

## Approved materials list (updated to 09/10/2017)

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	<b>Water:</b> CARSO ACS, BELGAQUA HYDROCHECK, TZW UBA (23°C e 85°C), TZW W270, TGM ÖNORM B5014-1	DVGW EN681-1 WA WB, D.M. 174/2004, FDA177.2600
EPDM 60Sh BLACK	01/U60 EP	<b>Water:</b> 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, FDA177.2600
EPDM 70 Sh BLACK	01/U70 EP	<b>Water:</b> 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), KIWA BRL-K17504 (110°C + ClassIII), AS/NZS 4020, CARSO ACS, BELGAQUA HYDROCHECK UL 157	D.M. 174/2004, FDA177.2600 Ozone resistance (according to EN681-1). Silicon free
EPDM 80Sh BLACK	01/U80 EP	<b>Water:</b> 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	<b>Water:</b> NSF ANSI 61 (82°C), AS/NZS 4020	Chlorine and Chloramine resistance (ASTM D 6284-09)
FKM 70Sh BLACK	01/AH70 FKM	<b>Gas:</b> DVGW EN549 E1H3, DVGW EN682 GBL <b>Water:</b> TZW UBA, TZW W270	Ozone resistance (according to EN549), EN681 WA WB
FKM 80Sh BLACK	01/E80 FKM	UL 157 (B,C,D,F,G,H,J) <b>Gas:</b> EN549 E1H3	
FKM 70Sh BLACK	01/G70 FKM	<b>Gas:</b> 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) <b>Gas:</b> DVGW EN549 B2H3	Ozone resistance (according to EN549)

<b>POLYMER AND HARDNESS</b>	<b>LAV.EL. GOMMA CODE</b>	<b>APPROVALS</b>	<b>COMPLIANCES</b>
FKM 70Sh GREEN	<b>01/S70 FKM</b>	<b>Gas:</b> DVGW EN549 E1H3	VOLVO STD 412-0002 FKM 70-1, Silicon free
FKM 60Sh GREEN	<b>01/T60 FKM</b>	<b>Water:</b> WRAS BS6920 (85°C) <b>Gas:</b> EN549 E1H2	Ozone resistance (according to EN549), FDA 177.2600
FKM 70Sh GREEN	<b>01/T70 FKM</b>	<b>Gas:</b> DVGW EN549 E1H3 <b>Water:</b> 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	<b>01/T80 FKM</b>	<b>Water:</b> WRAS BS6920 (85°C)	FDA 177.2600
FVMQ 60Sh BLUE	<b>01/A60 FMQ</b>	<b>Gas:</b> DVGW EN549 E2H2 UL 157 (F,G,J)	Ozone resistance (according to EN549)
HNBR 60Sh BLUE	<b>01/A60HNBR</b>		DVGW EN 549 B2H2 + ozone
HNBR 60Sh YELLOW	<b>01/C60 HNBR</b>		DVGW EN 549 B2H2 + ozone
HNBR 70Sh BLACK	<b>01/C70 HNBR</b>	<b>Gas:</b> DVGW EN549 D2H3	Ozone resistance (according to EN549)
HNBR 60Sh GREEN	<b>01/D60 HNBR</b>		DVGW EN 549 B2H2 + ozone
HNBR 70Sh BLACK	<b>01/D70 HNBR</b>	<b>Gas:</b> DVGW EN549 B2H3 + ozone	
HNBR 60Sh RED	<b>01/E60 HNBR</b>		DVGW EN 549 B2H2 + ozone
HNBR 70Sh YELLOW	<b>01/E70 HNBR</b>	<b>Gas:</b> DVGW EN549 B2H3, DVGW EN682 GBL	Ozone resistance (according to EN549)
HNBR 60Sh BROWN	<b>01/F60 HNBR</b>		DVGW EN 549 B2H2 + ozone
HNBR 60Sh GREY	<b>01/G60 HNBR</b>		DVGW EN 549 B2H2 + ozone
HNBR 70Sh YELLOW	<b>01/I70 HNBR</b>	UL 157 (G) <b>Gas:</b> DVGW EN549 B2H3	EN681-1 WB, Silicon free, Ozone resistance (according to EN549)
HNBR 70Sh YELLOW	<b>01/M70 HNBR</b>	<b>Gas:</b> EN682 GBL	Ozone resistance (according to EN682)
NBR 50Sh BLACK	<b>01/AA50 NBR</b>	<b>Water:</b> WRAS BS6920 (23°C)	
NBR 60Sh BLACK	<b>01/AA60 NBR</b>	<b>Water:</b> WRAS BS6920 (23°C), KIWA BRL-K17504 (50°C)	
NBR 70Sh BLACK	<b>01/AA70 NBR</b>	<b>Water:</b> CARSO ACS, DVGW EN681 WA, WRAS BS6920 (23°C), NSF ANSI 61 (23°C), KIWA BRL-K17504 (50°C) <b>Gas:</b> DVGW EN549 B2H3, DVGW EN682 GBL + VP406 (complete work sheet)	Ozone resistance (according to EN682) D.M. 174/2004, UBA, W270
NBR 80Sh BLACK	<b>01/AA80 NBR</b>	<b>Water:</b> WRAS BS6920 (23°C), NSF ANSI 61 (23°C), KIWA BRL-K17504 (50°C)	DVGW EN681-1 WA

<b>POLYMER AND HARDNESS</b>	<b>LAV.EL. GOMMA CODE</b>	<b>APPROVALS</b>	<b>COMPLIANCES</b>
NBR 75Sh BLACK	<b>01/AM75 NBR</b>	<b>Gas:</b> DVGW EN549 B2H3; UL 157 (F,G,J)	
NBR 60Sh BLACK	<b>01/AN60 NBR</b>	UL 157 (F,G,J) <b>Gas:</b> DVGW EN549 B2H2	Ozone resistance (according to EN549)
NBR 60Sh BLACK	<b>01/AS60 NBR</b>	UL 157 (F,G,J)	DVGW EN549 B2H2
NBR 65Sh BLACK	<b>01/AS65 NBR</b>	<b>Gas:</b> DVGW EN549 B2H3	Ozone resistance (according to EN549)
NBR 70Sh BLACK	<b>01/AS70 NBR</b>	UL 157 (F,G,I,J) <b>Gas:</b> DVGW EN549 B2H3	Ozone resistance (according to EN549)
NBR 80Sh BLACK	<b>01/AS80 NBR</b>	<b>Gas:</b> DVGW EN549 B2H3 UL 157 (F,G,I,J)	Ozone resistance (according to EN549)
NBR 50Sh BLACK	<b>01/B50 NBR</b>	<b>Water:</b> CARSO CLP, WRAS BS6920 (23°C)	
NBR 60Sh BLACK	<b>01/B60 NBR</b>	<b>Water:</b> CARSO CLP, WRAS BS6920 (23°C)	FDA 177.2600
NBR 70Sh BLACK	<b>01/B70 NBR</b>	<b>Water:</b> CARSO ACS, TZW UBA (23°C e 85°C), TZW W270, WRAS BS6920 (23°C), NSF ANSI 61 (82°C) <b>Gas:</b> DVGW EN549 B1H3	D.M. 174/2004; FDA 177.2600
NBR 80Sh BLACK	<b>01/B80 NBR</b>	<b>Water:</b> CARSO CLP, <b>TZW UBA (23°C e 85°C)</b> , TZW W270, NSF ANSI 61 (82°C), WRAS BS6920 (23°C)	
NBR 85Sh BLACK	<b>01/B85 NBR</b>	<b>Gas:</b> DVGW EN549 B2H3	Silicon free
NBR 60Sh BLACK	<b>01/D60 NBR</b>	UL 157 (F,G,J) <b>Gas:</b> DVGW EN549 B2H2	
NBR 80Sh BLACK	<b>01/D80 NBR</b>	<b>Gas:</b> DVGW EN549 B2H3	
NBR 85Sh BLACK	<b>01/D85 NBR</b>	UL 157 (F,G,J)	EN549 B1H3
NBR 50Sh BLACK	<b>01/E50 NBR</b>	<b>Gas:</b> DVGW EN549 A2H2	Ozone resistance (according to EN549)
NBR 70Sh BLACK	<b>01/H70 NBR</b>	<b>Gas:</b> EN549 B2H3	Silicon free
NBR 70Sh GREY	<b>01/Q70 NBR</b>	<b>Water:</b> NSF ANSI61 (82°C)	
VMQ 70Sh RED	<b>01/A70 VMQ</b>	<b>Gas:</b> DVGW EN549 E1H3	AMS 3304, FDA 177.2600, Ozone resistance (according to EN549)
VMQ 50Sh GREY	<b>01/C50 VMQ</b>	<b>Water:</b> CARSO CLP, WRAS BS6920 (85°C), NSF ANSI 61 (82°C)	
VMQ 60Sh GREY	<b>01/C60 VMQ</b>	<b>Water:</b> CARSO CLP, WRAS BS6920 (85°C), NSF ANSI 61 (82°C)	FDA 177.2600
VMQ 70Sh GREY	<b>01/C70 VMQ</b>	<b>Water:</b> CARSO CLP, WRAS BS6920 (85°C), NSF ANSI 61 (82°C)	
VMQ 65Sh BLUE	<b>01/F65 VMQ</b>	<b>Gas:</b> DVGW EN549 E1H3	

<b>POLYMER AND HARDNESS</b>	<b>LAV.EL. GOMMA CODE</b>	<b>APPROVALS</b>	<b>COMPLIANCES</b>
VMQ 50Sh BLUE	<b>01/L50 VMQ</b>	<b>Water:</b> CARSO CLP, WRAS BS6920 (85°C), NSF ANSI 61 (82°C)	
VMQ 60Sh BLUE	<b>01/L60 VMQ</b>	<b>Water:</b> CARSO CLP, WRAS BS6920 (85°C), NSF ANSI 61 (82°C)	
VMQ 70Sh BLUE	<b>01/L70 VMQ</b>	<b>Water:</b> CARSO CLP, WRAS BS6920 (85°C), NSF ANSI 61 (82°C)	Volvo VCS 1225,909
VMQ 50Sh RED	<b>01/M50 VMQ</b>	<b>Water:</b> 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	<b>01/M55 VMQ</b>	<b>Water:</b> 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	<b>01/M60 VMQ</b>	<b>Water:</b> 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	<b>01/M70 VMQ</b>	<b>Water:</b> 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	<b>01/N50 VMQ</b>	<b>Water:</b> CARSO CLP, WRAS BS6920 (85°C), NSF ANSI 61 (82°C)	
VMQ 60Sh WHITE	<b>01/N60 VMQ</b>	<b>Water:</b> CARSO CLP, WRAS BS6920 (85°C), NSF ANSI 61 (82°C)	
VMQ 70Sh WHITE	<b>01/N70 VMQ</b>	<b>Water:</b> 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

For more info click the links here below:

[Material data sheets](#)

[Approvals](#)

### Approvals in progress (updated to 09/10/2017)

**01/U60EP** WRAS BS6920 (85°C) Certificate extension  
**01/U70 EP + TF01** TZW UBA Elastomer Guideline  
**01/D55 HNBR** EN549 B2H2 (+ ozone)  
**01/U70EP** JIS K 6353  
**01/AH70FKM** DVGW W534