

Date: 30. March 2017

Lubrication Grease for TBM
Approval list for seal material 85 NBR B248

We have carried out seal material resistance tests with various grease types and our seal material 85 NBR B248. This material is used e.g. for special shaft seals type 2927 and 2821 in TBM-applications. The following grease types are suitable with seals made of 85 NBR B248 up to a work temperature of 60°C. Please note: These indications are only referring to the seal material resistance. The grease performance (e.g. antiwear properties, corrosion protection, ageing behaviour etc.) can not be tested by us. Do not use grease with solid particles (e.g. Graphite, MoS2 etc.) for seal lubrication. The mixture of different grease types can change the grease performance and the seal material resistance. The change of grease performance can not be estimated by us. The change of seal material resistance has to be tested with a particular mixture, when in doubt.

<u>Manufacturer and Name</u>	<u>Base Oil</u>
Blaser Blasolube 472 und 492	Mineral Oil
Blaser Blasolube 28282	Mineral Oil
Blaser Blasolube 422-01	Ester Oil
Blaser Blasolube 422-02	Ester Oil
ChevronTexaco Multifak EP2	Mineral Oil
Condat GR130-680 EP2	Mineral Oil
Condat HBW *	Synthetic Oil
Condat GR 217 S	Synthetic Oil
DEA Dolon E EP2	Synthetic Ester Oil
BASF MasterRoc EPB 1	Vegetable Oil
BASF MasterRoc EPB 10	Mineral Oil
BASF MasterRoc EPB 11	Mineral Oil
BASF MasterRoc BSG 1 *	Vegetable Oil
BASF MasterRoc BSG 11 *	Mineral Oil
Fuchs Plantogel 2 N	Rape Oil
Fuchs Plantogel ECO 2 N	Rape Oil
Fuchs Dea Plantogel 2 S	Synthetic Oil

*: used only as excluder grease !

Manufacturer and Name

Base Oil

Fuchs Renolit FEP 2	Mineral Oil
Fuchs Renolit FAP 502	Mineral Oil
Globalchimica Globaseal TBM/T *	N.A.
ITW Chemical Rocol Turmaline 2	Mineral Oil
Klüber Klüberbio M32-82	Synthetic Ester Oil
Klüber Klüberbio M72-82	Synthetic Ester Oil
Klüber Klüberlub RM 41-1503	Mineral Oil
Mapei Mapeblox/H	Synthetic Ester Oil
Mapei Mapeblox EP2	N.A.
Mapei Mapeblox EP ECO	Vegetable Oil
Mobil Mobilgrease XHP 222	Mineral Oil
Mobil Mobilux EP1	Mineral Oil
Normet TamGrease BS1 Excluder *	N.A.
Normet TamGrease BL11 EP2	Mineral Oil
Normet TamGrease BL12 EP2	Synthetic Ester Oil
Olipes Maxigras 48	Mineral Oil
Quaker Quaseal 500	Rape Oil
Repsol Grasa Tuneladora	Mineral Oil
Rhenus CXN 25	Natural Ester Oil
Rhenus LPU 25	Mineral Oil
Rhenus LQN 2	Mineral Oil
Seal Sanat RAGA MBG-70 *	Synthetic Oil
Shell Naturelle S5 V120P 2	N.A.
SMAZKA.RU MC 1330 *	Mineral Oil
SMAZKA.RU MC 1500	Mineral Oil
Statoil Uniway Bio Lix 62	Synthetic Ester Oil
Whitmore's Earthkeeper EP2	N.A.

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