

Table of materials

for mechanical seals
compared with former designations

Information **D01081**

Face materials (Item 1 / 2)

Current material code		Description	Former designations		
EN 12756 ¹⁾	EagleBurgmann		DIN 24960 ³⁾	KOMA ⁴⁾	13/3

Synthetic carbons

A	▶ A	Buko 03	Carbon graphite, antimony impregnated		
B	▶ B	Buko 1	Carbon graphite, resin impregnated approved for foodstuffs	B ₁	B ₁
B	▶ B ₃	Buko 02	Carbon graphite, resin impregnated		
B	▶ B ₅	Buko 34	Carbon, resin bonded		
C	▶ C	Buko 22	Electrographite, antimony impregnated	C ₁	C ₁

Metals

E	▶ E	Bume 20	Cr-Steel		
G	▶ G	Bume 17	CrNiMo-Steel	G ₁	G ₁
S	▶ S	Bume 5	Special cast CrMo-Steel	S ₂	S ₂
T	▶ T ₄₁	Bube 281	1.4462 DLC-coated		

Carbides

U = Tungsten carbides

U1	▶ U ₁	Buka 1 brazed	Tungsten carbide, Co-binder	U	U ₁₃	U ₁₃
U2	▶ U ₂	Buka 16 solid	Tungsten carbide, Ni-binder	U	U ₂₁	U ₂₁
U2	▶ U ₂₂	Buka 16 shrunk-in	Tungsten carbide, Ni-binder	U	U ₂₂	U ₂₂
U3	▶ U ₃	Buka 15 solid	Tungsten carbide, NiCrMo-binder	U	U ₃₆	-
U3	▶ U ₃₇	Buka 15 shrunk-in	Tungsten carbide, NiCrMo-binder	U	-	-
U	▶ U ₇	Buka 17 solid	Tungsten carbide, binder-free			

Q = Silicon carbides

Q1	▶ Q ₁	Buka 22 solid	SiC, sil. carb. sintered pressureless	U	Q ₁₁	Q ₃₁
Q1	▶ Q ₁₂	Buka 22 shrunk-in	SiC, sil. carb. sintered pressureless	U	U ₃₂	U ₃₂
Q2	▶ Q ₂	Buka 20 solid	SiC-Si, sil. carb. reaction bonded	U	Q ₂₁	Q ₄₁
Q2	▶ Q ₂₂	Buka 20 shrunk-in	SiC-Si, sil. carb. reaction bonded	U	U ₄₂	U ₄₂
Q3	▶ Q ₃	Buka 30 solid	SiC-C-Si, carbon silicon impregnated	U	Q ₃₁	U ₆₁
Q3	▶ Q ₃₂	Buka 30 shrunk-in	SiC-C-Si, carbon silicon impregnated	U	U ₆₂	U ₆₂
Q4	▶ Q ₄	Buka 32 solid	SiC-C, SiC sintered pressureless with carbon			
Q4	▶ Q ₄	Buka 24 solid	C-SiC, carbon surface silicated	U	Q ₄₁	U ₅₁
Q4	▶ Q ₁₉	Buka 221	SiC, DLC coated			

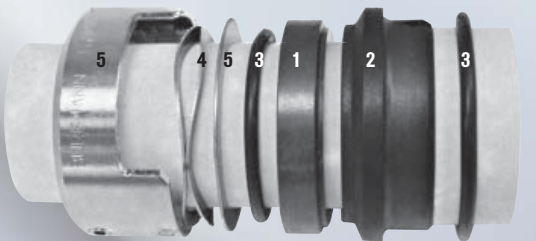
Metal oxides (Ceramics)

V	▶ V	Buke 5	Al-Oxide > 99 %		V ₁	V ₁
V	▶ V ₂	Buke 3	Al-Oxide > 96 %			
X	▶ X	Buke 8	Steatite (Magnesia silicate)			

Plastics

Y1	▶ Y ₁	Buku 2	PTFE, glassfibre reinforced Y			
Y2	▶ Y ₂	Buku 3	PTFE, carbon reinforced Y			

Material code designation example



Item	1	2	3	4	5
Material code acc.to EN 12756 ¹⁾	Q1	B	V	G	G
to EagleBurgmann	Buka22	Buko1	B	1.4571	1.4571
Example: EagleBurgmann M7N/d ₁ Q1 B V G G					

▶ Preferred materials
1) EN 12756, Dec. 2000, return to DIN 24960, June 1992
2) Shortway acc. to DIN ISO 1629, Nov. 2004

3) DIN 24960, June 1980
4) Burgmann Design Manual Mechanical Seals (DM)

Secondary seal components (Item 3)

Current material code		Description	Former designations		
EN 12756 ¹⁾	EagleBurgmann		DIN 24960 ³⁾	KOMA ⁴⁾	13/3

Elastomers, not wrapped

B	▶ B	B	Butyl rubber (IIR ²⁾)		
E	▶ E	E	Ethylene propylene rubber (EPDM ²⁾), e.g. Nordel [®]		
K	▶ K	K	Perfluorocarb. rubber (FFKM ²⁾), e.g. Kalrez [®] , Chemraz [®] , Simriz [®]	X	X ₃
N	▶ N	N	Chloroprene rubber (CR ²⁾), e.g. Neopren [®]		
P	▶ P	P	Nitrile-butadiene-rubber (NBR ²⁾), e.g. Perbunan [®]		
S	▶ S	S	Silicone rubber (VMQ ²⁾), e.g. Silopren [®]		
V	▶ V	V	Fluorocarbon rubber (FKM ²⁾), e.g. Viton [®]		
X	▶ X ₄	X ₄	Hydrogenated Nitrile-rubber (HNBR ²⁾)		
X	▶ X ₅	X ₅	Tetrafluoroethylene propylene rubber (FEPM ²⁾), e.g. Aflas [®] , Fluoraz [®]		

Elastomers, wrapped

M	▶ M ₁	TTV	FKM, double PTFE wrapped		
M	▶ M ₂	TTE	EPDM, double PTFE wrapped		
M	▶ M ₃	TTS	VMQ, double PTFE wrapped		
M	▶ M ₄	TTN	CR, double PTFE wrapped		
M	▶ M ₅	FEP	FKM, FEP wrapped		
M	▶ M ₇	TTV/T	FKM, double PTFE wrapped/solid		

Non-Elastomers

G	▶ G	Statotherm [®]	Pure graphite	Y	Y ₃
T	▶ T	T	PTFE (Polytetrafluoroethylene)		T ₁
T	▶ T ₂	T2	PTFE, glassfibre reinforced		T ₁
T	▶ T ₃	T3	PTFE, carbon reinforced		
T	▶ T ₁₂	T12	PTFE, carbon-graphite reinforced		
Y	▶ Y ₁	Burasil [®] -U	Synthetic fibre gasket/aramide	-	-

Differing materials

U	▶ U ₁	K/T	Perfluorocarbon rubber/PTFE	-	-
---	------------------	-----	-----------------------------	---	---

Spring and construction materials (Item 4 / 5)

Spring materials

G	▶ G	1.4571	CrNiMo-steel		
M	▶ M	Hast. C4	Hastelloy [®] C-4 (2.4610) Nickel-base alloy	M ₂	M ₂

Construction materials

D	▶ D	St	C-steel		
E	▶ E	1.4122	Cr-steel		
F	▶ F	1.4301	CrNi-steel		
F	▶ F	1.4308	CrNi-cast steel		
F	▶ F ₁	1.4313	special CrNi-cast steel		
G	▶ G	1.4401	CrNiMo-steel		
G	▶ G	1.4571	CrNiMo-steel		
G	▶ G	1.4581	CrNiMo-cast steel		
G	▶ G ₁	1.4462	CrNiMo-steel		
G	▶ G ₂	1.4439	CrNiMo-steel		
G	▶ G ₃	1.4539	NiCrMo-steel		

M = Nickel-base alloy

M	▶ M	Hast. C4	Hastelloy [®] C-4 (2.4610)		M ₂
M	▶ M ₁	Hast. B2	Hastelloy [®] B-2 (2.4617)		M ₂
M	▶ M ₃	Carp. 20	Carpenter [®] 20 Cb3 (2.4660)		
M	▶ M ₄	Monel K500	Monel [®] alloy K 500 (2.4375)		
M	▶ M ₅	Hast. C-276	Hastelloy [®] C-276 (2.4819)		
M	▶ M ₆	Incon. 718	Inconel [®] 718 (2.4668)	-	-

T = Other materials

T	▶ T ₁	1.4505	CrNiMoCuNb-steel		
T	▶ T ₂	Titan	Pure titanium (3.7035)		
T	▶ T ₃	Incon. 625	Inconel [®] 625 (2.4856)		
T	▶ T ₄	Carp. 42	Carpenter [®] 42 (1.3917)		
T	▶ T ₅	Incol. 800	Incoloy [®] 800 (1.4876)		

Werkstofftabelle

für Gleitringdichtungen
mit Gegenüberstellung früherer Bezeichnungen

Information **D01081**

Gleitwerkstoffe (Stelle 1 / Stelle 2)

Bezeichnung aktuell		Beschreibung	frühere Bezeichnung		
EN 12756 ¹⁾	EagleBurgmann		DIN 24960 ³⁾	KOMA ⁴⁾	13/3

Synthetische Kohlen

A	▶ A	Buko 03	Kohlegrafit, antimonimprägniert		
B	▶ B	Buko 1	Kohlegrafit, kunstharzprägniert lebensmittelzugelassen	B ₁	B ₁
B	B ₃	Buko 02	Kohlegrafit, kunstharzprägniert		
B	B ₅	Buko 34	Kohle, kunstharzgebunden		
C	C	Buko 22	Elektrografit, antimonimprägniert	C ₁	C ₁

Metalle

E	▶ E	Bume 20	Cr-Stahl		
G	G	Bume 17	CrNiMo-Stahl	G ₁	G ₁
S	▶ S	Bume 5	Sonder-Chrommolybdänguss	S ₂	S ₂
T	T ₄₁	Bube 281	1.4462 DLC-beschichtet		

Karbid

U = Wolframkarbid

U1	▶ U ₁	Buka 1 gelötet	Wolframkarbid, Co-gebunden	U	U ₁₃	U ₁₃
U2	▶ U ₂	Buka 16 massiv	Wolframkarbid, Ni-gebunden	U	U ₂₁	U ₂₁
U2	▶ U ₂₂	Buka 16 geschr.	Wolframkarbid, Ni-gebunden	U	U ₂₂	U ₂₂
U3	U ₃	Buka 15 massiv	Wolframkarbid, NiCrMo-gebunden	U	U ₃₆	-
U3	U ₃₇	Buka 15 geschr.	Wolframkarbid, NiCrMo-gebunden	U	-	-
U	U ₇	Buka 17 massiv	Wolframkarbid, binderfrei			

Q = Siliziumkarbid

Q1	▶ Q ₁	Buka 22 massiv	SiC, drucklos gesintert	U	Q ₁₁	Q ₃₁
Q1	▶ Q ₁₂	Buka 22 geschr.	SiC, drucklos gesintert	U	U	Q ₃₂
Q2	▶ Q ₂	Buka 20 massiv	SiC-Si, reaktionsgebunden	U	Q ₂₁	Q ₄₁
Q2	▶ Q ₂₂	Buka 20 geschr.	SiC-Si, reaktionsgebunden	U	U	Q ₄₂
Q3	Q ₃	Buka 30 massiv	SiC-C-Si, Kohle siliziumprägniert	U	Q ₃₁	U ₆₁
Q3	Q ₃₂	Buka 30 geschr.	SiC-C-Si, Kohle siliziumprägniert	U	U	U ₆₂
	Q ₆	Buka 32 massiv	SiC-C, SiC drucklos gesintert mit Kohle			
Q4	Q ₄	Buka 24 massiv	C-SiC, Kohle oberflächensiliziert	U	Q ₄₁	U ₅₁
	Q ₁₉	Buka 221	SiC, DLC-beschichtet			

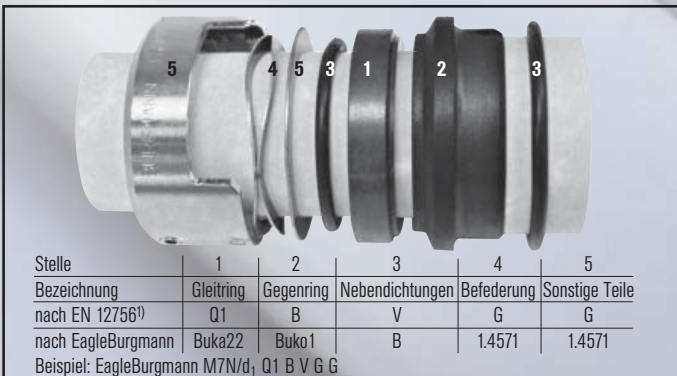
Metalloxide (Keramik)

V	▶ V	Buke 5	Al-Oxid > 99 %		V ₁	V ₁
V	V ₂	Buke 3	Al-Oxid > 96 %			
X	X	Buke 8	Steatit (Magnesiumsilikat)			

Kunststoffe

Y1	▶ Y ₁	Buku 2	PTFE, glasfaserverstärkt	Y		
Y2	Y ₂	Buku 3	PTFE, kohleverstärkt	Y		

Werkstoffbezeichnung



▶ Vorzugswerkstoffe

1) EN 12756, Dez. 2000, Ersatz für DIN 24960, Juni 1992
2) Kurzzeichen gem. DIN ISO 1629, Nov. 2004

3) DIN 24960, Juni 1980

4) Burgmann Konstruktionsmappe Gleitringdichtungen (KOMA)

Nebendichtungen (Stelle 3)

Bezeichnung aktuell		Beschreibung	frühere Bezeichnung		
EN 12756 ¹⁾	EagleBurgmann		DIN 24960 ³⁾	KOMA ⁴⁾	13/3

Elastomere, nicht ummantelt

B	B	B	Butyl-Kautschuk (IIR ²⁾)		
E	▶ E	E	Ethylen-Propylen-Dien-Kautschuk (EPDM ²⁾), z.B. Nordel [®]		
K	K	K	Perfluor-Kautschuk (FFKM ²⁾), z.B. Kalrez [®] , Chemraz [®] , Simriz [®]	X	X ₃
N	N	N	Chloropren-Kautschuk (CR ²⁾) z.B. Neopren [®]		
P	▶ P	P	Nitril-Butadien-Kautschuk (NBR ²⁾), z.B. Perbunan [®]		
S	S	S	Silikon-Kautschuk (VMQ ²⁾), z.B. Silopren [®]		
V	▶ V	V	Fluor-Kautschuk (FKM ²⁾), z.B. Viton [®]		
X	X ₄	X ₄	Hydrierter Nitril-Kautschuk (HNBR ²⁾)		
X	X ₅	X ₅	Tetrafluorethylen-Propylen Kautschuk (FEPM ²⁾), z.B. Aflas [®] , Fluoraz [®]		

Elastomere, ummantelt

M	▶ M ₁	TTV	FKM, doppelt PTFE-ummantelt		
M	▶ M ₂	TTE	EPDM, doppelt PTFE-ummantelt		
M	M ₃	TTS	VMQ, doppelt PTFE-ummantelt		
M	M ₄	TTN	CR, doppelt PTFE-ummantelt		
M	M ₅	FEP	FKM, FEP-ummantelt		
M	M ₇	TTV/T	FKM, doppelt PTFE-ummantelt/massiv		

Nicht-Elastomere

G	G	Statotherm [®]	Reingrafit	Y	Y ₃
T	T	T	PTFE (Polytetrafluorethylen)		T ₁
T	T ₂	T ₂	PTFE, glasfaserverstärkt		T ₁
T	T ₃	T ₃	PTFE, kohleverstärkt		
T	T ₁₂	T ₁₂	PTFE, kohle-grafit-verstärkt		
Y	Y ₁	Burasi [®] -U	Kunstfaserdichtung/Aramid	-	-

Unterschiedliche Werkstoffe

U	U ₁	K/T	Perfluor-Kautschuk/PTFE	-	-
---	----------------	-----	-------------------------	---	---

Feder- und Bauwerkstoffe (Stelle 4 / Stelle 5)

Federwerkstoffe

G	▶ G	1.4571	CrNiMo-Stahl		
M	▶ M	Hast. C4	Hastelloy [®] C-4 (2.4610) Hoch-Nickel-Legierung	M ₂	M ₂

Bauwerkstoffe

D	D	St	C-Stahl		
E	▶ E	1.4122	Cr-Stahl		
F	F	1.4301	CrNi-Stahl		
F	F	1.4308	CrNi-Stahlguss		
F	F ₁	1.4313	speziell CrNi-Stahlguss		
G	▶ G	1.4401	CrNiMo-Stahl		
G	▶ G	1.4571	CrNiMo-Stahl		
G	G	1.4581	CrNiMo-Stahlguss		
G	▶ G ₁	1.4462	CrNiMo-Stahl		
G	G ₂	1.4439	CrNiMo-Stahl		
G	G ₃	1.4539	NiCrMo-Stahl		

M = Hoch-Nickel-Legierung

M	▶ M	Hast. C4	Hastelloy [®] C-4 (2.4610)		
M	M ₁	Hast. B2	Hastelloy [®] B-2 (2.4617)		
M	M ₃	Carp. 20	Carpenter [®] 20 Cb3 (2.4660)		
M	M ₄	Monel K500	Monel [®] alloy K 500 (2.4375)		
M	M ₅	Hast. C-276	Hastelloy [®] C-276 (2.4819)		
M	M ₆	Incon. 718	Inconel [®] 718 (2.4668)	-	-

T = Sonstige Werkstoffe

T	T ₁	1.4505	CrNiMoCuNb-Stahl		
T	T ₂		Rein-Titan (3.7035)		
T	T ₃	Incon. 625	Inconel [®] 625 (2.4856)		
T	T ₄	Carp. 42	Carpenter [®] 42 (1.3917)		
T	T ₅	Incol. 800	Incoloy [®] 800 (1.4876)		