



UNCOMPROMISING QUALITY. COMMITMENT TO CARE.

Our products are free of any PVC and plasticizers linked to health and environmental concerns.



Healthier for you, your patients, and the environment

WilMarc™ specializes in providing PVC free and DEHP free products that have been shown to not create dioxins and other safety hazards during manufacturing or disposal.

PVC or Polyvinyl Chloride can be found in many different products in the hospital setting such as:

- · Nasal cannulas & tubing.
- · Urethral Catheters.
- Enteral feeding devices.
- Breathing circuits.

Environmental and Health Concerns

Production and incineration of PVC releases dioxins and other unsafe chemicals. Dioxins are widely distributed throughout the environment in low concentrations and are persistent, bioaccumulative, and toxic (PBT)¹

Plasticizers are phthalates that are used to make PVC flexible enough to be used in many medical devices.

• DEHP or Di (2-Ethylhexyl) Phthalates are not chemically bound to PVC and have the ability to leach, migrate or evaporate from PVC medical devices.

There have been a number of published studies regarding the effects of phthalates like DEHP on the body and although there is not consensus on the level of risks these chemicals pose, DEHP has been reported to produce a wide range of toxic effects including ^{2,3,4,5,10,11}:

- Male neonate reproductive system developmental issues.
- Attention Deficit Disorder (ADD)6.
- Functional liver damage.
- Cancer.





Improving patient care and reducing risks associated with oxygen therapy is our motivation.

WilMarc's senior management has over 70 years of combined manufacturing and design experience. For years clinicians have asked for PVC-Free products and WilMarc was formed to answer that call.

WilMarc™ is a woman owned company and our products are manufactured in the United States.

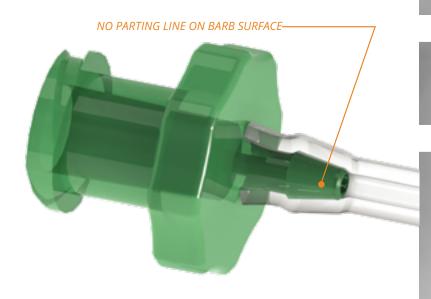


Utilizes materials that are designed to be used with anesthesia gases without degradation to the components, circuit or risks to the patient

- Some anesthesia gases can cause cracks in materials commonly used for connectors which can be found in filters and circuits 7.
- Damage to these connectors can lead to inability to provide adequate anesthesia and/or blocked filters potentially providing inaccurate readings.
- Proprietary material was formulated to be crush resistant with low-memory that helps prevent kinking.

Single-Barb Fittings = No Adhesive Assemblies

- · Eliminates health risks and environmental concerns from using volatile organic compounds 8.
- Strong pull force connections minimizing risk of disconnections.
- · Alleviates concerns related to aging and chemicals affecting the connections.



CONTENT PAGE

05 ADULT COAXIAL BREATHING **CIRCUIT**



06 ADULT **BREATHING**

CORRUGATED **CIRCUIT**

07 **ADULT EXPANDABLE** BREATHING **CIRCUIT**

80 **PEDIATRIC BREATHING** CIRCUIT



09 **FILTERS**



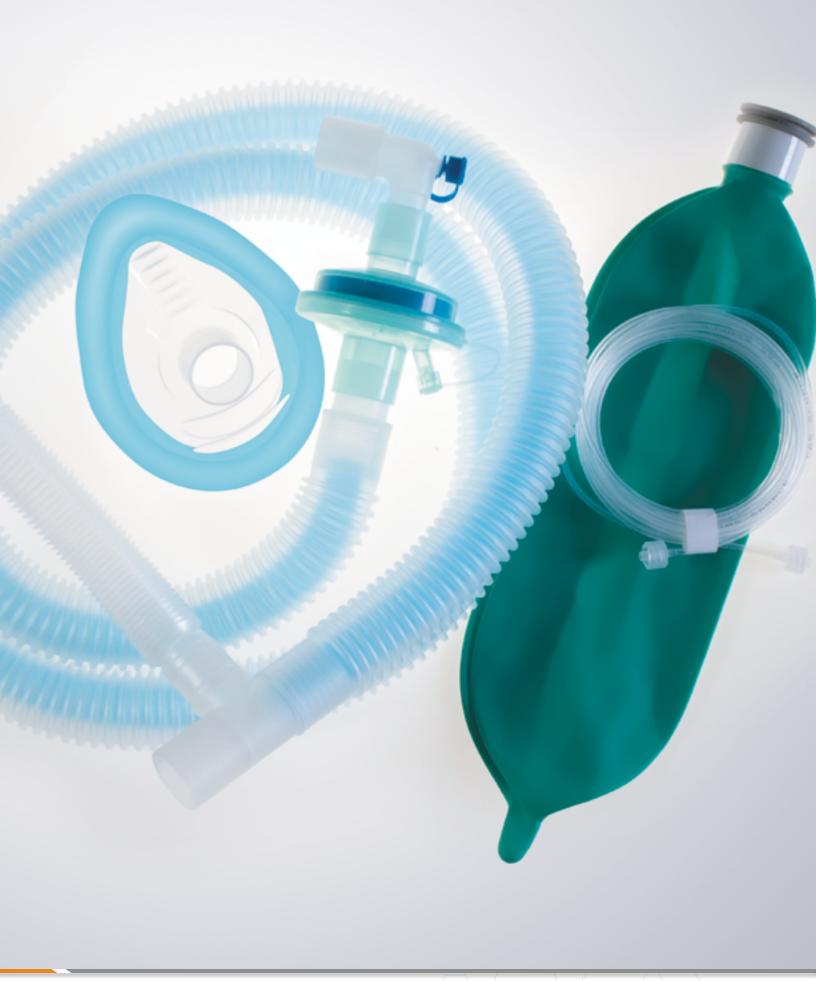
10 CLEANMASK™ **ANESTHESIA MASKS**



BAGS



GAS SAMPLING LINES



ADULT COAXIAL BREATHING CIRCUIT

- Designed to prevent problems associated with added dead space and weight.
- "Tube-within-a-tube" design eliminates twisting between the inspiratory and expiratory limbs.
- Provides natural heat and moisture conservation properties to that of a standard dual-limb circuit⁹.
- Removes clutter and disorder from the anesthesia field and ICU bed.
- Standard connections per ISO 5356-1.
- Configurations include choice of length of circuit, masks, gas sampling lines, and filters to provide a complete cost-effective kit.
- Breathing bags are not made with natural rubber latex.
- Able to manufacture breathing circuit lengths from 40" to 120".
- 20 each/case.



Part Number	Length	Tubing Type	Wye	Fittings	Fittings Filter		GSL	Mask
AC60	60 in.	Coaxial	Straight	Gas Sampling Elbow	-	-	-	-
AC60V	60 in.	Coaxial	Straight	Gas Sampling Elbow	BV	-	-	-
AC60H	60 in.	Coaxial	Straight	Gas Sampling Elbow	HMEF	-	-	-
AC60H2	60 in.	Coaxial	Straight	Gas Sampling Elbow	HMEF	2L	-	-
AC60B3	60 in.	Coaxial	Straight	Gas Sampling Elbow	BV & HMEF	3L	-	-
AC60V3M5	60 in.	Coaxial	Straight	Gas Sampling Elbow	BV	3L	10' M/M	Adult 5
AC60H3M	60 in.	Coaxial	Straight	Gas Sampling Elbow	HMEF	3L	10' M/M	-
AC60H2N5	60 in.	Coaxial	Straight	Gas Sampling Elbow	HMEF	2L	-	Adult 5
AC72	72 in.	Coaxial	Straight	Gas Sampling Elbow	-	-	-	-
AC72V	72 in.	Coaxial	Straight	Gas Sampling Elbow	BV	-	-	-
AC72W	72 in.	Coaxial	Straight	Gas Sampling Elbow	(2) BV	-	-	-
AC72H	72 in.	Coaxial	Straight	Gas Sampling Elbow	HMEF	-	-	-
AC72V3	72 in.	Coaxial	Straight	Gas Sampling Elbow	BV	3L	-	-
AC72H2M5	72 in.	Coaxial	Straight	Gas Sampling Elbow	HMEF	2L	10' M/M	Adult 5
AC72V2M5	72 in.	Coaxial	Straight	Gas Sampling Elbow	BV	2L	10' M/M	Adult 5
AC72H2N5	72 in.	Coaxial	Straight	Gas Sampling Elbow	HMEF	2L	-	Adult 5
AC72E3	72 in.	Coaxial	Straight	Gas Sampling Elbow	HEPA	3L	-	-
AC90	90 in.	Coaxial	Straight	Gas Sampling Elbow	-	-	-	-
AC90V	90 in.	Coaxial	Straight	Gas Sampling Elbow	BV	-	-	-
AC90H	90 in.	Coaxial	Straight	Gas Sampling Elbow	HMEF	-	-	-
AC90H2	90 in.	Coaxial	Straight	Gas Sampling Elbow	HMEF	2L	-	-
AC90P3M5	90 in.	Coaxial	Straight	Gas Sampling Elbow	HEPA	3L	10' M/M	Adult 5
AC90H2N5	90 in.	Coaxial	Straight	Gas Sampling Elbow	HMEF	2L	-	Adult 5
AC108V3M	108 in.	Coaxial	Straight	Gas Sampling Elbow	BV	3L	10' M/M	-
AC120V3M	120 in.	Coaxial	Straight	Gas Sampling Elbow	BV	3L	10' M/M	-

ADULT CORRUGATED BREATHING CIRCUIT

- · Lightweight and flexible to decrease kinking.
- 22mm corrugated tubing.
- Allows gas to freely pass.
- Standard connections per ISO 5356-1.
- Configurations include choice of length of circuit, masks, gas sampling lines, and filters to provide a complete cost-effective kit.
- Breathing bags are not made with natural rubber latex.
- Able to manufacture breathing circuit lengths from 40" to 120".
- 20 each/case.



Part Number	Length	Tubing Type	Wye	Fittings	Filter	Breathing Bag	GSL	Mask
AR60	60 in.	Corrugated	Parallel	Gas Sampling Elbow	-	-	-	-
AR60V	60 in.	Corrugated	Parallel	Gas Sampling Elbow	BV	-	-	-
AR60H	60 in.	Corrugated	Parallel	Gas Sampling Elbow	HMEF	-	-	-
AR60V2	60 in.	Corrugated	Parallel	Gas Sampling Elbow	BV	2L	-	-
AR60V2M5	60 in.	Corrugated	Parallel	Gas Sampling Elbow	BV	2L	10' M/M	Adult 5
AR60H3M5	60 in.	Corrugated	Parallel	Gas Sampling Elbow	HMEF	3L	10' M/M	Adult 5
AR60V2M	60 in.	Corrugated	Parallel	Gas Sampling Elbow	BV	2L	10' M/M	
AR60V2N5	60 in.	Corrugated	Parallel	Gas Sampling Elbow	BV	2L	-	Adult 5
AR72V3M5	72 in.	Corrugated	Parallel	Gas Sampling Elbow	BV	3L	10' M/M	Adult 5
AR72W2M	72 in.	Corrugated	Parallel	Gas Sampling Elbow	(2) BV	2L	10' M/M	-
AR72W3	72 in.	Corrugated	Parallel	Gas Sampling Elbow	(2) BV	3L	-	-
AR90	90 in.	Corrugated	Parallel	Gas Sampling Elbow	-	-	-	-
AR90V	90 in.	Corrugated	Parallel	Gas Sampling Elbow	BV	-	=	-
AR90H	90 in.	Corrugated	Parallel	Gas Sampling Elbow	HMEF	-	-	-
AR90E3	90 in.	Corrugated	Parallel	Gas Sampling Elbow	HEPA	3L	=	-
AR90V2	90 in.	Corrugated	Parallel	Gas Sampling Elbow	BV	2L	-	-
AR90V2M5	90 in.	Corrugated	Parallel	Gas Sampling Elbow	BV	2L	10' M/M	Adult 5
AR90H2M5	90 in.	Corrugated	Parallel	Gas Sampling Elbow	HMEF	2L	10' M/M	Adult 5
AR90V2M	90 in.	Corrugated	Parallel	Gas Sampling Elbow	BV	2L	10' M/M	-
AR90V2N5	90 in.	Corrugated	Parallel	Gas Sampling Elbow	BV	2L	-	Adult 5
AR108V3M	108 in.	Corrugated	Parallel	Gas Sampling Elbow	BV	3L	10' M/M	-
AR120V3M	120in.	Corrugated	Parallel	Gas Sampling Elbow	BV	3L	10' M/M	-

ADULT EXPANDABLE BREATHING CIRCUIT

- Lightweight and flexible.
- 22 mm expandable tubing.
- Standard connections per ISO 5356-1.
- Configurations include choice of length of circuit, masks, gas sampling lines, and filters to provide a complete cost-effective kit.
- Allows the anesthesia machine and other equipment to be located away from the patient's head.
- Breathing bags are not made with natural rubber latex.
- Able to manufacture breathing circuit lengths from 40" to 120".
- 20 each/case.



Part Number	Length	Tubing Type	Wye	Fittings Filter		Breathing Bag	GSL	Mask
AX72	72 in.	Expandable	Parallel	Gas Sampling Elbow -		-	-	-
AX72V	72 in.	Expandable	Parallel	Gas Sampling Elbow	BV	-	-	-
AX72H	72 in.	Expandable	Parallel	Gas Sampling Elbow	HMEF	-	-	-
AX72B3M5	72 in.	Expandable	Parallel	Gas Sampling Elbow	BV & HMEF	3L	10' M/M	Adult 5
AX72N3M5	72 in.	Expandable	Parallel	Gas Sampling Elbow	-	3L	10' M/M	Adult 5
AX72V2	72 in.	Expandable	Parallel	Gas Sampling Elbow	BV	2L	-	
AX72V2M5	72 in.	Expandable	Parallel	Gas Sampling Elbow	BV	2L	10' M/M	Adult 5
AX72H2M5	72 in.	Expandable	Parallel	Gas Sampling Elbow	HMEF	2L	10' M/M	Adult 5
AX72V2M	72 in.	Expandable	Parallel	Gas Sampling Elbow	BV	2L	10' M/M	
AX72V2N5	72 in.	Expandable	Parallel	Gas Sampling Elbow	BV	2L	-	Adult 5
AX72W2M	72 in.	Expandable	Parallel	Gas Sampling Elbow	(2) BV	2L	10' M/M	-
AX72W3	72 in.	Expandable	Parallel	Gas Sampling Elbow	(2) BV	3L	-	
AX90	90 in.	Expandable	Parallel	Gas Sampling Elbow	-	-	-	-
AX90V	90 in.	Expandable	Parallel	Gas Sampling Elbow	BV	-	-	-
AX90H	90 in.	Expandable	Parallel	Gas Sampling Elbow	HMEF	-	-	-
AX90E3	90 in.	Expandable	Parallel	Gas Sampling Elbow	HEPA	3L	-	-
AX90V2	90 in.	Expandable	Parallel	Gas Sampling Elbow	BV	2L	-	-
AX90V2M5	90 in.	Expandable	Parallel	Gas Sampling Elbow	BV	2L	10' M/M	Adult 5
AX90H2M5	90 in.	Expandable	Parallel	Gas Sampling Elbow	HMEF	2L	10' M/M	Adult 5
AX90V2M	90 in.	Expandable	Parallel	Gas Sampling Elbow	BV	2L	10' M/M	
AX90V2N5	90 in.	Expandable	Parallel	Gas Sampling Elbow	BV	2L	-	Adult 5
AX108V3M	108in.	Expandable	Parallel	Gas Sampling Elbow	BV	3L	10' M/M	
AX120V3M	120in.	Expandable	Parallel	Gas Sampling Elbow	BV	3L	10' M/M	

PEDIATRIC BREATHING CIRCUIT

- Smaller diameter tubing designed for pediatric use.
- All components are free of PVC and Phthalates including DEHP and Bisphenol A (BPA).
- Standard connections per ISO 5356-1.
- Configurations include choice of length of circuit, masks, gas sampling lines, and filters to provide a complete cost-effective kit.
- Breathing bags are not made with natural rubber latex.
- Able to manufacture breathing circuit lengths from 40" to 120".
- 20 each/case.



Part Number	Length	Tubing Type	Wye	Fittings	Filter	Breathing Bag	GSL	Mask
PEDIATRIC COR	RUGATED B	REATHING CIRC	UIT					
PR60	60 in.	Corrugated	Parallel	Gas Sampling Elbow	-	-	-	-
PR60V	60 in.	Corrugated	Parallel	Gas Sampling Elbow	BV	-		-
PR60V1	60 in.	Corrugated	Parallel	Gas Sampling Elbow	BV	1L	-	-
PR60V1M3	60 in.	Corrugated	Parallel	Gas Sampling Elbow	BV	1L	10' M/M	Ped 3
PR60H1M3	60 in.	Corrugated	Parallel	Gas Sampling Elbow	HMEF	1L	10' M/M	Ped 3
PR60V1M	60 in.	Corrugated	Parallel	Gas Sampling Elbow	BV	1L	10' M/M	
PR90	90 in.	Corrugated	Parallel	Gas Sampling Elbow	-	-	-	-
PR90V	90 in.	Corrugated	Parallel	Gas Sampling Elbow	BV	-		-
PR90V1	90 in.	Corrugated	Parallel	Gas Sampling Elbow	BV	1L	-	-
PR90V1M3	90 in.	Corrugated	Parallel	Gas Sampling Elbow	BV	1L	10' M/M	Ped 3
PR90H1M3	90 in.	Corrugated	Parallel	Gas Sampling Elbow	HMEF	1L	10' M/M	Ped 3
PR90V1M	90 in.	Corrugated	Parallel	Gas Sampling Elbow	BV	1L	10' M/M	

Customization available. Please contact us at 1-800-685-6706 for more information.

Part Number	Length	Tubing Type	Wye	Fittings	Filter	Breathing Bag	GSL	Mask
PEDIATRIC EXP	ANDABLE BE	REATHING CIRCL	JIT					
PX72	72 in.	Expandable	Parallel	Gas Sampling Elbow	-	-	-	-
PX72V	72 in.	Expandable	Parallel	Gas Sampling Elbow	BV	-	-	-
PX72V1M3	72 in.	Expandable	Parallel	Gas Sampling Elbow	BV	1L	10' M/M	Ped 3
PX72V1M	72 in.	Expandable	Parallel	Gas Sampling Elbow	BV	1L	10' M/M	
PX90	90 in.	Expandable	Parallel	Gas Sampling Elbow	-	-	-	-
PX90V	90 in.	Expandable	Parallel	Gas Sampling Elbow	BV	-	-	•
PX90V1M3	90 in.	Expandable	Parallel	Gas Sampling Elbow	BV	1L	10' M/M	Ped 3
PX90V1M	90 in.	Expandable	Parallel	Gas Sampling Elbow	BV	1L	10' M/M	

Part Number	Length	Tubing Type	Wye Fittings		Filter	Breathing Bag	GSL	Mask
PEDIATRIC COA	XIAL BREATH	ING CIRCUIT						
PC40	40 in.	Coaxial	Straight	Gas Sampling Elbow	-	-	-	-
PC40V	40 in.	Coaxial	Straight	Gas Sampling Elbow	BV	-	-	-
PC40H	40 in.	Coaxial	Straight	Gas Sampling Elbow	HMEF	-	-	-
PC40V1M3	40 in.	Coaxial	Straight	Gas Sampling Elbow	BV	1L	10' M/M	Ped 3
PC40H1M3	40 in.	Coaxial	Straight	Gas Sampling Elbow	HMEF	1L	10' M/M	Ped 3
PC40V1M	40 in.	Coaxial	Straight	Gas Sampling Elbow	BV	1L	10' M/M	
PC40V1N3	40 in.	Coaxial	Straight	Gas Sampling Elbow	BV	1L	-	Ped 3
PC60	60 in.	Coaxial	Straight	Gas Sampling Elbow	-	-	-	-
PC60V	60 in.	Coaxial	Straight	Gas Sampling Elbow	BV	-	-	-
PC60H	60 in.	Coaxial	Straight	Gas Sampling Elbow	HMEF	-	-	-
PC60V1M3	60 in.	Coaxial	Straight	Gas Sampling Elbow	BV	1L	10' M/M	Ped 3
PC60H1M3	60 in.	Coaxial	Straight	Gas Sampling Elbow	HMEF	1L	10' M/M	Ped 3
PC60V1M	60 in.	Coaxial	Straight	Gas Sampling Elbow	BV	1L	10' M/M	
PC60V1N3	60 in.	Coaxial	Straight	Gas Sampling Elbow	BV	1L	-	Ped 3
PC72V1M	72in.	Coaxial	Straight	Gas Sampling Elbow	BV	1L	10' M/M	
PC90V1M	90in.	Coaxial	Straight	Gas Sampling Elbow	BV	1L	10' M/M	

Customization available. Please contact us at 1-800-685-6706 for more information.

FILTERS

- Bacterial/viral filters help prevent cross contamination.
- Heat/moisture exchanger filters designed to trap moisture and reduce moisture build-up.
- Bacterial & Viral Filtration Efficiency >99.99%.
- Gas sampling port with tethered cap included.

Part Number	Description	Case Qty.
BVF001	Bacterial/Viral Filter with Port	20/case
BVF002	Bacterial/Viral Filter without Port	20/case
HMEF001	Heat Moisture Exchange Filter with Port	20/case
HEPA001	High Efficiency Particulate Arresting (HEPA) Filter with Port	20/case
PBF001	Pediatric Bacterial/Viral Filter with Port	20/case
PHMEF001	Pediatric Heat Moisture Exchange Filter with Port	20/case





CleanMask™ ANESTHESIA MASKS

- All components are free of PVC and Phthalates including DEHP and Bisphenol A (BPA).
- MRI Safe.
- · Odor Free.
- · Not made with natural rubber latex.
- Hand contours designed for a better grip and tighter seal.
- All masks come with a hook ring for attachment of the mask with a strap.

Part Number	Description	Mask Color	Case Qty.
CM1001	Size 1, Newborn	Natural	20/case
CM1002	Size 2, Infant	Purple	20/case
CM1003	Size 3, Toddler	Orange	20/case
CM1004	Size 4, Child/Small Adult	Yellow	20/case
CM1005	Size 5, Medium Adult	Blue	20/case
CM1006	Size 6, Large Adult	Green	20/case



BREATHING BAGS

- Not made with natural rubber latex.
- Accommodates all patient needs and physician preferences.
- Designed to deliver uniform inflation.
- Offered in a variety of sizes.

Part Number	Description	Case Qty.
LFB00	Breathing Bag, .5L	20/case
LFB01	Breathing Bag, 1L	20/case
LFB02	Breathing Bag, 2L	20/case
LFB03	Breathing Bag, 3L	20/case



GAS SAMPLING LINES

- All components are free of PVC and Phthalates including DEHP and Bisphenol A (BPA).
- Economical & Lightweight.
- Available in two ID sizes: .042" and .047". Custom sizes are available.
- Offered in both male or female luer for machine fittings.
- Individually bagged in case quantities of 10, 50 or 100.
- 0.8µ filter option available (special order).



Part Number	Tubing Type	Length	Fittings	Filter	Case Quantity
003-MM-10	.047"	10ft. / 3m	MM	None	10/case
003-MF-10	.047"	10ft. / 3m	MF	None	10/case
002-MM-10	.042"	10ft. / 3m	MM	None	10/case
002-MF-10	.042"	10ft. / 3m	MF	None	10/case
003-MM-50	.047"	10ft. / 3m	MM	None	50/case
003-MF-50	.047"	10ft. / 3m	MF	None	50/case
002-MM-50	.042"	10ft. / 3m	MM	None	50/case
002-MF-50	.042"	10ft. / 3m	MF	None	50/case
003-MML-50	.047"	10ft. / 3m	MM Elbow	None	50/case
003-MFL-50	.047"	10ft. / 3m	MF Elbow	None	50/case
003-MM-100	.047"	10ft. / 3m	MM	None	100/case
003-MF-100	.047"	10ft. / 3m	MF	None	100/case
002-MM-100	.042"	10ft. / 3m	MM	None	100/case
002-MF-100	.042"	10ft. / 3m	MF	None	100/case
003-MML-100	.047"	10ft. / 3m	MM Elbow	None	100/case
003-MFL-100	.047"	10ft. / 3m	MF Elbow	None	100/case

REFERENCES

1. U.S. EPA. A Multimedia Strategy for Priority Persistent, Bioaccumulative, and Toxic (PBT) Pollutants. Available:

http://www.epa.gov/pbt/pubs/fact.htm [April 18, 2011]

- 2. Kluwe WM, McConnell EE, Huff JE, Haseman JK, Douglas JF, Hartwell WV. Carcinogenicity testing of phthalate esters and related compounds by the National Toxicology Program and the National Cancer Institute. Environmental Health Perspectives. 1982;45:129-133.
- 3. Tickner, J. A., Schettler, T., Guidotti, T., McCally, M. and Rossi, M. (2001), Health risks posed by use of Di-2-ethylhexyl phthalate (DEHP) in PVC medical devices: A critical review. Am. J. Ind. Med., 39: 100–111.
- 4. Calafat AM, Needham LL, Silva MJ, Lambert G. Exposure to Di-(2-Ethylhexyl) Phthalate Among Premature Neonates in a Neonatal Intensive Care Unit Pediatrics 2004; 113:5 e429-e434
- 5. U.S. Food and Drug Administration (USFDA 2001) Safety Assessment of Di(2-ethylhexyl)phthalate (DEHP) Released from PVC Medical Devices. FDA Center for Devices and Radiological Health, Rockville, MD, September.
- 6. Verstraete S., et al., (2016) Circulating phthalates during critical illness in children are associated with long-term attention deficit: a study of a development and a validation cohort Intensive Care Medicine 2016 42:379-392
- 7. Lim HS, Cho SH, Kim DK, Lee SK, Ko SH (2010), Isoflurane cracks the polycarbonate connector of extracorporeal circuit A case report. Koren Journal of Anesthesiology 2010 March; 58(3): 304-306
- 8. U.S. EPA. Technical Overview of Volatile Organic Compounds. Available: https://www.epa.gov/indoor-air-quality-iaq/technical-overview-volatile-organic-compounds [October 15, 2015]
- 9. Mizrak A., et al., (2011) Comparison of the Coaxial Circle Circuit with the Conventional Circle Circuit. Eurasian Journal of Medicine 2011; 43: 92-8
- 10. European Chemical Agency (ECHA), March 2017. ANNEX XV RESTRICTION REPORT FOUR PHTHALATES (DEHP, DBP, DIBP and BBP)
- 11. Scientific Committee on Emerging and Newly-Identified Health Risks (SCENIHR), Rev. Feb 2016. Opinion on The safety of medical devices containing DEHP plasticized PVC or other plasticizers on neonates and other groups possibly at risk (2015 update).

Although measures are taken to ensure the information in catalogs and on the website is as timely and accurate as possible, WilMarc assumes no responsibility for the accuracy of such information. Actual products may differ slightly in appearance to images shown. Reuse of a single use device may create a risk of patient or user infection. Please consult product labels and inserts for more detailed safety information and instructions for use.

Handle and dispose of in accordance with accepted medical practice and applicable local, state and federal laws and regulations. Please consult product label and insert for any indications, contraindications, hazards, warnings, cautions and directions for use.

UNCOMPROMISING QUALITY. COMMITMENT TO CARE.



Copyright © 2016-2019 WilMarc, LLC. All Rights Reserved. WilMarc, WilMarc logo, and CleanMask are trademarks of WilMarc Holdings, LLC.

