

---

**TUBING AND SINGLE USE SYSTEMS  
FOR BIOTECH INDUSTRIES**

---



**venair**



Management System  
ISO/TS  
16949:2009  
[www.tuv.com](http://www.tuv.com)  
ID: 0910078058



Management System  
ISO 9001:2008  
ISO 14001:2004  
[www.tuv.com](http://www.tuv.com)  
ID: 9105057190

# VENAIR



**VENAIR IS AN INTERNATIONAL GROUP LEADER IN ENGINEERING AND MANUFACTURING SILICONE HOSES FOR THE MOST DEMANDING INDUSTRIES SUCH AS PHARMACEUTICAL, BIOTECHNOLOGICAL, FOOD, CHEMICAL AND COSMETIC.**

**Throughout its 30 years of history, Venair has created an extensive international network that has led to three manufacturing centers in Spain, Vietnam and Romania and 28 delegations distributed in Europe, America and Asia. Thanks to Venair's internationalization strategy, accompanied by a commitment to deliver high-quality products and a constant focus on the customer's needs, today we market our wide range of products worldwide.**

Whatever the nature of the fluid you convey, its temperature, concentration, working pressure or even the type of cleaning cycles used in your process, Venair emerges as the specialist in the transfer of liquid, pasty products or even solids offering a wide range of flexible solutions and customized pieces in silicone and other materials.

We hold the management certificates ISO 9001, ISO 14001, EMAS and also the product 3A 62-02 & 18-03 standards, apart from the full product validations required by the top pharmaceutical and biotech industries.

## **INNOVATION AS A HALLMARK**

Innovation is part of Venair Group's DNA, whose leading position is a direct result of great efforts in R&D projects. Over the past years, the company has implemented a new strategic innovation policy aimed at boosting its line of value-added products for the most demanding industries and improving the company's competitiveness.

Venair TechLab, which integrates all R&D projects in the Venair Group, is the face of the commitment to innovation and development.



Visit **Venair**  
corporate website.  
[www.venair.com](http://www.venair.com)



Shop **Vena®Bio**  
products online.  
[www.vena.bio](http://www.vena.bio)

# VENA<sup>®</sup> Bio

## BIOTECH TUBING RANGE

### INTRODUCING VENA<sup>®</sup>BIO, VENAIR'S SINGLE USE SYSTEM PRODUCTS RANGE:

- › SILICONE TUBING
- › THERMOPLASTIC TUBING
- › FLUOROPOLYMER TUBING
- › PVC TUBING
- › VITON TUBING
- › PERISTALTIC PUMP
- › 0,5L TO 1.000L BAGS
- › FLUID TRANSFER ASSEMBLIES
- › PRE DESIGNED KITS
- › OPEN ARCHITECTURE KITS





## VACUUM BAGGED

- › Visual bag integrity proof
- › Hydrogen peroxide vapour (HPV) disinfection cycle compatible

## CRUSH PROOF BOX

- › Individually packed rolls
- › Printed CoA inside
- › Labels on both bags and box










**TUBING**

# TUBING GUIDE

VENA®BIO tubing range comprises all key materials in a broad selection of sizes. Decisive factors in selecting the appropriate material are:

- Application
- Transparency
- Chemical compatibility/material
- Temperature range
- Pressure resistance
- Sterilizability
- Flexibility
- Connections
- Pumping characteristics
- Cost
- Validations



PRODUCT DESCRIPTION	APPLICATION	MATERIAL	CLARITY	T°	PRESSURE	FLEXIBLE	PUMP	ROLL LENGTH
 VENA®BIO PURE	General liquid handling. High biocompatibility.	Platinum cured silicone. Postcured to totally eliminate volatiles.	Transparent	-60/+220 °C (-76/+428 °F)	No	Yes	Yes	15,24m 30,48m (50ft) (100ft)
 VENA®BIO BRAIDED	General liquid handling. High biocompatibility.	Platinum cured silicone. Postcured. Reinforced with PET braiding.	Transparent	-60°C/+180°C (-76°F/+356°F)	Yes	Yes	No	10m 20m (32,81) (65,62ft)
 VENA®BIO PUMP	Long pump life required.	Thermoplastic vulcanizate	Opaque	-45°C/+135°C (-49°F/+275°F)	No	Yes	Yes	7,62m 15,24m (25ft) (50ft)
 VENA®BIO WELD	Welding / Sealing capabilities	Thermoplastic elastomer	Translucid	-45°C/+135°C (-49°F/+275°F)	No	Yes	Yes	7,62m 15,24m (25ft) (50ft)
 VENA®BIO FEP	Universal chemical compatibility.	Fluorinated ethylene propylene	Transparent	-200°C/+205°C (-328°F/+401°F)	Yes	Semi rigid	No	7,62m (25ft)
 VENA®BIO PVC	Medical such as IV feeding, dialysis, bypasses, catheters, etc	Polyvinyl chloride	Transparent	-20°C/+60°C (-4°F/+140°F)	Limited	Yes	Yes	-*
 VENA®BIO FKM	High oils, fats and hydrocarbons compatibility	Fluorocarbon elastomer	Opaque	-26°C/+230°C (-15°F/+446°F)	No	Yes	Yes	7,62m (25ft)

# TUBING GUIDE

ID	OD	WALL	ID	OD	WALL	PUMP SIZE*	PURE	BRAIDED**	PUMP	WELD	FEP	PVC***	FKM
METRIC (MM)			IMPERIAL (INCHES)										
0,8	1,6	0,4	1/32	1/16	1/64						x	-	
0,8	2,4	0,8	1/32	3/32	1/32		x					-	
0,8	4	1,6	1/32	5/32	1/16	13	x					-	
1,6	3,2	0,8	1/16	1/8	1/32		x				x	-	x
1,6	4,8	1,6	1/16	3/16	1/16	14	x		x	x		-	
2,4	4	0,8	3/32	5/32	1/32		x					-	
2,4	5,6	1,6	3/32	7/32	1/16		x					-	
3,2	4,8	0,8	1/8	3/16	1/32		x					-	x
3,2	5,2	1	-	-	-						x	-	
3,2	6,4	1,6	1/8	1/4	1/16	16	x		x	x		-	
3,2	7,9	2,4	1/8	5/16	3/32	120	x					-	
3,2	9,5	3,2	1/8	3/8	1/8		x					-	
4	7,1	1,6	5/32	9/32	1/16		x					-	
4	5,6	0,8	5/32	7/32	1/32		x					-	
4	8,7	2,4	5/32	11/32	3/32		x					-	
4	6	1	-	-	-						x	-	
4,8	6,4	0,8	3/16	1/4	1/32		x					-	x
4,8	6,8	1	-	-	-						x	-	
4,8	7,9	1,6	3/16	5/16	1/16	25	x		x	x		-	
4,8	9,5	2,4	3/16	3/8	3/32	15	x					-	
4,8	11,1	3,2	3/16	7/16	1/8	123	x					-	
6,4	7,9	0,8	1/4	5/16	1/32		x					-	x
6,4	8,4	1	-	-	-							-	
6,4	9,5	1,6	1/4	3/8	1/16	17	x		x	x	x	-	
6,4	11,1	2,4	1/4	7/16	3/32	24	x		x	x		-	
6,4	12,7	3,2	1/4	1/2	1/8	26	x	x*				-	
7,9	11,1	1,6	5/16	7/16	1/16	18	x		x	x		-	x
7,9	12,7	2,4	5/16	1/2	3/32	121	x		x			-	
7,9	14,3	3,2	5/16	9/16	1/8		x	x*				-	
8	10	1	-	-	-						x	-	
9,5	11,5	1	-	-	-						x	-	
9,5	12,7	1,6	3/8	1/2	1/16		x					-	x
9,5	14,3	2,4	3/8	9/16	3/32	122	x		x			-	
9,5	15,9	3,2	3/8	5/8	1/8	73	x	x*	x	x		-	
11,1	14,3	1,6	7/16	9/16	1/16		x					-	
12,7	14,7	1	-	-	-						x	-	
12,7	15,9	1,6	1/2	5/8	1/16		x					-	
12,7	17,5	2,4	1/2	11/16	3/32	19	x					-	
12,7	19,1	3,2	1/2	3/4	1/8	82	x	x*	x	x		-	x
15,9	22,2	3,2	5/8	7/8	1/8		x	x*				-	
19,1	25,4	3,2	3/4	1	1/8	90	x					-	
19,1	28,6	4,8	3/4	11/8	3/16		x	x*				-	
25,4	31,8	3,2	1	11/4	1/8		x					-	
25,4	34,9	4,8	1	13/8	3/16	92	x					-	
25,4	38,1	6,4	1	11/2	1/4		x	x*				-	
31,8	41,4	4,8	11/4	15/8	3/16			x*				-	

\*Braided tubing has non-standard OD, not present in this table. Please check datasheet

\*\*Pump size is a measurement designed for Masterflex pump units. It is the user responsibility to check tubing size suitability

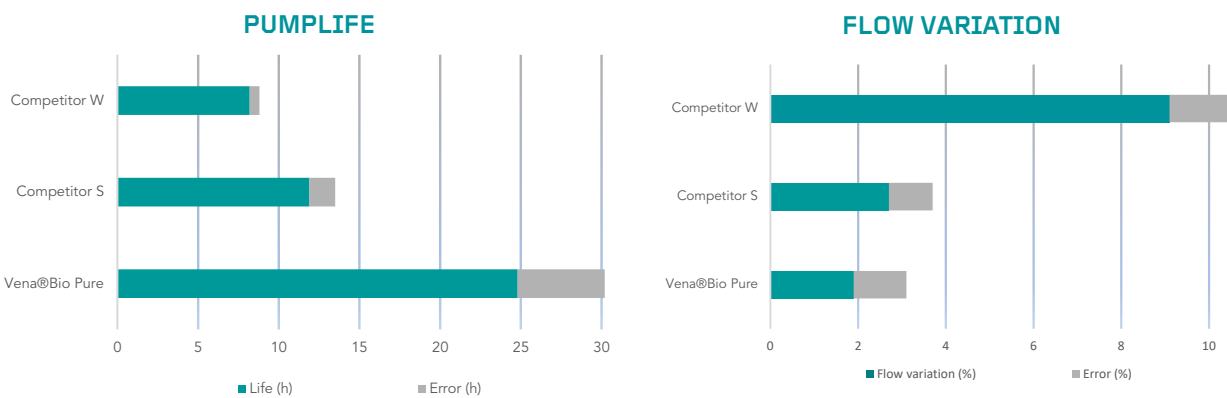
\*\*\* PVC is made under demand



# TUBING GUIDE

## VENA®BIO PURE PERISTALTIC PUMP PERFORMANCE

These tests were carried out at 600 rpm with a Masterflex L/S Variable speed Drive (ref. EW-07528-10) equipped with a Masterflex 8-channel 3 roller cartridge pump head (ref. HV07519-05) and a Masterflex cartridge (ref. HV-07519-70). The results shown here correspond to the test performed with ID4,8mm OD9,5mm (pumpsized L15).



**PUMPLIFE:** In the following graph it is shown how VENA®BIO PURE tubing lasts up to 300% longer than its main competitors.

**FLOW VARIATION:** The variation of flow rate has been measured comparing the flow at 7 hours of work (measurement window limited by the less performing tubing's pumplife) against the initial flow rate. VENA®BIO PURE tubing delivers outstanding precision in filling applications, with up to 500% more accuracy than the worst performing competitor.

## VALIDATION CHART

COMPLIANCE AND BIOCOMPATIBILITY BEFORE GAMMA DOSE								
PROPERTY	TEST PROTOCOL	PURE	BRAIDED	PUMP	WELD	FEP	PVC	FKM
Animal derived component free	ADCF	x	x	x	x	x		x
Phtalate / Bisphenol free	P / BPA	x	x	x	x	x	x	x
BSE / TSE free	BSE / TSE	x	x	x	x	x		x
Plastics in contact with food	EU 10/2011	x	x					
Materials in contact with food	EU 1935/2004	x	x					
BfR recommendation XV	BfR XV	x	x					
Multiple use rubber and materials	3A 18-03	x	x					
Silicone Elastomer for Closures and Tubing	EP 3.1.9.	x	x					
Rubber articles intended for repeated use	FDA 21 CFR 177.2600	x	x	x	x		x	x
Perfluorocarbon resins	FDA 21 CFR 177.1550					x		
Biological reactivity tests, in vitro, Class VI	USP 87	x	x	x	x			
Biological reactivity tests, in vivo, Class VI	USP 88	x	x	x	x	x	x	x
Hemolysis	ISO 10993-4	x	x	x	x			
Cytotoxicity	ISO 10993-5	x	x	x	x			
Local effects after implantation	ISO 10993-6	x	x					
Irritation and delayed type hypersensitivity	ISO 10993-10	x	x					
Extractables and Leachables study	-	x	x					

# VENA<sup>®</sup> BIO PURE



## > MATERIAL:

Platinum cured silicone. Postcured to completely eliminate volatiles.

## > APPLICATIONS:

This product is suitable for general fluid handling thanks to its high biocompatibility at an affordable cost. It is used upstream from the media prep to the harvest stage and downstream all the way from the first filtration stages to the final filling.

## > PACKAGING AND DELIVERY:

- Manufactured in ISO14644-1 Class 7 clean room
- Double bagged under vacuum (see page 5)
- Available in 15,24m (50ft) and 30,48m (100ft) rolls
- Other hardness, diameters and roll lengths available on demand



## TEMPERATURE SCALE:

-60°C / +220°C  
(-76°F / +428°F)



**HARDNESS:** 50ShA



**VALIDATIONS  
ON PAGE:** 9



**TUBING GUIDE  
ON PAGE:** 7-9



**CHEMICAL  
COMPATIBILITY CHART  
ON PAGE:** 29



## FEATURES:

- Traceable with reference, lot number and ID/OD making use of laser etched product and labelled box and all bag layers
- High surface smoothness avoids protein binding and biofilm formation
- Free of animal derived components, phthalates and bisphenols
- Full validation guide available on demand
- Optional gamma/eBeam sterilization at 25kGy prior delivery
- Unreinforced tubing not recommended for pressurized applications. Please consult your representative for further guidance

# VENA<sup>®</sup> BIO BRAIDED



## > MATERIAL:

Platinum cured silicone. Postcured to completely eliminate volatiles. Reinforced with polyester braiding.

## > APPLICATIONS:

This product is suitable for general fluid handling thanks to its high biocompatibility at an affordable cost. It is used upstream from the media prep to the harvest stage and downstream all the way from the first filtration stages to the final filling. The braiding provides higher pressure rating that meets downstream pre-filter requirements.

## > PACKAGING AND DELIVERY:

- Manufactured in ISO14644-1 Class 7 clean room
- Double bagged under vacuum (see page 5)
- Available in 15,24m (50ft) and 30,48m (100ft) rolls
- Other diameters and roll lengths available on demand



## TEMPERATURE SCALE:

-60°C / +180°C  
(-76°F / +356°F)



**HARDNESS:** 60ShA



**VALIDATIONS  
ON PAGE:** 9



**TUBING GUIDE  
ON PAGE:** 7-9



**CHEMICAL  
COMPATIBILITY CHART  
ON PAGE:** 29

## FEATURES:

- Traceable with reference, lot number and ID/OD making use of laser etched product and labelled box and all bag layers
- High surface smoothness avoids protein binding and biofilm formation
- Free of animal derived components, phthalates and bisphenols
- Full validation guide available on demand
- Optional gamma/eBeam sterilization at 25kGy prior delivery

# VENA<sup>®</sup> BIO PUMP



## > MATERIAL:

Thermoplastic vulcanizate.

## > APPLICATIONS:

This product is specially designed to work in long lasting pump cycles, where silicone would need to be replaced mid-batch. Self-sterilizing lines like acid and base feed into bioreactors for PH balancing are a great example. The average pump life when proper maintenance is followed is in the thousand-hour range.

It is important to mention that a thermoplastic is heat sensitive, so dry heat, SIP and autoclave sterilization cycles will shorten its life considerably, therefore it should only be used when the application is single use.

## > PACKAGING AND DELIVERY:

- Manufactured in ISO14644-1 Class 7 clean room
- Double bagged under vacuum (see page 5)
- Available in 7,62m (25ft) and 15,24m (50ft) rolls
- Other diameters and roll lengths available on demand



## TEMPERATURE SCALE:

-45°C / +135°C  
(-49°F / +275°F)



**HARDNESS:** 65ShA



**VALIDATIONS  
ON PAGE:** 9



**TUBING GUIDE  
ON PAGE:** 7-9



**CHEMICAL  
COMPATIBILITY CHART  
ON PAGE:** 29

## FEATURES:

- Traceable with reference, lot number and ID/OD with labelled box and all bag layers
- Free of animal derived components, phthalates and bisphenols
- Optional gamma/eBeam sterilization at 25kGy prior delivery
- Unreinforced tubing not recommended for pressurized applications. Please consult your representative for further guidance

# VENA<sup>®</sup> BIO WELD



## > MATERIAL:

Thermoplastic elastomer.

## > APPLICATIONS:

This product satisfies the need for a heat sealable and weldable biopharmaceutical tubing. It provides disconnection and re-connection capabilities through a cuttable seal and aseptic welding.

It is important to mention that a thermoplastic is heat sensitive, so dry heat, SIP and autoclave sterilization cycles will shorten its life considerably, therefore it should only be used when the application is single use.

## > PACKAGING AND DELIVERY:

- Manufactured in ISO14644-1 Class 7 clean room
- Double bagged under vacuum (see page 5)
- Available in 7,62m (25ft) and 15,24m (50ft) rolls
- Other diameters and roll lengths available on demand



## TEMPERATURE SCALE:

-45°C / +135°C  
(-49°F / +275°F)



**HARDNESS:** 60ShA



**VALIDATIONS  
ON PAGE:** 9



**TUBING GUIDE  
ON PAGE:** 7-9



**CHEMICAL  
COMPATIBILITY CHART  
ON PAGE:** 29

## FEATURES:

- Traceable with reference, lot number and ID/OD with labelled box and all bag layers
- Free of animal derived components, phthalates and bisphenols
- Optional gamma/eBeam sterilization at 25kGy prior delivery
- Unreinforced tubing not recommended for pressurized applications. Please consult your representative for further guidance

# VENA<sup>®</sup> BIO FEP



## > MATERIAL:

Fluorinated ethylene propylene.

## > APPLICATIONS:

This is a fluoropolymer tubing especially recommended for the most aggressive chemicals, pressurized gas transfer and abrasive particles in the pharmaceutical and biopharm processes.

## > PACKAGING AND DELIVERY:

- Available in 7,62m (25ft) rolls
- Other diameters and roll lengths available on demand



## TEMPERATURE SCALE:

-200°C / +205°C  
(-328°F / +421°F)



**HARDNESS:** 56ShD



**VALIDATIONS  
ON PAGE:** 9



**TUBING GUIDE  
ON PAGE:** 7-9



**CHEMICAL  
COMPATIBILITY CHART  
ON PAGE:** 29



## FEATURES:

- Traceable with reference, lot number and ID/OD with labelled box and all bag layers and labelled box and all bag layers
- Free of animal derived components, phthalates and bisphenols
- Resistant to abrasive products
- Very low permeability for pressurized gas conveying
- Highly transparent and semi-flexible
- Universal chemical compatibility
- Optional gamma/eBeam sterilization at 25kGy prior delivery

# VENA<sup>®</sup> BIO FKM



## > MATERIAL:

Fluorocarbon elastomer.

## > APPLICATIONS:

This black tubing provides an exceptional balance of physical properties at a broad range of temperature. It excels in petroleum based substance transfer, acid resistance and its very low gas permeability.

## > PACKAGING AND DELIVERY:

- Available in 7,62m (25ft) rolls
- Other diameters and roll lengths available on demand



## TEMPERATURE SCALE:

-26°C / +230°C  
(-15°F / +446°F)



**HARDNESS:** 60ShD



**VALIDATIONS  
ON PAGE:** 9



**TUBING GUIDE  
ON PAGE:** 7-9



**CHEMICAL  
COMPATIBILITY CHART  
ON PAGE:** 29



## FEATURES:

- Traceable with reference, lot number and ID/OD with labelled box and all bag layers and labelled box and all bag layers
- Free of animal derived components, phthalates and bisphenols
- High temperature resistance while retaining its good mechanical properties
- Excellent resistance to oils, fuels, lubricants, and most mineral acids unaffected by elevated temperatures
- Extremely low gas permeability for an elastomer
- Resistance to aliphatic, aromatic hydrocarbons that dissolve other rubbers

# ASK YOUR REPRESENTATIVE FOR AVAILABLE DISCOUNTS!

The image shows a screenshot of the VENA Bio website. At the top left is the logo "VENA<sup>®</sup> Bio BIOTECH TUBING RANGE". To the right are navigation links: "Shop", "About", "Contact", and "FAQ". The main banner features a photograph of a cleanroom with workers in white protective suits. Overlaid on the photo is the text "High purity precision tubing b" and "MANUFACTURED IN EU SINCE 198". A white "SHOP NOW" button is positioned in the bottom right of the banner. Below the banner are two product images: a roll of clear, platinum-cured silicone tubing on the left, and a roll of yellowish, weldable TPE tubing on the right. Each product image is accompanied by its name and description.

**VENA<sup>®</sup> Bio**  
BIOTECH TUBING RANGE

Shop About Contact ▼ FAQ ▼

High purity precision tubing b  
MANUFACTURED IN EU SINCE 198

SHOP NOW

**VENA<sup>®</sup> BIO PURE ISO7 50ShA**  
Platinum-cured silicone tubing

**VENA<sup>®</sup> BIO WELD**  
Weldable TPE tubing





**SHOP  
ONLINE**  
[www.vena.bio](http://www.vena.bio)



**VENA® BIO PUMP**  
Pumpgrade TPV tubing



**NEW PRODUCTS**

# VENA<sup>®</sup> BIO BAG

## > APPLICATIONS:

Vena<sup>®</sup> Bio Bag is a single use bioprocessing container suitable for media and buffer formulation, storage, mixing and transportation. They help increase plant productivity by avoiding cleaning validation. The ethylene vinyl alcohol 0,01mm layer provides high oxygen and moisture impermeability equivalent to 1m thick of PE.

## > PACKAGING AND DELIVERY:

- Manufactured in ISO14644-1 Class 7 clean room
- Double bagged under vacuum (see page 5)
- Available in preassembled SUS (see page 21)
- Available in custom shapes and sizes

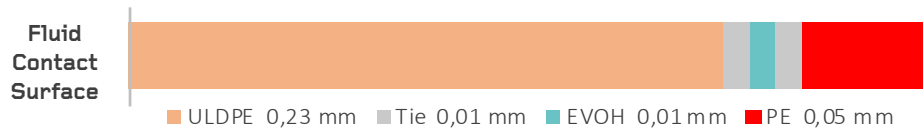
## FEATURES:

- Free of animal derived components, phthalates and bisphenols
- Full validation guide available on demand
- Optional gamma/eBeam sterilization at 25kGy prior delivery



# VENA<sup>®</sup> BIO BAG

## FILM MATERIAL



## FILM SPECIFICATIONS

PROPERTY	TEST PROTOCOL	VALUE
<b>Mechanical properties after 25kGy gamma dose</b>		
Film thickness	-	0,325 mm
Haze	ASTM D-1003	7%
Clarity	ASTM D-1003	97%
Transmittance	ASTM D-1003	93%
Elongation at break	ASTM D-882	13 Mpa
Elastic modulus	ASTM D-882	300%
Break at cold temperature	ISO 8570	below - 45°C
Density	ASTM D-792	0,9 g/cm <sup>3</sup>
Water vapour transmission rate at 23°C 100% RH	ASTM F-1249	0,32 g/(m <sup>2</sup> ·day)
Oxygen permeability at 23°C 0% RH	ASTM D-3985	0,05 cm <sup>3</sup> /(m <sup>2</sup> ·day·bar)
Carbon dioxide permeability at 23°C 0% RH	ASTM F-2476	0,02 cm <sup>3</sup> /(m <sup>2</sup> ·day·bar)
<b>Compliance and biocompatibility after 25kGy gamma dose</b>		
Animal derived component free	ADCF	Pass
Bacterial endotoxins	USP <85>	<0,005 EU/mL
Biological reactivity tests, in vitro, Class VI	USP <87>	Pass
Buffer capacity	USP <661>	0,10 mL
Nonvolatile residue	USP <661>	0,0 mg
Heavy metals	USP <661>	Pass
Residue on ignition	USP <661>	Pass
Hemolysis	ISO 10993-4	0,0%
Cytotoxicity	ISO 10993-5	Pass
Local effects after implantation	ISO 10993-6	Pass
Irritation and delayed type hypersensitivity	ISO 10993-10	Pass
Sensitization	ISO 10993-10	Pass
Acute systemic toxicity	ISO 10993-11	Pass
Appearance	EP <3.1.5>	Pass
Acidity	EP <3.1.5>	<1,5 mL NaOH
Alkalinity	EP <3.1.5>	<1,0 mL HCl
Absorbance	EP <3.1.5>	<0,2 abs
Reducing substances	EP <3.1.5>	<3,0 mL KMnO <sub>4</sub>

# VENA® BIO BAG

## > TUBING AVAILABLE IN:

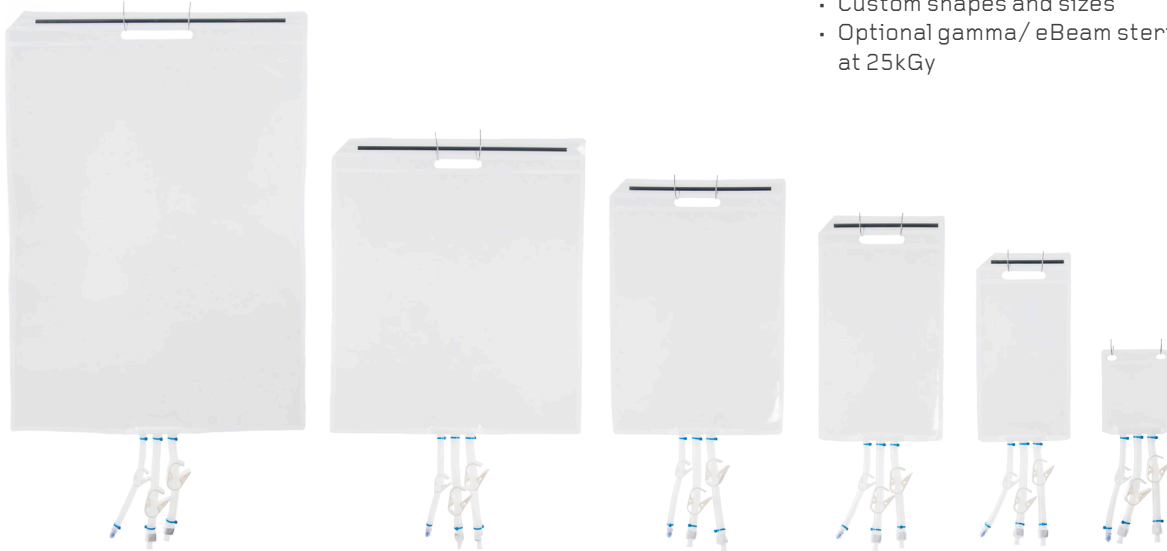
- VENA®BIO PURE
- VENA®BIO PUMP
- VENA®BIO WELD

## > CONNECTORS AVAILABLE IN:

- Polypropylene
- Polycarbonate
- PVDF

## > UNDER DEMAND:

- Different combination of inlet/outlet
- Other port lengths and diameters
- Sanitary fitting triclamp 25mm
- Stainless steel band clamps
- Custom shapes and sizes
- Optional gamma/ eBeam sterilization at 25kGy



VOLUME	PORT	SIZE	LENGTH	CONNECTIONS	DESCRIPTION
0,5L 2L 5L	Sampling Inlet Outlet	ID 3,20mm x OD 6,40mm ID 6,40mm x OD 9,50mm ID 6,40mm x OD 9,50mm	0,3m 0,3m 0,3m	<b>LUER</b>	Needlefree swabable valve female luer lock, Polycarbonate Male luer lock, Polycarbonate, cap included Female luer lock, Polycarbonate, cap included
0,5L 2L 5L	Sampling Inlet Outlet	ID 3,20mm x OD 6,40mm ID 6,40mm x OD 9,50mm ID 6,40mm x OD 9,50mm	0,3m 0,3m 0,3m	<b>QUICK CONNECT</b>	Needlefree swabable valve female luer lock, Polycarbonate RQC male quick connector, MPC compatible, Polypropylene, cap included RQC female quick connector, MPC compatible, Polypropylene, cap included
0,5L 2L 5L	Sampling Inlet Outlet	ID 3,20mm x OD 6,40mm ID 6,40mm x OD 9,50mm ID 6,40mm x OD 9,50mm	0,3m 0,3m 0,3m	<b>TRICLAMP</b>	Needlefree swabable valve female luer lock, Polycarbonate Sanitary fitting triclamp 50mm, Polypropylene Sanitary fitting triclamp 50mm, Polypropylene
10L 20L 50L	Sampling Inlet Outlet	ID 6,40mm x OD 9,50mm ID 9,50mm x OD 15,90mm ID 9,50mm x OD 15,90mm	0,3m 0,3m 0,3m	<b>QUICK CONNECT</b>	Needlefree swabable valve female luer lock, Polycarbonate RQC male quick connector, MPC compatible, Polypropylene, cap included RQC female quick connector, MPC compatible, Polypropylene, cap included
10L 20L 50L	Sampling Inlet Outlet	ID 6,40mm x OD 9,50mm ID 9,50mm x OD 15,90mm ID 9,50mm x OD 15,90mm	0,3m 0,3m 0,3m	<b>TRICLAMP</b>	Needlefree swabable valve female luer lock, Polycarbonate Sanitary fitting triclamp 50mm, Polypropylene Sanitary fitting triclamp 50mm, Polypropylene

\*All lines equipped with pinch clamps

# VENA® BIO TRANSFER KIT

## > TUBING AVAILABLE IN:

- VENA®BIO PURE
- VENA®BIO PUMP
- VENA®BIO WELD

## > CONNECTORS AVAILABLE IN:

- Polypropylene
- Polycarbonate
- PVDF

## > UNDER DEMAND:

- Different combination of inlet/outlet
- Other lengths and diameters
- Sanitary fitting triclamp 25mm
- Stainless steel band clamps
- Optional gamma/ eBeam sterilization at 25kGy



TUBING SIZE	LENGTH	CONNECTIONS	DESCRIPTIONS
ID 3,20mm x OD 6,40mm	0,5m 1,5m 5m	<b>LUER</b>	Inlet: Male luer lock, Polycarbonate, cap included Outlet: Needlefree swabable valve female luer lock, Polycarbonate
ID 6,40mm x OD 9,50mm	0,5m 1,5m 5m	<b>LUER</b>	Inlet: Male luer lock, Polycarbonate, cap included Outlet: Needlefree swabable valve female luer lock, Polycarbonate
		<b>QUICK CONNECT</b>	Inlet: RQC male quick connector, MPC compatible, Polypropylene, cap included Outlet: RQC female quick connector, MPC compatible, Polypropylene, cap included
		<b>TRICLAMP</b>	Inlet: Sanitary fitting triclamp 50mm, Polypropylene Outlet: Sanitary fitting triclamp 50mm, Polypropylene
ID 9,50mm x OD 15,90mm	0,5m 1,5m 5m	<b>QUICK CONNECT</b>	Inlet: RQC male quick connector, MPC compatible, Polypropylene, cap included Outlet: RQC female quick connector, MPC compatible, Polypropylene, cap included
		<b>TRICLAMP</b>	Inlet: Sanitary fitting triclamp 50mm, Polypropylene Outlet: Sanitary fitting triclamp 50mm, Polypropylene
ID 12,70mm x OD 19,10mm	0,5m 1,5m 5m	<b>QUICK CONNECT</b>	Inlet: RQC male quick connector, MPC compatible, Polypropylene, cap included Outlet: RQC female quick connector, MPC compatible, Polypropylene, cap included
		<b>TRICLAMP</b>	Inlet: Sanitary fitting triclamp 50mm, Polypropylene Outlet: Sanitary fitting triclamp 50mm, Polypropylene

# VENA<sup>®</sup>BIO ·Y· PUMP KIT

## > PUMPABLE TUBING

### SECTION AVAILABLE IN:

- VENA<sup>®</sup>BIO PURE
- VENA<sup>®</sup>BIO PUMP

## > CONNECTORS AVAILABLE IN:

- Polypropylene
- Polycarbonate
- PVDF

## > UNDER DEMAND:

- Different combination of inlet/outlet
- Other lengths and diameters
- Sanitary fitting triclamp 25mm
- Stainless steel band clamps
- Optional gamma/ eBeam sterilization at 25kGy



TUBING SIZE	LENGTH	CONNECTIONS	DESCRIPTIONS
Inlet & Outlet: ID 6,40mm x OD 9,50mm Pumpable section: ID 3,20mm x OD 6,40mm	Inlet & Outlet 0,5m  Pumpable section 0,3m	<b>LUER</b>	Inlet: Male luer lock, Polycarbonate, cap included Outlet: Needlefree swabable valve female luer lock, Polycarbonate
		<b>QUICK CONNECT</b>	Inlet: RQC male quick connector, MPC compatible, Polypropylene, cap included Outlet: RQC female quick connector, MPC compatible, Polypropylene, cap included
		<b>TRICLAMP</b>	Inlet: Sanitary fitting triclamp 50mm, Polypropylene Outlet: Sanitary fitting triclamp 50mm, Polypropylene
Inlet & Outlet: ID 9,50mm x OD 15,90mm Pumpable section: ID 6,40mm x OD 9,50mm	Inlet & Outlet 0,5m  Pumpable section 0,3m	<b>QUICK CONNECT</b>	Inlet: RQC male quick connector, MPC compatible, Polypropylene, cap included Outlet: RQC female quick connector, MPC compatible, Polypropylene, cap included
		<b>TRICLAMP</b>	Inlet: Sanitary fitting triclamp 50mm, Polypropylene Outlet: Sanitary fitting triclamp 50mm, Polypropylene
Inlet & Outlet: ID 12,70mm x OD 19,10mm Pumpable section: ID 9,50mm x OD 15,90mm	Inlet & Outlet 0,5m  Pumpable section 0,3m	<b>QUICK CONNECT</b>	Inlet: RQC male quick connector, MPC compatible, Polypropylene, cap included Outlet: RQC female quick connector, MPC compatible, Polypropylene, cap included
		<b>TRICLAMP</b>	Inlet: Sanitary fitting triclamp 50mm, Polypropylene Outlet: Sanitary fitting triclamp 50mm, Polypropylene

\*Inlet & outlet is made of VENA<sup>®</sup>BIO PURE in all options.

# VENA® BIO PERISTALTIC PUMP

**Vena®Bio Peristaltic Pump** perfectly meets small scale requirements and is good value for money. It is thus the ideal dosing solution for diverse applications: for laboratory process plant, for feeding and recycling, for automatic sampling and for general liquid handling applications.

The drive forms can be equipped with pump heads from Watson Marlow and Masterflex.

Large operating keys with tactile feedback enable sure operation, even when wearing gloves. The illuminated screen can be faultlessly read from any angle. The pump is suited both for stand-alone use and for operation in automated systems with up to 32 interconnected drives.

## FEATURES:

- Dispenser function
- Masterflex and Watson Marlow compatible pumpheads
- Can be controlled either manually or via interfaces
- Stackable and compact stainless steel housing
- Able to be calibrated in g/min and ml/min
- Easy to clean and to maintain





# VENA<sup>®</sup> BIO PERISTALTIC PUMP

## COMPARATIVE MATRIX OF PUMP TYPES

CHARACTERISTICS	PERISTALTIC PUMP	DIAPHRAGM PUMP	GEAR WHEEL PUMP	RECIPROCATING PUMP	SYRINGE PUMP
Dosing range	x		x	x	x
Exact dosing of small quantities	x			x	x
Pressure-resistant characteristic curve	x	x		x	x
Bidirectional feed	x		x		x
Low pulsation	x		x		x
Continuous feed	x		x		x
Gentle feed, sensitive to shearing Media	x	x			
Solid fraction, abrasive components	x				
Highly viscous media	x		x		
Self-priming	x			x	x
Feed from and into vacuum	x			x	x
Dead-space free	x				
Blocking	x				x
Dry-run safe	x				
Autoclavable	x				
Chemical stability	x	x		x	x
100% decontamination	x				
Maintenance-friendly	x				x
Cost-effectiveness	x	x			x

## SPECIFICATIONS



400 F/A



114



313D2



Easy Load

	WATSON MARLOW			MASTERFLEX
Pump head	400 F/A	114	313D2	Easy - Load
Feed rate	1 µl - 30 ml/min	20 µl - 250 ml/min	0,1 ml - 1,1 l/min	0,2 ml - 1,1 l/min
Internal diameter (mm)	0,8 - 2,41	0,8 - 4,81	8 - 6,4	0,8 - 8
Tubing wall thickness (mm)	0,8	1,6	2,4	1,6
Feed pressure (bar)	0 - 2	0 - 4	0 - 2,5	0 - 2,5
Speed range (rpm)	0,01 - 300	0,01 - 300	0,01 - 250	0,01 - 300

# MOLDED CLAMPS

- Using Venair's fully validated silicone
- Completely smooth transition from the tubing through the clamp
- Constant diameter without internal reductions
- Pregasketed for easier installation and reduced assembly time
- Available in mini and standard triclamp sizes
- Backup cups available in stainless steel and plastic



# STERILIZATION

METHOD	PURE	BRAIDED	PUMP	WELD	FEP	PVC	FKM
Dry heat	x	x			x		x
Autoclave	x	x	Limited*	Limited*	x		x
CIP	x	x	x	x	x	x	x
SIP	x	x	Limited*	Limited*	x		x
Ethylene oxide	x	x	x	x	x	x	x
Hydrogen peroxide	x	x	x	x	x	x	x
eBeam (25kGy)	x	x	x	x	x	x	x

\*Limited: Compatible method for a few cycles since product is heat sensitive.

**DISCLAIMER:** Venair provides this chart as a product compatibility chart with existing technologies. It is the end user responsibility to adjust each method's parameters accordingly to achieve the required sterility level.

# COMPATIBILITY TABLE



**Resistance to different products:**  
**A - excellent**  
**B - good**  
**C - insufficient**  
**D - unsatisfactory**

**A**

	SILICONE	TPV	TPE	FEP	PVC	FKM
acetaldehyde	A	A	A	A	D	D
acetamide	B	A	B	A	A	B
acetic acid 5%	A	A	A	A	A	A
acetic acid 30%	A	C	A	A	A	B
acetic acid, hot high press	C	-	-	A	-	D
acetic acid, glacial	B	A	C	A	D	D
acetic anhydride	C	A	B	A	D	D
acetone	B	A	C	A	D	D
acetophenone	D	B	-	A	D	D
acetyl acetone	D	A	-	A	D	D
acetyl chloride	C	D	A	A	D	A
acetylene	B	A	A	A	B	A
acetylene tetrabromide	E	D	-	A	D	A
acrylonitrile	D	D	D	A	D	D
adipic acid	E	B	C	A	A	E
aero lubriplate	B	C	-	A	-	A
aero safe 2300	C	B	-	A	-	D
aero safe 2300 w	C	B	-	A	-	D
aero shell IAC	B	D	-	A	-	A
aero shell 7 A grease	B	D	-	A	-	A
aero shell 17 grease	B	D	-	A	-	A
aero shell 750	D	D	-	A	-	A
aerozene 50 (50% hydrazine 50% UDMH)	-	-	-	-	-	-
air-below 300° F	A	D	A	A	-	A
air-above 300° F	A	D	A	A	-	A
alkazene	D	D	-	A	-	B
alum NH3 CR-K	A	A	-	A	-	D
aluminum acetate	D	A	-	A	A	D
aluminum bromide	A	B	-	A	A	A
aluminum chloride	B	A	A	A	A	A
aluminum fluoride	B	A	-	A	A	A
aluminum nitrate	B	A	-	A	A	A
aluminum phosphate	A	A	-	A	-	A
aluminum salts	A	A	A	A	A	A
aluminum sulfate	A	A	A	A	B	A
ambrex 33 mobile	D	-	-	A	-	A

amines, mixed	B	A	A	A	D	D
ammonia anhydrous(liquid)	C	A	A	A	A	D
ammonia gas, cold	A	A	A	A	A	D
ammonia gas, hot	A	-	A	A	-	D
ammonia & lithium metal solution	D	-	-	A	D	D
ammonium carbonate	E	A	A	A	A	E
ammonium chloride	E	A	A	A	B	A
ammonium hydroxide (concentrated)	A	A	A	A	B	B
ammonium nitrate	E	A	A	A	A	E
ammonium nitrite	B	A	-	A	-	E
ammonium persulfate solution	E	A	-	A	A	E
ammonium persulfate 10%	E	-	-	A	-	E
ammonium phosphate	A	A	A	A	B	E
ammonium phosphate, mono-basic	A	A	-	A	A	E
ammonium phosphate, dibasic	A	A	-	A	A	E
ammonium phosphate, tribasic	A	A	-	A	A	E
ammonium salts	A	A	A	A	A	C
ammonium sulfate	A	A	A	A	B	A
ammonium sulfide	E	A	-	A	B	D
amyl acetate	D	D	D	A	D	D
amyl alcohol	D	A	D	A	C	B
amyl borate	E	B	-	A	B	E
amyl chloride	D	D	D	A	D	A
amyl chloronaphthalene	D	C	-	A	D	A
amyl naphthalene	D	D	-	A	-	A
anderol L 774 (di-ester)	D	E	-	A	-	A
anderol L 826 (di-ester)	D	D	-	A	-	A
anderol L 829 (di-ester)	D	D	-	A	-	A
ang-25 (glycerol ester)	B	E	-	A	-	A
ang-25 (di-ester base)	B	D	-	A	-	A
anhydrous ammonia	B	A	-	A	-	D
anhydrous hydrazine	E	E	-	A	-	D
anhydrous hydrogen fluo	E	C	-	A	-	D
aniline	D	A	D	A	D	C
aniline dyes	C	A	-	A	-	B
aniline hydrochloride	D	A	D	A	D	B
aniline oils	D	C	-	A	-	C
animal fats	B	B	-	A	-	A
animal oil (lard oil)	B	B	-	A	-	A
AN-03 grade M	B	B	-	A	-	A
AN-0-6	D	E	-	A	-	A
AN-0-366	D	E	-	A	-	A
AN-V V-0-366 b hydrofluid	D	D	-	A	-	A
ansul ether	D	D	-	A	-	D
aqua regia	D	C	B	A	C	B
argon	B	A	-	A	-	A
aroclor 1248	B	D	-	A	E	A

aroclor 1254	C	D	-	A	-	A
aroclor 1260	A	D	-	A	-	A
aromatic fuel 50%	D	C	-	A	-	A
arsenic acid	A	A	C	A	B	A
arsenic trichloride	E	B	-	A	-	E
askatel	D	D	-	A	-	A
asphalt	D	C	-	A	A	A
ASTM oit #1	A	C	D	A	A	A
ASTM oil #2	D	D	D	A	A	A
ASTM oil #3	C	D	D	A	A	A
ASTM oil #4	D	D	-	A	-	A
ASTM reference fuel A	D	C	-	A	C	A
ASTM reference fuel B	D	C	-	A	D	A
ASTM reference fuel C	D	C	-	A	-	A
ATL-857	D	-	-	A	-	A
atlantic dominion F	D	C	-	A	-	A
aurex 903R mobil	D	E	-	A	-	A
automatic transmission fluid	D	D	-	A	-	A
automotive brake fluid	C	-	-	A	C	D

**B**

bardol B	D	D	-	A	-	A
barium chloride	A	A	-	A	B	A
barium hydroxide	A	A	A	A	B	A
barium salts	A	-	A	A	-	A
barium sulfate	A	A	-	A	B	A
barium sulfide	A	A	-	A	B	A
bayol D	D	D	-	A	-	A
beer	A	A	A	A	B	A
beet sugar liquors	A	A	-	A	A	A
benzaldehyde	D	B	D	A	D	D
benzene	D	D	D	A	D	A
benzene sulfonic acid	D	A	A	A	A	A
benzine	D	D	-	A	1	A
benzochloride	E	-	-	A	-	A
benzoic acid	B	A	D	A	B	A
benzophenone	E	-	-	A	-	A
benzyl alcohol	E	C	B	A	B	A
benzyl benzoate	E	C	-	A	-	A
benzyl chloride	D	C	-	A	D	A
black point 77	C	E	-	A	-	A
black sulphate liquors	B	E	-	A	-	A
blast furnace gas	A	A	-	A	-	A
bleach solution	B	B	-	A	-	A
borax	B	A	A	A	A	A
bordeaux mixture	B	A	-	A	-	A
boric acid	A	A	A	A	A	A
boron fluids (HEF)	D	D	-	A	-	A
brake fluid (non petroleum)	C	A	-	A	-	D
bray GG-130	D	-	-	A	-	A



D	-	-	-	-	-
decalin	D	D	-	A	A
decane	B	B	-	A	-
delco brake fluid	C	-	-	A	-
denatured alcohol	A	B	-	A	-
detergent solutions	A	B	-	A	A
developing fluids (photo)	A	A	-	A	-
dextron	D	A	-	A	-
diacetone	D	C	-	A	-
diacetone alcohol	D	A	A	A	D
diazinon	D	D	-	A	-
dibenzyl ether	E	C	-	A	-
dibenzyl sebacate	C	C	-	A	-
dibromoethyl benzene	D	C	-	A	-
dibutylamine	C	B	-	A	-
dibutyl ether	D	B	-	A	-
dibutyl phthalate	B	B	C	A	D
dibutyl sebacate	B	B	-	A	D
O-dichlorobenzene	D	D	-	A	D
P-dichlorobenzene	D	D	-	A	D
dichloro-butane	D	E	-	A	-
dichloro-isopropyl ether	D	D	-	A	-
dicyclohexylamine	E	B	-	A	-
diesel oil	D	C	D	A	B
di-ester lubricant MIL-L-7808	D	D	-	A	-
di-ester synthetic lubricants	D	D	-	A	-
diethylamine	B	A	A	A	C
diethyl benzene	D	C	-	A	-
diethyl ether	D	B	-	A	C
diethyl sebacate	B	B	-	A	A
diethylene glycol	B	A	A	A	C
difluorodibromomethane	D	B	-	A	-
diisobutylene	D	C	-	A	-
diisooctyl sebacate	C	B	-	A	-
diisopropyl benzene	E	C	-	A	-
diisopropyl ketone	D	C	-	A	-
dimethyl aniline	E	B	-	A	D
dimethyl formamide	B	A	A	A	D
dimethyl phthalate	E	B	-	A	D
dinitro toluene	D	B	-	A	-
dioctyl phthalate	C	B	-	A	D
dioctyl sebacate	C	C	-	A	-
dioxane	D	B	D	A	C
dioxolane	D	C	-	A	-
dipentene	A	C	-	A	-
diphenyl	D	C	-	A	E
diphenyl oxides	C	C	-	A	D
dow chemical 50-4	E	-	-	A	-
dow chemical ET378	D	-	-	A	-
dow chemical ET588	E	-	-	A	-

dow corning-3	C	-	-	A	-
dow corning-4	C	-	-	A	-
dow corning-5	C	-	-	A	-
dow corning-11	C	-	-	A	-
dow corning-33	C	-	-	A	-
dow corning-44	C	-	-	A	-
dow corning-55	C	-	-	A	-
dow corning-200	C	-	-	A	-
dow corning-220	C	-	-	A	-
dow corning-510	C	-	-	A	-
dow corning-550	C	-	-	A	-
dow corning-704	E	-	-	A	-
dow corning-705	E	-	-	A	-
dow corning-710	C	-	-	A	-
dow corning-1208	C	-	-	A	-
dow corning-4050	C	-	-	A	-
dow corning-6620	C	-	-	A	-
dow corning-F60	C	-	-	A	-
dow corning-F61	B	-	-	A	-
dow corning-XF60	C	-	-	A	-
dow guard	A	-	-	A	-
dowtherm oil	B	D	-	A	-
dowtherm A or E	D	D	-	A	-
dowtherm 209.50%solution	C	-	-	A	-
driking water	A	-	-	A	-
dry cleaning fluids	D	D	-	A	-
DTE light oil	D	D	-	A	-
	-	-	-	-	-
	-	-	-	-	-
	-	-	-	-	-
elco 28-EP lubricant	B	-	-	A	-
epichlorohydrin	D	B	-	A	-
epoxy resins	E	-	-	A	-
esam-6 fluid	E	B	-	A	-
esso fuel 208	B	-	-	A	-
esso golden gasoline	D	-	-	A	-
esso motor oil	D	-	-	A	-
esso transmission fluid (typeA)	D	-	-	A	-
esso WS3812 (MIL-L-7808 A)	D	-	-	A	-
esso SP90-EP lubricant	D	-	-	A	-
esstic 42,43	B	D	-	A	-
ethane	D	C	-	A	A
ethanol	A	A	B	A	A
ethanol amine	B	A	-	A	-
ethers	D	B	D	A	D
ethyl acetate-organic ester	B	A	D	A	D
ethyl acetoacetate	B	A	-	A	-
ethyl acrylate	B	A	-	A	D
ethyl acrylic acid	D	C	-	A	-
ethyl alcohol	B	A	E	A	B

ethyl benzene	D	D	-	A	-
ethyl benzoate	D	C	D	A	D
ethyl bromide	E	C	A	A	D
ethyl cellosolve	D	B	-	A	-
ethyl cellulose	C	A	-	A	-
ethyl chloride	D	C	A	A	D
ethyl chlorocarbonate	D	A	-	A	-
ethyl chloroformate	D	C	-	A	-
ethyl cyclopentane	D	E	-	A	-
ethyl ether	D	B	D	A	D
ethyl formate	E	A	-	A	-
ethyl hexanol	B	-	-	A	-
ethyl mercaptan	C	C	-	A	-
ethyl oxalate	D	A	-	A	-
ethyl pentachlorobenzene	D	D	-	A	-
ethyl silicate	E	A	-	A	-
ethylene	E	C	-	A	D
ethylene chloride	D	D	-	A	D
ethylene chlorohydrin	C	A	A	A	D
ethylene diamine	A	A	-	A	D
ethylene dibromide	D	C	-	A	-
ethylene dichloride	D	C	A	A	D
ethylene glycol	A	A	B	A	A
ethylene oxide	D	A	A	A	D
ethylene trichloride	D	E	-	A	-
ethylmorpholene stannous octoate (50/50)mixture	E	-	-	A	-
	-	-	-	-	-
	-	-	-	-	-
	-	-	-	-	-
F-60 fluid (dow corning)	D	-	-	A	-
F-61 fluid (dow corning)	D	-	-	A	-
fatty acids	C	B	B	A	-
FC-43 hetacosfluorotri-butylamine	A	-	-	A	-
FC75 fluorocarbon	A	-	-	A	-
ferric chloride	B	A	A	A	B
ferric nitrate	C	A	A	A	B
ferric sulfate	B	A	A	A	B
fish oil	A	B	-	A	A
fluoboric acid	E	A	A	A	E
fluorine (liquid)	D	-	-	A	D
fluorobenzene	D	C	-	A	-
fluorocarbon oils	E	D	-	A	-
fluorolube	A	E	-	A	-
fluorinated cyclic ethers	E	D	-	A	-
fluosilicic acid	E	A	A	A	-
formaldehyde	B	A	A	A	B
formic acid	B	A	A	A	A
freon,11	D	D	B	A	B
freon,12	D	D	B	A	B

freon, 12&ASTM-oil#2 (50/50 mixture)	D	-	-	A	-	A
freon, 12&SUNISO 4G (50/50 mixture)	D	-	-	A	-	A
freon,13	D	E	-	A	-	A
freon, 13B1	D	E	-	A	-	A
freon,14	D	E	-	A	-	A
freon,21	D	D	-	A	D	D
freon,22	D	D	B	A	D	D
freon,22&ASTM OIL#2D (50/50 mixture)	B	-	-	A	-	A
freon,31	E	E	-	A	-	D
freon,32	E	E	-	A	-	D
freon,112	D	E	-	A	-	A
freon, 113	D	D	-	A	B	B
freon,114	D	D	-	A	B	B
freon,114B2	D	E	-	A	-	B
freon,115	D	D	-	A	-	B
feron,142b	E	E	-	A	-	D
freon,152a	E	E	-	A	-	D
freon, 218	E	E	-	A	-	A
freon, C316	E	E	-	A	-	E
freon, C318	E	E	-	A	-	A
freon, 502	E	E	-	A	-	B
freon, BF	D	E	-	A	-	A
freon, MF	D	E	-	A	-	B
freon, TF	D	D	-	A	B	B
freon, TA	A	E	-	A	-	C
freon, TC	D	E	-	A	-	A
freon, TMC	C	E	-	A	-	A
freon, t-P35	A	E	-	A	-	A
freon, T-WD602	D	E	-	A	-	A
freon, PCA	D	E	-	A	-	B
fuel oil	D	D	D	A	A	A
fuel oil acidic	A	-	-	A	-	A
fuel oil #6	A	-	-	A	-	A
fumaric acid	B	A	-	A	-	A
fuming sulphuric acid (20/25% oleum)	D	E	-	A	-	A
furan (fufuran)	E	A	-	A	A	E
fufural	D	A	D	A	D	D
fufuraldehyde	D	-	-	A	-	D
fufuraldehyde	D	-	-	A	-	D
fufurally alcohol	D	C	-	A	-	E
furyl carbinol	D	E	-	A	-	E
fyrquel A60	C	-	-	A	-	D
fyrquel 90, 100, 150, 220, 300 500	A	-	-	A	-	A
	-	-	-	-	-	-
	-	-	-	-	-	-
<b>G</b>	-	-	-	-	-	-
galic acid	E	B	D	A	B	A
gasoline	D	D	D	A	C	A

gelatin	A	A	A	A	B	A
grilling brake fluid	E	-	-	A	-	D
glacial acetic-acid	B	-	-	A	-	D
glauber's salt	E	E	-	A	-	B
glucose	A	A	A	A	B	A
glue (depending on type)	A	A	A	A	B	A
glycerine-glycerol	A	A	B	A	-	A
glycols	A	A	-	A	-	A
green sulphate liquor	A	A	-	A	A	A
gulfcrown grease	D	-	-	A	-	A
gulf endurance oils	D	-	-	A	-	A
gulf FR fluids (emulsion)	D	-	-	A	-	A
gulf FRG-fluids	A	-	-	A	-	A
gulf FRp-fluids	A	-	-	A	-	B
gulf harmony oils	D	-	-	A	-	A
gulf high temperature grease	D	-	-	A	-	A
gulf lesion oils	D	-	-	A	-	A
gulf paraount oils	D	-	-	A	-	A
gulf security oils	D	-	-	A	-	A
	-	-	-	-	-	-
	-	-	-	-	-	-
<b>H</b>	-	-	-	-	-	-
halotane	D	E	-	A	-	A
halowax oil	D	D	-	A	-	A
hannifin lube A	B	D	-	A	-	A
heavy water	A	B	-	A	-	E
HEF-2 (high energy fuel)	D	D	-	A	-	A
helium	A	A	-	A	-	A
N-heptane	D	C	D	A	-	A
N-hexaldehyde	B	C	-	A	-	D
hexane	D	D	-	A	B	A
N-hexane-1	D	C	-	A	-	A
hexyl alcohol	B	B	-	A	B	A
high viscosity lubricant U14	A	-	-	A	-	A
high viscosity lubricant H2	A	-	-	A	-	A
hilo MS #1	C	E	-	A	-	D
houghto-safe271 (water and glycol base)	B	A	-	A	-	B
houghto-safe 620(water/glycol)	B	A	-	A	-	B
houthto-safe 1010 phosphate ester	C	A	-	A	-	A
houghto-safe 1055 phosphate ester	C	A	-	A	-	A
houghto-safe 1120 phosphate ester	C	A	-	A	-	A
houghto-safe 5040 (water/oil emulsion)	C	D	-	A	-	A
hydraulic oil (petroleumbase)	C	D	-	A	A	A
hydrazine	C	A	D	A	E	E
hydrobromic acid	D	B	A	A	-	C
hydrobromic acid 40%	D	-	A	A	-	A
hydrocarbons (saturated)	D	-	-	A	-	A

hydrochloric acid hot 37%	D	B	A	A	A	A
hydrochloric acid cold 37%	B	B	A	A	A	A
hydrochloric acid 3 molar	D	-	-	A	-	A
	D	-	-	A	-	A
hydrochloric acid concentrated	D	-	-	A	-	A
hydrocyanic acid	C	B	B	A	-	A
hydro-drive, MIH-50 (petroleum base)	B	-	-	A	-	A
hydro-drive, MIH-10 (petroleum base)	B	-	-	A	-	A
hydrofluoric acid, 65% max.cold	D	-	-	A	-	A
	D	-	-	A	-	A
hydrofluoric acid, 65% min.cold	D	-	-	A	-	A
	D	-	-	A	-	A
hydrofluoric acid, 65% max.hot	D	-	-	A	-	C
	D	-	-	A	-	C
hydrofluoric acid, 65% min.hot	D	-	-	A	-	C
	D	B	-	A	-	A
hydrofluosilicic acid	D	B	-	A	-	A
hydrogen gas, cold	C	A	A	A	-	A
hydrogen gas, hot	C	A	A	A	-	A
hydrogen peroxide (1)	A	A	A	A	A	A
hydrogen 90% (1)	B	-	D	A	-	B
hydrogen sulfide dry, cold	C	A	A	A	A	D
hydrogen sulfide dry, hot	C	A	A	A	A	D
hydrogen sulfide wet, cold	C	A	A	A	-	D
hydrogen sulfide wet, hot	C	A	A	A	-	D
hydrolube-water/ethylene glycol	B	A	E	A	-	A
hydroquinone	E	A	B	A	B	D
hydyne	D	D	-	A	-	D
hyjet	E	-	-	A	-	D
hyjet III	E	-	-	A	-	D
hyjet S	E	-	-	A	-	D
hyjet W	E	-	-	A	-	D
hydrochlorous	E	-	-	A	-	A
	-	-	-	-	-	-
	-	-	-	-	-	-
<b>I</b>	-	-	-	-	-	-
industron FF44	D	-	-	A	-	A
industron FF48	D	-	-	A	-	A
industron FF53	D	-	-	A	-	A
industron FF80	D	-	-	A	-	A
iodine	E	A	C	A	D	A
iodine pentafluoride	D	D	C	A	-	D
iodoform	E	B	-	A	D	E
isobutyl alcohol	A	A	C	A	-	A
iso-butyl N-butyrade	E	-	-	A	-	A
isododecane	E	E	-	A	-	A
iso-octane	D	D	D	A	A	A
isophorone (ketone)	D	B	-	A	-	D
isopropanol	A	B	-	A	-	A
isopropyl acetate	D	B	D	A	D	D
isopropyl alcohol	A	A	C	A	B	A
isopropyl chloride	D	C	-	A	-	A



isopropyl ether	D	C	D	A	B	D
	-	-	-	-	-	-
<b>J</b>						
JP 3 (MIL-J-5624)	D	C	-	A	C	A
JP 4 (MIL-J-5624)	D	D	-	A	C	A
JP 5 (MIL-J-5624)	D	C	-	A	C	A
JP 6 (MIL-J-25656)	D	C	-	A	-	A
JP X (MIL-J-25604)	D	C	-	A	-	D
kel F liquid	A	E	-	A	-	B
kerosene	D	D	D	A	C	A
keystone #87HX-grease	D	E	-	A	-	A
	-	-	-	-	-	-
<b>L</b>						
lactams-amino acids	E	E	-	A	-	D
lactic acid	A	A	B	A	A	A
lacquers	D	C	-	A	-	D
lacquer solvents	D	D	D	A	D	D
lard, animals fats	B	B	C	A	A	A
lavender oil	D	C	-	A	-	A
lead acetate	D	A	A	A	B	D
lead nitrate	B	A	-	A	B	E
lead sulphamate	B	A	-	A	B	A
lehigh x 1169	D	E	-	A	-	A
lehigh x 1170	D	E	-	A	-	A
light greas	D	E	-	A	-	A
ligroin (petroleum ether or benzene)	D	B	-	A	E	A
lime bleach	B	A	-	A	-	A
lime sulphur	A	B	-	A	-	A
lindol, hydraulic fluid (phosphate ester type)	C	A	-	A	-	B
linoleic acid	B	C	C	A	A	B
linseed oil	A	C	D	A	B	A
liquid oxygen	D	E	-	A	-	D
liquid petroleum gas (LPG)	C	D	-	A	-	A
liquimoly	D	E	-	A	-	A
lubricating oils, di-ester	D	D	-	A	-	A
lubricating oils, petroleum base	D	D	D	A	-	A
lye solutions	B	B	-	A	B	B
	-	-	-	-	-	-
<b>M</b>						
magnesium chloride	A	A	A	A	B	A
magnesium hydroxyde	E	A	A	A	A	A
magnesium sulphate	A	A	A	A	A	A
magnesium sulphite	A	A	-	A	-	A
magnesium salt	A	A	-	A	A	A
malathion	D	E	-	A	-	A
maleic acid	E	A	A	A	E	A
maleic anhydride	E	A	-	A	E	A
malicacid	B	A	A	A	A	A

MCS312	A	E	-	A	-	A
MCS352	C	E	-	A	-	D
MCS463	C	E	-	A	-	D
mercuric chloride	E	A	A	A	D	A
mercury	E	A	A	A	B	A
mercury vapor	E	A	-	A	-	A
mesityl oxide (ketone)	D	C	-	A	-	D
methane	D	C	D	A	B	A
methanol	A	A	E	A	A	A
methyl acetate	D	A	D	A	D	D
methyl acetoacetate	B	A	-	A	-	D
methyl acrylate	D	D	-	A	E	D
methylacrylic acid	D	A	-	A	-	C
methyl alcochol	A	A	A	A	-	D
methyl benzoate	D	E	-	A	-	A
methyl bromide	E	C	D	A	D	A
methyl butyl ketone	D	C	-	A	A	D
methyl carbonate	D	D	-	A	-	A
methyl cellosolve	D	A	-	A	D	D
methyl cellulose	B	E	-	A	-	D
methyl chloride	D	B	A	A	D	A
methyl chloroformate	D	E	-	A	-	A
methyl D-bromide	D	E	-	A	-	A
methyl cyclopentane	D	C	-	A	-	A
methylene chloride	D	C	-	A	D	B
methylene dichloride	D	E	-	A	-	B
methyl ether	A	-	-	A	-	A
methyl ethyl ketone (MEK)	D	D	E	A	-	D
methyl ethyl ketone peroxyde	B	-	-	A	-	D
methyl format	B	B	-	A	-	E
methyl isobutyl ketone (MIBK)	D	C	D	A	-	D
methyl isopropyl ketone	D	C	-	A	-	D
methyl methacrylic	C	B	-	A	-	D
methyl oleate	E	C	-	A	-	A
methyl salicylate	E	B	-	A	-	E
milk	A	A	A	A	B	A
mineral oils	B	D	B	A	-	A
mobil 24 DTE	D	-	-	A	-	A
mobil HF	E	-	-	A	-	A
	-	-	-	-	-	-
mobil delvac 1100,1110,1130	D	-	-	A	-	A
mobil nyvac 20 and 30	A	-	-	A	-	A
mobil velocite C	D	-	-	A	-	A
mobilgas wa 200, type A	D	-	-	A	-	A
automatic trans. Fluid	D	-	-	A	-	A
mobil oil SAE20	D	-	-	A	-	A
mobiltherm 600	D	-	-	A	-	A
mobilux	D	-	-	A	-	A
mono bromobenzene	D	-	-	A	-	A
mono chlorobenzene	D	D	-	A	-	A

mono ethanolamine	B	A	B	A	D	D
monomerthyl aniline	E	B	-	A	-	B
monomerthylether	E	C	-	A	-	E
monomerthyl hydrazine	D	E	-	A	-	E
monotrotoluene & dinitrotoluene(40-60mix)	D	E	-	A	-	C
monovinyl acethylene	B	-	-	A	-	A
mopar brake fluid	C	-	-	A	-	D
mustard gas	A	A	-	A	-	E
	-	-	-	-	-	-
<b>N</b>						
naptha	D	C	D	A	A	A
naphthalene	D	C	D	A	D	A
naphthenic	D	B	-	A	-	A
natural gas	A	B	D	A	A	A
neatsfoot oil	B	B	-	A	-	A
neon	A	A	-	A	-	A
neville acid	D	A	-	A	-	A
nickel acetate	D	A	-	A	B	D
nickel chloride	A	A	A	A	A	A
nickel salts	A	A	A	A	-	A
nickel sulfate	A	A	A	A	B	A
niter cake	A	A	-	A	-	A
nitric acid (1) 3 molar	D	-	-	A	-	A
nitric acid (1) concentrated	D	C	-	A	B	A
nitric acid dilute	B	-	A	A	-	A
nitric acid (1) red fuming (RFNA)	D	D	-	A	-	C
nitric acid (1) inhidited red fuming (IRFNA)	D	D	-	A	-	B
nitrobenzene	D	D	D	A	D	B
nitrobenzine	E	-	-	A	-	A
nitroethane	D	A	-	A	-	D
nitrogene	A	A	-	A	-	A
nitrogene (textroixide) (N204) (1)	D	D	-	A	-	D
nitromethane	D	A	D	A	B	D
nitropropane	D	B	-	A	-	D
	-	-	-	-	-	-
<b>O</b>						
o-a-548 A	B	-	-	A	-	B
o-t-634b	D	-	-	A	-	A
octachlorotoluene	D	E	-	A	-	A
octadecane	D	B	-	A	-	A
N-octane	D	D	-	A	-	A
octyl alcohol	D	B	-	A	-	A
oleic acid	E	C	B	A	B	B
oleum (fuming sulfuric acid)	D	D	-	A	-	A
oleum spirits	D	D	-	A	-	A
olive oil	D	B	-	A	B	A
oronite 8200	D	E	-	A	-	A
oronite 8515	D	-	-	A	-	A

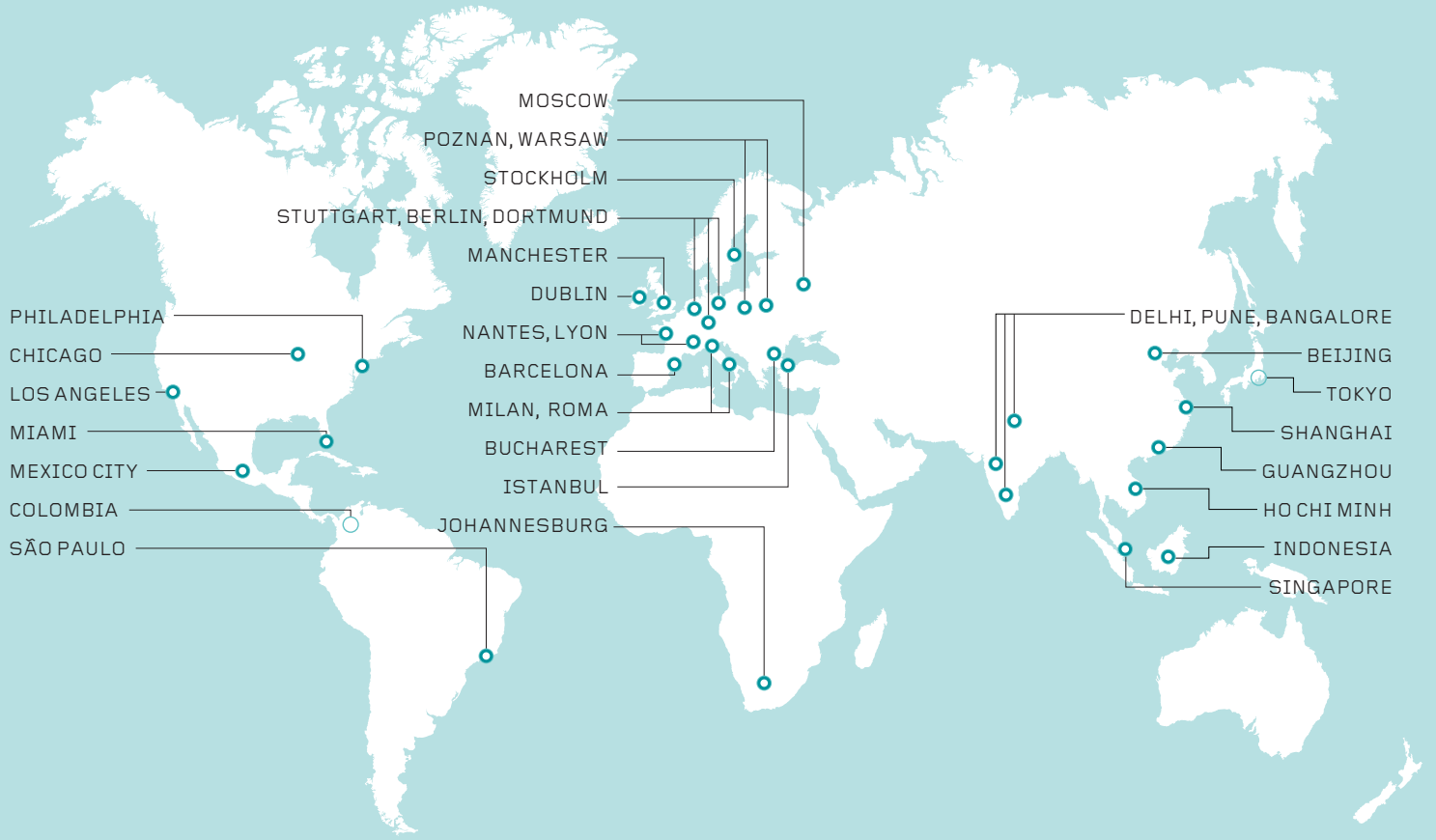
ortho-chloroethylbenzene	D	E	-	A	-	A
ortho-dichlorobenzene	D	D	-	A	-	A
os45 type III (os54)	D	E	-	A	-	A
os45 type IV (os45)	D	E	-	A	-	A
OS70	D	E	-	A	-	A
oxalic acid	B	A	A	A	B	A
oxygen, cold	A	-	A	A	A	A
oxygen, cold 200-400°F	B	-	-	A	-	B
ozone	A	A	A	A	B	A
	-	-	-	-	-	-
<b>P</b>	-	-	-	-	-	-
p-s-66 lb	D	-	-	A	-	A
p-d-680	D	-	-	A	-	A
paint thinner duco	D	C	-	A	-	B
palmitic acid	D	B	E	A	B	A
para-dichlorobenzene	D	C	-	A	-	A
par-al-keton	D	-	-	A	-	D
parker o lube	B	-	-	A	-	A
peanut oil	A	B	-	A	-	A
pentane 2 methyl	D	-	-	A	-	A
pentane, 2-4 dimethyl	D	-	-	A	-	A
pentane, 3 dimethyl	D	-	-	A	-	A
N-pentane	D	E	-	A	-	A
perchloric acid	D	A	A	A	-	A
perchloroethylene	D	D	B	A	-	A
petroleum oil, crude	D	C	-	A	-	A
petroleum oil, below 250°F	B	-	-	-	-	A
petroleum oil, above 250°F	D	-	-	A	-	B
phenol	D	C	D	A	-	A
phenol, 70%/30%H2O	D	-	D	A	-	A
phenol,85%/15%H2O	D	-	D	A	-	A
phenylbenzene	D	C	-	A	-	A
phenyl ethy ether	D	-	-	A	-	D
phenyl hydrazine	E	B	-	A	-	A
phorone	D	B	-	A	-	D
phosphoric acid 20%	B	A	A	A	B	A
phosphoric acid 45%	D	C	A	A	B	A
phosphoric acid 3 molar	B	-	-	A	-	A
phosphoric acid concent	C	-	-	A	-	A
phosphorous trichloride	E	B	B	A	D	A
pickling solution	D	A	-	A	-	B
picric acid H2O solution	D	A	-	A	-	A
picric acid molten	D	B	-	A	-	A
pinene	D	D	-	A	-	A
pine oil	D	D	-	A	-	A
piperidine	D	B	-	A	-	D
plating solutions, chrome	D	A	B	A	A	A
plating solutions, other	D	A	B	A	-	A
pneumatic service	D	-	-	A	-	A
polyvinyl acetate emulsion	D	A	-	A	-	E
potassium acetate	D	A	-	A	B	D
potassium chloride	A	A	-	A	B	A
potassium cupro cyanide	A	A	-	A	-	A
potassium cyanide	A	A	A	A	B	A
potassium dichromate	A	A	-	A	B	A
potassium hydroxide	C	A	A	A	A	B
potassium nitrate	A	A	-	A	B	A
potassium salts	A	E	A	A	-	A
potassium sulphate	A	A	-	A	A	A
potassium sulphite	A	E	-	A	A	A
prestone antifreeze	A	A	-	A	-	A
PRL-high temp.hydr.oil	B	E	-	A	-	A
producer gas	B	D	-	A	-	A
propane	D	D	A	A	B	A
propane propionitrile	D	E	-	A	-	A
propyl acetate	D	B	-	A	-	D
N-propyl acetone	D	-	-	A	-	D
propyl alcohol	A	A	C	A	B	A
propyl nitrate	D	B	-	A	-	D
	-	-	-	-	-	-
	-	-	-	-	-	-
<b>S</b>	-	-	-	-	-	-
shell diala	D	-	-	A	-	A
shell iris 905	D	-	-	A	-	A
shell iris 3XF mine fluid (fire resist.hydr.)	E	-	-	A	-	A
shell iris tellus #2 pet.base	D	-	-	A	-	A
shell iris tellus #33	D	-	-	A	-	A
shell iris tellus UMF (5% aromatic)	D	-	-	A	-	A
shell Lo hydrax 27 & 29	D	-	-	A	-	A
shell macoma 72	D	-	-	A	-	A
silicate esters	D	A	-	A	-	A
silicone greases	C	B	-	A	-	A
silicone oils	C	C	B	A	-	A
silver nitrate	A	A	A	A	B	A
sinclair,opaline CX-EPLlube	D	-	-	A	-	A
skelly,solvent B,C,E	E	-	-	A	-	A
skydrol 500	C	-	-	A	-	D
skydrol 7000	C	B	-	A	-	B
soap solution	A	A	A	A	A	A
socony mobile type A	D	-	-	A	-	A
socony vacuum AMV AC781 (grease)	D	-	-	A	-	A
socony vacuum PD959B	D	-	-	A	-	A
soda ash	A	A	-	A	-	A
sodium acetate	D	A	-	A	B	D
sodium bicarbonate (baking soda)	A	A	A	A	A	A
sodium bisulfite	A	A	B	A	A	A
sodium borate	A	A	B	A	B	A
sodium carbonate (sodium ash)	A	A	A	A	A	A
sodium chloride	A	A	A	A	B	A
sodium cyanide	A	A	A	A	B	A
sodium hydroxide	B	A	C	A	B	B
sodium hydrochlorite	B	B	-	A	B	A
sodium metaphosphate	E	-	-	A	A	A
sodium nitrate	D	A	A	A	B	E
sodium perborate	B	A	-	A	B	A
sodium peroxide	D	A	-	A	B	A
sodium phosphate (mono)	D	A	-	A	A	A
sodium phosphate (dibasic)	D	A	-	A	A	A
sodium phosphat (tribasic)	A	A	-	A	A	A
sodium salts	A	-	A	A	-	A
sodium silicate	E	A	A	A	B	A
sodium sulphate	A	A	-	A	A	A
sodium sulphide	A	A	A	A	A	A
sodium sulphite	A	A	A	A	A	A
sodium trisulfate	A	-	-	A	-	A
sovasol #1, 2 & 3	D	-	-	A	-	A
sovalsol # 73 & 74	D	-	-	A	-	A
soybean oil	A	B	-	A	-	A
spry	A	E	-	A	-	A
SR-6 fuel	D	E	-	A	-	A
SR-10 fuel	D	E	-	A	-	A
standard oil mobilube GX90-EP lube	D	-	-	A	-	A
stannic chloride	B	A	-	A	B	A
stannic chloride 50%	B	-	-	A	-	A
stannous chloride	B	A	-	A	B	A
stauffer 7700	D	-	-	A	-	A
steam, below 350°F	D	-	-	A	-	D
steam, above 350°F	D	-	-	A	-	D
stearic acid	B	A	A	A	B	E
stoddard solvent	D	D	-	A	C	A
	-	-	-	-	-	-
	-	-	-	-	-	-
<b>T</b>	-	-	-	-	-	-
TT-S-735,type II	D	-	-	A	-	A
TT-S-735,type II	D	-	-	A	-	A
TT-S-735,type III	D	-	-	A	-	A
TT-S-735,type IV	C	-	-	A	-	A
TT-S-735,type V	C	-	-	A	-	A
TT-S-735,type VI	C	-	-	A	-	A
TT-T-656b	D	-	-	A	-	D
tannic acid	B	A	A	A	B	A
tannic acid 10%	B	-	-	A	B	A
tar bituminous	B	D	-	A	-	A
tartaric acid	A	A	A	A	B	A
terpineol	E	B	-	A	A	A
tertiary butyl alcohol	B	A	-	A	-	A
tertiary butyl catechol	E	B	-	A	-	A
tertiary butyl mercaptan	D	B	-	A	-	A

tetrabromomethane	D	D	-	A	-	A
tertabutyl titanate	E	B	-	A	-	A
tetrachloroethylene	E	D	-	A	D	A
tetraethyl lead	E	C	-	A	A	A
"tetraethyl lead" blend	E	-	-	A	-	A
tetrahydrofuran	E	C	-	A	D	D
tetralin	D	C	-	A	-	A
texaco 3450 gear oil	D	-	-	A	-	A
texaco capella A & AA	D	-	-	A	-	A
texaco meropa #3	D	-	-	A	-	A
texaco regal B	D	-	-	A	-	A
texaco uni-ttemp grease	B	-	-	A	-	A
texamatic "A" trans.oil	D	-	-	A	-	A
texamatic 1581 fluid	D	-	-	A	-	A
texamatic 3401 fluid	D	-	-	A	-	A
texamatic 3525 fluid	D	-	-	A	-	A
texamatic 3528 fluid	D	-	-	A	-	A
texas 1500 oil	B	-	-	A	-	A
thiodol TP-90B	E	-	-	A	-	A
thiodol TP-95	E	-	-	A	-	A
thionyl chloride	E	-	-	A	D	A
tidewater oil-beedol	B	-	-	A	-	A
tidewater oil multigear 140, EP lube	E	-	-	A	-	A
titanium tetrachloride	E	B	-	A	-	A
toluene	E	D	D	A	D	A
toluene discocyanids	E	B	-	A	-	D
transformer oil	B	D	-	A	B	A
transmission fluid type A	B	C	-	A	-	A
triacetin	E	A	-	A	-	D
triaryl phosphate	C	B	-	A	-	A
tributoxyethyl phosphate	E	B	-	A	-	A
tributyl mercaptan	D	B	-	A	-	A
tributyl phosphate	E	A	-	A	D	D
trichloroacetic acid	E	B	A	A	C	C
trichloroethane	D	B	D	A	D	A
trichloroethylene	D	B	D	A	D	A
tricresyl phosphate	C	A	B	A	D	B
triethanol amine	E	A	D	A	B	D
triethyl aluminium	E	B	-	A	-	B
triethyl borane	E	B	-	A	-	A
trifluoroethane	D	E	-	A	-	A
trinitroluene	E	A	-	A	-	B
trioctyl phosphate	C	B	-	A	D	B
tripoly phosphate	C	-	-	A	-	B
tung oil (china wood oil)	D	B	-	A	-	A
	-	-	-	-	-	-
	-	-	-	-	-	-
<b>X</b>						
xylene	D	D	D	A	D	A
xylylenes-mixed-aromatic amines	D	-	-	A	-	D

xylol	D	-	-	A	D	A
xenon	A	A	-	A	-	A
	-	-	-	-	-	-
<b>Z</b>						
zeolites	E	A	-	A	-	A
zinc aceate	D	A	-	A	A	D
zinc chloride	E	A	A	A	A	A
zinc salts	A	A	A	A	A	A
zinc sulfate	A	A	-	A	A	A

The following chart is purely informative and does not imply any responsibility of VENAIR. Our specialists are available to advise you on the most suitable hose for any chemical product.

# VENAIR IN THE WORLD



## EUROPE

- › **VENAIR GMBH NORTH**  
Emil-Figge-Strasse 80  
44227 - Dortmund - GERMANY  
T: (+49) 0231 97424490  
kontakt@venair.com
- › **VENAIR GMBH EAST**  
Rhinststraße 84  
D-12681 Berlin - GERMANY  
T: +49 (0) 30 549 865 06  
kontakt@venair.com
- › **VENAIR GMBH SOUTH**  
Robert-Bosch-Strasse 3  
71691 - Freiberg am Neckar - GERMANY  
T: +49 (0) 07141 9748653  
kontakt@venair.com
- › **VENAIR SARL EAST**  
Champ Perrier  
Parc du Grand Lyon  
01700 - Neyron - FRANCE  
T: (+33) 437 85 08 60  
contact@venair.com
- › **VENAIR SARL WEST**  
Immeuble SKYLINE 22  
Mail Pablo Picasso  
44000 Nantes - FRANCE  
T: (+33) 607 62 37 98  
contact@venair.com
- › **VENAIR LTD**  
Unit 50, Gateway 49 Trade Park  
Kerfoot Street, Warrington WA2 8NT  
UNITED KINGDOM  
T: (+44) 01925 629 617  
uksales@venair.com
- › **VENAIR IRELAND**  
Skybridge House  
Corballis Road North Dublin  
Airport Swords Co. Dublin - IRELAND  
T: +353 (0) 1 566 5200  
iesales@venair.com
- › **VENAIR SWEDEN**  
Hälsingegatan, 45  
11331 - Stockholm - SWEDEN  
T: +46 (0) 703 773 931  
sesales@venair.com
- › **VENAIR ESPAÑA SLU**  
Cerdanya, 26 - Pol. Ind. Nord  
08226 - Terrassa - SPAIN  
T: (+34) 937 364 861  
esventas@venair.com
- › **VENAIR SRL NORTH**  
Viale del Fontanone, scn  
Zona Industriale 15040 - Castelletto  
Monferrato (AL) - ITALY  
T: (+39) 0131 243903  
commerciale@venair.com
- › **VENAIR SRL SOUTH**  
Piazza Piemonte, 13  
04014 Pontinia LT - ITALY  
T: (+39) 331 8180847  
commerciale@venair.com

- › **VENAIR SP. Z O.O. (Poland)**  
Ul. Obornicka 51A  
62-002 - Suchy Las k-Poznań - POLAND  
T: (+48) 616 792 487  
plsales@venair.com
- › **VENAIR SP. Z O.O. (Warsaw)**  
Grzybowska 80/82 lok.  
700 00-844 Warszawa  
T: (+48) 22 487 11 44  
plsales@venair.com
- › **VENAIR ÜRÜNLER**  
Selamiali Mah. Cumhuriyet Cad. No: 46  
Kat 5 Bogazici Plaza  
Uskudar/Istanbul - TURKEY  
T: (+90) 216 295 0343  
venairtr@venair.com
- › **VENAIR O.O.O**  
Ul. Novgorodskaya, 1  
Building 5 - Office B420  
127576 - Moscow - RUSSIA  
T: (+7) 499 490 06 83  
rusales@venair.com
- › **VENAIR MANUFACTURING S.R.L**  
Ploiesti West Park DN 72, KM 8,  
London Street N. 7 Aricestii Rahtivani  
107025 Ploiesti (Prahova)  
T: (+40) 34422090  
rocontact@venair.com

## AFRICA

- › **VENAIR SOUTH AFRICA**  
1 Bompas Rd (3rd Floor),  
Dunkeld West, Johannesburg, 2196  
T: (076) 496 6795  
zasales@venair.com

## NORTH AMERICA

- › **VENAIR INC (Miami)**  
16713 Park Centre Blvd  
Miami Gardens, FL 33169 - USA  
T: (+1) 305 362 8920  
usasales@venair.com
- › **VENAIR INC (Los Angeles)**  
1693 E Del Amo Blvd  
Carson, CA 90746 - USA  
T: (+1) 424 785 8858  
usasales@venair.com
- › **VENAIR INC (Philadelphia)**  
The Navy Yard, Quarters M-2  
4601 - South Broad Street  
Philadelphia, PA 19112 - USA  
T: (+1) 267 386 8120  
usasales@venair.com
- › **VENAIR INC (Chicago)**  
1500 N Halsted Street, 2nd Floor  
Chicago, IL 60642 - USA  
T: (510) 612-3539  
USAsales@venair.com

## CENTRAL AMERICA

- › **VENAIR MEXICO**  
Godard, 108 col. Héroes de Nacozári  
Ciudad de México, CP 07780  
T: (+ 52) 1 55 5547 7744  
mxsales@venair.com

## SOUTH AMERICA

- › **VENAIR EIRELI**  
Rua João Teixeira da  
Silva 167, Subsolo  
Vila Invernada (Zona Leste)  
03348-040 - São Paulo - BRAZIL  
T: (+55) 11 3213 4968  
brsales@venair.com

## ASIA

- › **VENAIR CHINA NORTH**  
N.88 Jianguo Road, Building D,  
Office 3112, SOHO New Town,  
Chaoyang District, Beijing - CHINA  
T: (+86) 010-86393497  
cnsales@venair.com
- › **VENAIR CHINA MIDDLE**  
Jiangkai Road 177, Building 3, Floor 1,  
Room 02-03, Shanghai - CHINA  
T: (+86) 021-60555117  
cnsales@venair.com
- › **VENAIR CHINA SOUTH**  
Room 1421,14/F, Tower A  
China International Centre, n.33,  
Zhongshan San Road Yuexiu District,  
Guangzhou, 510055 - CHINA  
T: (+86) 020-81148395  
cnsales@venair.com
- › **VENAIR INDIA NORTH**  
CoWorks 15, Delhi - Jaipur Express Way,  
Sector 18, Gurugram  
122022 Haryana, INDIA  
insales@venair.com
- VENAIR INDIA WEST**  
Suave Spaces  
601, 602 Suratwala Mark Plazzo,  
Hinjawadi, Pune  
411057 Maharashtra, INDIA  
T: (+91) 9158750222  
insales@venair.com

- › **VENAIR INDIA SOUTH**  
Survey No. 118/2  
80 Feet Main Road, Jakkur Bengaluru  
560064 Karnataka, INDIA  
T: (+91) 80 2973 6800  
insales@venair.com

- › **VENAIR BIOTECH**  
Unit A, Floor 2  
Standard Factory, Road 14  
Tan Thuan EPZ, Tan Thuan Dong Ward  
District 7 - Ho Chi Minh City - VIETNAM  
T: (+84) 837 700 360  
vnsales@venair.com

- › **VENAIR SINGAPORE PTE LTD**  
133 Cecil Street, #08-02/02A  
Keck Seng Tower  
069535 - Singapore - SINGAPORE  
T: (+65) 6221 7445  
sgsales@venair.com

- › **VENAIR INDONESIA**  
Scientia Business Park Tower II, 2nd Floor  
Jalan Boulevard Gading  
Serpong Block 0/2  
Serpong - INDONESIA  
T: (+62) (21) 2188 5200



**IMPORTANT:**

The Company reserves the right to change, amend, modify, suspend, continue or terminate all or any part of this Catalogue at any time without notice.

It is the user's responsibility to ensure the suitability and safety of the VENAIR products for all intended uses. All the tests must be conducted in accordance with applicable regulatory requirements in order to determine the safety and effectiveness for use of the hoses in any particular application.

**Limited Warranty:** For a period of 6 months from the date of sale, VENAIR warrants this product to be free from defects in materials and workmanship. Our only obligation will be to replace any portion proving defective, or at our option, to refund the purchase price thereof. User assumes all other risk, if any, including the risk of injury, loss or damage, direct or consequential, arising out of the use, misuse, or inability to use, this product. THIS WARRANTY IS IN LIEU OF THE WARRANTIES OF MERCHANTABILITY, FITNESS FOR PARTICULAR PURPOSE, AND ALL OTHER WARRANTIES, EXPRESSED OR IMPLIED. No deviation is authorized. VENAIR assumes no obligations or liability for any advice furnished by it, or for results obtained with respect to those products. All such advice is given and accepted at the buyer's risk.

Vena, Venair and the Venair logo are trademarks of Venair Ibérica SA.

CAT 1 REV 01 EN - US.

Copyright 2018 / Venair Group / All rights reserved®