OECD polymer of low concern (PLC) criteria + PRELON specific requirements

OECD = Organisation for Economic Co-operation and Development

Polymer	proprietary recepie	Polymer composition	MW, Mn, MWD	Wt-% oligomer	Electrical charge	Reactive functional groups (RFG)
	firmeneigene Rezeptur	*Polymer composition*	*molekulare Gewichts-verteilung*	*Gew-% monomere, die aus-dampfen können?*	*elektrische Leit-fähig*	*Reaktions-fähige Funktions-gruppe*
PTFE 8	proprietary recepie	☑	☑	☑	☑	☑
PTFE 9	proprietary recepie	☑	☑	☑		☑
PTFE 16 / 18	proprietary recepie	☑	☑	☑		☑
PTFE 23	proprietary recepie	☑	☑	☑		☑
PTFE 90 / 91	proprietary recepie	☑	☑	☑		☑
PTFE 20	proprietary recepie	☑	☑	☑		☑
PTFE 19	proprietary recepie	☑	☑	☑		☑
PTFE 80	proprietary recepie	☑	☑	☑		☑
PTFE 94	proprietary recepie	☑	☑	☑	☑	☑
PTFE 61	proprietary recepie	☑	☑	☑		☑
PTFE 63	proprietary recepie	☑	☑	☑		☑
PTFE 75	proprietary recepie	☑	☑	☑		☑
PTFE 65	proprietary recepie	☑	☑	☑		☑
PTFE 92	proprietary recepie	☑	☑	☑		☑
TFM 92	proprietary recepie	☑	☑	☑		☑
TFM 60	proprietary recepie	☑	☑	☑		☑
PTFE Türkis	proprietary recepie	☑	☑	☑		☑
PTFE 05	proprietary recepie	☑	☑	☑		☑
PTFE 77	proprietary recepie	☑	☑	☑	☑	☑
FKM	proprietary recepie					
PEEK-PTFE		☒	☒	☑	☒	☑
PEEK-C-Fibre		☒	☒	☑	☒	☑
PEEK Grafite		☒	☒	☑	☒	☑
UHMWPE		☑	☑	☑	☒	☒
PA 66		☒	☒	☒	☒	☒
NBR		☒	☒	☒	☒	☒
EPDM		☒	☒	☒	☒	☒

Symbols

☑	Fulfilled
☒	not fulfilled
☑	limitedly fulfilled

Legend

Polymer composition	mcomposition, structure & elemental composition; including CAS no.
MW, Mn, MWD	ght and oligomer content are used criteria for PLC assessment. MWD --> polydispersity i
Wt-% oligomer	Weight % of oligomers < 1000 Da
Electrical charge	: anionic, cationic, amphoteric, nonionic; cationic polymers associated with aquatic toxi
Reactive functional groups (RFG)	hemical structure that is intended or can be reasonable expected to undeergo facile che
Functional group equivalent weight (FGEW)	ined as the ratio of Mn to the number of functional groups in the polymer
Low MW leachables	ecules, either inorganic or organic, that migrate (i.e. leach) out of the polymer
Water/lipid solubility,octanol water partition	which a compound will dissolve in water; negligible water solubility < 1x10E-6 mg/L = 1 p
Particle size	deep lung upon inhalation are associated with adverse health effects. Polymer particles
Polymer stability	n. Breaking down into smaller particles is ccritical. Molecules with Mn<1000 Da are capa
Thermal stability	ended or in extreme temperature during dosposal. Theermal stability testing may involv
Abiotic stability	e, monomers are not. Abiotic degradaton may involve sunlight, water or oxygen.
Biotic stability	ıer is degraded by microorganisms under oxygenated (aerobic) or anoxic (anaerobic) cor
wear	wear of sealing component
abrasion	wear of mating surface
coeffician of friction	friction force
hardness	sealings have to be flexible

Functional group equivalent weight (FGEW)	Low MW leachables	Water/liquid solubility, octanol water partition	Particle size	Polymer stability	Thermal stability	Abiotic stability	Biotic stability
Funktions-gruppen-Gewichts-äquivalent	*niedermole-kulare, extra-hierbare Anteile*	*Wasser-löslichkeit*	*Partikel-größe*	*Polymer-stabilität*	*ther-mische Stabilität*	*Abio-tische Stabilität*	*Biotische Stabilität*
☑	☑	☑	☑	☑	☑	☑	☑
☑	☑	☑	☑	☑	☑	☑	☑
☑	☑	☑	☑	☑	☑	☑	☑
☑	☑	☑	☑	☑	☑	☑	☑
☑	☑	☑	☑	☑	☑	☑	☑
☑	☑	☑	☑	☑	☑	☑	☑
☑	☑	☑	☑	☑	☑	☑	☑
☑	☑	☑	☑	☑	☑	☑	☑
☑	☑	☑	☑	☑	☑	☑	☑
☑	☑	☑	☑	☑	☑	☑	☑
☑	☑	☑	☑	☑	☑	☑	☑
☑	☑	☑	☑	☑	☑	☑	☑
☑	☑	☑	☑	☑	☑	☑	☑
☑	☑	☑	☑	☑	☑	☑	☑
☑	☑	☑	☑	☑	☑	☑	☑
☑	☑	☑	☑	☑	☑	☑	☑
☑	☑	☑	☑	☑	☑	☑	☑
☑	☑	☑	☑	☑	☑	☑	☑
☑	☑	☑	☑	☑	☑	☑	☑
					☑		
☑	☒	☑	☑	☑	☑	☑	☑
☑	☒	☑	☑	☑	☑	☑	☑
☑	☒	☑	☑	☑	☑	☑	☑
☑ (yellow)	☑ (yellow)	☑	☑ (yellow)	☒	☒	☒	☒
☒	☒	☒	☑ (yellow)	☒	☒	☒	☒
☒	☑ (yellow)	☑	☑ (yellow)	☑ (yellow)	☒	☑ (yellow)	☒
☒	☑ (yellow)	☑	☑ (yellow)	☑ (yellow)	☒	☑ (yellow)	☒

ndex

icity

mical reaction

pt
should be > 5 µm
ole of crossing cell membranes
e TGA

nditions

wear resistance *Verschleißwiderstand*	abrasion *Abrasion*	Coefficient of friction *Reibungskoeffizient*	hardness *Härte Steifigkeit*
☑	☑	☑	☑
☑	☑	☑	☑
☑	☑	☑	☑
☑	☑	☑ (yellow)	☑
☑	☑	☑	☑
☑	☑ (yellow)	☑ (yellow)	☑
☑	☑	☑	☑
☑	☑	☑	☑
☑	☑	☑	☑
☑	☑	☑	☑
☑	☑	☑	☑
☑	☑	☑	☑
☑	☑	☑	☑
☑	☑	☑	☑
☑	☑	☑	☑
☑	☑	☑	☑
☑	☑	☑	☑
☑	☑	☑	☑
☑	☑	☑	☑
☒	☒	☑ (yellow)	☑
☑	☑	☑	☒
☑ (yellow)	☑ (yellow)	☒	☒
☑	☑	☑	☒
☑ (yellow)	☑	☑	☑
☒	☑ (yellow)	☑ (yellow)	☑ (yellow)
☒	☒	☒	☑
☒	☒	☒	☑