatic copper wire

Cover: Wide corrugated, low friction UHMW cover. Non-marking, abrasion, chemical and

microbe resistant.

Color Options:

CRP Part Number	Color	Inside Diameter (in)	Outside Diameter (in)	Vacuum: (psi)	Working Pressure (psi)	Burst Pressure (psi)	Weight (lbs/ft)	Bend Radius (in)
8206-100		1.00	1.46	13	150	450	0.54	0.54
8206-150		1.50	1.97	13	150	450	0.76	0.76
8206-200		2.00	2.56	13	150	450	1.21	1.21
8206-250		2.50	3.05	13	150	450	1.47	1.47
8206-300		3.00	3.58	13	150	450	1.88	1.88
8206-400		4.00	4.61	13	150	450	2.46	2.46

# **Hot Oil Hose**

# Wrapped Wash Down

8389 Series

1016W Series



Premium grade suction and delivery hose designed for hot oil. Specifically designed for the rigorous application of hot oil suction and recycling.

### **Technical Characteristics:**

Temperature Range: -40°F / +302°F

 $(-40^{\circ}C / +150^{\circ}C)$ 

Dimensional Tolerance: ISO1307

Vacuum: 13 psi (0.9 bar)



Softwall hot water discharge hose for floor and equipment wash down in diaries, creameries, food processing plants, and paper mills, etc.

### **Technical Characteristics:**

Temperature Range: -40°F / +176°F (-40°C / +80°C)

### **Hose Construction:**

Tube: HNBR, white, phthalate-free, tested in compliance with 1907/2006/CE (REACH)

Meets FDA 21 CFR 177.2600, DM21.03.73 e seguenti, European Reglement 1935/2004/

CE, 3A Sanitary Standard Class II

Reinforcement: Synthetic plies, Galvanized wire helices

Cover: Smooth, oil resistant rubber cover

Color Options:

Sterilization: See cleaning and sterilizing guidelines for food and beverage hose.

#### Inside Outside Vacuum: Working Burst Weight Bend **CRP Part Number** Color Diameter (in) Radius (in) Diameter (in) Pressure (psi) Pressure (psi) (lbs/ft) (psi) 8389-050 0.50 0.94 13 250 750 0.39 2.36 8389-075 0.75 1.22 13 250 750 0.47 3.35 8389-100 1.00 1.42 13 250 750 0.50 3.94

### **Hose Construction:**

Tube: White, smooth, SBR rubber Reinforcement: High strength synthetic cord

Cover: Color based, smooth, (wrapped finish) EPDM, weathering and ozone resistant

Color Options: / Other colors available upon request.

CRP Part Number	Color	Inside Diameter (in)	Outside Diameter (in)	Vacuum: (psi)	Working Pressure (psi)	Burst Pressure (psi)	Weight (lbs/ft)	Bend Radius (in)
1016WHW		0.625	1.00	N/A	150	450	0.25	N/A

# **Extruded Wash Down**

# **CRP ATC PTFE**

1016E Series

8751 Series



Hot water washing hose in food environment with excellent resistance to high temperatures. Suitable for hygenic operations in dairies, canneries, slaughterhouses, and all food processing industries.

### **Technical Characteristics:**

Temperature Range: -4°F / +203°F

(-20°C / +95°C)



Top of the line suction and delivery hose for nearly all food, beverage, and high sanitary applications. The PTFE tube combines flexibility and purity with elite chemical resistance. Features highly cleanable UHMW cover.

### **Technical Characteristics:**

Temperature Range: -40°F / +302°F

(-40°C / +150°C)

Dimensional Tolerance: EN12115

Vacuum: 13 psi (0.9 bar)

### **Hose Construction:**

Tube: White, seamless synthetic rubber, phthalate-free, fat resistant, made with materials in

compliance with FDA tit 21 art. 177.2600 and BfR XXI Cat.3.

Reinforcement: High strength synthetic fabrics.

Cover: Antimicrobial, seamless synthetic rubber, made with materials in compliance with ISO

22196:2011. Aging, ozone, and fat resistant.

Color Options: / Other colors available upon request.

Sterilization: See cleaning and sterilizing guidelines for food and beverage hose.

CRP Part Number	Color	Inside Diameter (in)	Outside Diameter (in)	Vacuum: (psi)	Working Pressure (psi)	Burst Pressure (psi)	Weight (lbs/ft)	Bend Radius (in)
1016-WEX		0.625	1.00	N/A	150	450	0.29	N/A

### **Hose Construction:**

Tube: PTFE, White, complies with 1907/2006/CE (REACH), FDA 21 CFR 177.2600,

DM21.03.73 e seguenti, European Reglement 1935/2004/CE, USP Class VI, ISO 10993

Sections 5, 10, 11:2009

Reinforcement: Synthetic plies, Stainless steel wire helices, Antistatic copper wire

Cover: Wide corrugated Blue UHMW cover. Non-marking, abrasion, chemical and microbe

resistant.

Color Options:

Sterilization: See cleaning and sterilizing guidelines.

CRP Part Number	Color	Inside Diameter (in)	Outside Diameter (in)	Vacuum: (psi)	Working Pressure (psi)	Burst Pressure (psi)	Weight (lbs/ft)	Bend Radius (in)
8751-050		0.50	0.98	13	150	600	0.33	2.76
8751-075		0.75	1.22	13	150	600	0.43	3.94
8751-100		1.00	1.45	13	150	600	0.52	5.12
8751-150		1.50	2.00	13	150	600	0.79	7.48
8751-200		1.97	2.60	13	150	600	1.28	9.84
8751-250		2.50	3.13	13	150	600	1.62	12.60
8751-300		2.95	3.58	13	150	600	1.89	14.96

# Pharmaceutical & Cosmetic



# The beauty of CRP Industrial Pharmaceutical & Cosmetic hoses is more than skin deep.

Built from the core out on a proprietary rigid mandrel frame, CRP Industrial high-purity pharmaceutical hoses for the pharmaceutical and cosmetic industries incorporate liners and plies to accommodate a myriad of sanitary applications. Liners are available in PTFE; plus the Platinum-Cured Silicone liner in our silicone series of hoses. Select hoses are designed for applications where static electricity can build up, helping avoid dangerous discharges.

Here are a few benefits designed into CRP Industrial Pharmaceutical & Cosmetic hoses:

- Ozone Resistant Cover (abrasion resistant in many cases)
- Flexible hoses allow for easier routing
- Choice of liners specific to applications

CRP Industrial has been offering high-quality hose for over 40 years and is the leading choice of many pharmaceutical and cosmetic companies in North America.

For details, call CRP's US headquarters at 800.526.4066.

# **Silicone**

9000 Series



Platinum cured silicone suction and delivery hose designed for pharmaceutical and cosmetic applications. Features high flexibility, high purity, and extraordinary temperature resistance. Manufactured in an ISO class 8 cleanroom.

### **Technical Characteristics:**

Temperature Range: -76°F / +392°F

(-60°C / +200°C)

Dimensional Tolerance: ISO 1307

Vacuum: 13 psi (0.9 bar)

### **Hose Construction:**

Tube: Silicone, clear, manufactured in an ISO class 8 cleanroom, tested in compliance with

1907/2006/CE (REACH). Meets FDA 21 CFR 177.2600, DM21.03.73 e seguenti, European Reglement 1935/2004/CE, 3A Sanitary Standard Class II, USP Class VI, ISO10993

Sections 5, 10, 11:2009

Reinforcement: Synthetic plies, Stainless steel helices
Cover: Smooth, translucent silicone cover

Color Options:

CRP Part Number	Color	Inside Diameter (in)	Outside Diameter (in)	Vacuum: (psi)	Working Pressure (psi)	Burst Pressure (psi)	Weight (lbs/ft)	Bend Radius (in)
9000-050		0.50	0.94	13	225	675	0.31	2.36
9000-075		0.75	1.18	13	195	585	0.40	3.15
9000-100		1.00	1.42	13	150	450	0.49	3.94
9000-150		1.50	1.97	13	105	315	0.81	6.10
9000-200		2.00	2.52	13	90	270	1.05	8.27
9000-250		2.50	3.09	13	75	225	1.55	10.24
9000-300		3.00	3.54	13	60	180	1.82	12.20

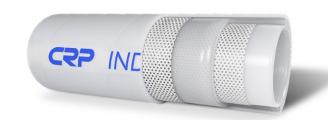
# Silicone/D

# **CRP PTFE Pharma**

9010 Series

7959 Series

PHARMACEUTICAL & COSMETIC



Platinum cured silicone delivery only hose designed for pharmaceutical and cosmetic applications. Features high flexibility, high purity, and extraordinary temperature resistance. Manufactured in an ISO class 8 cleanroom.

### **Technical Characteristics:**

Temperature Range: -76°F / +392°F

(-60°C / +200°C)

Dimensional Tolerance: ISO 1307



Top of the line suction and delivery hose for nearly all pharmaceutical and cosmetic applications. The PTFE tube combines flexibility and purity with elite chemical resistance.

### **Technical Characteristics:**

Temperature Range: -40°F / +302°F

(-40°C / +150°C)

EN12115 Dimensional Tolerance:

13 psi (0.9 bar) Vacuum:

### **Hose Construction:**

Tube: Silicone, clear, manufactured in an ISO class 8 cleanroom, tested in compliance with

1907/2006/CE (REACH). Meets FDA 21 CFR 177.2600, DM21.03.73 e seguenti, European Reglement 1935/2004/CE, 3A Sanitary Standard Class II, USP Class VI,

ISO10993 Sections 5, 10, 11:2009

Synthetic plies Reinforcement:

Cover: Smooth, translucent silicone cover

Color Options:

### **Hose Construction:**

Tube: White PTFE, clear/white, phthalate-free, complies with 1907/2006/CE (REACH), FDA 21

CFR 177.2600, DM21.03.73 e seguenti, European Reglement 1935/2004/CE, USP Class

VI, ISO 10993 Sections 5, 10, 11:2009

Reinforcement: Synthetic plies, Stainless steel wire helices, Antistatic copper wire

Cover: White, abrasion resistant EPDM cover

**Color Options:** 

Sterilization: See cleaning and sterilizing guidelines.

CRP Part Number	Color	Inside Diameter (in)	Outside Diameter (in)	Vacuum: (psi)	Working Pressure (psi)	Burst Pressure (psi)	Weight (lbs/ft)	Bend Radius (in)
9010-050		0.50	1.00	-	225	675	0.27	-
9010-075		0.75	1.22	-	195	585	0.37	-
9010-100		1.00	1.46	-	150	450	0.46	-
9010-150		1.50	1.97	-	105	315	0.64	-
9010-200		2.00	2.48	-	90	270	0.83	-
9010-250		2.50	3.01	-	75	225	1.13	-
9010-300		3.00	3.50	-	60	180	1.33	-

CRP Part Number	Color	Inside Diameter (in)	Outside Diameter (in)	Vacuum: (psi)	Working Pressure (psi)	Burst Pressure (psi)	Weight (lbs/ft)	Bend Radius (in)
7959-075		0.75	1.22	13	250	1000	0.47	5.12
7959-100		1.00	1.46	13	250	1000	0.58	6.69
7959-150		1.50	2.00	13	250	1000	0.96	10.04
7959-200		1.97	2.60	13	250	1000	1.39	12.99
7959-250		2.50	3.13	13	250	1000	1.98	16.93
7959-300		2.95	3.58	13	250	1000	2.30	20.08
7959-400		3.94	4.57	13	250	1000	3.08	26.57

# **CRP PTFE Sil**

9159 Series



Top of the line ultra flexible suction and delivery hose for nearly all industrial chemicals. The PTFE tube combines flexibility and purity with elite chemical resistance.

### Technical Characteristics:

Temperature Range: -40°F / +302°F

(-40°C / +150°C)

Dimensional Tolerance: ISO 1307

Vacuum: 13 psi (0.9 bar)

### **Hose Construction:**

Tube: Coextruded virgin PTFE, clear/white, phthalate-free, complies with 1907/2006/

CE (REACH), FDA 21 CFR 177.1550, DM21.03.73 e seguenti, European Reglement

1935/2004/CE, USP Class VI, ISO 10993 Sections 5, 10, 11:2009

Reinforcement: Synthetic plies, Stainless steel wire helices, Antistatic copper wire

Cover: White silicone cover for extreme flexibility and temperature resistance

Color Options: / /

Sterilization: See cleaning and sterilizing guidelines.

CRP Part Number	Color	Inside Diameter (in)	Outside Diameter (in)	Vacuum: (psi)	Working Pressure (psi)	Burst Pressure (psi)	Weight (lbs/ft)	Bend Radius (in)
9159-050		0.50	0.94	13	150	600	0.31	1.77
9159-075		0.75	1.18	13	150	600	0.41	2.76
9159-100		1.00	1.42	13	150	600	0.51	3.54
9159-150		1.50	1.97	13	105	420	0.84	5.51
9159-200		1.97	2.44	13	105	420	1.07	7.09
9159-250		2.50	3.13	13	90	360	1.80	12.60
9159-300		2.95	3.58	13	75	300	2.17	14.96

# Specialty



# **CRP Industrial Specialty hoses keep production lines running.**

Built from the core out on a proprietary rigid mandrel frame, CRP Industrial hoses incorporate liners, plies, and covers chosen specifically for each individual application. Liners are available in NBR, Silicone, PTFE, PFA, FEP, UHMW, and EPDM.

Here are just a few benefits designed into CRP Industrial Specialty hoses:

- Abrasion resistant covers
- Integrated static discharge elements in selected hoses
- Choice of liners specific to applications

CRP Industrial has been offering high-quality hose for over 40 years and is the leading choice of many companies in North America.

For details, call CRP's US headquarters at 800.526.4066.

20 www.crpindustrial.com

# **CRP FEP Chem**

# PTFE Chem FC

7942 Series

7962 Series



Top of the line suction and delivery hose for nearly all industrial chemicals. The PTFE tube combines flexibility and purity with elite chemical resistance.

### **Technical Characteristics:**

Temperature Range: -40°F / +302°F

(-40°C / +150°C)

Dimensional Tolerance: EN12115

Vacuum: 13 psi (0.9 bar)



Top of the line suction and delivery hose for nearly all industrial chemicals. The PTFE tube combines flexibility and purity with elite chemical resistance. The conductivity allows for safe operation with flammable and explosive materials.

### **Technical Characteristics:**

Temperature Range: -40°F / +302°F

(-40°C / +150°C)

Dimensional Tolerance: EN12115

Vacuum: 13 psi (0.9 bar)

### **Hose Construction:**

Tube: Fluorinated Ethylene Propylene (FEP), clear/white, phthalate-free, complies with

1907/2006/CE (REACH), FDA 21 CFR 177.2600, DM21.03.73 e seguenti, European

Reglement 1935/2004/CE, USP Class VI

Reinforcement: Synthetic plies, Stainless steel wire helices, Antistatic copper wire

Cover: Smooth, abrasion resistant EPDM cover

Color Options:

Sterilization: See cleaning and sterilizing guidelines.

### **Hose Construction:**

Tube: Fully Conductive PTFE, black, Conductive (Type  $\Omega/T$ ) according to EN12115 Standards,

complies with 1907/2006/CE (REACH), FDA 21 CFR 177.1550, DM21.03.73 e seguenti, European Reglement 1935/2004/CE, USP Class VI, ISO 10993 Sections 5, 10, 11:2009

Reinforcement: Synthetic plies, Stainless steel wire helices, Antistatic copper wire

Cover: Smooth, abrasion resistant EPDM cover

Color Options:

Sterilization: See cleaning and sterilizing guidelines.

CRP Part Number	Color	Inside Diameter (in)	Outside Diameter (in)	Vacuum: (psi)	Working Pressure (psi)	Burst Pressure (psi)	Weight (lbs/ft)	Bend Radius (in)
7942-075		0.75	1.22	13	250	1000	0.47	5.12
7942-100		1.00	1.46	13	250	1000	0.58	6.69
7942-150		1.50	2.00	13	250	1000	0.96	10.04
7942-200		1.97	2.60	13	250	1000	1.39	12.99
7942-250		2.50	3.13	13	250	1000	1.98	16.93
7942-300		2.95	3.58	13	250	1000	2.30	20.08
7942-400		3.94	4.57	13	250	1000	3.08	26.57

CRP Part Number	Color	Inside Diameter (in)	Outside Diameter (in)	Vacuum: (psi)	Working Pressure (psi)	Burst Pressure (psi)	Weight (lbs/ft)	Bend Radius (in)
7962-075		0.75	1.22	13	250	1000	0.47	5.12
7962-100		1.00	1.46	13	250	1000	0.58	6.69
7962-150		1.50	2.00	13	250	1000	0.96	10.04
7962-200		1.97	2.60	13	250	1000	1.39	12.99
7962-250		2.50	3.13	13	250	1000	1.98	16.93
7962-300		2.95	3.58	13	250	1000	2.30	20.08
7962-400		3.94	4.57	13	250	1000	3.08	26.57

# **EPDM Chem**

# **UHMW Chem FC**

9802 Series

8782 Series



Suction and delivery hose for a wide variety of industrial chemicals. Fully conductive hose designed for use in Atex areas (Ex-Zone).

### **Technical Characteristics:**

Temperature Range: -40°F / +248°F

(-40°C / +120°C)

Dimensional Tolerance: EN12115

Vacuum: 13 psi (0.9 bar)



Fully conductive suction and delivery hose for a wide variety of industrial chemicals. The thermoplastic tube provides enhanced chemical resistance.

### **Technical Characteristics:**

Temperature Range: -31°F / +212°F

(-35°C / +100°C)

Dimensional Tolerance: EN12115

Vacuum: 13 psi (0.9 bar)

### **Hose Construction:**

Tube: EPDM, Black, Conductive (Type  $\Omega/T$ )

Reinforcement: Synthetic plies, Galvanized steel wire helices, Antistatic copper wire

Cover: Smooth, abrasion resistant EPDM cover

Color Options:



### **Hose Construction:**

Tube: UHMW, clear/black, phthalate-free, Conductive (Type  $\Omega/T$ ), complies with 1907/2006/

CE (REACH), FDA 21 CFR 177.1520, DM21.03.73 e seguenti, European Reglement

1935/2004/CE

Reinforcement: Synthetic plies, Galvanized steel wire helices, Antistatic copper wire

Cover: Smooth, abrasion resistant EPDM cover

Color Options:



CRP Part Number	Color	Inside Diameter (in)	Outside Diameter (in)	Vacuum: (psi)	Working Pressure (psi)	Burst Pressure (psi)	Weight (lbs/ft)	Bend Radius (in)
9802-100		1.00	1.46	13	250	1000	0.54	3.54
9802-150		1.50	2.00	13	250	1000	0.87	6.10
9802-200		2.00	2.64	13	250	1000	1.45	8.46
9802-250		2.50	3.13	13	250	1000	1.92	10.83
9802-300		3.00	3.62	13	250	1000	2.31	12.99
9802-400		4.00	4.65	13	250	1000	2.99	17.72

CRP Part Number	Color	Inside Diameter (in)	Outside Diameter (in)	Vacuum: (psi)	Working Pressure (psi)	Burst Pressure (psi)	Weight (lbs/ft)	Bend Radius (in)
8782-100		1.00	1.46	13	250	1000	0.62	6.10
8782-150		1.50	2.00	13	250	1000	0.93	9.45
8782-200		2.00	2.64	13	250	1000	1.56	12.99
8782-250		2.50	3.13	13	250	1000	2.07	16.34
8782-300		3.00	3.62	13	250	1000	2.42	19.69
8782-400		4.00	4.65	13	250	1000	3.13	26.57

# Silicone SPC

9203 Series



Hard-wall corrugated silicone hose is appropriate for use in cooling systems of automobiles and commercial vehicle engines in locations requiring strong temperature tolerance. Designed for hot air, exhaust air, fluid mixture and oil. Flame retardant compound per ASTM C-542.

### **Technical Characteristics:**

Temperature Range: Air -58°F / +392 °F

(-50°C / +200 °C)

Liquid -40°F / +212 °F (-40°C /+100 °C)

Standards: SAE J20R2 CLASS A

**ASTM C-542** 

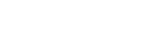
Vacuum: 13 psi (0.9 bar)

### **Hose Construction:**

Tube: Smooth colored silicone
Reinforcement: Synthetic cord and helix wire

Cover: Corrugated, shiny silicone rubber. Flame retardant according to ASTM C-542.

Color Options:



CRP Part Number	Color	Inside Diameter (in)	Outside Diameter (in)	Vacuum: (psi)	Working Pressure (psi)	Burst Pressure (psi)	Weight (lbs/ft)	Bend Radius (in)
9203-136		1.1875	N/A	13	45	135	0.56	3.94
9203-200		2.00	N/A	13	45	135	0.88	7.87
9203-250		2.50	N/A	13	45	135	1.03	10.6
9203-300		3.00	N/A	13	45	135	1.33	13.78

# Fittings & Accessories



### **CRP Industrial Hose Fittings and Accessories**

CRP Industrial offers a variety of internally expanded and externally crimped fittings for sanitary applications. These fittings reduce the potential for bacterial buildup at the end of the stem and the inner liner of the hose.

The uniform crimp pressure eliminates leaking and off-gassing at the interface between the stem and the hose. Chemical and petrochemical hoses can also benefit from the reduced leak path.

Additional fittings and accessories are available upon request.

CRP Industrial has been offering high-quality hose for over 40 years and is a leading choice of sanitary hose accessories for many companies in North America.

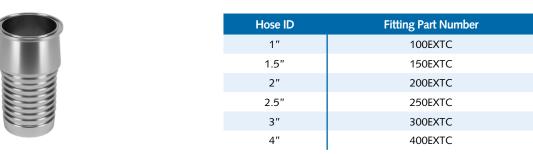
For details, call CRP's US headquarters at 800.526.4066.

26 www.crpindustrial.com

# **Tri-Clamp**

Expanded





### Expanded

# I-Line, Female



Hose ID	Fitting Part Number
1.5"	150EXFIL
2"	200EXFIL
2.5"	250EXFIL
3"	300EXFIL
4"	400EXFIL

### Expanded



Hose ID	Fitting Part Number	Nut Part Number
1.5"	150EXTBF	150EXTBFNUT
2"	200EXTBF	200EXTBFNUT
2.5"	250EXTBF	250EXTBFNUT
3"	300EXTBF	300EXTBFNUT
4"	400EXTBF	400EXTBFNUT

### Expanded

# I-Line, Male



Hose ID	Fitting Part Number
1.5"	150EXMIL
2"	200EXMIL
2.5"	250EXMIL
3"	300EXMIL
4"	400FXMII

### Expanded



Hose ID	Fitting Part Number
1.5"	150EXNPT
2"	200EXNPT
2.5"	250EXNPT
3"	300EXNPT
4"	400EXNPT

Crimped

# **Tri-Clamp**



Hose ID	Fitting Part Number
0.5"	050CRTC
0.75"	075CRTC
1"	100CRTC
1.5"	150CRTC
2"	200CRTC
2.5"	250CRTC
3"	300CRTC
4"	400CRTC

### Expanded



Hose ID	Fitting Part Number	Nut Part Number
1.5"	150EXDIN	DIN40NUT
2"	200EXDIN	DIN50NUT
2.5"	250EXDIN	DIN65NUT
3"	300EXDIN	DIN80NUT
4"	400EXDIN	DIN100NUT

# Mini Tri-Clamp

Crimped



Hose ID	Fitting Part Number
0.5"	050CRMTC
0.75"	075CRMTC

## Cam & Groove

Type C



Hose ID	Fitting Part Number
1"	100CRCMLK
1.5"	150CRCMLK
2"	200CRCMLK
2.5"	250CRCMLK
3"	300CRCMLKSS
4"	400CRCMLKSS

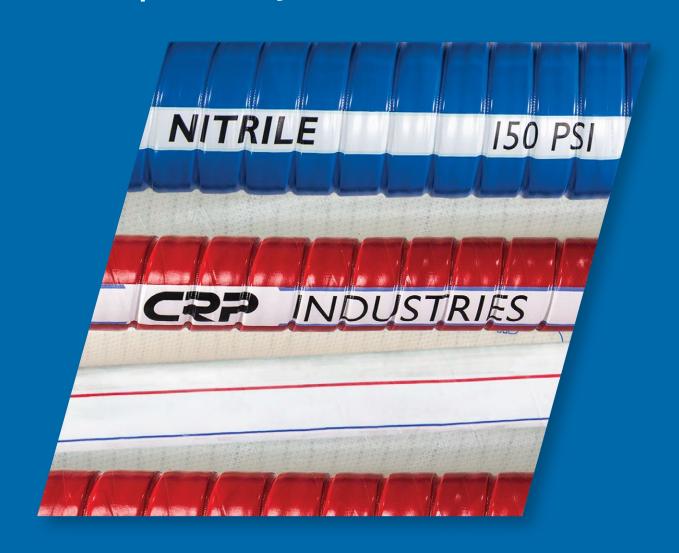
# Cam & Groove

Type E



Hose ID	Fitting Part Number
1"	100CRTYPE
1.5"	150CRTYPE
2"	200CRTYPE
2.5"	250CRTYPE
3"	300CRTYPESS
4"	400CRTYPESS

# Chemical Compatibility Chart



#### **CHEMICAL RESISTANCE RATING**

A Good Resistance This chemical has no or minimal effect on the polymer.

This chemical has a small effect on the polymer. Continuous usage, increased temperatures, and high concentrations can negatively affect the polymer. **B** Fair Resistance

This chemical is acceptable for intermittent use or specific conditions. **C** Conditional Resistance

**D** Minimal Resistance This chemical has significant negative effects on the polymer.

This chemical compatibility chart is meant to be a guide only. The listed compounds are the most common tube materials used by CRP Industries Inc. This reflects the effect on the polymer only. It does not factor additional design requirements into the chemical ratings.

For further assistance in selecting the right product for your application, please contact CRP Industries Inc.

The data compiled from multiple sources is based on application temperature of 70° F (21° C) under normal service conditions.

31

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			_	FKM/Vitor	و	>	PTFE/PFA
	≥	Nitrile	EPDM	ş	Silicone	UHMW	FE/
	Butyl	ž	EPI	¥	S	크	PT
2,4D with 10% Fuel Oil	D	Α	D	Α	-	Α	Α
Acetal (Delrin)	В	D	В	D	-	Α	Α
Acetaldehyde*	Α	D	Α	D	В	Α	Α
Acetamide	Α	Α	Α	В	В	Α	Α
Acetate Solvents	С	D	Α	D	-	Α	Α
Acetic Acid, 10%	Α	В	Α	В	Α	Α	Α
Acetic Acid, 30%	В	С	Α	С	Α	Α	Α
Acetic Acid, 50%	В	D	Α	D	Α	Α	A
Acetic Acid, Glacial	B	D	В	D	В	Α	A
Acetic Anhydride Acetic Ether	В	C D	B B	D D	D C	A B	A
Acetone	A	D	A	D	С	А	A
Acetophenone	A	D	Α	D	D	D	Α
Acetyl Chloride	D	D	D	В	C	C	Α
Acetylacetone	Α	D	Α	D	-	Α	Α
Acetylene	Α	Α	Α	Α	В	Α	Α
Acrylonitrile	D	D	D	С	D	В	Α
Air	Α	Α	Α	Α	Α	Α	Α
Alcohol Aliphatic	Α	В	Α	С	В	Α	Α
Alcohol, Aromatic	D	С	D	Α	-	Α	Α
Alk-Tri	D	С	D	Α	D	В	Α
Allyl Alcohol	A	В	A	В	-	Α	A
Allyl Chlorida	D	D B	D D	B A	D D	B B	A
Allyl Chloride Alum	A	А	A	A	A	А	A
Aluminum Acetate	A	В	A	C	D	A	A
Aluminum Chloride	A	A	Α	A	В	Α	Α
Aluminum Fluoride	Α	Α	Α	Α	В	Α	Α
Aluminum Hydroxide	Α	С	Α	В	В	Α	Α
Aluminum Nitrate	Α	Α	Α	Α	В	Α	Α
Aluminum Phosphate	Α	Α	Α	Α	В	Α	Α
Aluminum Sulfate	Α	Α	Α	Α	Α	Α	Α
Ammonia Water	В	С	Α	D	В	Α	Α
Ammonia, Liquid*	Α	C	Α	D	В	Α	A
Ammonium Carbonate	A	C	A	Α	D	Α	A
Ammonium Chloride Ammonium Hydroxide	A B	A C	A	A D	C B	A	A
Ammonium Metaphosphate	A	В	A	C	В	A	Α
Ammonium Nitrate*	A	A	Α	D	В	Α	Α
Ammonium Persulfate	Α	D	Α	D	D	Α	Α
Ammonium Phosphate	Α	Α	Α	Α	Α	Α	Α
Ammonium Sulfate	Α	Α	Α	С	С	Α	Α
Ammonium Sulfide	Α	Α	Α	С	D	Α	Α
Ammonium Sulfite	Α	С	Α	В	В	Α	Α
Ammonium Thiocyanate	Α	С	Α	С	В	Α	Α
Ammonium Thiosulfate	Α	В	Α	В	В	Α	Α
Amyl Acetate	В	C	В	C	С	Α	Α
Amyl Acetone	В	С	В	С	С	Α	Α
Amyl Alcohol Amyl Borate	A D	B A	A D	B A	D D	A	A
Amyl Chloride	D	В	D	A	D	A	Α
Amyl Chloronaphthalene	D	C	D	В	D	В	Α
Amyl Naphthalene	D	D	D	A	D	В	Α
Amyl Oleate	В	D	В	C	-	A	Α
Amyl Phenol	D	D	D	Α	D	Α	Α
Anethole	D	D	D	В	-	В	Α
Aniline	Α	D	С	В	С	Α	Α
Aniline Dye	В	D	С	В	С	Α	Α
Aniline Hydrochloride	В	С	С	В	D	Α	Α
Animal Fats	В	Α	С	Α	В	Α	Α
Animal Grease	С	Α	C	Α	В	Α	A
	В	Α	C	Α	В	Α	Α
Animal Oils Ansul Ether	C	С	D	C	D	Α	Α

CHEMICAL RESISTANCE RATING

A = Good Resistance

B = Fair Resistance

C = Depends On Conditions

D = Not Recommended

	Butyl	Nitrile	EPDM	FKM/Viton	Silicone	MWM	PTFE/PFA
Antimony Chloride	В	Α	C	Α	С	Α	Α
Antimony Pentachloride	С	В	C	Α	D	Α	Α
Aqua Regia	С	D	С	Α	D	C	Α
Aromatic Hydrocarbons	D	C	D	Α	D	В	A
Arquad	Α	Α	Α	Α	-	Α	A
Arsenic Acid	Α	Α	Α	Α	Α	Α	A
Arsenic Chloride	D	В	D	C	D	D	A
Asphalt*	D	В	D	A	D	B	A
ASTM #1 Oil	D	Α	D	A	D	A	A
ASTM #2 Oil ASTM #3 Oil	D	B B	D D	A	D D	A	A
Aviation Gasoline	D D	В	D	A	D	B	A
Barium Carbonate	A	А		A		A	A
		A	A	A	B A	A	A
Barium Chloride	Α						
Barium Hydroxide	Α	Α	Α	Α	Α	Α	A
Barium Sulfate	Α	Α	Α	Α	Α	A	Α
Barium Sulfide	Α	Α	Α	Α	В	Α	Α
Beer	Α	Α	Α	Α	Α	Α	Α
Beet Sugar Liquors	Α	Α	Α	Α	Α	Α	Α
Benzaldehyde	В	D	Α	D	D	Α	A
Benzene	D	D	D	Α	D	В	A
Benzenesulfonic acid	D	D	D	Α	D	Α	Α
Benzine Solvent	D	В	D	Α	D	В	Α
Benzoic Acid	В	D	D	Α	D	Α	Α
Benzoic Aldehyde	В	D	Α	D	D	Α	Α
Benzotrichloride	D	D	В	D	D	В	Α
Benzoyl Chloride	D	D	D	В	D	В	Α
Benzyl Acetate	В	С	Α	С	В	Α	Α
Benzyl Alcohol	В	D	В	Α	В	Α	Α
Benzyl Chloride	D	D	D	В	D	Α	Α
Bichromate of Soda	Α	С	Α	С	В	Α	Α
Black Sulfate Liquor	Α	В	Α	Α	D	Α	Α
Blast Furnace Gas	В	D	D	Α	Α	Α	Α
Bleach Solutions	В	D	В	В	С	С	Α
Borax	Α	В	Α	Α	В	Α	Α
Bordeaux Mixture	Α	В	Α	Α	Α	Α	Α
Boric Acid	Α	Α	Α	Α	Α	Α	Α
Brandy	Α	В	Α	В	В	Α	Α
Brine	Α	В	Α	Α	Α	Α	Α
Bromine	D	D	D	Α	D	D	Α
Bromine Water	D	D	В	D	D	Α	Α
Bromobenzene	D	D	D	В	D	В	Α
Bunker Oil	D	Α	D	Α	В	В	Α
Butane	D	Α	D	Α	D	Α	Α
Butanol	Α	В	Α	Α	В	Α	Α
Butter	Α	Α	Α	Α	В	Α	Α
Butyl Acetate	В	D	В	D	D	Α	Α
Butyl Acrylate	C	D	D	D	C	В	Α
Butyl Benzene	D	D	D	Α	D	Α	Α
Butyl Bromide	D	D	D	В	D	В	Α
Butyl Butyrate	В	D	В	В	D	В	Α
Butyl Carbitol	Α	С	В	В	D	Α	Α
Butyl Cellosolve	В	C	В	D	D	Α	Α
Butyl Chloride	С	Α	D	Α	В	В	Α
Butyl Ether	С	С	С	D	D	Α	Α
Butyl Ethyl Acetaldehyde	С	D	D	D	-	Α	Α
Butyl Ethyl Ether	С	В	С	D	D	Α	Α
Butyl Oleate	В	D	В	Α	D	Α	Α
Butyl Phthalate	В	D	В	С	В	Α	Α
Butyl Stearate	С	В	D	Α	D	Α	Α
Butylamine	C	В	D	D	D	Α	Α
Butyraldehyde	В	D	В	D	D	Α	Α
Butyric Acid	В	D	В	С	D	Α	Α
Butyric Anhydride	Α	С	Α	С	В	Α	Α

	Butyl	Nitrile	EPDM	FKM/Viton	Silicone	UHWW	PTFE/PFA
Calcium Acetate	Α	В	Α	С	D	Α	Α
Calcium Bisulfate	В	Α	В	Α	-	Α	Α
Calcium Bisulfite	Α	В	Α	В	С	Α	Α
Calcium Carbonate	Α	Α	Α	Α	Α	Α	Α
Calcium Chloride	Α	Α	Α	Α	Α	Α	Α
Calcium Hydroxide	Α	В	Α	В	Α	Α	Α
Calcium Hypochlorite	Α	С	Α	В	В	В	Α
Calcium Nitrate	Α	Α	Α	Α	В	Α	Α
Calcium Oxide	Α	Α	Α	Α	Α	Α	Α
Calcium Sulfate	Α	С	Α	В	В	Α	Α
Calcium Sulfide	Α	Α	Α	Α	В	Α	Α
Calcium Sulfite	Α	Α	Α	Α	Α	Α	Α
Cane Sugar Liquors	Α	В	Α	Α	Α	Α	Α
Carbitol	В	В	В	В	В	Α	Α
Carbitol Acetate	В	D	В	D	-	Α	Α
Carbolic Acid	В	D	C	Α	D	Α	Α
Carbon Dioxide	A	Α	Α	Α	Α	Α	Α
Carbon Disulfide*	D	D	D	C	D	C	A
Carbon Monoxide	В	Α	В	Α	В	Α	A
Carbon Tetrachloride	D	B C	D	A	D	В	A
Carbon Tetraflouride	D		D	Α	D	C	A
Carbonic Acid Castor Oil	A	В	A	Α	Α	Α	A
	A	A C	B B	A C	A C	A	A
Caustic Potash Caustic Soda	A	В	А	C	В	A	A
Cellosolve	A	D	A	C	D	A	A
Cellulose Acetate	A	D	В	D	D	A	A
Cellulube	В	D	В	C	В	Α	A
China Wood Oil	C	A	D	В	D	Α	Α
Chlorinated Hydrocarbons	D	D	D	A	D	В	Α
Chlorine Dioxide	C	D	C	Α	C	В	Α
Chlorine Gas*	D	D	D	D	D	D	В
Chlorine Water Solutions	D	D	С	С	D	В	Α
Chloroacetic Acid	С	D	В	D	D	Α	Α
Chloroacetone	В	D	Α	D	D	Α	Α
Chlorobenzene	D	D	D	Α	D	В	Α
Chlorobutadiene	D	D	D	Α	D	В	Α
Chlorobutane	D	В	D	Α	В	В	Α
Chloroethane*	С	В	С	Α	C	В	Α
Chloroethylene*	D	D	D	В	-	В	Α
Chloroform	D	D	D	В	D	В	Α
Chloropentane	D	D	D	В	D	Α	Α
Chlorophenol	С	D	С	Α	С	В	Α
Chloropropanone	В	D	Α	D	D	Α	Α
Chlorosulfonic Acid	D	С	D	D	D	D	Α
Chlorotoluene	D	D	D	Α	D	С	Α
Chromic Acid	D	D	С	Α	D	С	Α
Citric Acid	Α	Α	Α		Α	Α	Α
Coal Oil	D	Α	D	_	D	Α	Α
Coal Tar*	D	Α	D	Α	D	Α	Α
Coal Tar Naphtha	D	В	D	Α	D	Α	Α
Cobalt Chloride	Α	Α	A	Α	В	Α	A
Coconut Oil	В	Α	С	Α	Α	Α	Α
Cod Liver Oil	A	Α	Α	Α	В	Α	A
Coke Oven Gas	D	D	D	Α	C	C	A
Copper (I) Cyanide	A	A	A	A	Α	A	A
Copper (I) Sulfide	A	A	A	A	-	A	A
	A	A	A	A	-	Α	A
	Δ	Α	Α	A	A	A	A
Copper (II) Arsenate Copper (II) Chloride		Λ.			A	А	A
Copper (II) Chloride Copper (II) Nitrate	Α	A	A				
Copper (II) Chloride Copper (II) Nitrate Copper (II) Nitrite	A	Α	Α	Α	Α	Α	Α
Copper (II) Chloride Copper (II) Nitrate	Α						

CHEMICAL RESISTANCE RATING

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	Butyl	Nitrile	EPDM	FKM/Vit	Silicone	WWHO	PTFE/PF/
Creosol	В	С	D	Α	С	Α	Α
Creosote (Coal Tar)	D	Α	D	Α	D	Α	Α
Creosote (Wood)	D	Α	D	Α	D	Α	Α
Cresylic Acid	D	D	D	Α	D	Α	Α
Crude Oil	D	Α	D	Α	D	Α	Α
Cumene	D	D	D	Α	D	Α	Α
Cupric Carbonate	Α	С	Α	Α	В	Α	Α
Cyclohexane	D	В	D	Α	D	Α	Α
Cyclohexanol	D	В	D	Α	D	Α	Α
Cyclohexanone	D	D	С	С	D	Α	Α
Cyclopentane	D	В	D	Α	D	Α	Α
DDT in Kerosene	D	В	D	Α	D	Α	Α
Decaline	D	D	D	Α	D	Α	Α
Decane	D	В	D	Α	В	Α	Α
Decanoic Acid	D	Α	D	Α	В	Α	Α
Detergent Solutions	Α	Α	Α	Α	Α	Α	Α
Diacetone Alcohol	Α	D	В	D	D	Α	Α
Dibenzyl Ether	В	D	В	С	D	Α	Α
Dibenzylsebacate	В	D	В	В	С	Α	Α
Dibromobenzene	D	D	D	Α	D	В	Α
Dibutyl Ether	С	С	С	D	D	Α	Α
Dibutyl Phthalate	В	D	В	С	В	Α	Α
Dibutyl Sebacate	С	D	В	C	В	В	Α
Dibutylamine	D	D	D	D	С	D	Α
Dicalcium Phosphate	Α	Α	Α	Α	A	Α	Α
Dichloroacetic Acid	D	С	D	Α	D	Α	Α
Dichlorobutane	D	В	D	Α	D	Α	Α
Dichlorodifluoromethane	C	В	C	В	D	Α	Α
Dichloroethane	D	В	D	A	_	C	A
Dichloroethyl Ether	D	D	D	C	_	Α	A
Dichloroethylene	D	C	D	В	_	C	Α
Dichlorohexane	D	D	D	A	-	Α	A
Dichloroisopropyl Ether	D	D	C	C	D	Α	A
Dichloromethane	D	D	D	В	D	Α	A
Dichloropentane	D	D	D	A	-	Α	A
Dieldrin in Xylene	D	C	D	Ĉ	D	A	A
Dieldrin in Xylene & Water Spray	D	C	D	C	D	A	A
Diesel Oil	D	A	D	A	D	В	A
Diethanolamine	A	C	A	C	В	A	A
Diethyl Ether*	D	D	D	D	D	Α	A
Diethyl Oxalate	В	D	A	В	D	A	A
Diethyl Phthalate	D	В	D	A	-	A	A
	D	В	D	A		A	A
Diethyl Phthalate	_			_	-		
Diethyl Sebacate	A	D	C	В	- D	A	A
Diethyl Sulfate	В	D	A	Α	В	A	A
Diethylamine	A	В	В	D	В	Α	A
Diethylbenzene	D	D	D	Α	D	Α	Α
Diethylene Dioxide	В	D	В	C	-	Α	Α
Diethylenetriamine	Α	В	В	C	-	Α	Α
Dihydroxyethyl Ether	Α	Α	Α	Α	В	Α	Α
Diisobutyl Ketone	Α	D	Α	D	-	Α	Α
Diisobutylene	D	В	D	Α	D	Α	Α
Diisodecyl Adipate	Α	D	Α	С	-	Α	Α
Diisodecyl Phthalate	Α	D	Α	В	-	Α	Α
Diisooctyl Adipate	Α	D	Α	С	-	Α	Α
Diisooctyl Phthalate	В	D	С	Α	С	Α	Α
Diisopropanol Amine	Α	В	Α	С	-	Α	Α
Diisopropyl Ether	D	С	D	С	D	Α	Α
Diisopropyl Ketone	В	D	В	D	D	Α	Α
Diisopropylbenzene	D	С	D	Α	-	Α	Α
Dilauryl Ether	D	С	С	С	-	Α	Α
	D	С	D	Α	D	С	Α
Dimethyl Benzene							
Dimethyl Ketone	A	D	Α	D	С	Α	Α

 $<sup>{}^*\!\</sup>mathsf{This}\ \mathsf{chemical}\ \mathsf{has}\ \mathsf{special}\ \mathsf{transportation}\ \mathsf{requirements}.\ \mathsf{Contact}\ \mathsf{CRP}\ \mathsf{Industries}\ \mathsf{Inc.}\ \mathsf{for}\ \mathsf{further}\ \mathsf{assistance}.$ 

 $<sup>{}^{\</sup>star}\text{This chemical has special transportation requirements. Contact CRP Industries Inc. for further assistance.}$ 

HEMICAL RESISTANCE RATING	Α	= G	ooa	Kes	istar	ice	Ľ	3
				ton			∡	
	_	e	⋝	FKM/Vitor	ne	⋛	PTFE/PFA	
	Butyl	Nitrile	EPDM	Σ	Silicone	UHMW	벁	
	В		ш	ш	S	ر	Ъ	
Dimethyl Phthalate	Α	D	В	C	D	Α	Α	
Dimethyl Sulfate	В	D	D	D	-	Α	Α	
Dimethyl Sulfide*	С	D	D	С	-	В	Α	
Dimethylaniline	D	D	В	С	D	В	A	
Dimethylformamide (DMF) Dinitrobenzene	B C	D D	B C	C A	B D	A	A	
Dinitrotoluene	D	D	D	C	D	A	A	
Dioctyl Adipate (DOA)	A	D	В	С	-	Α	A	
Dioctyl Phthalate (DOP)	В	D	C	A	С	Α	A	
Dioctyl Sebacate (DOS)	В	D	В	Α	С	Α	Α	
Dioxane	В	D	В	D	D	Α	Α	
Dioxolane	C	D	В	С	D	Α	Α	
Dipentene (Limonene)	D	С	D	Α	D	Α	Α	
Diphenyl (Biphenyl)	D	D	D	Α	D	Α	Α	
Diphenyl Oxide	D	D	D	Α	С	Α	Α	
Dipropyl Ketone	В	D	В	D	-	Α	A	
Dipropylene Glycol	A	A	A	A	A -	A	A	
Disodium Phosphate Divinyl Benzene	D	D	D	A	-	A	A	
Dodecyl Benzene	D	В	D	Α	_	Α	A	
Dodecyl Toluene	D	D	D	Α	-	Α	A	
Dowfume W-40, 100%	D	D	C	C	-	В	A	
Dow-Per	D	D	D	Α	D	Α	Α	
Dowtherm Oil, A & E	D	D	D	Α	-	Α	Α	
Dowtherm S.R.I.	Α	Α	Α	Α	-	Α	Α	
Dry Cleaning Fluids	D	С	D	Α	D	В	Α	
Epichlorohydrin*	В	D	В	D	D	В	Α	
Ethanol	A	В	Α	В	Α	Α	A	
Ethers Ethyl Acetate	D B	D D	D B	D D	D C	B B	A	
Ethyl Acetate  Ethyl Acetoacetate	В	D	В	D	В	А	A	
Ethyl Acrylate	В	D	В	D	В	В	A	
Ethyl Benzoate	C	D	C	A	D	A	A	
Ethyl Butyl Alcohol	Α	Α	Α	В	-	Α	Α	
Ethyl Butyl Ketone	В	D	В	D	-	Α	Α	
Ethyl Cellulose	В	В	В	D	С	Α	Α	
Ethyl Chloride*	С	В	С	Α	С	В	Α	
Ethyl Ether*	D	D	D	D	D	Α	Α	
Ethyl Formate	В	D	В	С	-	Α	A	
Ethyl Methyl Ketone Ethyl Oxalate	B B	D D	B A	D B	D D	A	A	
Ethyl Propyl Ether	D	В	D	С	-	A	A	
Ethyl Propyl Ketone	В	D	В	D	-	A	A	
Ethyl Silicate	A	Α	A	Α	С	Α	Α	
Ethyl Sulfate	В	D	В	D	-	Α	Α	
Ethylbenzene	D	С	D	Α	D	Α	Α	
Ethylene	D	Α	C	Α	D	Α	Α	
Ethylene Bromide	D	D	D	В	D	В	Α	
Ethylene Chloride	C	D	D	В	D	В	Α	
Ethylene Dibromide	D	D	C	В	D	В	Α	
Ethylene Dichloride	C	D	C	В	D	В	A	
Ethylene Glycol Ethylene Oxide	A C	A D	A C	A D	A D	A C	A	
Ethylene Trichloride	D	C	D	A	D	В	A	
Ethylhexanol	A	A	A	Α	В	A	Α	
EX TRI (Trichlorethylene)	D	C	D	Α	D	В	A	
Fatty Acids	C	В	С	Α	С	A	Α	
Ferric Bromide	A	A	A	Α	В	Α	Α	
Ferric Chloride	Α	Α	Α	Α	В	Α	Α	
Ferric Nitrate	Α	Α	Α	Α	С	Α	Α	
Ferric Sulfate	Α	Α	Α	Α	В	Α	Α	
Ferrous Acetate	Α	D	В	D	- D	Α	Α	
Ferrous Ammonium Sulfate Ferrous Chloride	A	C A	A	C B	B B	A	A	
i enous Chionae	_	А	А	D	D	А	А	

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	Butyl	Nitrile	EPDM	FKM/Viton	Silicone	UHWW	PTFE/PFA
Ferrous Hydroxide	Α	С	В	С	В	Α	Α
Ferrous Sulfate	A	С	Α	Α	В	Α	Α
Fish Oil Fluorine	C D	B D	D D	A D	A D	A D	A B
Fluoroboric Acid	A	A	A	В	A	В	А
Fluosilic Acid	A	A	В	A	D	В	A
Formaldehyde	Α	В	В	C	В	A	Α
Formamide	Α	C	A	C	В	Α	Α
Formic Acid	Α	В	Α	D	В	Α	Α
Freon 10	D	В	D	Α	D	В	Α
Freon 11	D	В	D	В	D	Α	Α
Freon 112	D	В	D	Α	С	Α	Α
Freon 113	С	Α	D	В	D	Α	Α
Freon 114	Α	Α	В	Α	C	Α	Α
Freon 114B2	D	В	D	В	D	Α	Α
Freon 115	A	Α	Α	В	-	Α	Α
Freon 12 Freon 13	C	B B	C A	B A	D D	A	A
Freon 13B1	A	A	A	В	D	A	A
Freon 142b	В	C	В	С	-	В	A
Freon 152a	A	A	A	A	Α	A	Α
Freon 21	D	D	D	D	-	Α	Α
Freon 218	Α	Α	Α	В	-	Α	Α
Freon 22	В	D	В	D	С	Α	Α
Freon 32	Α	Α	Α	С	-	Α	Α
Freon 502	Α	В	Α	В	-	Α	Α
Freon BF	D	В	D	Α	D	Α	-
Freon C316	Α	Α	Α	Α	-	Α	Α
Freon C318	Α	Α	Α	В	-	Α	Α
Freon MF	D	В	D	В	D	Α	Α
Freon TA	Α	Α	В	C	С	Α	-
Freon TC Freon TF	A C	A	B D	C B	D D	A	- А
Freon TMC	В	В	C	A	C	A	A
Freon T-P35	A	A	A	Α	A	Α	-
Freon T-WD 602	Α	В	C	Α	C	Α	Α
Freon31	Α	D	A	D	-	Α	Α
Fuel Oil	D	Α	D	Α	В	В	Α
Fuel, ASTM A	D	Α	D	Α	D	Α	Α
Fuel, ASTM B	D	В	D	Α	D	Α	Α
Fuel, ASTM C	D	В	D	Α	D	Α	Α
Fumaric Acid	D	Α	С	Α	В	Α	Α
Furan	С	D	С	D	D	Α	Α
Furfural	В	D	В	D	D	Α	Α
Furfuryl Alcohol	C	D	С	C	D	A	A
Gallic Acid Gasoline, Hi-Test	C D	B A	B D	A	D D	A B	A
Gasoline, Lead Free	D	A	D	A	D	В	A
Gasoline, Reg	D	Α	D	Α	D	A	Α
Gelatin	Α	A	A	Α	A	Α	Α
Gluconic Acid	Α	С	Α	В	В	Α	Α
Glucose	Α	Α	Α	Α	Α	Α	Α
Glue	В	Α	Α	С	Α	Α	Α
Glycerine (Glycerol)	Α	Α	Α	Α	Α	Α	Α
Glycols	Α	Α	Α	Α	Α	Α	Α
Grease	D	Α	D	Α	-	Α	Α
Green Liquor	Α	В	Α	В	Α	Α	Α
Halowax Oil	D	D	D	Α	D	Α	Α
Heptachlor in Petroleum Solvents	D	В	D	В	D -	A	A
	Ь						A
Heptanal	D	D A	С	D			
Heptane	D	Α	D	Α	D	Α	Α

	Butyl	Nitrile	EPDM	FKM/Viton	Silicone	UHWW	PTFE/PFA
Hexanol	В	Α	В	Α	В	Α	Α
Hexene	D	В	D	Α	D	Α	Α
Hexyl Methyl Ketone	Α	С	Α	D	В	Α	Α
Hexylene	D	В	D	Α	D	Α	A
Hexylene Glycol	A D	A C	A D	A	B D	A B	A
Hi-Tri (Trichloroethylene) Hydraulic Fluid (Petroleum)	D	A	D	A	C	А	A
Hydraulic Fluid (Phospate Ester Base)	A	D	A	В	С	A	A
Hydraulic Fluid (Poly Alkylene Glycol Base)	A	A	Α	A	-	Α	-
Hydrobromic Acid	Α	D	Α	Α	D	В	Α
Hydrobromic Acid, 15%	В	D	Α	Α	D	В	Α
Hydrobromic Acid, 37%	С	D	Α	Α	D	В	Α
Hydrobromic Acid, 5%	В	С	Α	Α	D	Α	Α
Hydrocyanic Acid	Α	В	Α	Α	С	Α	Α
Hydrofluoric Acid	C	D	С	Α	D	Α	Α
Hydrofluosilicic Acid	Α	Α	В	Α	D	В	Α
Hydrogen Gas*	Α	Α	Α	Α	С	Α	Α
Hydrogen Peroxide, 10%	Α	С	Α	Α	В	Α	Α
Hydrogen Peroxide, 3%	Α	С	Α	Α	В	Α	Α
Hydrogen Peroxide, 30%	С	D	С	В	С	Α	Α
Hydrogen Peroxide, 90%	D	D	C	В	C	В	Α
Hydrogen Sulfide*	A	D	A	C	С	В	A
Hydroquinone	В	C	С	D	В	A	A
Hypochlorous Acid	B B	D A	B B	C A	D A	A	A
Ink Oil (Linseed Oil Base) Insulating Oil	D	A	D	A	В	A	A
lodine	В	C	В	В	С	Α	A
Iron (II) Acetate	A	D	В	D	-	Α	A
Iron (II) Hydroxide	A	C	В	C	В	Α	Α
Iron (II) Sulfate	Α	C	A	A	В	Α	Α
Iron (II) Sulfide	Α	A	Α	Α	-	Α	Α
Iron Salts	Α	Α	Α	Α	В	Α	Α
Isoamyl Acetate	Α	С	В	С	В	Α	Α
Isoamyl Alcohol	Α	Α	Α	В	-	В	Α
Isoamyl Bromide	D	D	D	В	-	В	Α
Isoamyl Butyrate	В	D	В	D	В	В	Α
Isoamyl Chloride	С	D	D	В	-	В	Α
Isoamyl Ether	D	В	D	D	-	Α	Α
Isoamyl Phthalate	Α	D	В	С	-	Α	Α
Isobutanol	Α	В	Α	В	Α	Α	Α
Isobutyl Acetate	A	С	В	С	В	Α	A
Isobutyl Aldehyde	В	D	В	D	-	Α	A
Isobutyl Amine	В	D	В	D	-	A	A
Isobutyl Bromide Isobutyl Chloride	D D	D D	D D	B B	D D	B B	A
Isobutyl Ether	D	C	D	D	-	А	A
Isobutylene	D	С	D	A	-	A	A
Isocyanates	В	D	В	C	_	В	A
Isooctane	D	A	D	A	D	A	A
Isopentane*	D	Α	D	Α	-		Α
Isopropyl Acetate	Α	D	В	D	D	Α	Α
Isopropyl Alcohol	Α	В	Α	Α	Α	Α	Α
Isopropyl Amine	Α	С	В	D	В	Α	Α
Isopropyl Chloride*	D	D	D	В	D	В	Α
Isopropyl Ether	D	С	D	С	D	Α	Α
Isopropyl Toluene	D	D	D	Α	-	Α	Α
Isopropylamine	Α	С	В	D	В	Α	Α
Icanranylhanzana	D	D	D	Α	D	Α	Α
Isopropylbenzene	D	В	D	Α	D	В	Α
Jet Fuels*		Α	D	Α	D	В	Α
Jet Fuels* Kerosene	D			_	_		
Jet Fuels* Kerosene Ketones	В	D	В	D	С	В	A
Jet Fuels* Kerosene				D D A	C D B	B B A	A A

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			_	Ζit	ē	≥	PF∕
	Butyl	Nitrile	EPDM	FKM/Vito	Silicone	UHMW	PTFE/PF
	Bu	Ē	급	兴	S	⇒	PT
Lard	В	Α	В	Α	В	Α	Α
Lauryl Alcohol	Α	Α	Α	В	-	Α	Α
Lead (II) Acetate	Α	С	Α	С	D	Α	Α
Lead (II) Nitrate	Α	Α	Α	Α	В	Α	Α
Lead (II) Sulfate	Α	Α	Α	Α	-	Α	Α
Lead Sulfamate	Α	В	Α	Α	В	Α	Α
Ligroin	D	Α	D	Α	D	Α	Α
Lime Water	Α	С	Α	Α	-	Α	-
Lindol	Α	D	Α	В	C	Α	Α
Linseed Oil	В	Α	С	Α	Α	Α	Α
Liquid Petroleum Gas*	D	Α	D	Α	С	В	Α
Liquid Soap	В	Α	В	Α	В	Α	Α
Lubricating Oils	D	Α	D	Α	D	Α	Α
Lye	Α	В	Α	В	В	Α	Α
Magnesium Acetate	Α	С	В	С	-	Α	Α
Magnesium Carbonate	Α	Α	Α	Α	-	Α	Α
Magnesium Chloride	Α	Α	Α	Α	Α	Α	Α
Magnesium Hydrate	Α	В	Α	В	-	Α	Α
Magnesium Hydroxide	Α	В	Α	Α	-	Α	Α
Magnesium Nitrate	Α	Α	Α	Α	-	Α	Α
Magnesium Sulfate	Α	Α	В	Α	Α	Α	Α
Malathion 50 in Aromatic Solvents	D	С	D	В	D	Α	Α
Maleic Acid	С	D	С	Α	D	Α	Α
Maleic Anhydride	С	D	С	С	-	Α	Α
Malic Acid	D	В	D	Α	В	Α	Α
Manganese (II) Sulfate	Α	В	Α	Α	В	Α	Α
Manganese (II) Sulfide	Α	Α	Α	Α	-	Α	Α
Manganese (II) Sulfite	Α	Α	Α	Α	-	Α	Α
Mercuric Chloride	Α	С	Α	С	В	Α	Α
Mercury	Α	Α	Α	Α	-	Α	Α
Methacrylic Acid	В	С	В	С	D	Α	-
Methane*	С	Α	D	Α	D	Α	Α
Methanol	Α	В	Α	C	Α	Α	Α
Methyl Acetate	В	D	В	D	D	Α	Α
Methyl Acrylate	В	D	В	D	D	Α	Α
Methyl Bromide	С	D	С	В	В	Α	Α
Methyl Butyl Ketone	В	D	В	D	D	Α	Α
Methyl Cellosolve	В	С	В	D	D	Α	Α
Methyl Chloride*	D	D	С	В	D	C	Α
Methyl Cyclohexane	D	D	D	В	-	Α	A
Methyl Ethyl Ketone (MEK)	В	D	В	D	D	Α	A
Methyl Formate	В	D	В	C	D	В	Α
Methyl Hexanol	Α	Α	A	Α	-	Α	A
Methyl Hexyl Ketone	В	С	В	D	В	Α	Α
Methyl Isobutyl Carbinol	A	В	A	В	-	Α	A
Methyl Isobutyl Ketone (MIBK)	С	D	С	D	D	Α	A
Methyl Isopropyl Ketone	В	D	В	D	D	Α	A
Methyl Methacrylate	D	D	D	D	-	Α	A
Methyl Propyl Ether	D B	D	D B	D	-	A	A
Methyl Propyl Ketone	В	D D		D B	D -	A	A
Methyl Salicylate	С		В				A
Methyl tert-Butyl Ether (MTBE)		C	D	С	D	D	A
Methylene Bromide	D D	C D	D D	C B	- D	C	A
Methylene Chloride					D	A	A
Mineral Col	D D	A	D	A	В	A	A
Mineral Spirits  Monochlorobenzene	D		D	A	D		A
		D	D		D	В	A
Monochlorodifluoromethane (Freon 22)	В	D C	В	D	С	Α	A
Monomethylether	В		В	D	D	A	A
Monovinyl Acetate	A	D	В	A	D	Α	A
Motor Oil	D A	A	D	A	D	A	A
Muriatic Acid		В	A	A	D	Α	A
Naphtha Naphthenic Acid	D D	В	D	A	D	A	A
	1)	( .	D	Α	D	Α	Δ

CHEMICAL COMPATIBILITY CHART

 $<sup>{}^{\</sup>star}\text{This chemical has special transportation requirements. Contact CRP Industries Inc. for further assistance.}$ 

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				FKM/Vitor		_	₹
	_	<u>ie</u>	Š	$\geq$	Silicone	UHMW	PTFE/PFA
	Butyl	Nitrile	EPDM	FK	Silic	H	PF
Picric Acid, Molten	Α	С	Α	В	D	В	Α
Picric Acid, Water Soln.	A	В	A	A	C	A	A
Pine Oil	D	В	D	Α	D	Α	Α
Pinene	D	В	D	Α	D	Α	Α
Piperidine	D	D	D	В	D	В	Α
Pitch	D	В	D	C	-	Α	Α
Plating Solution, Chrome Plating Solution, Others	B A	D B	B A	A B	D D	A	A -
Polyethylene Glycol	A	В	A	A	-	A	A
Polypropylene Glycol	Α	A	Α	Α	-	Α	Α
Polyvinyl Acetate Emulsion (PVA)	Α	С	Α	С	D	Α	Α
Potassium Bicarbonate	Α	В	Α	Α	В	Α	Α
Potassium Bisulfate	Α	Α	Α	Α	Α	Α	Α
Potassium Bisulfite	Α	В	Α	Α	В	Α	Α
Potassium Carbonate Potassium Chloride	A	A	A	B A	A	A	A
Potassium Chromate	A	D	В	В	C	A	A
Potassium Cyanide	A	A	A	A	A	A	A
Potassium Dichromate	Α	В	Α	В	Α	Α	Α
Potassium Hydrate	Α	В	В	С	-	Α	Α
Potassium Hydroxide	Α	С	В	С	С	Α	Α
Potassium Nitrate	Α	Α	Α	Α	Α	Α	Α
Potassium Permanganate	Α	C	Α	В	В	Α	Α
Potassium Silicate	Α	A	Α	A	A	A	A
Potassium Sulfate Potassium Sulfide	A	A C	A	A	A B	A	A
Potassium Sulfite	A	A	A	A	A	Α	A
Producer Gas	D	Α	D	Α	В	Α	В
Propanediol	Α	Α	Α	Α	В	Α	Α
Propanol	Α	Α	Α	Α	Α	Α	Α
Propyl Acetate	В	D	В	D	D	Α	Α
Propyl Chloride*	С	D	С	В	-	В	Α
Propylaldehyde	B D	C	В	D	С	A	A
Propylene Dichloride Propylene Glycol	A	C A	D A	A	D B	B A	A
Pydraul Hydraulic Fluids	В	D	В	C	D	В	A
Pyranol	D	C	D	A	D	-	Α
Pyridine	В	D	В	D	D	Α	Α
Pyroligneous Acid	В	C	В	С	-	Α	Α
Pyrrole	С	D	С	С	С	Α	Α
Rapeseed Oil	A	В	A	Α	D	В	Α
Red Oil Rosin Oil	C D	A B	C D	Α	D	A	A
Rotenone and Water	A	A	A	A	-	A	A
Rum	A	В	A	В	Α	Α	A
Sal Ammoniac	Α	A	Α	Α	В	Α	-
Salicylic Acid	Α	В	Α	Α	-	Α	Α
Sea Water	Α	Α	Α	Α	Α	Α	Α
Sewage	С	Α	С	Α	-	Α	Α
Silicate Esters	D	В	D	Α	D	Α	-
Silicate of Soda Silicone Greases	A	A	A	A	A B	A	A
Silicone Oils	A	A	A	A	D	A	A
Silver Nitrate	A	В	A	Α	A	A	A
Skelly Solvent	D	A	D	Α	D	Α	Α
Skydrol Hydraulic Fluids	С	D	Α	D	С	Α	Α
Soap Solutions	В	Α	В	Α	В	Α	Α
Soda Ash	Α	Α	Α	Α	Α	Α	Α
Soda Lime	Α	В	Α	C	-	Α	Α
Soda, Caustic (Sodium Hydroxide)	Α	В	A	С	В	Α	A
Sodium Acetate Sodium Aluminate	A	C B	B A	D A	D B	A	A
Sodium Bicarbonate	A	A	A	A	A	A	A
Sodium Piculfato	^	^	^	^	^	^	^

	Butyl	Nitrile	EPDM	FKM/Viton	Silicone	WWHO	PTFE/PFA
Sodium Bisulfite	Α	Α	Α	Α	Α	Α	Α
Sodium Borate	Α	В	Α	Α	В	Α	Α
Sodium Carbonate	Α	Α	Α	Α	Α	Α	Α
Sodium Chloride	Α	Α	Α	Α	Α	Α	A
Sodium Chromate Sodium Cyanide	A	D A	A	C A	B A	B A	A
Sodium Dichromate	A	Ĉ	A	C	В	A	A
Sodium Fluoride	A	В	Α	A	В	Α	A
Sodium Hydroxide	A	В	Α	C	В	Α	Α
Sodium Hypochlorite	В	С	В	В	В	В	Α
Sodium Metaphosphate	Α	Α	Α	Α	С	Α	Α
Sodium Nitrate	Α	В	Α	Α	D	Α	Α
Sodium Nitrite	Α	В	Α	Α	-	Α	Α
Sodium Perborate	Α	В	Α	Α	В	В	Α
Sodium Peroxide	Α	С	Α	В	D	В	Α
Sodium Phosphate	Α	В	Α	Α	C	Α	A
Sodium Silicate	A	A	Α	Α	Α	Α	A
Sodium Sulfate Sodium Sulfide	A B	A B	A	A	A	A	A
Sodium Sulfite	A	А	A	A	A	A	A
Sodium Thiosulfate	A	B	A	A	A	A	A
Soybean Oil	В	A	C	Α	В	Α	Α
Stannic Chloride	В	A	В	Α	В	Α	Α
Stannic Sulfide	Α	Α	Α	Α	-	Α	Α
Stannous Chloride	Α	Α	Α	Α	В	Α	Α
Stannous Sulfide	Α	Α	Α	Α	В	Α	Α
Stearic Acid	В	В	В	Α	В	Α	Α
Stoddards Solvent	D	Α	D	Α	D	Α	Α
Styrene	D	D	D	В	С	В	Α
Sugar Sols. (Sucrose) Non F.D.A.	Α	Α	Α	Α	Α	Α	A
Sulfamic Acid	A	C	A	В	B D	A	A
Sulfite Liquors Sulfonic Acid	A B	C	B B	B C	В	В	A
Sulfur (II) Chloride	D	C	D	A	С	В	A
Sulfur (Molten)	C	D	C	Α	С	A	Α
Sulfur Dioxide	В	C	A	Α	В	Α	Α
Sulfur Hexafluoride	Α	В	Α	В	В	Α	Α
Sulfur Trioxide	В	D	В	Α	В	D	Α
Sulfuric Acid, 25%	Α	В	Α	Α	В	Α	Α
Sulfuric Acid, 25-50%	В	D	С	В	D	В	Α
Sulfuric Acid, Fuming	С	D	D	D	D	С	Α
Sulfurous Acid	В	В	В	C	D	Α	Α
Tall Oil	D	Α	D	Α	-	Α	Α
Tallow	D	A	D	Α	В	A	A
Tannic Acid Tar*	A D	B B	A D	A B	B C	A D	A
Tartaric Acid	В	A	В	В	A	A	A
Terpineol	C	В	С	A	-	В	A
Tertiary Butyl Alcohol	В	В	В	Α	В	A	Α
Tetrachlorobenzene	D	D	D	В	D	В	Α
Tetrachloroethane	D	D	D	Α	D	В	Α
Tetrachloroethylene	D	D	D	Α	D	Α	Α
Tetrachloromethane	D	В	D	Α	D	В	Α
Tetrachloronaphthalene	D	D	D	В	-	В	Α
Tetraethyl Lead	D	В	D	Α	-	Α	Α
Tetraethylene Glycol	Α	Α	Α	Α	-	Α	Α
Tetrahydrofuran	D	D	D	D	D	В	Α
Thionyl Chloride	C	D	C	В	- D	В	A
Tin Chloride	A	A	A	A	В	Α	A
Tin Tetrachloride Titanium Tetrachloride	В	A B	B C	A	В	A	Α
Toluene	D	D R	D	В	D D	В	A
Toluene (Toluol)	D	D	D	В	D	В	A
TOILIENE CTOILLOD							

	Butyl	Nitrile	EPDM	FKM/V	Silicone	WHW	PTFE/P
Transformer Oils (Chlorinated Phenyl Base Askerels)	D	В	D	Α	В	В	Α
Transformer Oils (Petroleum Base)	D	Α	D	Α	В	Α	Α
Transmission Fluids - A	D	В	D	Α	D	В	Α
Transmission Fluids - B	D	В	D	Α	D	В	Α
Tributyl Phosphate	В	D	В	D	D	Α	Α
Tricetin	Α	В	Α	D	D	Α	-
Trichlorobenzene	D	С	D	В	-	В	Α
Trichloroethane	D	D	D	Α	D	Α	Α
Trichloroethylene	D	С	D	Α	D	В	Α
Trichloropropane	D	D	D	Α	D	Α	Α
Tricresyl Phosphate (TCP)	Α	D	Α	Α	C	Α	Α
Triethylene Glycol	Α	В	Α	В	В	Α	Α
Trinitrotoluene (TNT)	D	D	D	В	-	D	_
Triphenyl Phosphate	A	D	В	C	С	A	Α
Trisodium Phosphate	Α	A	A		Α	Α	Α
Tung Oil	C	A	D	В	D	A	Α
Turbine Oil	D	В	D	A	D	A	Α
Turpentine	D	В	D	A	D	A	A
Ucon Hydrolube Oils	A	A	A	A	A	A	Α
Undecanol	A	A	A	В	-	В	A
Unsymmetrical Dimethyl-Hydrazine (UDMH)	A	В	A	D	D	С	-
Varnish	D	В	D	Α	D	Α	Α
Vegetable oils	В	A	C	Α	A	Α	
Versilube	A	Α	A	Α	С	Α	Α
Vinegar	Α	В	Α	Α	-	Α	Α
Vinyl Acetate	В	D	В	С	-	Α	Α
Vinyl Benzene	D	D	D	В	С	В	Α
Vinyl Chloride (Monomer)*	D	D	D	В	-	В	A
Vinyl Ether*	D	D	C	D	_	A	Ĺ
Vinyl Toluene	D	D	D	A	_	Α	A
Vinyl Trichloride	D	D	D	Α	D	Α	Α
VM&P Naphtha	D	В	D	A	D	A	A
Water, Fresh	A	A	A		A	A	A
Water, Salt	A	A	A	A	A	A	A
	A	В	A	В	A	A	A
Whiskey, Wines White Liquor	В	В	В	А	C	A	A
White Oil	D	А	D	A	A	A	A
Wood Alcohol	A		A	C	A	A	_
	D	B C	D	A	D	C	Α
Xylene Xylidina						_	_
Xylidine Zaplitas	D	C	C	D	D	В	Α
Zeolites	Α	Α	Α	Α	Α	Α	Α
Zinc (II) Chloride	Α	В	Α		Α	Α	Α
Zinc Acetate	Α	C	Α	D	D	Α	A
Zinc Carbonate	Α	Α	Α	Α	Α	Α	Α
Zinc Chromate	Α		Α		В	В	Α
Zinc Sulfate	Α	Α	Α	Α	Α	Α	Α

AAAAAAA

Sodium Bisulfate

CHEMICAL COMPATIBILITY CHART

**D** = Not Recommended

 $<sup>{}^{\</sup>star}\text{This chemical has special transportation requirements. Contact CRP Industries Inc. for further assistance.}$ 

# Guidelines for Cleaning and Sanitizing Food and Beverage Hose

# THE FOLLOWING SUGGESTIONS ARE GUIDELINES ONLY. THESE GUIDELINES DO NOT SUPERSEDE EXISTING GOVERNMENT OR INDUSTRY REGULATIONS.

Cleaning and sanitizing is a critical part of every food and beverage process. Chemical and physical cleaners are selected for their ability to remove residue and eliminate biological contamination. In addition, users are required select temperature, concentration, duration and frequency of cleaning. This can be a complicated task.

All of these factors affect the hose life. The cleaning procedure is often the key factor in determining how long an assembly will last. This guide will help end users achieve proper sanitation while maximizing hose life. Several industries have required cleaning and sanitation procedures. CRP Industrial can assist users in selecting a product to best match their unique requirements.

	Medium	Hose Tube	Concentration	Temperature
Rinsing	Hot Water	NBR/Silicone EPDM/BIIR/UHMW PTFE/PFA	-	Max 90°C
		NBR	-	Max 110°C Max 10 min
Physical Cleaner	Steam	EPDM/BIIR/UHMW PTFE/PFA	-	Max 130°C Max 30 min
		Silicone	-	Max 135°C Max 18 min
		NBR/Silicone	0.1%	Max 65°C
	Acid	NBR/Silicone	2%	Max 25°C
	(i.e. Nitric acid)	EPDM/BIIR/UHMW	0.1%	Max 85°C
		PTFE/PFA	3%	Max 25°C
Chemical		NBR/Silicone	2%	Max 65°C
Cleaner	Alkaline solution	NBR/ Silicone	4%	Max 25°C
	(i.e. Caustic soda)	EPDM/BIIR/UHMW	2%	Max 85°C
		PTFE/PFA	5%	Max 25°C
	Disinfectant	NBR/Silicone		Max 25°C
	(i.e. Peracetic acid)	EPDM/BIIR/UHMW PTFE/PFA	1%	Max 40°C

### **CLEANING AND SANITIZING STEPS**

### 1. WASHING

The first step in the process is thoroughly washing the hose. Rinsing with hot potable water does not eliminate the need to clean the hose with the appropriate detergent followed by the disinfection of the hose. The initial rinse with hot potable water should be completed as soon as possible after the transfer is completed.

#### 2. CLEANING

The cleaning and disinfecting media depend upon the material/products being conveyed. The recommendation of the manufacturer of the detergent and disinfectant should be strictly followed especially regarding concentration levels.

The attached chart can offer some guidance based on the hose product being used. Cleaning and sanitation is always the top priority. Increasing the temperature, concentration, and duration of cleaning, does not always provide a better result.

### 3. DISINFECTING

The cleaning process may kill off many harmful bacteria and contaminants. A round of disinfecting is sometimes needed to eliminate the rest. Cleaners like steam double as good physical disinfectants. Peracetic acid (PAA) is a common chemical disinfectant in breweries. It typically follows an acid and alkaline wash.

Temperature, concentration and duration are important factors to consider in the disinfecting step. As soon as the disinfecting is complete, the hose should be carefully and sufficiently rinsed with potable water to eliminate any chemical residue.

### 4. INSPECTION

The hose assembly should be completely inspected before returning it to service. The outside of the hose should be checked for signs of tearing and over-flexing. The inside of the hose should be inspected as well. The cleaning procedure, can over-time wear down the interior of the hose leaving cracks and grooves that bacteria can reside in. It is critical to check both the interior and exterior. This will help the user refine their process and establish a suitable replacement schedule.

CRP Industrial hoses are suitable for steam sterilization temperatures up to  $266^{\circ}F$  ( $130^{\circ}C$ ) for 30 minutes. The silicone hoses can be sterilized with steam up to  $275^{\circ}F$  ( $135^{\circ}C$ ) for 18 minutes.

39

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# **STAMPED:**

# The Key to Hose Selection

To identify the correct hose for use in a particular application, it is recommended to use the industry-wide standard **STAMPED**. This acronym stands for **S**ize, **T**emperature, **A**pplication, **M**aterial, **P**ressure, **E**nds, and **D**elivery.

### **S** ize

- Hose inner diameter and Hose length are required
- Is the hose outer diameter critical?
- Does the hose need to be an exact length (OAL)?

### T emperature

- What temperature is the material being transferred?
- What is the temperature and duration of cleaning?
- What temperature is the environment the hose is in?

### **A** pplication

- How is this hose going to be used?
- Is the hose exposed to direct sunlight, chemicals, or abrasion?
- How much is the hose going to be bent?
- Is the hose at risk of being crushed?
- Is this being used in a flammable or explosive environment?
- Is the hose being used for a food grade product? Does it need to meet pharmaceutical standards?

### **M** aterial

- What material is being conveyed?
- What concentration is being used?
- What phase is the product in?
- Is the material sharp and abrasive?

### P ressure

- What is the maximum pressure required?
- Is the hose used for suction and delivery?

### E nds

- What style of hose ends are needed?
- What material do you need the ends to be made from?

### **D** elivery

- When is the hose needed?
- Are there any specific delivery or packaging requirements?

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To view the CRP Industrial Hose Safety Guide, visit <a href="http://www.crpindustrial.com/pdf/CRPIndustrial">http://www.crpindustrial.com/pdf/CRPIndustrial</a> HoseSafetyGuide.pdf.

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