

OECD polymer of low concern (PLC) criteria and additional customer related criteria

OECD = Organisation for Economic Co-operation and Development

	Polymer composition	MW, Mn, MWD
Polymers currently in use		
Fluoropolymer (in general)	✓	✓
PTFE	✓	✓
TFM-PTFE	✓	✓
PFA	✓	✓
FEP	✓	✓
Alternative Materials for lining		
PE	✗	✓
UHMW-PE	✗	✓
PEEK	✓	✗
PA 66	✗	✗
PPS	✗	✗
PI	✗	✗

Symbols



Meaning

Accept

Not fulfilled

Accept with limitations

Nearly not fulfilled

Legend

Polymer composition	, structure & elemental composition; including CAS number
MW, Mn, MWD	number content are used criteria for PLC assessment. MW
Wt-% oligomer	Weight % of oligomers < 1000 Da
Electrical charge	cationic, amphoteric, nonionic; cationic polymers associated
Reactive functional groups (RFG)	structure that is intended or can be reasonably expected to
Functional group equivalent weight (FGEW)	ratio of Mn to the number of functional groups in the polymer
Low MW leachables	inorganic or organic, that migrate (i.e. leach) out of the polymer
Water/lipid solubility, octanol water partition	polymer will dissolve in water; negligible water solubility
Particle size	particles on inhalation are associated with adverse health effects
Polymer stability	breakdown into smaller particles is critical. Molecules with high MW
Thermal stability	extreme temperature during disposal. Thermal stability
Abiotic stability	are not. Abiotic degradation may involve sunlight, water
Biotic stability	degraded by microorganisms under oxygenated (aerobic) or anaerobic
Acid resistance	media the polymer may not change its properties significantly
Caustic resistance	media the polymer may not change its properties significantly

Solvent resistant

; the polymer may not change its properties significant

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Low MW leachables

Water/lipid
solubility,octanol
water partition

Particle size

Polymer stability

Thermal stability



Company: SIDA Fluoroplastics

Abiotic stability

Biotic stability

Acid resistance

Caustic resistance

Solvent resistance

