

Approved materials list (updated to 03/06/2019)

POLYMER AND HARDNESS	LAV.EL. GOMMA CODE	APPROVALS	COMPLIANCES
CR 70Sh BLACK	01/A70 CR	UL 157 (F,G,J, Refrigerants)	DVGW EN549 B2H3
CR 80Sh BLACK	01/A80 CR	UL 157 (F,G,J, Refrigerants)	
EPDM 50Sh BLACK	01/U50 EP	Water: CARSO ACS, BELGAQUA HYDROCHECK, TZW UBA (23°C e 85°C)+ W270, TGM ÖNORM B5014-1	DVGW EN681-1 WA WB, D.M. 174/2004, FDA177.2600
EPDM 60Sh BLACK	01/U60 EP	Water: BELGAQUA HYDROCHECK, CARSO CLP, TZW UBA (23°C e 85°C), TZW W270, WRAS BS6920 (85°C), NSF ANSI 61 (82°C), UL 157	D.M. 174/2004, FDA 177.2600
EPDM 70 Sh BLACK	01/U70 EP	Water: DVGW W534 (EN681 WA WB + UBA (23°C e 85°C) + W270), WRAS BS6920 (85°C), TGM ÖNORM B5014-1, NSF ANSI 61(82°C),CARSO ACS, KIWA BRL-K17504 (110°C + ClassIII), AS/NZS 4020,BELGAQUA HYDROCHECK UL 157	D.M. 174/2004, FDA177.2600 Ozone resistance(according to EN681-1) Silicon free
EPDM 80Sh BLACK	01/U80 EP	Water: DVGW W534 (EN681 WA WB + UBA (23°C e 85°C)+ W270), CARSO ACS, BELGAQUA HYDROCHECK, TGM ÖNORM B5014-1, WRAS BS6920 (85°C), NSF ANSI 61 (82 °C) UL 157	D.M. 174/2004, FDA177.2600 Ozone resistance (according to EN681-1). EN549 B2H3 (only mechanical requirements)
EPDM 70 Sh NERO	01/W70 EP	Water: NSF ANSI 61 (82°C), AS/NZS 4020	Chlorine and Chloramine resistance (ASTM D 6284-09)
FKM 70Sh BLACK	01/AH70 FKM	Gas : EN549 E1H3, DVGW EN682 GBL Water: DVGW W534 (EN681 WA WB + UBA (23°C e 85°C) + W270)	Ozone resistance (according to EN549)
FKM 80Sh BLACK	01/E80 FKM	UL 157 (B,C,D,F,G,H,J) Gas: EN549 E1H3	
FKM 70Sh BLACK	01/G70 FKM	Gas: EN549 E1H3	Ozone resistance (according to EN549)
FKM 70Sh BLACK	01/I70 FKM	UL 157 (F,G,J)	
FKM 70Sh BLACK	01/L70 FKM	UL 157 (F,G,J) Gas: DVGW EN549 B2H3	Ozone resistance (according to EN549)

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FKM 70Sh GREEN	01/S70 FKM	Gas: DVGW EN549 E1H3	VOLVO STD 412-0002 FKM 70-1, Silicon free
FKM 60Sh GREEN	01/T60 FKM	Water: WRAS BS6920 (85°C) Gas: EN549 E1H2	Ozone resistance (according to EN549), FDA 177.2600
FKM 70Sh GREEN	01/T70 FKM	Gas: DVGW EN549 E1H3 Water: WRAS BS6920 (85°C), NSF ANSI 61 (82°C)	DVGW EN681-1 WB, FDA 177.2600 Ozone resistance (according to EN681-1)
FKM 80Sh GREEN	01/T80 FKM	Water: WRAS BS6920 (85°C)	FDA 177.2600
FVMQ 60Sh BLUE	01/A60 FMQ	Gas: DVGW EN549 E2H2 UL 157 (F,G,J)	Ozone resistance (according to EN549)
HNBR 60Sh BLUE	01/A60HNBR		DVGW EN 549 B2H2 + ozone
HNBR 60Sh YELLOW	01/C60 HNBR		DVGW EN 549 B2H2 + ozone
HNBR 70Sh BLACK	01/C70 HNBR	Gas: DVGW EN549 D2H3	Ozone resistance (according to EN549)
HNBR 55Sh BLACK	01/D55 HNBR	Gas: DVGW EN549 B2H2	Ozone resistance (according to EN549)
HNBR 60Sh GREEN	01/D60 HNBR		DVGW EN 549 B2H2 + ozone
HNBR 70Sh BLACK	01/D70 HNBR	Gas: DVGW EN549 B2H3	Ozone resistance (according to EN549)
HNBR 60Sh RED	01/E60 HNBR		DVGW EN 549 B2H2 + ozone
HNBR 70Sh YELLOW	01/E70 HNBR	Gas: DVGW EN549 B2H3, DVGW EN682 GBL	Ozone resistance (according to EN549)
HNBR 60Sh BROWN	01/F60 HNBR		DVGW EN 549 B2H2 + ozone
HNBR 60Sh GREY	01/G60 HNBR		DVGW EN 549 B2H2 + ozone
HNBR 70Sh YELLOW	01/I70 HNBR	UL 157 (G) Gas: DVGW EN549 B2H3	EN681-1 WB, Silicon free, Ozone resistance (according to EN549)
HNBR 70Sh YELLOW	01/M70 HNBR	Gas: EN682 GBL	Ozone resistance (according to EN682)
NBR 50Sh BLACK	01/AA50 NBR	Water: WRAS BS6920 (23°C)	
NBR 60Sh BLACK	01/AA60 NBR	Water: WRAS BS6920 (23°C),	
NBR 70Sh BLACK	01/AA70 NBR	Water: CARSO ACS, WRAS BS6920(23°C), NSF ANSI 61 (23°C), Gas: DVGW EN549 B2H3, DVGW EN682 GBL + VP406 (complete work sheet)	Ozone resistance (according to EN682) D.M. 174/2004 EN681-1 WA
NBR 80Sh BLACK	01/AA80 NBR	Water: WRAS BS6920 (23°C), NSF ANSI 61 (23°C),	DVGW EN681-1 WA

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NBR 75Sh BLACK	01/AM75 NBR	Gas: DVGW EN549 B2H3; UL 157 (F,G,J)	
NBR 60Sh BLACK	01/AN60 NBR	UL 157 (F,G,J) Gas: DVGW EN549 B2H2	Ozone resistance (according to EN549)
NBR 60Sh BLACK	01/AS60 NBR	UL 157 (F,G,J)	DVGW EN549 B2H2
NBR 65Sh BLACK	01/AS65 NBR	Gas: DVGW EN549 B2H3	Ozone resistance (according to EN549)
NBR 70Sh BLACK	01/AS70 NBR	UL 157 (F,G,I,J) Gas: DVGW EN549 B2H3	Ozone resistance (according to EN549)
NBR 80Sh BLACK	01/AS80 NBR	Gas: DVGW EN549 B2H3 UL 157 (F,G,I,J)	Ozone resistance (according to EN549)
NBR 50Sh BLACK	01/B50 NBR	Water: CARSO CLP, WRAS BS6920 (23°C)	
NBR 60Sh BLACK	01/B60 NBR	Water: CARSO CLP, WRAS BS6920 (23°C)	FDA 177.2600
NBR 70Sh BLACK	01/B70 NBR	Water: CARSO ACS, TZW UBA (23°C e 85°C), TZW W270, WRAS BS6920 (23°C), NSF ANSI 61 (82°C) Gas: DVGW EN549 B1H3	D.M. 174/2004; FDA 177.2600
NBR 80Sh BLACK	01/B80 NBR	Water: CARSO CLP, TZW UBA (23°C e 85°C), TZW W270, NSF ANSI 61 (82°C), WRAS BS6920 (23°C)	
NBR 85Sh BLACK	01/B85 NBR	Gas: DVGW EN549 B2H3	Silicon free
NBR 60Sh BLACK	01/D60 NBR	UL 157 (F,G,J) Gas: DVGW EN549 B2H2	
NBR 80Sh BLACK	01/D80 NBR	Gas: DVGW EN549 B2H3	
NBR 85Sh BLACK	01/D85 NBR	UL 157 (F,G,J)	EN549 B1H3
NBR 50Sh BLACK	01/E50 NBR	Gas: DVGW EN549 A2H2	Ozone resistance (according to EN549)
NBR 70Sh BLACK	01/H70 NBR	Gas: EN549 B2H3	Silicon free
NBR 70Sh GREY	01/Q70 NBR	Water: NSF ANSI61 (82°C)	
VMQ 70Sh RED	01/A70 VMQ	Gas: DVGW EN549 E1H3	AMS 3304, FDA 177.2600, Ozone resistance (according to EN549)
VMQ 50Sh GREY	01/C50 VMQ	Water: CARSO CLP, WRAS BS6920 (85°C), NSF ANSI 61 (82°C)	
VMQ 60Sh GREY	01/C60 VMQ	Water: CARSO CLP, WRAS BS6920 (85°C), NSF ANSI 61 (82°C)	FDA 177.2600
VMQ 70Sh GREY	01/C70 VMQ	Water: CARSO CLP, WRAS BS6920 (85°C), NSF ANSI 61 (82°C)	

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VMQ 65Sh BLUE	01/F65 VMQ	Gas: DVGW EN549 E1H3	
VMQ 50Sh BLUE	01/L50 VMQ	Water: CARSO CLP, WRAS BS6920 (85°C), NSF ANSI 61 (82°C)	
VMQ 60Sh BLUE	01/L60 VMQ	Water: CARSO CLP, WRAS BS6920 (85°C), NSF ANSI 61 (82°C)	
VMQ 70Sh BLUE	01/L70 VMQ	Water: CARSO CLP, WRAS BS6920 (85°C), NSF ANSI 61 (82°C)	Volvo VCS 1225,909
VMQ 50Sh RED	01/M50 VMQ	Water: DVGW Cold water certificate (EN681 WA + KTW (85°C)+ W270), CARSO CLP, WRAS BS6920 (85°C), NSF ANSI 61 (82°C)	DVGW EN681-1 WA WB Ozone resistance (according to EN681-1)
VMQ 55Sh RED	01/M55 VMQ	Water: TZW KTW (23°C), TZW W270	CLP, BS6920, BFR Racc. Part XV, LFGB sec.31 and Reg. No. 1935/2004, ZEK Cat.1
VMQ 60Sh RED	01/M60 VMQ	Water: CARSO CLP, TZW KTW (23°C), TZW W270, WRAS BS6920 (85°C), NSF ANSI 61 (82°C)	FDA, USP class VI, EN549
VMQ 70Sh RED	01/M70 VMQ	Water: DVGW Cold water certificate (EN681 WA + KTW (85°C)+ W270), CARSO CLP, T WRAS BS6920 (85°C), NSF ANSI 61 (82°C)	EN681 WAWB, FDA, BfR
VMQ 50Sh WHITE	01/N50 VMQ	Water: CARSO CLP, WRAS BS6920 (85°C), NSF ANSI 61 (82°C)	
VMQ 60Sh WHITE	01/N60 VMQ	Water: CARSO CLP, WRAS BS6920 (85°C), NSF ANSI 61 (82°C)	
VMQ 70Sh WHITE	01/N70 VMQ	Water: CARSO CLP, WRAS BS6920 (85°C), NSF ANSI 61 (82°C)	

In blue: New approvals

Other DBL omologations:

01/B70 EP DBL 6038.14 - DBL 5307.10

01/AF70 FKM DBL 6038.40

01/A70 ACM DBL 6038.63