

ELASTOMER

RANGE
2024, May

MCD® ELASTOMER RANGE

RUBBER	MCD p/n	Food Approval	Color code	Hardness (Shore A)	Temperature resistance (°C) / (°F)		
					Minimum continuous	Maximum continuous	Maximum intermittent
NBR Base Soft	NBS	Yes	1 yellow	73 ± 5	-20 / -4	+120 / +248	+135 / +275
NBR Performance HT Food	NFT	Yes	2 yellow	75 ± 5	-15 / +5	+140 / +284	+150 / +302
NBR Fatty Food	NFF	Yes	1 yellow + 1 grey	79 ± 4	-20 / -4	+140 / +284	+145 / +293
new NBR French Legislation	NFL	Yes	2 yellow + 1 grey	80 ± 5	-20 / -4	+140 / +284	+145 / +293
NBR Low Temperature	NLT	No	1 yellow + 1 blue	80 ± 5	-40 / -40	+50 / +122	+65 / +176
NBR Low Hardness	NLH	Yes	2 yellow + 1 blue	62 ± 3	-25 / -13	+125 / +257	+135 / +275
BUTYL	IIR	No	2 white	80 ± 5	-20 / -4	+120 / +248	+130 / +266
HNBR Food	HFD	Yes	2 green	75 ± 5	-5 / +23	+150 / +302	+160 / +320
HNBR Industry	HIN	No	1 green	80 ± 5	-5 / +23	+160 / +320	+170 / +338
EPDM Performance HT Food	EFT	Yes	1 blue	80 ± 5	-10 / +14	+150 / +302	+160 / +320
EPDM Fatty Food	EFF	Yes	1 blue + 1 grey	79 ± 4	-35 / -31	+150 / +302	+160 / +320
new EPDM French Legislation	EFL	Yes	2 blue + 1 grey	80 ± 5	-35 / -31	+150 / +302	+160 / +320
EPDM Performance Industry	EPI	No	1 blue + 1 red	80 ± 5	-10 / +14	+160 / 320	+170 / +338
EPDM Performance High Pressure Industry	EAL	No	1 blue + 2 red	89 ± 3	-35 / +31	+170 / +338	+180 / +356
EPDM Chlorine Resistant	ECR	No	2 blue	80 ± 5	-35 / +31	+140 / +284	+145 / +293
AFLAS	AFL	No	3 purple	80+/-3	+5 / +41	+180 / +356	+200 / 392
FKM G	FKG	No	1 beige	80 ± 5	-5 / +23	+150 / +302	+170 / +338
FKM A	FKA	Yes	2 purple	80 ± 5	-5 / +23	+160 / +320	+180 / +356
FKM High Temperature Steam	FKH	No	1 beige + 1 purple	80 ± 5	-5 / +23	+170 / +338	+200 / +392
FKM Sulfuric Acid	FKS	No	1 beige + 2 purple	80 ± 5	-5 / +23	+130 / +266	+150 / +302
VITON G	FVG	No	2 beige	80 ± 5	-5 / +23	+150 / +302	+200 / +392
SILICONE	SIQ	Yes	none	80 ± 5	-50 / -58	+120 / +248	+135 / +275
HYPALON	CSM	No	1 red	80 ± 5	-10 / +14	+70 / +158	+80 / +176
NEOPRENE	CRM	No	1 khaki	80 ± 5	-35 / -31	+110 / 230	+120 / +248

MCD® Materials & Color codes

Food Grade material

**ALFA
LAVAL
OEM
Materials &
Color codes**

		NBR Base Soft (NBS)	NBR Performance HT Food (NFT)	NBR Fatty Food (NFF)	NBR French Legislation (NFL)	NBR Low Temperature (NLT)	NBR Low Hardness (NLH)	EPDM Performance HT Food (EFT)	EPDM Fatty Food (EFF)	EPDM French Legislation (EFL)	EPDM Performance Industry (EPI)	EPDM Performance HP Industry (EAL)	EPDM Chlorine Resistant (ECR)	HNBR Food (HFD)	HNBR Industry (HIN)	AFLAS (AFL)	FKM A (FKA)	VITON G (FVG)	FKM G (FKG)	FKM High Temperature Steam (FKH)	FKM Sulfuric Acid (FKS)	BUTYL (IIR)	SILICONE (SIQ)	HYPALON (CSM)	NEOPREN (CRM)
CR	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
CSM*	?																								
EPDM	●																								
EPDMAL	●●●																								
EPDMC	●●																								
EPDMCT	●●●																								
EPDMF	●●																								
EPDMFF	●●																								
EPDMW*	?																								
EPDMP	●●																								
Vicarb EPDM Chlorine Resistant	●●																								
FEPMAL (AFLAS)	●●																								
FEPMT (AFLAS)	●●●																								
FKMAL	●●																								
FKMA*	?																								
FKMB*	?																								
FKMFF	●●																								
FKMG	●●●																								
FKMS	●●●																								
FKMT	●●●●																								
HNBR	●●																								
IIR	●																								
NBRB	●●																								
NBRFF	●●																								
NBRHT	?																								
NBRHTF	●●●																								
NBRLH	●●																								
NBRLT	●●																								
NBRP	●																								
QP (SILICONE)	none																								

Food Grade material

API
SCHMIDT
BRETEN
OEM Materials
& Color codes

		MCD® Materials & Color codes																							
		NBR Base Soft (NBS)	NBR Performance HT Food (NFT)	NBR Fatty Food (NFF)	NBR French Legislation (NFL)	NBR Low Temperature (NLT)	NBR Low Hardness (NLH)	EPDM Performance HT Food (EFT)	EPDM Fatty Food (EFF)	EPDM French Legislation (EFL)	EPDM Performance Industry (EPI)	EPDM Performance HP Industry (EAL)	EPDM Chlorine Resistant (ECR)	HNBR Food (HFD)	HNBR Industry (HIN)	AFLAS (AFL)	FKM A (FKA)	VITON G (FVG)	FKM G (FKG)	FKM High Temperature Steam (FKH)	FKM Sulfuric Acid (FKS)	BUTYL (IIR)	SILICONE (SIQ)	HYPALON (CSM)	NEOPREN (CRM)
NBR FDA	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
NBR FDA/BGA	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
NBR FDA***	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
NBR TRP C210	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
HNBR	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
EPDM-NT FDA	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
EPDM-HT	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
EPDM-HT BGA	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
VITON B	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
VITON G	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•

Food Grade material

**DANFOSS
SONDEX
OEM Materials
& Color codes**

		MCD® Materials & Color codes																							
		NBR Base Soft (NBS)	NBR Performance HT Food (NFT)	NBR Fatty Food (NFF)	NBR French Legislation (NFL)	NBR Low Temperature (NLT)	NBR Low Hardness (NLH)	EPDM Performance HT Food (EFT)	EPDM Fatty Food (EFF)	EPDM French Legislation (EFL)	EPDM Performance Industry (EPI)	EPDM Performance HP Industry (EAL)	EPDM Chlorine Resistant (ECR)	HNBR Food (HFD)	HNBR Industry (HIN)	AFLAS (AFL)	FKM A (FKA)	VITON G (FVG)	FKM G (FKG)	FKM High Temperature Steam (FKH)	FKM Sulfuric Acid (FKS)	BUTYL (IIR)	SILICONE (SIQ)	HYPALON (CSM)	NEOPREN (CRM)
NBR	●●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
NBR FDA	●●●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
NBR HT FDA	●●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
NBR HT	●●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
NBR LT	●●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
NBR SOFT	●●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
NBR HARD	●●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
NBR HT HARD	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
NBR HYD	●●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
EPDM	●●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
EPDM FDA	●●●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
EPDM HT	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
EPDM HT FDA	●●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
EPDM HARD	●●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
EPDM HT HARD	●●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
EPDM HT WRAS	●●●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
EPDM UHT - STEAM	●●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
VITON FOOD	●●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
VITON IND	●●●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
VITON GF	●●●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
VITON AFLAS	●●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
VITON STEAM	●●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
VITON GF HARD	●●●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
NEOPRENE / CHLOROPRENE	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
HYPALON	●●●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
BUTYL	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●

Food Grade material

FUNKE OEM Materials & Color codes

		MCD® Materials & Color codes																							
		NBR Base Soft (NBS)	NBR Performance HT Food (NFT)	NBR Fatty Food (NFF)	NBR French Legislation (NFL)	NBR Low Temperature (NLT)	NBR Low Hardness (NLH)	EPDM Performance HT Food (EFT)	EPDM Fatty Food (EFF)	EPDM French Legislation (EFL)	EPDM Performance Industry (EPI)	EPDM Performance HP Industry (EAL)	EPDM Chlorine Resistant (ECR)	HNBR Food (HFD)	HNBR Industry (HIN)	AFLAS (AFL)	FKM A (FKA)	VITON G (FVG)	FKM G (FKG)	FKM High Temperature Steam (FKH)	FKM Sulfuric Acid (FKS)	BUTYL (IIR)	SILICONE (SIQ)	HYPALON (CSM)	NEOPREN (CRM)
NBR	none	●																							
NBR HT	●		■																						
NBR HT Soft	●●																								
HNBR	●●																								
EPDM	●							■																	
EPDM HT	●●																								
HYPALON	●●																							■	
CHLOROPRENE	●																								■
NBR / CHLOROPRENE	●●																								
EPDM / CHLOROPRENE	●●																								
SILICONE	■																						■		
BUTYL	●																							■	
VITON I	●																								
VITON G	●●																								
VITON F	●●																								
VITON S	●●																								

Food Grade material

HISAKA OEM Materials & Color codes

MCD® Materials & Color codes

		NBR Base Soft (NBS)	NBR Performance HT Food (NFT)	NBR Fatty Food (NFF)	NBR French Legislation (NFL)	NBR Low Temperature (NLT)	NBR Low Hardness (NLH)	EPDM Performance HT Food (EFT)	EPDM Fatty Food (EFF)	EPDM French Legislation (EFL)	EPDM Performance Industry (EPI)	EPDM Performance HP Industry (EAL)	EPDM Chlorine Resistant (ECR)	HNBR Food (HFD)	HNBR Industry (HIN)	AFLAS (AFL)	FKM A (FKA)	VITON G (FVG)	FKM G (FKG)	FKM High Temperature Steam (FKH)	FKM Sulfuric Acid (FKS)	BUTYL (IIR)	SILICONE (SIQ)	HYPALON (CSM)	NEOPREN (CRM)
NBR	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
LG-NBR	●●																								
G-NBR	●●																								
GZ-NBR	●●																								
AGZ-NBR	●●																								
FOOD NBR	●																								
T-EPDM	●																								
AN-EPDM	●●																								
N-EPDM	●●																								
K-EPDM	●●																								
EPDM	●●																								
G-EPDM	●●																								
R-EPDM (NEW EPDM)	●●																								
FOOD EPDM	●●/●																								
A-EPDM	?																								
L-EPDM	?																								
IIR	●●																								
N-IIR	●																								
G-IIR	●●/●●																								
FPM	●●●																								
AG-FPM	●●●●/																								
G-FPM	●●●●/																								
R-FPM	●																								
SI	none																								
FEM	●●																								
G-FEM	●●																								
CR	●																								
CPE	●																								

MCD® Materials & Color codes

Food Grade material

SPXFLOW OEM Materials & Color codes

		NBR Base Soft (NBS)	NBR Performance HT Food (NFT)	NBR Fatty Food (NFF)	NBR French Legislation (NFL)	NBR Low Temperature (NLT)	NBR Low Hardness (NLH)	EPDM Performance HT Food (EFT)	EPDM Fatty Food (EFF)	EPDM French Legislation (EFL)	EPDM Performance Industry (EPI)	EPDM Performance HP Industry EAL)	EPDM Chlorine Resistant (ECR)	HNBR Food (HFD)	HNBR Industry (HIN)	AFLAS (AFL)	FKM A (FKA)	VITON G (FVG)	FKM G (FKG)	FKM High Temperature Steam (FKH)	FKM Sulfuric Acid (FKS)	BUTYL (IIR)	SILICONE (SIQ)	HYPALON (CSM)	NEOPREN (CRM)
PARACIL - NBR STD	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
PEROXY NITRILE – NBR PER	●●																								
NBR PER FOOD	?																								
PARATOR – NBR HYD	●●●																								
PARATEMP – EPDM RES (EPDM RC)	●●																								
PARATEMP 2	●																								
EPDM STD	●●																								
EPDM PER FOOD	●																								
CLEP (EPDM Chlorine Resistant)	●●●●																								
PARAMINE (AFLAS®)	?																								
PARAALKALI	?																								
PARATHERM	?																								
PARACENT – FKM FDA	●●																								
PARAFLO – FPM IND	●●																								
PARADUR – FKM STEAM	●●●																								
PARAPRENE - NEOPRENE	●																								

Food Grade material

KELVION OEM Materials & Color codes

		MCD® Materials & Color codes																							
		NBR Base Soft (NBS)	NBR Performance HT Food (NFT)	NBR Fatty Food (NFF)	NBR French Legislation (NFL)	NBR Low Temperature (NL T)	NBR Low Hardness (NLH)	EPDM Performance HT Food (EFT)	EPDM Fatty Food (EFF)	EPDM French Legislation (EFL)	EPDM Performance Industry (EPI)	EPDM Performance HP Industry EAL)	EPDM Chlorine Resistant (ECR)	HNBR Food (HFD)	HNBR Industry (HIN)	AFLAS (AFL)	FKM A (FKA)	VITON G (FVG)	FKM G (FKG)	FKM High Temperature Steam (FKH)	FKM Sulfuric Acid (FKS)	BUTYL (IIR)	SILICONE (SIQ)	HYPALON (CSM)	NEOPREN (CRM)
AFLAS	● ●	●	●	●		●	●	●	●		●	●	●	●		●	●	●	●	●	●	●			
BUTYL	●																					●			
EPDM (Resin cured)	● ●																								
EPDM (Peroxyd cured)	●																								
EPDM (antischwelling) = EPDM Hard	● ●																								
EPDM FDA (AQU. FOOD)	● ●																								
EPDM FDA (white)	●																								
EPDM HT Ind	●																								
HYPALON	● ●																								
NBR (Sulfur cured)	none																								
NBR (Peroxyd cured)	●																								
NBR FDA (Fatty Food)	●																								
NBR FDA (white)	●																								
HNBR (NBR HYD)	● ●																								
NBR (water approval)	● ●																								
NBR LT	● ●																								
NEOPRENE	● ●																								
NR	● ●																								
SILICONE																									
VITON B	●																								
VITON STEAM	● ●																								
VITON E FOOD	● ●																								
VITON E STD	● ●																								
VITON GF	● ●																								
EPDM / CR	● ●																								
EPDM / HNBR	● ●																								

Food Grade material

MUELLER OEM Materials & Color codes

MCD® Materials & Color codes

	NBR Base Soft (NBS)	NBR Performance HT Food (NFT)	NBR Fatty Food (NFF)	NBR French Legislation (NFL)	NBR Low Temperature (NLT)	NBR Low Hardness (NLH)	EPDM Performance HT Food (EFT)	EPDM Fatty Food (EFF)	EPDM French Legislation (EFL)	EPDM Performance Industry (EPI)	EPDM Performance HP Industry (EAL)	EPDM Chlorine Resistant (ECR)	HNBR Food (HFD)	HNBR Industry (HIN)	AFLAS (AFL)	FKM A (FKA)	VITON G (FVG)	FKM G (FKG)	FKM High Temperature Steam (FKH)	FKM Sulfuric Acid (FKS)	BUTYL (IIR)	SILICONE (SIQ)	HYPALON (CSM)	NEOPREN (CRM)
AFLAS	● ●																							
BUTYL	●																							
EPDM (FDA 3-A)	● ●																							
EPDM (FDA 3-A)	●																							
EPDM (FDA)	● ●																							
EPDM (HHT)	● ●																							
EPDM (HT)	●																							
EPDM (HT)	●																							
FKM	● ●																							
FKM (HT)	● ●																							
FKM (B)	● ●																							
FKM (FDA 3-A)	● ●																							
FKM (FDA HT)	● ● ●																							
FKM (FDA)	● ●																							
FKM (FKM-GF)	● ●																							
FKM (G / GF)	● ●																							
FKM (G)	● ●																							
HYPALON	● ●																							
NBR	●																							
NBR (FDA 3-A)	●																							
NBR (FDA 3-A)	● ●																							
NBR (FDA 3-A)	●																							
NBR (FDA HT 3-A)	●																							
NBR (FDA)	●																							
NBR (PARTIAL FDA)	● ●																							
SILICONE	none																							

Food Grade material

TRANTER OEM Materials & Color codes

		MCD® Materials & Color codes																							
		NBR Base Soft (NBS)	NBR Performance HT Food (NFT)	NBR Fatty Food (NFF)	NBR French Legislation (NFL)	NBR Low Temperature (NLT)	NBR Low Hardness (NLH)	EPDM Performance HT Food (EFT)	EPDM Fatty Food (EFF)	EPDM French Legislation (EFL)	EPDM Performance Industry (EPI)	EPDM Performance HP Industry (EAL)	EPDM Chlorine Resistant (ECR)	HNBR Food (HFD)	HNBR Industry (HIN)	AFLAS (AFL)	FKM A (FKA)	VITON G (FVG)	FKM G (FKG)	FKM High Temperature Steam (FKH)	FKM Sulfuric Acid (FKS)	BUTYL (IIR)	SILICONE (SIQ)	HYPALON (CSM)	NEOPREN (CRM)
NBR(S)	none	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
NBR(S) 14-920	● ●																								
NBR (Industrial grade)	● ● ●																								
NBR(P)	● / ● ●																								
FDA NBR (NBR P - FDA Partial)	●																								
NBR (Full FDA)	● ●																								
NBR LT (NBR P - LT)	● ●																								
NBR LH (Low Hard)	● ●																								
HNBR (NBR Hydrog.)	● ●																								
EPDM(P) (Industrial)	●																								
EPDM(P) Soft	● ● ●																								
EPDM XH (EPDM HARD)	● ● ● ●																								
FDA EPDM (EPDM P - FDA Partial)	● ● ●																								
EPDM (Full FDA)	● ● ●																								
EPDM(IR)	● ● ●																								
EPDM(S)	● ● ●																								
FKMT																									
FLUOR G / VITON GB / VITON A & G	●																								
VITON B	● ● ●																								
VITON GF	● ● ● ●																								
VITON GF 04-312	● ● ● ●																								
VITON FDA Full	● ● ● ●																								
Steam grade fluoroelastomer for GE test units	● ● ● ● ●																								
RCB (IIR / Butyl)	●																								
Hypalon (CSM)	●																								
Neoprene (CR)	●																								
Silicone	●																								
Silastic (Dow)																									
PTFE / NBR																									
PTFE / EPDM																									

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