



Precision Polymer Engineering

Elastomer Types and Chemical Compatibility

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Precision Polymer Engineering (PPE) is a world-class designer and manufacturer of high performance elastomer sealing solutions for critical applications.

With over 300 elastomer (rubber) material grades to choose from, PPE is sure to have a sealing material to suit any application. This guide details the generic chemical resistance of 15 different types of elastomer material, tested in ambient (room temperature) conditions.

Elevated operating temperatures accelerate the speed at which chemical degradation of elastomer seals occurs. Seek advice from your seal provider, using the checklist on page 31, for clarification of material suitability for your application.

Elastomer types and properties

Elastomer types are often referred to under standard designations/acronyms listed in ASTM D1418 or ISO 1629. A brief description of each elastomer type and their typical characteristics follows:

ACM (Polyacrylic or Polyacrylate)

These rubbers are usually copolymers of ethyl acrylate and a vinyl ether and are resistant to heat, hydrocarbon oils and in particular, oil additives, especially sulphurised types used for lubrication under extreme pressure conditions.

ACM elastomers offer excellent heat resistance; they can typically be used at temperatures of 150°C/302°F (up to 175°C/347°F for limited periods). They provide high resistance to ozone, weathering and oxidation but are extremely susceptible to hydrolysis, hence their unsuitability for use in aqueous media. Compression set and low temperature flexibility depends on the base polymer and compounding choice. ACM elastomers are used primarily where combined resistance to heat and oil is required, typical uses include O-rings, seals and gaskets mainly for the automotive industry, particularly under-bonnet applications.

AEM (Ethylene Acrylic)

These elastomers are terpolymers of ethylene, methyl acrylate and a cure site monomer. AEM elastomers offer good resistance to heat ageing, weathering, aliphatic hydrocarbons and good low temperature performance. They show poor resistance to strong acids, hydrolyzing agents and some polar fluids.

AEM applications are similar to those of ACM elastomers, but AEM has the advantage where low temperature flexibility is concerned. Applications typically include shaft seals, spark plug boots, CV joint bellows and ignition wire jackets.

AU / EU (Polyester and Polyether Urethane)

These elastomers generally show outstanding tensile strength, tear and abrasion resistance, and give excellent protection against oxygen and ozone (except in hot climates, due to greater risk of microbiological attack in AU types, and ultraviolet light in the case of EU types). EU elastomers have a better low temperature flexibility (-35°C/-31°F typically) and both have excellent resistance to high-energy radiation.

Polyurethane rubbers are used where high abrasion resistance and oil / solvent resistance are required together, e.g. hydraulic seals and gaskets, diaphragms, hoses and roller-skate and skateboard wheels. In all applications, consideration should be given to hydrolysis and limited heat resistance.

CR (Chloroprene)

Chloroprene rubbers are essentially chlorinated polyisoprenes, which exhibit medium resistance to high molecular weight oils. Chloroprene rubbers contain chlorine in the polymer to reduce the reactivity to many oxidising agents, as well as to oil and flame. CR elastomers also have good resistance to ozone cracking, heat ageing and chemical attack. Some of the important applications of CR elastomers include Vee-belts, coated fabrics, cable jackets, tyre-sidewalls, seals and gaskets in contact with refrigerants, mild chemicals and atmospheric ozone.



CSM (Chlorosulphonyl polyethylene or Chlorosulphonated polyethylene)

CSM grades contain 24-43% chlorine content to provide excellent ozone and weather resistance, high resistance to many oxidising and corrosive chemicals, good resistance to dry heat to 150°C/302°F, low flammability and gas permeability, and also good resistance to hot water (when cured with lead oxide). The low temperature properties are generally limited, depending on the chlorine content of the CSM grade used, and the compression set is not very good. CSM elastomers are generally useful in electrical applications, weather resistant membranes, hoses and acid resistant tank linings.

ECO (Epichlorohydrin)

These halogenated linear aliphatic polyethers show excellent resistance to ozone and weathering and very good resistance to hydrocarbon oils bettered only by polysulphides, fluoroelastomers and high-acrylonitrile nitrile rubbers. They exhibit good mechanical properties but are susceptible to sour gas attack. They are unsuitable for use with ketones and esters, alcohols, phosphate ester hydraulic fluids, sour gas, water and steam, and generally not recommended for rubber to metal bonding (they are corrosive to metals). The main applications for ECO elastomers are centred on the automotive industry, for use as seals, gaskets, diaphragms, cable jackets, belting, plus low temperature Natural Gas diaphragms.

Elastomer types and properties

EPR/EPDM (Ethylene-Propylene)

These rubbers are mainly available in two structures – as the copolymer (EPR), or as the terpolymer (EPDM). The properties for both types of rubber are very similar with the polymers exhibiting outstanding resistance to weathering, ozone, water and steam. These rubbers have good chemical resistance and are particularly recommended for use with phosphate ester based hydraulic systems. They are typically used in the production of window and door seals, wire and cable insulations, waterproofing sheets and hoses. They are not suitable for use with mineral oils or petroleum based fluids. These rubbers can either be sulphur or peroxide-cured, in general sulphur-cured grades have superior mechanical properties and inferior high temperature properties and vice-versa for peroxide cured grades.

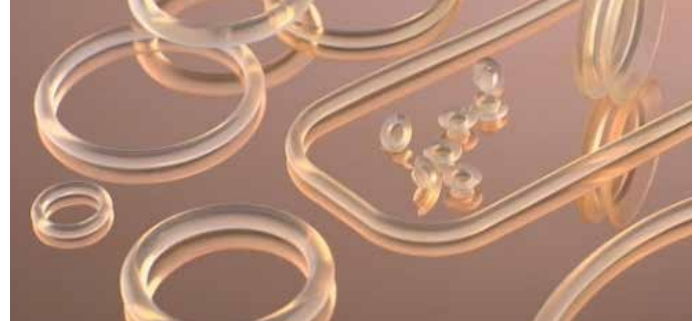
FEP/PFA (Fluoroethylene Propylene-Perfluoroalkoxy)

These chemically modified fluorocarbon copolymers (fluoropolymers) appear more like plastic than rubber, they are extremely resilient and show excellent chemical resistance. Mechanical properties are very good even at high temperatures. Non-stick characteristics are excellent and abrasion resistance can be classified as moderate. The effective continuous temperature range is from -100°C/-148°F to +200/250°C/ +392/482°F for FEP/PFA respectively. Typical applications include door seals and sealing systems in diaphragm pumps, cryogenic plants, sealed filter units, corrosive fluid plants, relief and emergency valves and pneumatics. Fluoropolymers are often used to encapsulate other elastomers to produce composite seals.

FEPM or TFE/P (Tetrafluoroethylene/Propylene)

A copolymer of tetrafluoroethylene and propylene, FEPM is solely produced by the Asahi Glass Company, and sold under the name Aflas®. FEPM vulcanisates exhibit similar thermal stability to FKM elastomers, but better electrical resistance and a different chemical resistance profile. FEPM compounds have the ability to resist a wide range of chemical combinations such as sour gas and oil, acids and strong alkalis, ozone and weather, steam and water, all hydraulic and brake fluids, alcohols, amine corrosion inhibitors, water-based drilling and completion fluids, high pH completion fluids and high energy radiation. However, they are not compatible with aromatic hydrocarbons, chlorinated hydrocarbons (e.g. M.E.K. and acetone), organic acetates and organic refrigerants. FEPM elastomers are suitable for long-term service in air up to 225°C/437°F and for short periods up to 250°C/482°F, but are limited in low temperature applications.

They are finding wide applications mainly in oil-field operations and chemical processing as O-rings, seals and gaskets, cable insulating and jacketing and hose liners.



FFKM/FPFM (Perfluoroelastomer)

FFKMs exhibit outstanding high temperature properties and are the most chemically resistant elastomer available; effectively a rubber form of PTFE. They are superior to FKM elastomers, showing continuous dry-heat resistance to 260°C/500°F, with extended performance to 330°C/626°F for high temperature grades. They are extremely inert chemically and show excellent resistance to the majority of chemicals that attack other elastomers. Other notable properties include excellent resistance to oil-well sour gases, high temperature steam, low out-gassing under vacuum and good long-term high temperature compression set resistance. Typical applications are sealing systems for oil refineries, pharmaceutical plant, aerospace, chemical plant and the semiconductor industry.

FKM/FPM (Fluoroelastomer or Fluorocarbon)

This class of rubber is available as a copolymer, terpolymer or tetrapolymer; the type determines the fluorine content and thus, chemical resistance. FKM materials are either bisphenol-cured or peroxide-cured for better resistance to wet environments. General properties include excellent resistance to heat, aliphatic and aromatic hydrocarbons, chlorinated solvents and petroleum fluids. Fluoroelastomers have a clear superiority in O-ring sealing force retention over most other oil-heat resistant rubbers with the exception of perfluoroelastomers such as Perlast®

FKM/FPMs do show poor resistance to ethers, ketones, esters, amines and hydraulic fluids based on phosphate esters. Special compounds are required to provide suitable resistance to hot water, steam and wet chlorine. Typical applications are for valve-stem seals, crankshaft seals, diesel engine cylinder O-ring seals, pinion seals, glow plug seals, ducting expansion joints and seals for the aerospace industry.

Elastomer types and properties

Copolymer, Terpolymer or Tetrapolymer

Fluoroelastomer or fluorocarbon (FKM/FPM) materials are available in three general types depending on their fluorine content and the number of monomers contained within the polymer:

Type	Fluorine Content	Advantages/Disadvantages
Copolymer (A/E)	65-65.5%	Contains two monomers (simple molecules from which polymers are built). General purpose, most common, most widely used for sealing. Best compression set and very good fluid resistance. Often referred to as 'A' and 'E' type grades. These are normally the least cost types of compound.
Terpolymer (B or F)	67%	Contains three monomers. Better fluid and oil/solvent resistance than copolymers but at the expense of poorer compression set resistance. Often referred to as 'B' or 'F' type grades. 'F' grades offer superior fluid resistance over 'B' grades.
Tetrapolymer (G)	67-69%	Contains four monomers. Improved fluid, acid, solvent resistance over other types. Compression set better than terpolymers. These are sometimes known as 'G' grades. In addition, certain tetrapolymers have good low-temperature flexibility. Tetrapolymers are the most costly of the three types listed here. Tetrapolymer materials can also be referred to as GF, GLT and GFLT grades which correspond to Viton® FKM materials. GF – Good high temperature performance and chemical resistance but reduced mechanical properties and low temperature performance. GLT – Improved low temperature performance but reduced chemical resistance. GFLT – Good all-round low/high temperature performance and chemical resistance.

Viton® is a registered trade name of Dupont Performance Elastomers.

FVMQ (Fluorosilicone)

FVMQ elastomers are modified silicone rubbers, which have many of the properties associated with silicone rubber but show great improvements in oil and fuel resistance. Typical properties include excellent resistance to ozone, oxygen, weathering and non-adhesive characteristics. They have a very wide service temperature range and low chemical reactivity. They do however have low tensile strength, poor tear and abrasion resistance and high gas permeability. Typical uses include sealing systems requiring wide temperature exposure and resistance to aerospace fuels and oils.

HNBR (Hydrogenated Nitrile)

HNBR elastomers are a saturated version of NBR, showing superior heat resistance. General properties include excellent wear resistance, high tensile strength, high hot-tear resistance, low compression set and very good ozone and weathering resistance. They also exhibit good resistance to many oil additives, hydrogen sulphide, high-energy radiation and amines present in crude oil.

HNBRs fill the gap between NBRs and FKMs in many areas of application where resistance to heat and aggressive media are required simultaneously, and may therefore provide a lower cost alternative to FKM elastomers. Typical applications are in extreme environments such as oil-fields and under-bonnet automotive.

IIR (Butyl)

This copolymerised structure of isobutene and isoprene has an effective long-term temperature range of -50°/-58°F to +120°C/+248°F. The key properties for this rubber are very low gas permeability and water absorption with very good resistance to ozone, weathering and oxygen.

All grades have very low elastic resilience and are suitable for use with many fluids except for mineral and petroleum based chemicals. Typical applications are tyre inner tubes, vacuum seals and membranes, pharmaceutical enclosures and shock absorbers.

Elastomer types and properties

IR (Polyisoprene)

Synthetic version of natural rubber; its strengths and uses are similar, but its relative purity means that IR materials tend to crystallise less at low temperatures. Consequently, it has better performance at lower temperatures but, at normal temperatures, its performance is inferior to natural rubber.

NBR (Nitrile or Acrylonitrile Butadiene)

The properties of this copolymer are governed by the ratios of the two monomers acrylonitrile and butadiene. Nitrile rubber can be classified as three types based on the acrylonitrile (ACN) content (low, medium and high). The higher the ACN content, the higher will be the resistance to aromatic hydrocarbons. The lower the ACN content, the better will be the low temperature flexibility. The most commonly specified, and the best overall balance for most applications is, therefore, 'medium nitrile'.

High Nitrile:	>45% ACN content
Medium Nitrile:	30 – 45% ACN content
Low Nitrile:	< 30% ACN content

General characteristics of NBRs include excellent resistance to aliphatic hydrocarbon oils, fuels and greases, very low gas permeability, improved heat ageing and ozone resistance, improved tensile and abrasion strength, hardness, density and low compression set. Typical applications are as gaskets and seals, hoses and cable jacketing in hydraulic/pneumatic systems and oil/hydrocarbon based environment.



NR (Natural rubber)

Natural rubber (tapped from the cultivated rubber tree) exhibits high tensile strength, abrasion resistance, resilience, tear strength and low hysteresis. These rubbers exhibit the best long range elasticity.

The chemically similar IR (polyisoprene) has lower strength properties than the natural form but better low-temperature performance. Both rubbers are susceptible to degradation by weathering, and both show poor resistance to mineral and petroleum-based oils and fuels.

Main applications apart from tyres are for vibration mounts, springs and bearings.



PTFE (Polytetrafluoroethylene)

Polytetrafluoroethylene is not an elastomer but an extremely inert thermoplastic, unaffected by virtually all known solvents. It also exhibits this inert characteristic over a wide range of temperatures. Its hardness and lack of elasticity prevents its general use as an elastomeric sealing ring, but it is often used as a back-up ring. Typical applications are backing rings, bearings and non-stick requirements, or for use in composite seals when combined with elastomers.

SBR (Styrene-Butadiene)

This copolymer of styrene and butadiene is used in general applications where exposure to mineral oils is not required. Originally developed to replace natural rubber, it performs better at high temperatures, although tensile strength, resilience and abrasion resistance are inferior at lower temperatures. SBRs have inferior weathering and chemical resistance to most other elastomers. Typical applications are sealing requirements for hydraulic braking systems.

TFE/P (Tetrafluoroethylene/Propylene)

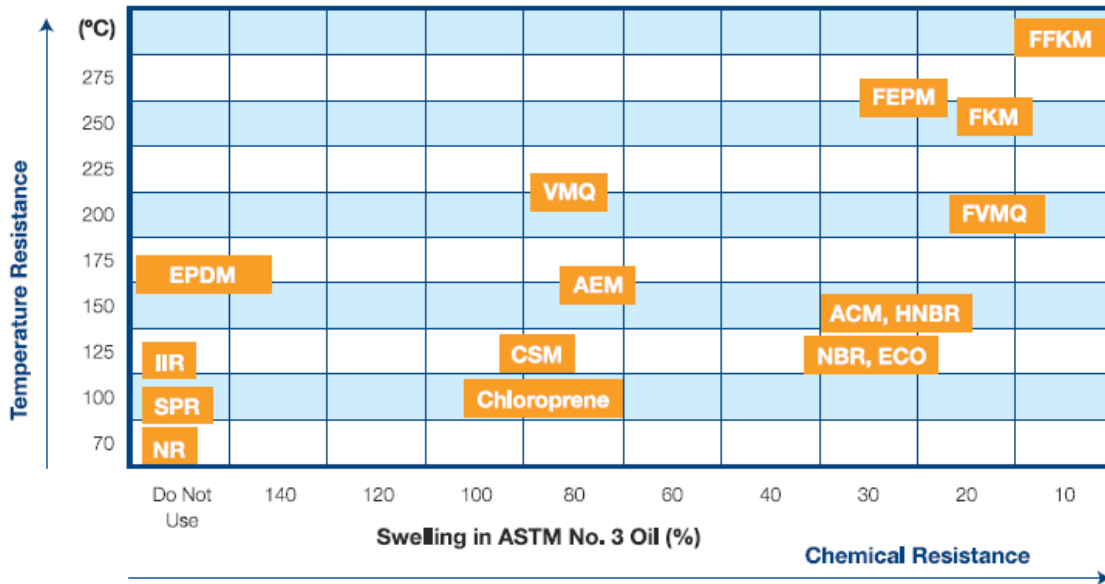
See FEPM.

VMQ/PVMQ (Silicone)

These elastomers, which include the phenyl substituted silicones are noted for their high and low temperature applications (phenyl silicones offer exceptionally low temperature flexibility). They have excellent resistance to ozone and weathering and good resistance to compression set at high temperatures. They do, however, have poor tensile strength, low tear and abrasion resistance and high gas permeability. Silicones have a low level of combustible components; even when exposed to flame, the elastomer is reduced to a non-conducting silica ash. Silicones also exhibit excellent compression set and high physiological inertness (tasteless, odourless and completely non-toxic). Silicones are also resistant to bacteria, fungi, a wide range of media including high energy radiation and excellent release properties (except to glass). Platinum-cured silicones offer enhanced levels of purity and low extractables making them ideal for pharmaceutical, biomedical and food & drink applications.

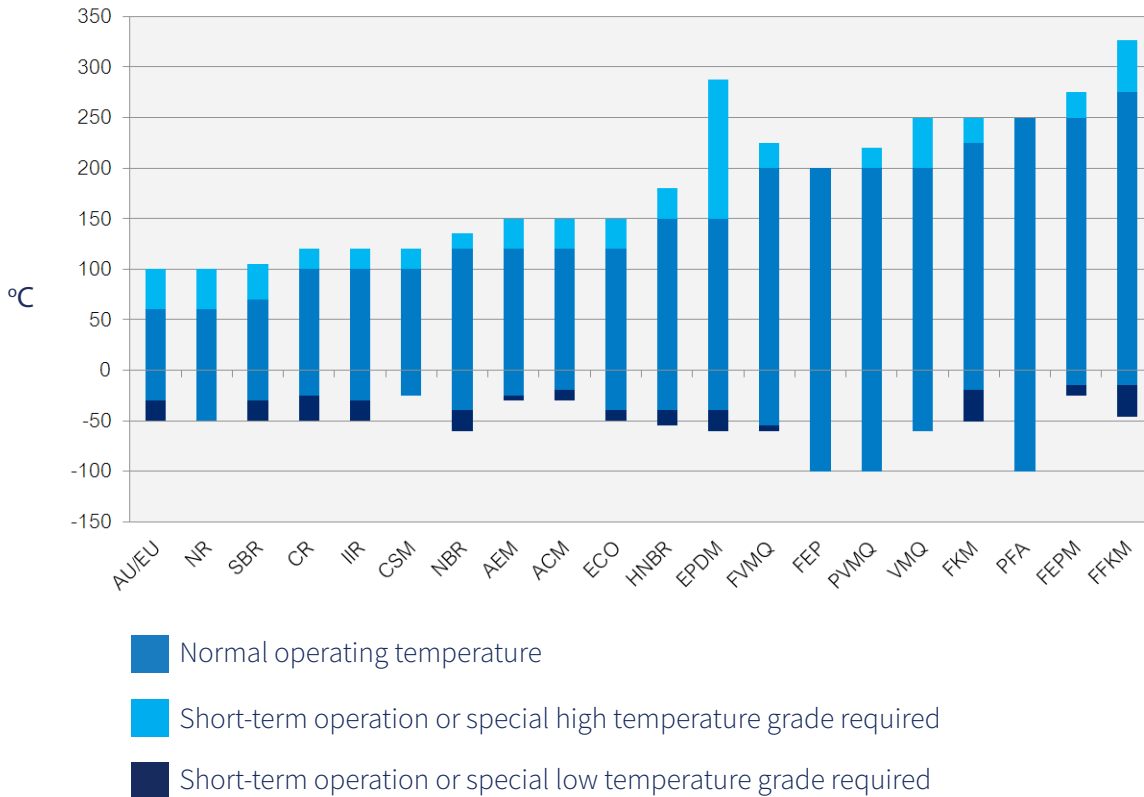
Elastomer types and properties

This graph positions the various elastomer types according to typical temperature and chemical resistance. Elastomers which are in the top right-hand corner are considered high performance elastomers.



Typical temperature capability of elastomers

This graph shows the typical useful operating temperature range of each elastomer type.





Chemical compatibility guide

This guide is intended to provide assistance in determining the suitability of various elastomer types in different chemical environments. The ratings are based on volume swell data which has been compiled from published literature, laboratory tests (conducted at room temperature), actual field experience and informed judgments. As laboratory tests do not necessarily predict end-use performance, it is the user's responsibility to ensure suitability in application.

Rating System

Rating	Description	Volume Change	Comments
1	Excellent	<10%	Little or no effect.
2	Good	10-20%	Moderate swelling and change in physical properties. May be suitable for static applications.
3	Doubtful	20-40%	Significant swelling and noticeable change in physical properties. Questionable performance, caution advised if used.
4	Do not use	>40%	Not suitable.
	No data available		Insufficient information available for rating.

Volume change (swell) is only an indicator of fluid compatibility and is intended as a typical guideline for comparative purposes. Fluid attack of the polymer may affect various physical properties, including tensile strength, hardness and elongation. Elevated temperatures can exacerbate chemical attack on elastomers, therefore in some cases it may be necessary to select special formulations which offer improved performance. Please contact PPE for technical support and assistance when choosing the right elastomer for a specific application.

1 = Excellent
 2 = Good
 3 = Doubtful
 4 = Do not use
 * = Special formulation

PPE Prefix	PERLAST®												FKM (Fluorocarbon)			FVMQ (Fluorosilicone)		
	G	A	B	C	D	E	H	J	N	P	Q	R	V	W	Z	F	L	S
Chemical or Media	Dynamic And Static Applications															Static Only		
Acetaldehyde	1		3	3	1	2	4	2	3	4	4	3	4	3	3	4	3	2
Acetamide	1	2	4	2	1	1	2	2	1	4	4	4	3	4	2	1	2	1
Acetic acid (dilute)	1	2	2	1	1	1	2	1	2	4	4	2	1	4	2	2	1	1
Acetic acid (glacial)	1	3	3	4	1	2	4	2	2	4	4	2	2	4	2	4	4	2
Acetic acid (hot, high pressure)	1	3	4	4	1	3	4	4	4	4	4	4	2	4	3	4	4	3
Acetic anhydride	1	2	4	2	1	2	4	2	4	4	4	2	4	4	4	4	2	2
Acetic oxide (Acetic anhydride)	1	2	4	2	1	2	4	2	4	4	4	2	4	4	4	4	2	2
Acetone	1	4	3	3	1	1	4	1	4	4	4	4	4	4	4	4	3	4
Acetone cyanohydrin	1		3	2	1	4		1	4			3	4					4
Acetonitrile (Methyl cyanide)	1	1		1	1	1			2				1	2				1
Acetophenone	1	4	4	4	1	1	4	2	4	4	4	4	4	4	4	4	4	4
Acetyl acetone	1	4	4	4	1	1	4	2	4	4	4	4	4	4	4	4	4	4
Acetyl chloride	1	1	4	4	1	4	4	4	4	4	4	4	1	4	4	2	4	3
Acetyl salicylic acid (Aspirin)	1			1	1	4			2									
Acetylene (Ethyne)	1	1	2	2	1	1	1	1	1	4	4	2	1	1	1	1	2	2
Acetylene tetrabromide	1	1	4	2	1	1	4	1	4	4	4	4	1	4	4	2	4	4
Acrolein (Acrylaldehyde)	1	1	3	2	1	1	4	2	2	4	4	2	1			4	2	4
Acrylaldehyde	1	1	3	2	1	1	4	2	2	4	4	2	1			4	2	4
Acrylonitrile (Vinyl cyanide)	1	2	3	3	1	4	4	4	4	4	4	3	3	4	4	4	3	4
Adipic acid	1	2	1	1	1	2	2	1	1	4	4	1	1	2	1	1	1	1
Alkane (Dodecyl benzene)	1		4	4	1			4	4	3	4	4	1	2		2		4
Alkane sulfonic acid	1			1	1	1			3	4			3	3		1		2
Alkazene (Dibromoethylbenzene)	1	3	4	4	1	4	2	4	4	4	4	4	2	4		2	4	4
Alkyl aryl sulfonate	1			2	1	4			1	1			1	1		1		2
Allyl alcohol	1	1	1	2	1	2	2	2	1	4	3	3	2	1		1	1	1
Allyl bromide	1		4	4	1			4	4			4	2					4
Allyl chloride	1		4	2	1	2		3	2			4	2	1				4
Alum	1	1	1	1	1	1		1	1	4	1		1	3	1	1	1	1
Aluminium acetate	1	1	3	2	1	1	2	1	2	4	4	1	3	4	2	4	4	4
Aluminium bromide	1	1	1	1	1	1		1	1	1	3	1	1	1		1	1	1
Aluminium chloride	1	1	1	1	1	1	1	1	1	1	3	1	1	1	1	1	1	2
Aluminium fluoride	1	1	1	1	1	1	1	1	1		3	2	1	1		1	1	2
Aluminium hydroxide	1	1	2	1	1	2		1	2			1	2					2
Aluminium nitrate	1	1	1	1	1	1	1	1	1	4	3	1	1	4	1	1	1	2
Aluminium phosphate	1	1	1	1	1	1	1	1	1			1	1	1		1	1	1
Aluminium potassium sulfate	1	1	1	1	1	1		1	1	4	4	1	1	3		4	1	1
Aluminium salts	1	1	1	1	1	1		1	1	1	3	1	1	1		1	1	1
Aluminium sodium sulfate	1		1			1		1	1			1	1	1	1			1
Aluminium sulfate	1	1	2	1	1	1	2	1	1	4	4	1	1	4	1	1	1	1
Amines	1	2	2	2	1	2		2	4	4	4	2	4	4	3	4	4	2
Aminobenzene (Aniline)	1	1	4	4	1	2	4	2	4	4	4	4	3	4	4	3	4	4
Aminobutane (Butyl amine)	1	2	3	4	1	3	4	4	3	4	4	4	4	4	4	4	4	3
Aminosalicic acid	1					1												
Ammonia , anhydrous	1	2	4	1	1	1	3	1	2	4	4	4	4	4	2	4	4	2
Ammonia gas, cold	1	1	1	1	1	1	1	1	1	4	3	1	4	4	1	4	1	1

1 = Excellent
 2 = Good
 3 = Doubtful
 4 = Do not use
 * = Special formulation

PPE Prefix	G	A	B	C	D	E	H	J	N	P	Q	R	V	W	Z	F	L	S
Chemical or Media	Dynamic And Static Applications															Static Only		
Ammonia gas, hot	1	2	4	2	1	2	4	2	4	4	4	4	4	4	4	4	2	1
Ammonium acetate	1	1	1	2	1	1	1	1	1	4	1	1	1	1	1	1	1	1
Ammonium bicarbonate	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Ammonium bifluoride	1	1	1	4	1	2	2	2	2	2	2	2	2	2	2	2	2	2
Ammonium bisulfite	1	1	1	1	1	1	3	3	3	4	4	4	3	3	3	3	3	3
Ammonium bromide	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Ammonium carbonate	1	1	1	1	1	1	2	1	4	4	4	1	2	4	4	3	1	2
Ammonium chloride	1	1	1	1	1	1	1	1	1	3	3	2	1	2	1	2	1	3
Ammonium cupric sulfate	1	1	1	1	1	1	1	1	1	3	3	2	1	2	1	1	1	1
Ammonium dichromate	1	1	1	1	1	1	1	1	1	1	1	1	3	1	1	1	1	1
Ammonium fluoride	1	1	1	2	1	1	1	1	1	2	2	2	1	1	1	1	1	1
Ammonium fluosilicate	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Ammonium hydrogen fluoride	1	1	1	4	1	2	2	2	2	2	2	2	2	2	2	2	2	2
Ammonium hydroxide, 3 molar	1	1	2	1	1	1	2	1	2	4	4	2	2	1	2	2	1	1
Ammonium hydroxide, conc.	1	1	3	2	1	1	2	1	4	4	4	3	2	4	4	3	1	1
Ammonium iodide	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Ammonium nitrate	1	1	1	1	1	1	2	1	1	4	4	3	2	3	1	3	1	3
Ammonium nitrite	1	1	1	1	1	1	2	1	1	4	4	1	3	4	1	3	1	2
Ammonium oxalate	1	1	1	1	1	1	3	3	3	1	1	1	3	1	1	1	1	2
Ammonium perchlorate	1	1	4	1	1	1	1	3	3	4	1	1	3	3	3	1	1	2
Ammonium persulfate	1	1	4	1	1	1	2	1	4	4	4	3	3	4	4	4	1	1
Ammonium phosphate	1	1	1	1	1	1	2	1	1	4	4	1	4	4	1	4	1	1
Ammonium salts	1	1	1	1	1	1	1	1	1	3	1	1	3	1	1	3	1	1
Ammonium sulfate	1	1	2	1	1	1	2	1	1	4	4	1	4	4	1	4	1	1
Ammonium sulfide	1	1	2	1	1	1	2	1	3	4	4	3	4	4	3	4	1	1
Ammonium sulfite	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Ammonium thiocyanate	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Ammonium thiosulfate	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Amyl acetate	1	3	4	4	1	1	4	1	4	4	4	4	4	4	4	4	4	4
Amyl alcohol (Pentanol)	1	1	2	2	1	1	1	1	2	4	4	2	2	3	2	1	2	4
Amyl amine	1	1	2	1	1	1	1	2	2	2	2	2	2	2	2	2	2	3
Amyl borate	1	1	4	2	1	4	4	1	1	4	1	1	4	1	1	4	1	1
Amyl chloride (Chloropentane)	1	1	4	4	1	4	4	3	3	4	2	1	1	2	2	2	4	4
Amyl chloronaphthalene	1	2	4	4	1	4	4	4	4	3	4	4	1	4	4	2	4	4
Amyl naphthalene	1	2	4	4	1	4	4	4	4	3	4	4	1	2	4	2	4	4
Amyl nitrate	1	1	4	1	1	1	1	2	2	4	1	1	3	2	2	1	2	2
Amyl phenol	1	1	4	1	1	1	4	4	4	4	4	4	1	1	1	4	1	1
Aniline (Aminobenzene)	1	1	4	4	1	2	4	2	4	4	4	4	3	4	4	3	4	4
Aniline dyes	1	1	2	2	1	2	4	2	4	4	4	3	2	3	4	2	2	3
Aniline hydrochloride	1	1	3	4	1	3	4	2	3	4	4	3	2	4	2	2	4	3
Aniline oil	1	2	4	4	1	2	4	2	4	4	4	3	3	4	4	3	4	4
Aniline sulfate	1	1	4	1	1	1	3	3	3	4	1	1	3	1	1	1	2	2
Animal oils & fats	1	1	4	2	1	2	1	2	1	1	2	4	1	1	1	1	3	2
Anisole (Methyl phenyl ether)	1	1	4	4	1	1	4	4	4	4	4	4	3	3	3	4	4	4
Anone (Cyclohexanone)	1	3	4	4	1	2	4	2	4	4	4	4	4	4	4	4	4	4

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PPE Prefix	PERLAST®												FVMQ (Fluorosilicone)						
	G	A	B	C	D	E	H	J	N	P	Q	R	V	W	Z	F	L	S	
Chemical or Media	Dynamic And Static Applications															Static Only			
Anthraquinone	1	1		1	1		1	2	2		4	2					1		
Antifreeze	1	1	1	1	1		2	1	2		4	4	2	1	1	2	1	1	1
Antimony pentachloride	1		4		1			4	4									4	
Antimony trichloride	1		2	2	1	2		2	1				2					2	
Aqua regia	1	3	4	4	1	3	4	4	4	4	4	4	4	2	4	4	3	4	4
Argon	1	1	4	4	1	1	1	2	3	1	1	4	1	1	2		2	4	2
Aromatic fuels	1	2	4	4	1	4		4	2	4	4	4	1	4	2		2	4	4
Arsenic acid	1	1	1	1	1	1	1	1	2	3	3	2	1	4	1		1	1	1
Arsenic trichloride	1		4	1	1	3		4	2			4	4		2			4	
Ascorbic acid	1		4		1	1			3	4		1	1		3		1		2
Askarel	1	1	4	4	1	4		4	2	4	4	4	1	4	2		2	4	4
Asphalt	1		4	2	1	4	1	4	2	2	2	4	1	1			2	4	4
ASTM fluid 101	1		4	4	1	4	3	4	3	4	4	4	1	4	4		1	4	4
ASTM fuel A (aliphatic)	1	3	4	2	1	4	1	4	1	2	1	4	1	1	1		1	2	4
ASTM fuel B (30% aromatic)	1	4	4	4	1	4	2	4	1	4	2	4	1	3	1		1	4	4
ASTM fuel C (50% aromatic)	1	4	4	4	1	4	2	4	2	4	4	4	1	4	2		2	4	4
ASTM fuel D	1	4	4	4	1	4	2	4	1	2	3		1		2		1	4	4
ASTM oil 1 (high aniline)	1	1	4	1	1	4	1	4	1	1	1	4	1	1	1		1	2	1
ASTM oil 2 (medium aniline)	1	2	4	3	1	4	1	4	1	1	2	4	1	1	1		1	4	4
ASTM oil 3 (low aniline)	1	3	4	4	1	4	1	4	1	1	2	4	1	2	1		1	4	3
ASTM oil 4 (high aniline)	1	2	4	4	1	4		4	2	2	4	4	1		2		2	4	4
Automatic transmission fluid	1	1	4	2	1	4		4	1	1	2	4	1	1	1		2	3	4
Barium carbonate	1	1	1	1	1	1		1	1			1	1	1			1		
Barium chlorate	1		4		1	1			3		1		3		3		1		2
Barium chloride	1	1	1	1	1	1	1	1	1	2	2	1	1	1	1		1	1	1
Barium cyanide	1			1	1				3						1				
Barium hydrate	1	1	1	1	1	1	1	1	1	4	4	1	1	1	1		1	1	1
Barium hydroxide	1	1	1	1	1	1	1	1	1	4	4	1	1	3	1		1	1	1
Barium nitrate	1			1	1	1			1				3				1		2
Barium salts	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1		1	1	1
Barium sulfate	1	1	1	1	1	1	1	1	1	4	1	1	1	4	1		1	1	1
Barium sulfide	1	1	2	1	1	1	1	1	1	4	1	1	1	3	1		1	1	1
Beer	1	1	4	1	1	1			1	2	1	1	1	4	1		1		1
Benzal chloride	1	1	4	4	1	4	4	3	4	3	4	4	1	4			2	4	4
Benzaldehyde	2	2	4	4	1	1	4	1	4	4	4	4	4	4	4		4	4	4
Benzene (Benzol)	1	3	4	4	1	4	4	4	4	4	4	4	1	4	4		1	4	4
Benzene sulfonic acid, 10%	2		4	2	1	4	4	4	4	4	4	4	1	4	4		2	1	4
Benzene (Ligroin) (Nitrobenzine)	1	2	4	2	1	4	1	4	1	1	2	4	1	4	1		1	3	4
Benzochloride	1	1	4	4	1	1		2	4	4		4	1				1	4	
Benzoic acid	1	1	4	4	1	4	2	4	4	4	4	4	1	4	4		2	4	4
Benzophenone	1	1	4	4	1	2	4	2	4	4	4	4	1	4	4		1	4	2
Benzoyl chloride	1	1	4	4	1	4	4	4	4	3	4	4	1	4	4		2	4	4
Benzoyl peroxide	1			1	1														
Benzyl acetate	1		4		1			2	4			4	4						
Benzyl alcohol	1	1	4	2	1	2	4	2	4	4	4	4	1	4	4		2	2	1

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PPE Prefix	PERLAST®			CR	FEP & PFA	EPR & EPDM	ECO	IIR (Butyl)	NBR (Nitrile)	ACM	AU & EU	NR (Natural Rubber)	FKM (Fluorocarbon)	AEM	HNBR	FVMQ (Fluorosilicone)	CSM	VMQ (Silicone)	
	G	A	B																
Chemical or Media	Dynamic And Static Applications															Static Only			
Benzyl benzoate	1	2	4	4	1	2	4	2	4	4	4	4	1	4	4	1	4	4	
Benzyl chloride (Chlorotoluene)	1	1	4	4	1	4	4	4	4	4	4	4	1	4	4	2	4	4	
Benzyl dichloride	1	1	4	4	1	4	4	3	4	3	4	4	1	4	4	2	4	4	
Beryllium chloride	1		3	3	1	1			1	3	1	3	1		1	3		3	
Beryllium sulfate	1		4		1	1		1	3		4	1	3		3	1	1	2	
Biphenyl (Phenylbenzene)	1	2	4	4	1	4	4	4	4	4	4	4	1	4	4	2	4	4	
Bismuth carbonate	1	1		1	1	1			1				1						
Black sulfate liquors (cold)	1	1	2	2	1	2		2	2	4	4	2	1			2	2	2	
Blast furnace gas	1	1	4	4	1	4		4	4	4	4	4	1		4	2	4	1	
Bleach liquor	1	1	4	3	1	1		2	1	3	4	4	4	1	3	2	2	1	2
Borax (Sodium borate)	1	1	2	4	1	1		1	1	2	3	3	2	1	1	1	2	4	2
Bordeaux mixture	1	1	2	2	1	1		1	2	4	4	2	1			2	1	1	
Boric acid (Boracic acid)	1	1	1	1	1	1		1	1	1	4	3	1	1	2	1	1	1	1
Boron fluids (HEF)	1	1	4	4	1	4		1	4	2	4	4	4	1		2	4	4	
Boron trichloride	1				1														
Brake fluid (glycol base)	1	1	1	2	1	1		4	2	3	4	4	4	4	4	3	4	2	3
Brake fluid (mineral oil base)	1	1	4	2	1	4		1	4	1	1	1	4	1	1	1	1	2	3
Brake fluid (silicone oil base)	1	1	1	2	1	1		4	2	3	4	4		4	4	3	4	2	3
Brine (Salt water)	1	1	1	2	1	2		2	1	1	4	3	4	1	1	1	1	1	1
Bromide	1		4	4	1	4			4					1					4
Bromine	1	1	4	4	1	4		4	4	4	4	4	4	1	4	4	2	4	4
Bromine pentafluoride	2	4	4	4		4		4	4	4	4	4	4	4	4	4	4	4	4
Bromine trifluoride	2	4	4	4	4	4		4	4	4	4	4	4	4	4	4	4	4	4
Bromobenzene	1	4	4	4	1	4		4	4	4	4	4	4	1	4	4	2	4	4
Bromochloro trifluoroethane	1	1	4	4	1	4		4	4		4	4	4	1		4	2	4	4
Bromochloromethane	1	1	4	4	1	2		2	4			4	2		4				4
Bromoethane (Ethyl bromide)	1	1	3	4	1	4		2	4	2	4	3	4	1	4	2	1	4	4
Bromotoluene	1		4		1			4	4			4		2					4
Bromotrifluoromethane	2	1	1	1	1	1		1	1	1	2	1	1	1	2	1	2	1	4
Bunker oil	1	1	4	4	1	4		4	1		1	2	4	1	1	1	1	4	2
Butadiene	1		4	4	1	4		4	4	4	4	4	4	1	4	4	1	4	4
Butane (Butyl hydride) (LPG)	1	3	3	2	1	4		1	4	1	1	4	4	1	3	1	1	2	4
Butanediol	1		1	2	1	1		1	4			2	1						2
Butanol (Butyl alcohol)	1	1	1	1	1	2		4	2	2	4	4	1	1	1	1	1	1	3
Butene (Butylene)	1		4	3	1	4		1	4	2	4	4	4	1	4	2	2	4	4
Butoxyethanol (Butyl cellosolve)	1	3	4	3	1	2		3	2	3	4	4	4	4	4	4	4	4	4
Butter	1	1	4	2	1	2		1	2	1	1	2	4	1	1	1	1	3	2
Butyldigol (Butyl carbitol)	1	2	4	3	1	1		1	1	4	4		4	2		4	4	4	4
Butyl acetate	1	4	4	4	1	2		4	2	4	4	4	4	4	4	4	4	4	4
Butyl acetyl ricinoleate	1	1	4	2	1	1		1	2		1	4	4	1		2	2	2	
Butyl acrylate	1	4	4	4	1	4		4	4	4	4	4	4	4	4	4	4	4	1
Butyl alcohol (Butanol)	1	1	1	1	1	2		4	2	2	4	4	1	1	1	1	1	1	3
Butyl amine (Aminobutane)	1	2	3	4	1	3		4	4	3	4	4	4	4	4	4	4	4	3
Butyl benzoate	1		4	4	1	1		4	1	4	4	4	4	1	4	4	1	4	4
Butyl bromide	1		4		1			4	4			4		2					4

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PPE Prefix	PERLAST®												FKM (Fluorocarbon)			FVMQ (Fluorosilicone)		
	G	A	B	C	D	E	H	J	N	P	Q	R	V	W	Z	F	L	S
Chemical or Media	Dynamic And Static Applications															Static Only		
Butyl butyrate	1		4	4	1	1		2	4		4	4	1			1	4	
Butyl carbitol	1	2	4		3	1	1	1	1	4		4	4	2	4	4	4	4
Butyl cellosolve (Butoxyethanol)	1	3	4		3	1	2	3	2	3		4	4	4	4	4	4	4
Butyl chloride (Chlorobutane)	1		4			1			3	3			4	2		3	1	4
Butyl ether	1		4		4	1	3	4	3	3		4	2	4		4	4	4
Butyl hydride (Butane)	1	3	3		2	1	4	1	4	1		1	4	1	3	1	1	2
Butyl oleate	1	1	4		4	1	2	4	2	4		4	4	1	4	4	2	4
Butyl phenol	1		4		4	1	4		4	4		3	4	1			4	4
Butyl phthalate (Dibutyl phthalate)	1		4		4	1			1	4			4	3			4	
Butyl stearate	1	1	4		4	1	4	2	4	2		4	4	1	1	2	2	4
Butylene (Butene)	1		4		3	1	4	1	4	2		4	4	1	4	2	2	4
Butyraldehyde	2	3	4		4	1	2	4	2	4		4	4	4	4	4	4	4
Butyric acid	1	2	4		4	1	2	4	2	4		4	4	2	4	4	4	4
Butyric anhydride	1		4			1			3	3			3				2	
Butyrene (Dipropyl ketone)	1		4			1			2	4			4	4			4	
Cadmium chloride	1		4		1	1	1		1	3		4	1	3	3		1	1
Cadmium nitrate	1		4			1	1			3		1	1		3		1	1
Cadmium sulfate	1		4		1	1	1			3		4	1		3		1	1
Calcine liquors	1	1				1	1		1	1		4	4	1	1		1	
Calcium acetate	1	1	3		2	1	2		3	1	3	4	4	1	4	4	4	4
Calcium bisulfate	1				2	1	2			1				1				
Calcium bisulfide	1		4		1	1	1			3		4	1		3		1	1
Calcium bisulfite	1	1	4		1	1	4		4	4	1	4	3	1	4	1	2	1
Calcium bromide	1		1		1	1	1		1	1		1	1	1	1	1	1	1
Calcium carbonate	1	1	1		1	1	1		1	1		3	3	1	1	1	1	1
Calcium chlorate	1	1			1	1	1			1				1	1			
Calcium chloride	1	1	1		1	1	1		1	1	1	3	3	1	1	1	1	1
Calcium cyanide	1	1	1		1	1	1		2	1	1	4	4	1	1	2	1	1
Calcium hydrosulfide	1		1			1			1	1			1	1			1	
Calcium hydroxide	1	1	1		1	1	1		1	1	1	4	4	1	1	3	1	3
Calcium hypochloride	1	1	4		4	1	1		2	1	4	4	4	1	4		1	1
Calcium hypochlorite	1	1	3		3	1	1		2	1	3	4	4	1	4	2	2	1
Calcium nitrate	1	1	1		1	1	1		1	1	1	3	3	1	1	2	1	1
Calcium oxichloride	1	1	4		3	1	2		2	2	2	4	4	1	2		2	2
Calcium oxide	1		1		1	1	1		1	1		1	1	1	1	1	1	1
Calcium permanganate	1					1				1				1				
Calcium phosphate	1	1	1		2	1	1		1	1		1	1	1	1		1	1
Calcium salts	1	1	1		1	1	1		1	1		1	1	1	1		1	1
Calcium silicate	1	1	1		1	1	1		1	1			1	1	1		1	
Calcium sulfate (Gypsum)	1	1	1		1	1	1		1	1			1	1	1		1	
Calcium sulfhydrate	1		1			1			1	1			1	1	1		1	
Calcium sulfide	1	1	2		1	1	1		2	1	2	4	1	1	4	1	1	1
Calcium sulfite	1	1	2		1	1	1		1	1		4	1	1	1		1	1
Calcium thiosulfate	1	1	2		1	1	1		2	1	2	4	3	1	2	2	1	1
Caliche liquors	1	1	1		1	1	1		1	1		1	1	1	1		1	1

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PPE Prefix	PERLAST®												FKM (Fluorocarbon)			FVMQ (Fluorosilicone)		
	G	A	B	C	D	E	H	J	N	P	Q	R	V	W	Z	F	L	S
Chemical or Media	Dynamic And Static Applications															Static Only		
Camphor	1		4	2	1	4		4	1			4	2					4
Cane sugar liquor	1	1	1	1	1	1	1	1	2		4	4	1	1	1	2		1 1 1
Capric acid (Caproic acid)	1	2	2	2	1	4			1		1	4		1		1		1 2 2
Caproic aldehyde	1		4	1	1	2			2	4	4	4	2	4				4 2
Capryl alcohol (Octanol)	1	1	2	2	1	1	2	2	2	2	4	4	2	1	2	2		2 2 2
Carbamate	1		4	2	1	2		2	3		4	4	4	1	4			1 2
Carbinol (Methanol)	1	1	1	1	1	1	2	1	2		4	4	1	1	1	1		2 1 2
Carbitol	1	2	2	2	1	2		2	2		4	4	2	2	4			2 2 2
Carbolic acid (Phenol)	1	1	4	4	1	2	4	2	4		4	4	4	1	4	4		1 4 4
Carbon bisulfide	1	1	4	4	1	4	4	4	4		3	4	4	1	4	2		1 4 3
Carbon dioxide, dry	1	1	2	2	1	2	1	2	1		2	1	2	2	1	1		2 2 2
Carbon dioxide, wet	1	1	2	2	1	2	1	2	1		2		2	2	1	1		2 2 2
Carbon disulfide	1	1	4	4	1	4	4	4	4		3	4	4	1	4	3		1 4 3
Carbon monoxide	1	1	3	3	1	2	1	2	1		1	1	2	1	1	1		2 2 1
Carbon tetrachloride	2	4	4	4	1	4	2	3	2		4	4	4	1	4	2		2 4 4
Carbonic acid	1	1	2	1	1	1	1	1	2		3	3	1	1	1	2		1 1 1
Castor oil	1	1	2	1	1	2	1	2	1		1	1	2	1	2	1		1 1 1
Caustic potash	1	2	2	2	1	1	2	1	2		4	2	2	2	4			2 2 3
Caustic soda	1	1	2	2	1	1	2	1	2		4	2	2	2				2 2 3
Cellosolve	1	1	4	4	1	2	4	2	4		4	4	4	4	4	4		4 4 4
Cellosolve, acetate	1	3	4	4	1	2	4	2	4		4	4	4	4	4	4		4 4 4
Cellosolve, butyl	1	2	4	3	1	2	4	2	4		4	4	4	4	4	4		4 4 4
Cellosolve, methyl	1	2	4	3	1	2	4	2	4		4	4	4	4	4	4		4 4 4
Cellulose acetate (CA)	1	3		4	1	2			4					4	4	4		4 4 4
Cetane (Hexadecane)	1	1	4	2	1	4	4	1			1	4	4	1		1		3 2 4
Cetyl alcohol	1		1		1	4			1							1		1 2 2
China Wood oil (Tung oil)	1	1	4	2	1	4	3	1			1	3	4	1	2	1		2 3 4
Chloral hydrate	2		3	3	1	3	3	4				4		3				2
Chloramine-T	1		1	1	1	1	1	1				1				1		1
Chlordane	1	1	4	3	1	4	4	2				4		1	2			2 3 4
Chlorextol	1	1	4	2	1	4	4	2			2	4	4	1	2			2 4 4
Chloric acid	1		4	4	1	1	2	4				4		1				1
Chlorinated brine	1	1	4	4	1	4	4	4			4	4	2	1	4			1 2 4
Chlorinated lime	1	1	4	3	1	2	2	2	2		4	4	2	1	2			2 2 2
Chlorinated solvents	1	4	4	4	1	4	4	4			4	4	4	1	4			1 4 4
Chlorine dioxide	1	3	4	4	1	3	4	3	4		4	4	4	2	4	4		2 3 3
Chlorine trifluoride	2	4	4	4	4	4	4	4	4		4	4	4	4	4	4		4 4 4
Chlorine, dry	1	3	4	4	1	4	2	4	4		4	4	4	1	4	3		1 4 4
Chlorine, wet	1	3	4	3	1	4	3	4	4		4	4	4	1	4	3		2 3 3
Chloroacetic acid	1	2	4	4	1	2	4	2	4		4	4	4	4	4	4		4 4 3
Chloroacetone	1	4	4	4	1	1	4	2	4		4	4	4	4	4	4		4 4 4
Chlorobenzene	1	2	4	4	1	4	4	4	4		4	4	4	1	4	4		2 4 4
Chlorobromomethane	1	3	4	4	1	2	4	2	4		4	4	4	1	4	4		2 4 4
Chlorobutadiene (Chloroprene)	1	2	4	4	1	4	4	4	4		4	4	4	1	4	4		2 4 4
Chlorobutane (Butyl chloride)	1		4		1		3	4				4		2				4

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Chemical or Media	Dynamic And Static Applications															Static Only		
Chlorodifluoromethane	1	1	2	1	1	1	1	1	4	2	4	2	4	4		4	1	4
Chlorodiphenyl				4		4		4	4				1				4	
Chlorododecane	1	2	4	4	1	4		4	4	4	4	4	1		4	1	4	4
Chloroethylene (Vinyl chloride)	1	2	4	4	1	3		4	3	4	4	4	1	4	4	2	4	4
Chloroform	1	4	4	4	1	4		4	4	4	4	4	1	4	4	2	4	4
Chloronaphthalene	1	4	4	4	1	4		4	4			4	1			2	4	4
Chloronitroethane				4		4		4	4	4		4	3				4	
Chloropentafluoroethane	1		1	1	1	1	1	1	1	1	2	1	2	1	1	3	1	3
Chloropentane (Amyl chloride)	1		4	4	1	4		4	4	4		4	2			2	4	4
Chloroprene (Chlorobutadiene)	1	2	4	4	1	4		4	4	4	4	4	1	4	4	2	4	4
Chlorosulfonic acid	1	1	4	4	1	4		4	4	4	4	4	4	4	4	4	4	4
Chlorothene (Trichloroethane)	1	2	4	4	1	4		4	4	4	4	4	1	4	4	2	4	4
Chlorotoluene (Benzyl chloride)	1	1	4	4	1	4		4	4	4	4	4	1	4	4	2	4	4
Chlorotrifluoroethylene (CTFE)	2					1				4								
Chlorotrifluoromethane	2	1	2	1	1	1		1	1	1	2	4	2	3	1	1	3	1
Chlorox	1	1	4	2	1	2		1	2	2	3	3	3	1	3	2	1	2
Chrome plating solution	1	1	4	4	1	2		2	4		4	4	4	1	4	4	2	4
Chromic acid, 50%	1	1	4	4	1	2		3	3	4	4	4	4	1	4	4	3	2
Chromic oxide (aqueous)	1	1	4	4	1	2		2	4		4	4	4	1	4	2	1	2
Chromium sulfate	1	2				2				2				1	2			
Citric acid	1	1	1	1	1	1		1	1	1	3	3	1	1	1	1	1	1
Cobalt chloride	1	1	1	1	1	1		2	1	1	3	3	1	1	2	1	1	2
Coconut oil	1	1	4	3	1	3		1	3	1	1	3	4	1	1	1	1	3
Cod liver oil	1	1	4	2	1	1		1	1	1	1	1	4	1	3	1	1	2
Coffee	1	1	1	1	1	1		4	1	2	4	4	3	1	3	2	1	1
Coke oven gas	1	1	4	4	1	4		4	4		4	4	4	1	4	2	4	2
Coliche liquors	1		2	1	1	2		2	2			1						
Coolanol	1	1	4	1	1	4		4	1		4	4	4	1	1	2	2	4
Copper acetate	1	4	4	2	1	1		3	1	2	4	4	1	4	4	4	4	4
Copper carbonate	1		1			1		1	2		4	1	3	1	1	1	1	2
Copper chloride	1	1	1	2	1	1		2	1	1	3	3	3	1	2	1	1	2
Copper cyanide	1	2	1	1	1	1		1	1		1	1	1	1	1	1	1	1
Copper salts	1	1	1	1	1	1		1	1		1	1	1	1	1	1	1	1
Copper sulfate, 10%	1	1	2	1	1	1		2	2	1	4	3	3	1	2	1	1	1
Copper sulfate, 50%	1	1	2	1	1	1		2	1		4	3	2	1	4	1	1	1
Copper sulfide	1		1			1		1	1			3		1				1
Corn oil	1	1	4	3	1	3		1	3	1	1	1	4	1	1	1	1	3
Cottonseed oil	1	1	4	3	1	3		1	3	1	1	1	4	1	1	1	1	3
Creosote (coal tar)	1	1	4	2	1	4		4	4	1	1	3	4	1	3	1	1	4
Creosote (wood tar)	1	1	4	2	1	4		4	4	1	1	3	4	1	4	2	1	4
Cresol (Cresylic acid)	1	1	4	4	1	4		4	4	4	4	4	4	1	4	2	2	4
Crotonaldehyde	1		4	1	1	2		1	2			4		2				2
Crotonic acid	1		4	2	1	2		2	4		4	4	4	3	4	4	4	4
Crude oil	1	1	4	4	1	4		1	4	2	1		4	1	1	1	2	4
Cumene (Isopropyl benzene)	1	3	4	4	1	4		4	4	4	4	4	4	1	4	4	2	4

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PPE Prefix	PERLAST®			CR	FEP & PFA		EPR & EPDM	ECO	IIR (Butyl)	NBR (Nitrile)	ACM	AU & EU	NR (Natural Rubber)	FKM (Fluorocarbon)	AEM	HNBR	FVMQ (Fluorosilicone)	CSM	VMQ (Silicone)
	G	A	B																
Chemical or Media	Dynamic And Static Applications																Static Only		
Cupric chloride (Copper chloride)	1	1	1	2	1	1	2	1	1	3	3	3	1	2	1	1	2	1	
Cutting oil	1	1	4	2	1	4			4	1	1	1	4	1	1	1	1	2	4
Cyclohexane	1	2	4	3	1	4	1	4	1	2	1	4	1	2	1	1	4	4	
Cyclohexanol	1	1	4	2	1	4	4	4	2	4	4	4	1	3	2				
Cyclohexanone	1	3	4	4	1	2	4	2	4	4	4	4	4	4	4				
Cyclopentane	1		4	1	1	4	4	4	4			4	1					4	
Cymene (Isopropyltoluene)	1		4	4	1	4	4	4	4	4	4	4	1	4	4			2 4 4	
Decahydronaphthalene	1		4	4	1	4	4	3	4	4	4	4	1	4	4			2 4 4	
Decalin	1		4	4	1	4	4	3	4	4	4	4	1	4	4			2 4 4	
Decanal	1		4		1	4		1	4			4	4					4	
Decane	1	1	4	3	1	4	1	4	1	1	2	4	1	3	1			1 3 2	
Decanol (Decyl alcohol)	1		1	4	1			1	1			1	2					1	
Denatured alcohol	1	1	1	1	1	1	1	1	2	4	4	1	1	2	2			1 1 1	
Detergent solution	1	1	2	2	1	1	2	1	1	4	4	2	1	3	1			1 2 1	
Developing fluid (photographic)	1	1	2	1	1	2		2	1			1	1	1	1			1 1 1	
Dextron	1	1	4	2	1	4		4	1	1	2	4	1	1	1			2 4 4	
Dextrose	1	1	1	1	1	1	1	1	1	4	4	1	1	1	1			1 1 1	
Diacetone (Diacetone alcohol)	1	4	4	4	1	1	4	1	4	4	4	4	4	4	4			4 4 4	
Diazinon	1		4	3	1	4		4	3			4	2					2 3 4	
Dibenzyl ether	1	3	4	4	1	2	4	2	4	4	3	4	4	4	4			2 4 2	
Dibenzyl sebacate	1	2	4	4	1	2		2	4	4	2	4	2	4	4			3 4 3	
Dibromoethyl benzene	1	3	4	4	1	4	2	4	4	4	4	4	2	4	4			2 4 4	
Dibutyl amine	1	2	4	3	1	4	4	4	4	4	4	4	4	4	4			4 4 3	
Dibutyl ether	1	4	4	4	1	3	4	3	4	3	2	4	3	4	4			3 4 4	
Dibutyl phthalate (DBP)	1	2	4	4	1	2	2	3	4	4	3	4	3	4	4			3 4 2	
Dibutyl sebecate (DBS)	1	2	4	4	1	2	3	2	4	4	4	4	2	4	4			2 4 2	
Dichloro isopropyl ether	1	3	4	4	1	3		4	4	3	2	4	3	3	4			3 4 4	
Dichloroacetic acid	1*		4	4	1	1		3	4		4	2	4					4	
Dichlorobenzene	1		4	4	1	4	4	4	4	4	4	4	1	4	4			2 4 4	
Dichlorobutane	1	1	4	4	1	4		4	2	4	4	4	1		2			2 4 4	
Dichlorodifluoromethane	1	2	1	1	1	2	1	2	1	1	2	2	2	1	1			2 1 4	
Dichloroethyl ether	1		4		1	4		4	4			4						4	
Dichloroethylene	1		4	4	1	4		4	4			4	2					3 4	
Dichlorofluoromethane	2		4	2	1	4	2	4	4	4	4	4	4	4	4			4 4 4	
Dichlorotetrafluoroethane	2		1	1	1	1	1	1	1	1	1	1	2	1	1			2 1 4	
Dicyclohexylamine	1	3	4	4	1	4	4	4	3	4	4	4	4	4	3			4 4 4	
Diesel oil	1	1	4	3	1	4	1	4	1	1	3	4	1	2	1			1 4 4	
Diester synthetic lubricant	1	1	4	4	1	4		4	2	2	4	4	1		2			2 4 4	
Diethanol amine (DEA)	1		2	1	1	1		1	2	4	1	2	3		2			1 2 2	
Diethyl amine	1		3	3	1	3	4	3	3	4	3	3	4	4	3			4 3 3	
Diethyl benzene	1		4	4	1	4		4	4		4	4	1					2 4 4	
Diethyl carbonate	1			4	1				4										
Diethyl ether	1	4	4	3	1	3	3	4	3	3	3	4	3	4	3			3 4 4	
Diethyl phthalate (DEP)	1		4	4	1			1	4			4	3					4	
Diethyl sebacate	1	2	4	4	1	3	2	3		4	4	4	2	4	3			2 4 2	

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PPE Prefix	PERLAST®												FKM (Fluorocarbon)			FVMQ (Fluorosilicone)		
	G	A	B	C	D	E	H	J	N	P	Q	R	V	W	Z	F	L	S
Chemical or Media	Dynamic And Static Applications															Static Only		
Diethylene ether (Dioxane)	1	4	4	4	1	2	4	2	4	4	4	4	4	4	3	4	4	4
Diethylene glycol (Digol)	1	1	3	1	1	1	2	1	1	4	4	2	1	2	1	1	1	2
Diethylene triamine	1				1				2									
Difluorodibromomethane	1		4	4	1	2		2	4	4	4	4				4	4	4
Diisobutyl ketone	1		4	4	1	2	4	2	4	4	4	4	4	4	4	4	4	4
Diisobutylene	1		4	4	1	4	2	4	2	4	4	4	1	4	3	3	4	4
Diisodecyl adipate (DIDA)	1		4		1			1	4			4	3				4	
Diisodecyl phthalate (DIDP)	1		4	4	1	1		1	4			4	3				4	
Diisooctyl adipate (DIOA)	1		4		1			1	4			4	3				4	
Diisooctyl phthalate (DIOP)	1		4		1			1	4			4	3				4	
Diisooctyl sebecate (DIOS)	1		4	4	1	3		4	3	4	4	4	2	4		3	4	3
Diisopropyl amine			2		1			1	2			2					3	
Diisopropyl benzene	1		4	4	1	4	4	4	4	4	4	4	1	4	4	2	4	3
Diisopropyl ketone	1		4	4	1	2	4	2	4	4	4	4	4	4	4	4	4	4
Dimethyl amine (DMA)	1		4	4	1	4	4	4	4	4	4	4	4	4	4	4	4	4
Dimethyl aniline	1		4	4	1	3	4	3	3	4	4	4	4	4	4	4	4	4
Dimethyl ether	1	4	4	3	1	3	4	3	2	4	4	4	2	4		1	4	1
Dimethyl formamide (DMF)	1	1	4	4	1	3	4	3	2	4	4	4	4	4	2	4	4	2
Dimethyl ketone (Acetone)	1	4	3	3	1	1	4	1	4	4	4	4	4	4	4	4	3	4
Dimethyl phthalate	1	2	4	4	1	2	4	2	4	4	4	4	2	4	4	2	4	1
Dimethyl sulfate			4		1			3	4			4	2				4	
Dimethyl sulfide	1		4		1	4		3		1	4	4	1			1	4	2
Dinitrotoluene (DNT)	1	4	4	4	1	4		4	4	4	4	4	3	4	4	4	4	4
Diocetyl phthalate (DOP)	1	2	4	4	1	2	3	2	3	4	3	4	2	3	3	2	4	3
Diocetyl sebacate	1	1	4	4	1	2	3	2	4	4	2	4	2	4	4	3	4	3
Dioxane	1	4	4	4	1	2	4	2	4	4	4	4	4	4	3	4	4	4
Dioxolane	1	4	4	4	1	2	4	3	4	4	4	4	4	4	4	4	4	4
Dipentene (Limonene)	1	3	4	4	1	4	4	4	2	4	4	4	1	4	2	3	4	4
Diphenyl (Phenylbenzene)	1	2	4	4	1	4	4	4	4	4	4	4	1	4	4	2	4	4
Diphenyl oxide (Phenyl ether)	1	2	4	4	1	4	4	4	4	4	4	4	1	3	4	2	4	3
Dipropyl ketone (Butyrone)	1		4		1			2	4			4	4				4	
Dipropylamine	1		2		1			1	2			2					3	
Dipropylene glycol	1		1		1			1	1			1	1	1			1	
Divinyl benzene (DVB)	1	3	4	4	1	4	4	4	4	4	3	4	2	3		3	4	4
Dodecyl benzene (Alkane)	1		4		1			4	4			4	1				4	
Drinking water	1	1	2	1	1	1	2	1	1	4	4	1	1	1		1	1	1
Dry cleaning fluids	2	3	4	4	1	4	4	4	3	4	4	4	1	4	3	2	4	4
DTE light oil	1	1	4	2	1	4		4	1	1	2	4	1	2	1	1	4	4
Epichlorohydrin	2	4	4	4	1	2	4	2	4	4	4	4	4	4	4	4	4	4
Epoxy resin	1	2	1	1	1	1		1	3				4				3	
Epsom salts	1	1	2	2	1	1	2	1	1	4	4	2	1	2	1	1	1	1
Ethanal (Acetaldehyde)	1		3	3	1	2	4	2	3	4	4	3	4	3	3	4	3	2
Ethane	1		4	2	1	4	1	4	1	1	3	4	1	2	1	2	2	4
Ethanethiol (Ethyl mercaptan)	1	1	4	3	1	3	4	4	4	4	4	4	1	4	4	3	2	3
Ethanol	1	1	1	1	1	1	2	1	2	4	4	1	1	2	2	1	1	1

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PPE Prefix	PERLAST®			CR	FEP & PFA	EPR & EPDM	ECO	IIR (Butyl)	NBR (Nitrile)	ACM	AU & EU	NR (Natural Ru)	FKM (Fluoroca)	AEM	HNBR	FVMQ (Fluoroc)	CSM	VMQ (Silicone)
	G	A	B															
Chemical or Media	Dynamic And Static Applications															Static Only		
Ethanol amine	1	1	2	2	1	2	2	2	2	4	3	2	4	4	2	4	3	2
Ether	1	4	4	3	1	3	3	4	3	3	3	4	3	4	3	3	4	4
Ethyl acetate	1	4	4	4	1	2	4	2	4	4	4	4	4	4	4	4	4	2
Ethyl acetoacetate	1		3	4	1	2	4	2	4	4	4	3	4	4	4	4	4	2
Ethyl acrylate	1	3	4	3	1	3	4	2	4	4	4	4	4	4	4	4	4	2
Ethyl acrylic acid	1		4	2	1	2		2	4	4	4	4				4	4	4
Ethyl alcohol	1	1	1	1	1	1	2	1	2	4	4	1	1	3	2	1	1	1
Ethyl aluminium dichloride	1		4			1		4	4			4	2			4		
Ethyl amine (Monoethylamine)	1		3	3	1	1		2	3			3	4			3		
Ethyl benzene	1	2	4	4	1	1	4	4	4	4	4	4	1	4	4	1	4	4
Ethyl benzoate	1	3	3	4	1	4	4	4	4	4	4	4	1	4	4	1	4	4
Ethyl bromide (Bromoethane)	1	1	3	4	1	4	2	4	2	4	3	4	1	4	2	1	4	4
Ethyl butyl acetate	1		4			1		2	4			4	4			4		
Ethyl butyl alcohol	1		1	2	1	3		2	1	4	4	1	1			1	2	2
Ethyl butyl ketone	1		4			1		2	4			4	4			4		
Ethyl butyraldehyde	1		4			1		1	4			4	4			4		
Ethyl butyrate	1			4	1	4			4				3					
Ethyl cellosolve	1	4	4	4	1	2	4	2	4	4	4	4	4	4	4	4	4	4
Ethyl cellulose	1		2	2	1	2		2	2	4	2	2	4	4		4	2	2
Ethyl chloride	1	2	3	2	1	2	2	1	1	3	2	1	1	4	1	1	4	4
Ethyl chlorocarbonate	1	2	4	4	1	4		4	4	4	4	4	1	4	4	2	4	4
Ethyl chloroformate	1	2	4	4	1	4		4	4	4	4	4	1	4		2	4	4
Ethyl cyanide (Propionitrile)	1	1	4	2	1	3		4	2	1	4	4	1	4	1	3	2	4
Ethyl cyclopentane	1	2	4	3	1	4		4	1	2	1	4	1		1	1	4	4
Ethyl ether (Ether)	1	4	4	3	1	3	3	4	3	3	3	4	3	4	3	3	4	4
Ethyl formate	2	2	4	2	1	2	4	2	4	4	4	4	1	4	4	1	2	4
Ethyl hexanol	1	1	2	1	1	1	2	1	1	4	4	2	1	1		1	1	2
Ethyl hexyl acetate	1		4			1		2	4			4	4			4		
Ethyl hexyl alcohol	1	1	2	1	1	1	2	1	2	4	4	2	1	1		2	1	2
Ethyl iodide			4	1	1			4	4			4	2			1		
Ethyl mercaptan (Ethanethiol)	1	1	4	3	1	3	4	4	4	4	4	4	1	4	4	3	2	3
Ethyl oxalate	1	1	1	3	1	1	4	1	4	4	4	3	1	4	4	2	4	4
Ethyl pentachlorobenzene	1		4	4	1	4	3	4	4	4	4	4	1	4		2	4	4
Ethyl silicate	1	1	2	1	1	1	1	1	1	4	4	2	1	4	1	1	2	1
Ethyl sulfate	1	1	4			1		3	4			4	2			4		
Ethylene (Ethene)	1	2	3	3	1	2	1	2	1	1	2	3	1	3	1	1	3	4
Ethylene alcohol	1	1	1	1	1	1	1	1	1	4	3	3	1	1	1	1	1	1
Ethylene bromide	1		4	4	1	4		4	4	4	4	4	1			3	4	4
Ethylene chloride	1	2	4	4	1	4	4	4	4	4	4	4	1	4	4	3	4	4
Ethylene chlorohydrin	1	1	2	2	1	2	4	2	4	4	4	2	1	4	4	2	2	3
Ethylene diamine	2	2	2	1	1	1	1	1	1	4	4	1	4	4	1	4	2	1
Ethylene dibromide	1		4	4	1	4		4	4	4	4	4	1			3	4	4
Ethylene dichloride	1	2	4	4	1	4	4	4	4	4	4	4	1	4	4	3	4	4
Ethylene glycol	1	1	1	1	1	1	2	1	2	4	4	2	1	2	2	1	1	1
Ethylene oxide (ETO)	1	3	4	4	1	3	4	3	4	4	4	4	4	4	4	4	4	4

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PPE Prefix	PERLAST®			CR	FEP & PFA			ECO	IIR (Butyl)			ACM	AU & EU			FKM (Fluorocarbon)			FVMQ (Fluorosilicone)				
	G	A	B		SBR	EPR & EPDM	NBR (Nitrile)		NR (Natural Rubber)	AEM	HNBR		CSM	VMQ (Silicone)									
Chemical or Media	Dynamic And Static Applications															Static Only							
Ethylene trichloride	1	4	4		4	1	3		4	3	4		4	4	4		1	4	4		3	4	4
Ethyne (Acetylene)	1	1	2		2	1	1		2	1	1		4	4	2		1	1			1	2	2
Fatty acids	1	1	4		2	1	3			3	2					4	1	1	2			3	3
Ferric chloride	1	1	1		2	1	1		1	1	1		3	3	3		1	2	1		1	2	2
Ferric hydroxide	1		2			1				1	2					4		4					2
Ferric nitrate	1	1	2		2	1	1		1	1	1		3	3	3		1	2	1		1	1	2
Ferric sulfate	1	1	2		2	1	1		2	1	1		3	3	3		1	2	1		1	1	1
Ferrous chloride	1	1	1		2	1	1		1	1	1		3	3	3		1	2	1		1	2	2
Ferrous sulfate	1	1	2		2	1	1		1	1	1		3	3	3		1	2	1		1	1	2
Fish oil	1	1	4		3	1	4		1	4	1		1	2	4		1	3	1		1	4	1
Fluoboric acid (Fluoroboric acid)	1		2		1	1	1		1	1	1				1		2				1	1	
Fluorine	2		4		3	4	3		4	3	4		4	4	4		2	4	4		2	4	4
Fluorobenzene	1		4		4	1	4		2	4	4		3	4	4		3	4	4		2	4	4
Fluorochloroethylene										3	4												
Fluorol (Sodium fluoride)	1	1			1	1	1			1							1						
Fluorolube (Fluorocarbon oils)	2	2	4		1	1	1		1	1						2		1			2	1	1
Fluosilicic acid	1	1	3		2	1	2		2	2				1		2	2	2			4	1	4
Formaldehyde	1	1	3		3	1	2		2	2	3		4	4	2		4	4	3		4	3	2
Formamide	1				3	1	2			1	3				2		3					1	
Formic acid	2	3	2		2	1	2		3	2	3		4	4	4		3	2	3		4	3	4
Freon 11	2	4	4		4	1	4		3	4	2		4	4	4		2		2		2	4	4
Freon 12	2	4	1		1	1	2		1	2	1		2	2	2		2	1	1		3	1	4
Freon 13	1	1	1		1	1	1		1	1	1		4	4	1		1		1		3	1	4
Freon 13b1	2	2	1		1	1	1		1	1			1	1		2		1			2	1	4
Freon 14	1		1		1	1	1		1	1			1	1		1		1				1	4
Freon 21	2		4		2	1	4		2	4	4				4		4				4	4	4
Freon 22	2	2			1	1	1		1	1	4		2	4	2		4	3	4		4	1	4
Freon 31	2	2			1	1	1			1	4				2		4	4			2		
Freon 32	2	4	1		1	1	1			1	1				1		4	1			3	1	
Freon 112 (Freon BF)	2	4	4		2	1	4		3	4	2		4	2	4		1		2		3	2	4
Freon 113 (Freon TF)	3	4	2		1	1	4		1	4	1		4	2	3		2	4	1		4	1	4
Freon 114	3	4	1		1	1	1		1	1	1		4	1	1		2		1		2	1	4
Freon 114b2	3	4	3		1	1	4		2	4	2		4	4	4		2		2		2	1	4
Freon 115	3	4	1		1	1	1		1	1	1		4	4	1		2		1		4	1	4
Freon 134a	2	4	3		2	1	1			3	1			4	2		4	1	1		3	1	2
Freon 502	3		1		1	1	1		1	2					1		2		2				
Freon C316	2		1		1	1	1		1	1					1			1				1	
Freon C318	3	4	1		1	1	1		1	1					1		2		1			1	
Freon K-142b	3	4	1		1	1	4		1	2					2		2		2		4	1	
Freon K-152a	3		1		1	1	1		1	1					1		4		1			3	
Freon PCA	3	4	2		1		4		4	1			1	4		2		1			1	4	
Freon T-P35	2	1	1		1	1	1		1	1			1	1		1		1			1	1	1
Freon T-WD602	2		2		2	1	2		1	2			1	3		1		2			2	4	
Freon TA	3	3	1		1		1		1	1			1	1		3		1			1	1	
Freon TC	2		2		1	1	2		1	1			1	4		1		1			1	4	

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PPE Prefix	PERLAST®			CR	FEP & PFA		EPR & EPDM	ECO	IIR (Butyl)			NBR (Nitrile)	ACM	AU & EU			NR (Natural Rubber)	FKM (Fluorocarbon)			AEM	HNBR	FVMQ (Fluorosilicone)			CSM	VMQ (Silicone)
	G	A	B		C	D			E	H	J			N	P	Q		R	V	W			Z	F	L		
Chemical or Media	Dynamic And Static Applications																					Static Only					
Freon TMC	2		3	2	1	2			2	2			2	2			1		2					2	3		
Fuel oil	1	1	4	3	1	4			1	4	1		1	3	4		1*	2	1					1	4	4	
Fumaric acid	1	1	2	2	1	2			4	1			4		1		1	4	1					1	2	2	
Furan (Furfuran)	1		4	4	1	3			4	3	4		4	4	4		4	4	4					4	4	4	
Furfural (Furfuraldehyde)	2	3	4	4	1	2			4	2	4		4	4	4		4	4	3					4	4	4	
Furfuryl alcohol	1	2	4	4	1	2			4	2	4		4	4	4		4	4	4					4	4	4	
Gallic acid	1	1	2	3	1	2			2	2			4	4	1		1	4	2					1	2	3	
Gasohol	1		4	4	1	4			4	4	3		4	4	4		1	4	4					2	4	4	
Gasoline	1	3	4	4	1	4			1	4	2		4	3	4		1	3	3					1	4	4	
Gelatin	1	1	1	1	1	1			1	1	1		4	4	1		1	3	1					1	1	1	
Glauber's salt	1	1	4	2	1	2			1	2	4		4		2		1	1	4					1	2		
Gluconic acid	1		4	1	1	1			3	3			1	4		1		3						1	2	2	
Glucose	1	1	1	1	1	1			1	1	1		4	4	1		1	1	1					1	1	1	
Glycerine (Glycerol)	1	1	1	1	1	2			1	1	1		3	4	1		1	1	1					1	1	1	
Glycine	1		2	1	1	1			1	2					2		1									2	
Glycol	1	1	1	1	1	1			2	1	2		4	4	2		1	1	2					1	1	1	
Glycolic acid	1		1	2	1	2			1	1					2		1							1	1	1	
Glycolmonoethylether	1		3	2	1	4			1	1					3		1										
Grease (petroleum base)	1	1	4	2	1	4			2	4	1		1	1	4		1	1	1					1	4	4	
Green Sulfate liquor	2	1	2	2	1	1			1	1	2		4	2	2		1		2					2	2	4	
Halothane	2	1	4	4	1	4			4	4			4	4	4		1		4					2	4	4	
Halowax oil	2	1	4	4	1	4			4	4			4	4	4		1	1	4					1	4	4	
Heavy water	1	1	1	2	1	1			1	1			4	4	1		1	1						1	1	1	
HEF-2 (high energy fuel)	1	1	4	4	1	4			4	2			3	3	3		1		2					2	4	4	
Helium	1	1	1	1	1	1			1	1	1		1	1	1		1	1	1					1	1	1	
Heptanal	1		4			1			1	4					4		2									4	
Heptane	1	3	4	2	1	4			1	4	1		1	2	4		1	1	1					1	2	4	
Hexachlorobutadiene	1		4	4	1	4			4	1			4	4	4		1									4	4
Hexadecane (Cetane)	1	1	4	2	1	4			4	1			1	4	4		1		1					3	2	4	
Hexalin (Cyclohexanol)	1	1	4	2	1	4			4	4	2		4	4	4		1	3	2					1	3	4	
Hexamine	1					1	1																				
Hexane (n-Hexane)	1	3	4	2	1	4			1	4	1		1	1	4		1	2	2					1	2	4	
Hexanedioic acid (Adipic acid)	1	2	1	1	1	2			2	1	1		4	4	1		1	2	1					1	1	1	
Hexanol	1		2	2	1	3			2	2	2		4	4	2		1	1	2					1	2	3	
Hexone (MIBK)	1	4	4	4	1	3			4	3	4		4	4	4		4	4	4					4	4	4	
Hexyl alcohol	1		2	2	1	3			2	2	2		4	4	2		1	1	2					1	2	3	
Hexylene (n-Hexene)	1	3	4	2	1	4			2	4	2		1	2	4		1	3	2					1	2	4	
Hexylene glycol (Brake fluid)	1		4	1	1	1					3		4	1	1		3		3					1		2	
Hydraulic oil (petroleum base)	1	1	4	2	1	4			1	4	1		1	1	4		1	1	1					1	2	2	
Hydrazine (Diamine)	2	2	2	2	1	1			1	2					4		4							4	2	2	
Hydrazine, anhydrous	2	2	1	2	1	2			4	2	4		4	4	4		4	1	1					4	2		
Hydrobromic acid	1	1	4	3	1	1			4	1	4		4	4	1		1	4	4					3	1	4	
Hydrochloric acid, 3 molar	1	1	3	3	1	1			4	1	3		3	4	3		1	3						2	2	4	
Hydrochloric acid, 37% (cold)	1	1	3	3	1	2			4	2	3		4	4	2		1	3	3					2	2	4	
Hydrochloric acid, 37% (hot)	1	1	4	4	1	3			3	3	4		4	4	3		1	3	3					3	4	4	

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PPE Prefix	PERLAST®			CR	FEP & PFA	EPR & EPDM	ECO	IIR (Butyl)	NBR (Nitrile)	ACM	AU & EU	NR (Natural Rubber)	FKM (Fluorocarbon)	AEM	HNBR	FVMQ (Fluorosilicone)	CSM	VMQ (Silicone)
	G	A	B															
Chemical or Media	Dynamic And Static Applications															Static Only		
Hydrochloric acid, concentrated	1	1	4	4	1	2	4	3	4	4	4	4	1	4	3	3	4	4
Hydrocyanic acid	1	1	2	2	1	1	2	1	2	4	4	2	1	3	2	2	1	3
Hydrofluoric acid, concentrated	1	2	3	3	1	3	4	2	4	3	4	3	2	4	4	4	2	4
Hydrofluosilicic acid	1	1	2	2	1	1	1	2		4	1		1	2	4	1	4	
Hydrogen bromide	1	2	4	3	1	2	4	1	4	4	4	2	2	4	3	1	4	
Hydrogen chloride	1	1	2	4	1	1	1	4		2			1		1			
Hydrogen fluoride (HF)	1	2	4	4	1	4	4	4	4	4	4	4	2	4	4	4	3	4
Hydrogen fluoride, anhydrous	1	2	4	4	1	2	4	3	4	4	4	4	3	4	4	4	3	4
Hydrogen gas	1	1	2	1	1	1	1	1	1	2	1	2	1	1	1	3	1	3
Hydrogen peroxide, 30%	1	1	2	1	1	1	1	1	2	4	4	2	1	4	2	1	2	1
Hydrogen peroxide, 90%	1	1	4	4	1	3	2	3	3	4	4	4	1	4	3	2	3	2
Hydrogen sulfide (wet, hot)	1	1	3	2	1	1	2	1	4	4	4	4	3	4	3	3	2	3
Hydrolube (water/ethylene glycol)	1	1	1	2	1	1	2	1		4	4		1		2		2	
Hydroquinone	2		4	4	1	4	4	3		4	2		3	4	4	2	4	3
Hydroxyacetic acid	1		1	2	1	2	1	1		2			1		1	1	1	1
Hypochlorous acid	1		4	4	1	2	2	2	4	4	2		3	4		3		
Iodine	1	2	2	4	1	2	2	2	2	4	4	4	1	2	1	1	2	3
Iodine pentafluoride	2	4	4	4		4	4	4	4	4	4	4	4	4	4	4	4	4
Iodoform	1		4	4	1	4	1			3	4	4	2	3	2			
Iso-butane	1		4	2	1	4	4	1		1	4	4	1		1	1	4	2
Iso-octane	1	2	4	3	1	4	1	4	1	1	2	4	1	1	1	1	2	4
Isoamyl acetate	1	4	4	4	1	2	2	4		4	1	4	4		3	1	4	2
Isoamyl alcohol	1	1	1	1	1	1	1	1		1			1		1			
Isoamyl butyrate	1	4	4	4	1	2	2	4		4	1	4	4		3	1	4	2
Isoamyl chloride	1		4	4	1	4	3	4		4			2		4			
Isobutyl alcohol (Isobutanol)	1	1	2	1	1	1	2	1	2	4	4	2	1	3	2	2	1	1
Isobutyl amine	1		2	1			1	2		2			4		3			
Isobutyl chloride	1	2	4	4	1	2	4	3		4			1		4	2	4	1
Isobutyric acid	1	3		3	1	1	3						4		2			
Isododecane	1	1	4	2	1	4	4	1		4	4		1	1	1	1	2	4
Isopentane	1		4	2	1	4	4	1		1	4	4	1		1	1	3	2
Isophorone (Ketone)	1	2	4	4	1	1	4	1	4	4	4	4	4	4	4	4	4	4
Isopropanol (Isopropyl alcohol)	1	1	2	2	1	1	2	1	2	4	4	1	1	3	2	2	1	1
Isopropyl acetate	1	4	4	4	1	2	4	2	4	4	4	4	4	4	4	4	4	4
Isopropyl alcohol (IPA)	1	1	2	2	1	1	2	1	2	4	4	1	1	3	2	2	1	1
Isopropyl amine	1		2	1			1	2		2			4		3			
Isopropyl benzene	1	3	4	4	1	4	4	4	4	4	4	4	1	4	4	2	4	4
Isopropyl chloride	1	4	4	4	1	4	4	4	4	4	4	4	1	4	4	2	4	4
Isopropyl ether	1	4	4	3	1	4	4	4	3	3	3	4	4	4	3	3	3	4
Isopropyl toluene (Cymene)	1		4	4	1	4	4	4	4	4	4	4	1	4	4	2	4	4
Kel F liquids	2	3	1	1	1		1	1					2		2	2	1	1
Kerosene (Kerosine)	1	2	4	3	1	4	2	4	1	2	1	4	1	2	2	1	3	4
Lacquer solvents	1	4	4	4	1	4	4	4	4	4	4	4	4	4	4	4	4	4
Lacquers	1	4	4	4	1	4	4	4	4	4	4	4	4	4	4	4	4	4
Lactams (Amino acids)	1	3	4	2	1	2	2	4		4			4		4	4	2	

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PPE Prefix	PERLAST®												FKM (Fluorocarbon)			FVMQ (Fluorosilicone)		
	G	A	B	C	D	E	H	J	N	P	Q	R	V	W	Z	F	L	S
Chemical or Media	Dynamic And Static Applications															Static Only		
Lactic acid (cold)	1	1	1	1	1	1	1	1	1	4	1	1	1	4	1	1	1	2
Lactic acid (hot)	1	1	4	4	1	4	4	4	4	4	4	4	1	4	4	2	3	2
Lard	1	1	4	2	1	2	1	2	1	1	2	4	1	1	1	1	3	2
Lauryl alcohol (n-Dodecanol)	1	1	1	1	1	2	1	1	1	1	1	1	2			2		
Lavender oil	1	1	4	4	1	4	3	4	2	2	4	4	1	4	3	2	4	4
Lead acetate	1	4	4	2	1	1	2	1	3	4	4	2	4	4	2	4	4	4
Lead chloride	1		4	2	1	1			3	4	1	1	3	3		1	1	2
Lead chromate	1		4	2	1	1			1	3	4	1	1	3	3	1	1	2
Lead nitrate	1	2	1	1	1	1	2	1	1	4	4	1	1	2	1	1	2	4
Lead sulfamate	1		2	1	1	1			1	2	4	2	1	4		1	1	2
Light grease	1	2	4	4	1	4	1	4	1	1	1	4	1	1	1	1	4	4
Ligroin (Nitrobenzine)	1	2	4	2	1	4	1	4	1	1	2	4	1	4	1	1	3	4
Lime bleach	1	1	2	2	1	1	2	1	1	4	4	2	1	2	1	1	2	2
Lime sulfur	1	1	4	1	1	1			1	4	4	4	1	1		1	1	1
Limonene (Dipentene)	1	3	4	4	1	4	4	4	2	4	4	4	1	4	2	3	4	4
Lindol (Tritolyl phosphate)	1	1	4	4	1	1	4	1	4	4	4	4	2	4	4	3	4	3
Linoleic acid	1	1	4	3	1	4	2	4	2	4	3	4	2	4	2	2	4	2
Linseed oil	1	1	4	3	1	3	1	3	1	1	2	4	1	3	1	1	3	1
Liquefied petroleum gas (LPG)	1		4	2	1	4	1	4	1	3	1	4	1	4	2	3	4	3
Liquid oxygen	4	4	4	4	1	4	4	4	4	4	4	4	4	4	4	4	4	4
Liquimoly	1	1	4	2	1	4	4	1		1	2	4	1		1	1	4	4
Lithium bromide	1	1	1	2	1	1	1	1		1	2		1			1	1	1
Lithium chloride	1	1	1	2	1	1	1	1		1	2		1			1	1	1
Lithium hydroxide	1		4	1	1	1			3	4			3	3		1	1	2
Lithophone	1		4	1	1		1	3		4	1	1	3	3		1		2
Lubricating oil (di-ester base)	1	2	4	3	1	4	2	4	2	2	4	4	1	1		2	4	4
Lubricating oil (petroleum base)	1	1	4	2	1	4	1	4	1	1	2	4	1	1	1	1	4	4
Lye solution	1	2	2	2	1	1	2	1	2	4	4	2	2	4	2	2	1	2
Magnesium acetate	1		4	1			2	4		4			4			4		
Magnesium chloride	1	1	1	2	1	1	2	1	1	4	3	1	1	2	1	1	1	1
Magnesium hydroxide	1	1	2	2	1	1	1	1	2	4	4	2	1	1	2	2	1	3
Magnesium salts	1	1	1	1	1	1	1	1		1	1	1	1	1	1	1	1	1
Magnesium sulfate	1	1	2	2	1	1	2	1	1	4	4	2	1	2	1	1	1	1
Malathion	1		4	3	1	4			4	2			4	1		2		4
Maleic acid	1	1	4	4	1	4	4	4		4	3	4	1	1	4			3
Maleic anhydride	1	1	4	4	1	4	4	4		4	4		1	4	4			4
Malic acid (Apple acid)	1	1	2	2	1	4	4	1		4	1		1	1	1	1	2	2
Managanese (II) chloride	1		4	1	1		1	1		4			3	3		1		1
Manganese carbonate	1		4	1	1	1	1	1		4	1		3	3		1	1	2
Manganese sulfate	1		1	1			1	1		3			1			1		1
Mercuric chloride	1	1	1	2	1	1	1	1	1			1	1	1	1	1	1	3
Mercuric cyanide	1	1		2	1	1		2					1					
Mercurous nitrate	1	1		2	1	1		2					1					
Mercury	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	2
Mesityl oxide	1	4	4	4	1	2	4	2	4	4	4	4	4	4	4	4	4	4

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	G	A	B										V	W	Z	F	L	S
Chemical or Media	Dynamic And Static Applications												Static Only					
Methacrylacid methylester	1	4		4	1	2		2	4	4	4	4	4			4	4	
Methacrylic acid	1	2		2	1	2			4				3		4	4	4	
Methane	1	2	4	2	1	4	1	4	1	1	3	4	1	2	1	2	2	4
Methanol (Methyl alcohol)	1	1	1	1	1	1	2	1	2	4	4	1	1	1	1	2	1	2
Methyl acetate	1	4	4	3	1	2	4	2	4	4	4	4	4	4	4	4	4	
Methyl acetoacetate	1	4	4	4	1	2	4	2	4	4	4	4	4	4	4	4	3	
Methyl acrylate	1	4	4	2	1	2	4	2	4	4	4	4	4	4	4	4	4	
Methyl acrylic acid (Crotonic acid)	1		4	2	1	2		2	4	4	4	4	3	4		4	4	
Methyl alcohol (Methanol)	1	1	1	1	1	1	2	1	2	4	4	1	1	1	1	2	1	2
Methyl amine	1		2	2	1	2		1	4			2	2			1		
Methyl amyl acetate	1					1			1				4					
Methyl amyl alcohol	1		1			1		1	1			1	4			1		
Methyl benzoate	1	1	4	4	1	4	4	4	4	4	4	4	1	4	4	1	4	4
Methyl bromide	1	2	4	4	1	4	4	4	2	3	4	4	1	3	2	1	4	3
Methyl butyl ketone	1	4	4	4	1	2	4	2	4	4	4	4	4	4	4	4	4	3
Methyl butyrate	1			4	1	4			4									
Methyl carbonate	1	1	4	4	1	4		4	4	4	4	4	1		4	2	4	4
Methyl cellosolve	1	1	4	3	1	2	4	2	3	4	4	4	4	4	4	4	4	4
Methyl cellulose	1	1	2	2	1	2		2	2	4	2	2	4	1	2	4	2	2
Methyl chloride	1	4	4	4	1	3	4	3	4	4	4	4	2	4	4	2	4	4
Methyl chloroformate	1	1	4	4	1	4		4	4	4	4	4	1		4	2	4	4
Methyl cyanide (Acetonitrile)	1	1		1	1	1			2				1		2	1		
Methyl cyclopentane	1	4	4	4	1	4	4	4	4	4	4	4	1	4	4	2	4	4
Methyl dichloride	1		4	4	1	3	4	3	4	4	4	4	1	4		2	4	4
Methyl ether	1	4	2	3	1	2	4	2	2	4	4	3	1	4	1	1	4	1
Methyl ethyl ketone (MEK)	1	4	4	4	1	2	4	2	4	4	4	4	4	4	4	4	4	4
Methyl ethyl ketone peroxide	1	4	4	4	1	3	4	3	4	4	4	4	4	4	4	4	4	2
Methyl formate	1	4	4	2	1	2	4	2	4	4	4	4	3	4	4	4	2	3
Methyl glycol acetate	1		2	3	1	1		2	4	4	4	3	4			2	2	
Methyl iodide	1			4	1	1			4									
Methyl isobutyl ketone (MIBK)	1	4	4	4	1	3	4	3	4	4	4	4	4	4	4	4	4	4
Methyl isopropyl ketone	1	4	4	4	1	2	4	2	4	4	4	4	4	4	4	4	4	4
Methyl mercaptan	1			1	1			1										
Methyl methacrylate (MMA)	1	3	4	4	1	3	4	3	4	4	4	4	4	4	4	4	4	3
Methyl oleate	1	2	4	4	1	2	4	2	4	4	4	4	1	4	4	2	4	3
Methyl phenyl ether (Anisole)	1		4	4	1				4			4	3					
Methyl propyl ketone	1		4	4	1	2		2	4			4	4				4	
Methyl salicylate	1	3	3	4	1	2	4	2	4	4	4	3	4	4	4	4	4	3
Methylene bromide	1		4	4	1			4	4			4	2				4	
Methylene chloride	1	2	4	4	1	4	4	4	4	4	4	4	2	4	4	2	4	4
Methylene dichloride	1	2	4	4	1	4	4	4	4	4	4	4	2	3		2	4	4
MIL- spec fluids	Contact technical department																	
Milk				1	1	1			1			1	1	4				1
Mineral oil	1	1	4	2	1	3	1	3	1	1	1	4	1	2	1	1	2	2
Monobromo benzene	1	2	4	4	1	4	4	4	4	4	4	4	1	4	4	2	4	4

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PPE Prefix	PERLAST®												FKM (Fluorocarbon)			FVMQ (Fluorosilicone)		
	G	A	B	C	D	E	H	J	N	P	Q	R	V	W	Z	F	L	S
Chemical or Media	Dynamic And Static Applications															Static Only		
Monochloro acetic acid	1		4	4	1	2	4	3	4	4	4	4	4	4	4	4	4	4
Monochloro acetone	1		4	2	1	1	4	2	4	4	4	3	4	4	4	4	3	4
Monochloro benzene	1	4	4	4	1	4	4	4	4	4	4	4	1	4	4	2	4	4
Monoethanolamine (MEA)	1	1	2	4	1	2	4	2	4	4	4	2	4	4	4	4	4	2
Monoethylamine (Ethyl amine)	1		3	3	1	1			2	3		3	4					3
Monomethyl amine (MMA)	1					1	1			3	1	1	3	3		1		
Monomethyl aniline	1	2	4	4	1	2	4	2	4	4	4	4	2	4	4	2	4	2
Monomethyl ether	1		3	2	1	4		1	1			3	1	4				
Monomethyl hydrazine	1	1	2	2	1	1		1	2						2		2	4
Monovinyl acetylene	1	2	2	2	1	1		1	1			2	1	1			2	2
Morpholine	1		4	2	1	2	4	2	4	4	4	4	1	4	4	4	2	4
Mustard gas	1		3	3	1	3		1				3	1			1	1	1
n-Dodecanol (Lauryl alcohol)	1		1	1	1	2		1	1			1	2					2
n-Heptane	1	3	4	2	1	4	1	4	1	1	1	4	1	3	2	1	2	4
n-Hexaldehyde	1		4	1	1	1	4	2	4	4	3	4	4	4	4	4	3	2
n-Hexane	1	2	4	2	1	4	1	4	1	1	2	4	1	1	2	1	2	4
n-Hexanol	1		2	2	1	3	2	3	1	4	4	2	1	4	2	2	2	2
n-Hexene (Hexylene)	1	3	4	2	1	4	2	4	2	1	2	4	1	3	2	1	2	4
n-Octane	1		4	4	1	4	2	4	2	4	4	4	1	3	2	2	4	4
n-Pentane	1		3	2	1	4	1	4	1	1	4	4	1	3	1	3	2	4
n-Propyl acetate (Propyl acetate)	1	4	4	4	1	2	4	2	4	4	4	4	4	4	4	4	4	4
n-Propyl acetone	1		4	4	1	1	4	1	4	4	4	4	4	4		4	4	4
n-Propyl nitrate (NPN)	1		4	4	1	2	4	2	4	4	4	4	4	4	4	4	4	4
Naphtha	1	2	4	4	1	4	1	4	2	2	2	4	1	4	2	2	4	4
Naphtha coal tar (Benzol)	1	3	4	4	1	4	4	4	4	4	4	4	1	4	4	1	4	4
Naphthalene (Tar camphor)	1	2	4	4	1	4	4	4	4	4	3	4	1	4	4	1	4	4
Naphthenic acid	1	1	4	4	1	4	2	4	2	4	4	4	1	4	3	1	4	4
Natural gas	1	1	3	2	1	4	1	4	1	2	2	2	1	2	1	2	2	4
Neatsfoot oil	1	1	4	4	1	2	1	2	1	1	1	4	1	3	1	1	4	2
Neohexane	1		4	2	1	4		4	1	1	4	4	1	2		1	4	4
Neon	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Neville acid	1	1	4	4	1	2		2	4	4	4		1	4	4	2	4	4
Nickel acetate (Diacetate)	1	4	4	2	1	1	3	1	3	4	4	3	4	4	2	4	4	4
Nickel chloride	1	1	2	2	1	1	2	1	1	3	3	3	1	2	1	1	1	1
Nickel nitrate (Dinitrate)	1	1	1	1	1	1		1	1			1	1					1
Nickel salts	1	1	2	2	1	1	2	1	1	3	3	2	1	2	1	1	1	1
Nickel sulfate	1	1	2	2	1	1	2	1	1	4	3	3	1	2	1	1	1	1
Niter cake	1	1	1	1	1	1	1	1	1	4	1	1	1	1	1	1	1	1
Nitric acid (3 molar)	1	2	4	4	1	2	4	1	4	4	4	4	1	4	3	3	4	4
Nitric acid (concentrated)	1	2	4	4	1	4	4	1	4	4	4	4	1	4	4	3	4	4
Nitric acid (red fuming) (RFNA)	2	3	4	4	1	4	4	2	4	4	4	4	3	4	4	4	4	4
Nitrobenzene	1	1	4	4	1	4	4	4	4	4	4	4	2	4	4	4	4	4
Nitrobenzine (Ligroin)	1	2	4	2	1	4	1	4	1	1	2	4	1	4	1	1	3	4
Nitroethane	1	2	2	2	1	2	4	2	4	4	4	2	4	4	4	4	2	4
Nitrogen	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1

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	G	A	B	C	D	E	H	J	N	P	Q	R	V	W	Z	F	L	S
Chemical or Media	Dynamic And Static Applications															Static Only		
Nitrogen tetroxide	1	3	4	4	1	4	4	3	4	4	4	4	4	4	4	4	4	4
Nitromethane	1	3	3	3	1	2	4	2	4	4	4	2	4	4	4	4	2	4
Nitropropane	1	2	4	4	1	2	4	2	4	4	4	4	4	4	4	4	4	4
Nitrous acid	1		4			1			3						3			2
o-Chloronaphthalene	1		4	4	1	4	4	4	4	4	4	4	1	4	4	2	4	4
o-Cresol (Cresylic acid)	1	1	4	4	1	4	4	4	4	4	4	4	1	4	2	2	4	4
o-Dichlorobenzene	1		4	4	1	4	4	4	4	4	4	4	1	4	4	2	4	4
Octachlorotoluene	1		4	4	1	4		4	4	4	4	4	1			2	4	4
Octadecane	1	1	4	2	1	4		4	1	2	1	4	1	2		1	2	4
Octanol (Octyl alcohol)	1	1	2	2	1	1	2	2	2	4	4	2	1	2	2	2	2	2
Octyl acetate	1		4			1		2	4			4	4					4
Octyl alcohol (Octanol)	1	1	2	2	1	1	2	2	2	4	4	2	1	2	2	2	2	2
Oleic acid	1	1	4	4	1	4	2	4	3	4	3	4	1	4	4	2	4	4
Olein (Trioleine)	1		4	4	1	4		2	3	2	4	4	2		3			4
Oleum (fuming sulfuric acid)	1	1	4	4	1	4	4	4	4	4	4	4	1	4	3	4	4	4
Olive oil	1	1	4	2	1	2	2	2	1	1	1	4	1	3	1	1	2	1
Orthochloroethylbenzene	1	4	4	4		4		4	4	4	4	4	1		4	2	4	4
Oxalic acid	1	1	2	2	1	1	3	1	2	4	4	2	1	4	2	1	2	2
Oxygen (100 to 200°C)	1	2	4	4	1	4	4	4	4	4	4	4	2	4	3	4	4	2
Oxygen (below 100°C)	1	1	4	1	2	1	2	1	2	2	1	2	1	1	1	1	1	1
Ozone (50 PPHM)	1	1	4	2	1	1	1	1	2	1	1	4	1	1	1	1	1	1
Paint thinner (Duco)	1	2	4	4	1	4	4	4	4	4	4	4	2	4	4	3	4	4
Palmitic acid	1	1	3	2	1	2	2	2	2	4	3	3	1	4	1	1	3	4
Par-al-ketone	1	4	4	4	1	4		4	4	4	4	4	4			4	4	4
Para-dichlorobenzene	1	3	4	4	1	4		4	4	4	4	4	1		4	2	4	4
Paraffins	1		4	1	1	4	1	4	1	1	1	4	1	1	1	1	1	1
Paraldehyde	1			2	1	1		1	4			3	4					
Peanut oil	1	1	4	3	1	3	1	3	1	1	2	4	1	2	1	1	3	1
Penicillin	1			1	1					3			1			4		
Pentachloroethane (Pentalin)	1		4	4	1			4	4			4	1			4		
Pentachlorophenol (PCP)	1			4	1	4			4				1					
Pentane (Amyl hydride)	1		4	2	1	4		4	1	1	4	4	1			3	3	4
Pentanol	1	1	2	2	1	1	1	1	2	4	4	2	2	2	2	1	2	4
Pentyl alcohol (Amyl alcohol)	1	1	2	2	1	1	1	1	2	4	4	2	2	2	2	1	2	4
Pentyl amine (Amyl amine)	1		2			1		1	2			2				3		
Perchloric acid	1	2	4	2	1	2	3	2	4	4	4	4	1		4	1	2	4
Perchloroethylene (Perchlor)	1	4	4	4	1	4	3	4	3	4	4	4	1	4	3	2	4	4
Petrolatum	1	1	4	2	1	4	1	4	1	1	1	4	1	1	1	1	2	4
Petroleum oil (above 100 °C/212°F)	1	1	4	4	1	4	2	4	4	4	4	4	1	2	2	4	4	4
Petroleum oil (below 100 °C/212°F)	1	1	4	2	1	4	1	4	1	2	2	4	1	1	1	2	2	2
Petroleum oil, crude	1	1	4	2	1	4		4	1	1	1	4	1	1	1	1	2	4
Phenol (Carbolic acid)	1	1	4	4	1	2	4	2	4	4	4	4	1	4	4	1	4	4
Phenol sulfonic acid	1		4			1		3	4			4	2			4		
Phenyl acetate	1		4	4	1	2			4			4	4					
Phenyl benzene	1	2	4	4	1	4	4	4	4	4	4	4	1	4	4	2	4	4

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PPE Prefix	PERLAST®												FVMQ (Fluorosilicone)						
	G	A	B	C	D	E	H	J	N	P	Q	R	V	W	Z	F	L	S	
Chemical or Media	Dynamic And Static Applications															Static Only			
Phenyl ether (Diphenyl oxide)	1	2	4	4	1	4	4	4	4	4	4	4	1	1	4	2	4	3	
Phenyl ethyl ether (Phenetole)	1	4	4	4	1	4	4	4	4	4	4	4	4	4	4	4	4	4	
Phenyl hydrazine	1	1	2	4	1	4		4	4	4	1	1	4	4	2	4	3		
Phenyl methyl ketone	1		4	4	1	1	4	1	4	4	4	4	4	4	4	4	4		
Phorone	1	4	4	4	1	2	4	2	4	4	4	4	4	4	4	4	4		
Phosgene	1			1	1	1		1	2				2				2		
Phosphate esters	1	2	4	4	1	1		1	4	4	4	4	1	4		3	4	4	
Phosphoric acid (3 molar)	1	1	2	3	1	1	3	3	4	3	4	2	1	4	2	2	2	2	
Phosphoric acid (concentrated)	1	2	3	4	1	2	4	3	4	3	4	3	1	4	3	2	3	3	
Phosphorus oxychloride	1			4	1			4											
Phosphorus trichloride	1	1	4	4	1	1	4	1	4	4	4	4	1	4	4	1	4	4	
Phthalic acid	1	2		2	1	2		1	3		4		2				1		
Phthalic anhydride	1			4	1	1							2						
Picric acid, H2	1	2	2	2	1	1	4	1	2	4	4	2	1	4	2	2	1	4	
Pine oil	1	1	4	3	1	4	2	4	2	4	3	4	1	4	2	1	4	4	
Pinene	1	1	4	3	1	4	2	4	2	4	3	4	1	4	2	1	4	4	
Piperidine	1		4	4	1	4	4	4	4	4	4	4	4	4	4	4	4	4	
Plating solution, chrome	1	1	4	4	1	1		2	4	4	4	4	1		4	4	4	4	
Pneumatic service	1	1	4	1	1	1	1	1	1	4	1	4	1	1	1	4	1	4	
Potassium acetate	1	1	4	2	1	1	3	1	2	4	4	2	4	4	4	4	4	4	
Potassium bicarbonate	1			1	1	1		2	1	4	3	1	1	1		1		2	
Potassium bisulfate	1	1	1	2	1	1		1	1		4	1	1	1			1		
Potassium bisulfite	1	1	1	1	1	1		1	1		1	1	1	1			1		
Potassium bromide	1	1	1	2	1	1		1	1		4	1	1	1			1		
Potassium carbonate (Potash)	1	1	1	1	1	1		1	1		1	1	1	1		1	1	1	
Potassium chlorate	1	1	2	2	1	1		1	4		4	2	1				1		
Potassium chloride	1	1	1	1	1	1		2	1	1	3	3	1	1	2	1	1	1	1
Potassium chromate	1	1	2	1	1	1		2	1	1	3	3	2	1	2		1	3	1
Potassium copper cyanide	1	1	1	1	1	1		2	1	1	3	3	1	1	2	1	1	1	1
Potassium cyanide	1	1	1	1	1	1		2	1	1	3	3	1	1	2	1	1	1	1
Potassium dichromate	1	1	2	1	1	1		2	1	1	3	3	1	1	2	1	1	1	1
Potassium ferricyanide	1		2	1	1	1			4		2		1						
Potassium ferrocyanide	1				1	1			4				1		4				
Potassium fluoride	1			2	1	1			2				1						
Potassium hydroxide, 50%	1	1	2	2	1	1		2	1	3	4	4	2	4	4	2	3	1	3
Potassium hypochlorite	1		2	3	1	1		3	3		2		2		3				
Potassium iodate	1		4		1	1			3		4		1	3	3		1		2
Potassium iodide	1	1	1	1	1	1		2	1	1	4	4	1	1	2	1	1	1	1
Potassium nitrate	1	1	1	2	1	1		2	1	1	3	3	1	1	2	1	1	1	1
Potassium nitrite	1	1	1	2	1	1		2	1	1	3	3	1	1	2	1	1	1	1
Potassium oxalate	1		4	1	1	1			3		4		1	3		3		1	2
Potassium perchlorate	1	1	3	2	1	1		2	1	2	4	4	3	1	2	1	1	1	1
Potassium permanganate	1		4	2	1	1		2	1	3	4	4	4	1	2	1	1	3	1
Potassium persulfate	1		4	2	1	1		2	1	4	4	4	4	1	2	2	1	1	1
Potassium phosphate	1	1		1	1	1			1					1					

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Chemical or Media	Dynamic And Static Applications															Static Only		
Potassium salts	1	1	1	1	1	1		1	1	1	1	1	1	1	1	1	1	1
Potassium silicate	1	1	1	1	1	1		1	1		1	1	1	1	1		1	1
Potassium sulfate	1	1	2	2	1	1		2	1	1	4	3	2	1	3	1	1	2
Potassium sulfide	1	1	1	1	1	1		1	1		1	1	1	1	1	1	1	1
Potassium sulfite	1	1	2	2	1	1		2	1	2	4	4	2	1	2	1	1	1
Potassium tartrate	1			1	1	1		3		4	1	1	3	3		1	1	2
Potassium thiocyanate	1			1	1			1	3	4		1	3	3		1		
Producer gas	1	1	4	2	1	4		4	1	2	1	4	1	1	1	2	2	2
Propane (LPG)	1	1	4	2	1	4		1	4	1	1	3	4	1	2	1	2	3
Propanol (Propyl alcohol)	1	1	1	1	1	1		2	1	2	4	3	1	1	3	1	1	2
Propionaldehyde (Propanal)	1			1				1	4		3		4					
Propionic acid	1	1		3	1	1		1	3				1					
Propionitrile (Ethyl cyanide)	1	1	4	2	1	3		4	2	1	4	4	1	4	1	3	2	4
Propyl acetate (n-Propyl acetate)	1	4	4	4	1	2		4	2	4	4	4	4	4	4	4	4	4
Propyl alcohol (1-Propanol)	1	1	1	1	1	1		2	1	2	4	3	1	1	3	1	1	2
Propyl amine	1		4	4	1	4		4	4	4	4	4	4	4	4	4	4	4
Propyl nitrate (n-Propyl nitrate)	1		4	4	1	2		4	2	4	4	4	4	4	4	4	4	4
Propylene (Propene)	1	1	4	4	1	4		4	4	4	4	4	4	1	4	4	2	4
Propylene chlorohydrin	1		4	1				4			4		4	3				
Propylene dichloride	1		4	4	1	4		4	4		4		2	4			4	
Propylene glycol	1	1	1	2	1	1		1	1		1		1				1	
Propylene oxide	1	3	4	4	1	2		4	2	4	4	4	4	3	4	4	4	4
Pyridene	1	2	4	4	1	2		4	2	4	4	4	4	3	4	4	4	4
Pyrogallol (Pyrogallic acid)	1			3	1	3		3		4			1					
Pyrrole (Azole)	1		3	4	1	3		4	4	4	4	4	3	4	4	4	4	3
Quinine (Bisulfate) (Sulfate)	1			1				2		4	2		3	2		2		
Quinone	1			1	4			4	2		4		1	2				
Radiation	Contact technical department																	
Rapeseed oil	1	1	4	3	1	2		1	2	1	1	2	4	1	3	1	1	3
Red oil (MIL-H-5606)	1	2	4	2	1	4		1	4	1	1	1	4	1	4	1	1	2
RJ-1 (MIL-F-25576)	1	1	4	2	1	4		1	4	1	1	1	4	1	1	1	1	2
Rosin	1			3	1	4		1		4	4		1	1		2	2	
Rotenone	1	1		1	1	1		1					1					
RP-1 (MIL-F-25576)	1	1	4	2	1	4		1	4	1	1	1	4	1	1	1	1	2
Sal ammoniac	1	1	1	1	1	1		1	1	1	3	3	2	1	2	1	2	3
Salicylic acid	1	1	2	1	1	1		2	1	1	4	4	2	1	4	1	1	1
Sea water (Brine)	1	1	1	2	1	1		2	1	1	4	4	1	1	1	1	1	1
Sewage	1	1	1	2	1	1		1	1		4	4	1	1	1	1	1	1
Silicate esters	1	1	4	1	1	4		2	4	2	4	3	4	1	4	2	1	2
Silicone grease	1	1	1	2	1	1		1	1	1	1	1	1	1	1	1	2	3
Silicone oil	1	1	1	1	1	1		1	1	1	1	1	1	1	1	1	2	4
Silicone tetrachloride	2			1									1					
Silver bromide	1		4	1	1			1		4			3					
Silver chloride	1		4	1	1			1	3	4	1		3	3				
Silver cyanide	1		4	1	1	1				4	4		1			1		4

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PPE Prefix	PERLAST®			CR	FEP & PFA	EPR & EPDM	ECO	IIR (Butyl)	NBR (Nitrile)	ACM	AU & EU	NR (Natural Rubber)	FKM (Fluorocarbon)	AEM	HNBR	FVMQ (Fluorosilicone)	CSM	VMQ (Silicone)
	G	A	B															
Chemical or Media	Dynamic And Static Applications															Static Only		
Silver nitrate	1	1	1	1	1	1	3	1	1	3	3	1	1	2	1	1	1	1
Skydrol 500	1	1	4	4	1	1	4	2	4	4	4	4	4	4	4	3	4	3
Skydrol 7000	1	1	4	4	1	1	4	1	4	4	4	4	2	4	4	3	4	3
Soap solutions	See Detergent solution																	
Sodium acetate	1	2	4	2	1	1	3	1	2	3	3	2	4	4	4	4	4	4
Sodium aluminate	1		1	1	1		1	1				1	1	1				1
Sodium arsenite	1		3	4	1	1	3	3		4			3		3			3
Sodium benzoate	1	1	1	1	1	1	2	1	1	4	4	1	1	1	1	1	1	1
Sodium bicarbonate (Baking soda)	1	1	1	1	1	1	2	1	1	4	4	1	1	1	1	1	1	1
Sodium bichromate	1	1	1	1	1	1	2	1	1	4	4	2	1	2	1	1	3	1
Sodium bisulfate	1	1	2	1	1	1	1	1	1	4		2	1	1	1	1	1	1
Sodium bisulfite	1	1	4	1	1	1	2	1	3	2	4	4	1	2	1	1	1	1
Sodium borate (Borax)	1	1	2	4	1	1	1	1	2	3	3	2	1	1	1	2	4	2
Sodium bromate	1	1	4		1	1			3	4	1		1		3	1		2
Sodium bromide	1	1	4	1	1	1		1	3	4	1	1	1		3	1	1	2
Sodium carbonate (Soda ash)	1	1	1	1	1	1	2	1	1	4	4	1	1	1	1	1	1	1
Sodium chlorate	1	1	3	1	1	1	2	1	2	4	4	3	1	2	1	1	1	1
Sodium chloride	1	1	1	1	1	1	2	1	1	4	3	1	1	1	1	1	1	1
Sodium chlorite	1	2			1	1			4				1					
Sodium chromate	1	1	1	1	1	1	2	1	1	4	4	1	1	2	1	1	3	1
Sodium citrate	1		4	1	1	1			3				3		3	1		3
Sodium cyanide	1	1	1	1	1	1	2	1	1	4	4	1	1	2	1	1	1	1
Sodium dichromate	1	1	1	1	1	1	2	1	1	4	4	1	1	2	1	1	1	1
Sodium ethylate	1		4	1	1	1			3	4			3		3	1		3
Sodium ferricyanide	1		4	1	1	1		1	3	4	1	1	3		3	1	1	2
Sodium ferrocyanide	1		4	1	1	1			3	4		1	3		3	1		2
Sodium fluoride (Fluorol)	1	1		1	1	1			1				1					
Sodium hydrogen sulfate	1	1	2	1	1	1	1	1	1	4		2	1	1	1	1	1	1
Sodium hydrogen sulfite	1	1	2	1	1	1	1	1	1	4	4	3	1	1	1	1	1	1
Sodium hydroxide (Caustic soda)	1	1	2	2	1	1	2	1	1	4	3	2	3	4	1	2	1	2
Sodium hypochlorite, 20%	1	1	3	3	1	2	2	2	2	4	4	3	1	4	2	2	4	2
Sodium hyposulfite	1	1	2	1	1	1	1	1	2	4	3	2	1	2		1	1	1
Sodium iodide	1		4	1	1	1			3	4		1	3		3	1		2
Sodium lactate	1				1	1		1	3	4	1	1	3		3	1		2
Sodium metaphosphate	1	1	1	2	1	1		1	1			1	1		1	1		2
Sodium metasilicate	1			1	1				1				1		1			
Sodium nitrate	1	1	2	2	1	1	2	1	2	4	4	2	1	2	1	1	1	4
Sodium nitrite	1	1	2	2	1	1	2	1	2	4	4	2	1	2	1	1	1	4
Sodium oleate	1		4	1	1	1			3	4		1	3		3	1		2
Sodium oxalate	1	1			1	1			1				1					
Sodium perborate	1	1	3	2	1	1	2	1	2	4	4	3	1	2	1	1	2	2
Sodium perchlorate	1				1													
Sodium peroxide	1	1	2	2	1	1		1	2	4	4	2	1	4	2	1	2	4
Sodium persulfate	1	1			1	1							1					
Sodium phosphate (Di-basic)	1	1	1	2	1	1	2	1	1	3	3	1	1	2	1	1	1	4

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PPE Prefix	PERLAST®			CR	FEP & PFA		ECO	IIR (Butyl)			ACM	AU & EU		NR (Natural Rubber)	FKM (Fluorocarbon)			FVMQ (Fluorosilicone)		
	G	A	B		C	D		E	H	J		N	P		Q	R	V	W	Z	F
Chemical or Media	Dynamic And Static Applications															Static Only				
Sodium phosphate (Mono-basic)	1	1	1	2	1	1	2	1	1	3	3	1	1	2	1	1	1	4		
Sodium phosphate (Tri-basic)	1	1	1	2	1	1	2	1	1	3	3	1	1	2	1	1	1	3		
Sodium pyrophosphate	1	4	1	1	1	1	3	4	1	3	3	1	1	2	1	1	2			
Sodium salts	1	1	1	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1		
Sodium silicate	1	1	1	1	1	1	2	1	1	4	4	1	1	2	1	1	1	1		
Sodium sulfate	1	1	3	2	1	1	4	3	2	1	3	1	1	3	1	1	1	1		
Sodium sulfide	1	1	2	1	1	1	2	1	2	4	3	2	2	4	1	2	2	2		
Sodium sulfite	1	1	2	1	1	1	2	1	1	4	1	2	1	4	1	1	1	1		
Sodium tartrate	1	4	1	1	1	1	3	4	1	3	3	1	1	2	1	1	2			
Sodium tetraborate	1		1	1	1	1	1			1			1	1	1	1		1		
Sodium thiosulfate	1	1	2	1	1	1	1	1	2	4	3	2	1	2	1	1	1	1		
Sour crude oil	2	2				4				4			4	2		4	4			
Sour natural gas	1	1	4			4				4			4	2		4	4			
Soybean oil	1	1	4	3	1	3	1	3	1	1	2	4	1	3	1	1	3	1		
Stannic chloride	1	2	1	3	1	1	2	2	1	4	4	1	1	2	1	1	4	2		
Stannic chloride, 50%	1	2	1	3	1	1	2	1	1	4	4	1	1	4	1	1	4	2		
Stannous chloride, 15%	1	1	1	2	1	1	2	1	1	4	4	1	1	4	1	1	1	2		
Starch	1	1	1	1	1	1	1	1	1	4	4	1	1	1	1	1	1	1		
Stauffer 7700	1	2	4	4	1	4	4	2		2	4		1	2		2	4	4		
Steam (to 150°C)	1	1	4	3	1	1	4	1	4	4	4	4	1	2	1	4	4	3		
Steam (to 175°C)	1	1	4	4	1	1	4	4	4	4	4	4	1	4	3	4	4	4		
Steam (to 200°C)	1	1	4	4	1	4	4	4	4	4	4	4	1	4	4	4	4	4		
Steam (to 260°C)	2	3	4	4	1	4	4	4	4	4	4	4	3	4	4	4	4	4		
Stearic acid	1	1	3	3	1	3	3	3	3	4	3	3	2	4	2	2	3	3		
Stoddard solvent	1	2	4	2	1	4	1	4	1	1	1	4	1	1	1	1	4	4		
Styrene (Vinylbenzene) Monomer	1	2	4	4	1	4	4	4	4	4	4	4	2	4	4	3	4	4		
Succinic acid	1	1	1	2	1	1	1	1		4	2		1			1	1	1		
Sucrose solution	1	1	1	2	1	1	2	1	1	4	4	1	1	2	1	1	2	1		
Sulfamic acid	1	2	2	1	1	1	1	2		1	2		2			2				
Sulfur	1	1	4	1	1	1	3	1	4	4	4	4	1	4		1	1	1		
Sulfur chloride	1	1	4	4	1	4	4	4	4	4	4	4	1	4	4	2	4	3		
Sulfur dioxide (dry)	1	2	2	4	1	1	3	2	4	4	4	3	4	4	3	2	4	2		
Sulfur dioxide (wet)	1	2	3	3	1	1	1	4		4	4	4	4	4	3	2	3	2		
Sulfur hexafluoride	2	2	4	1	1	1	1	1	2	4	4	4	2	4	2	2	2	2		
Sulfur trioxide (dry)	1	2	4	4	1	3	4	3	4	4	4	3	1	4	4	2	4	3		
Sulfur, molten	1	1	4	3	1	3	3	4		4	4	4	1	1		3	4	3		
Sulfuric acid (3 molar)	1	1	3	3	1	2	2	3	4	2	3	3	1	4	3	3	3	4		
Sulfuric acid (concentrated)	1	1	4	4	1	4	4	4	4	4	4	4	1	4	4	4	4	4		
Sulfuric acid, fuming	1	2	4	4	1	4	4	4	4	4	4	4	2	4	4	4	4	4		
Sulfurous acid	1	1	2	2	1	2	2	2		4	4	2	1	4	2	3	1	4		
Sulfuryl chloride	1		2	2	1	2	2	4		2			1			1				
Tannic acid	1	1	3	2	1	1	2	2	2	4	3	1	1	4	1	1	2	2		
Tar, bituminous	1	1	4	3	1	4	2	4	2	4	3	3	1	3	2	1	4	2		
Tartaric acid	1	1	2	2	1	2	2	2	1	4	3	2	1	4	1	1	1	1		
Terpineol (Terpilanol)	1		4	4	1	3	2	3	2	4	2	4	1	4	3	1	4	4		

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	G	A	B	C	D	E	H	J	N	P	Q	R	V	W	Z	F	L	S
Chemical or Media	Dynamic And Static Applications															Static Only		
Tertiary butyl alcohol	1	1	2	2	1	2	2	2	2	4	4	2	1	3	2	2	2	2
Tertiary butyl catechol	1	2	3	2	1	2		2	4	4	4	4	1	4		1	2	3
Tertiary butyl mercaptan	1	1	4	4	1	4		4	4	4	4	4	1	4	4		4	4
Tetrabromoethane	1	3	4	4	1	4	4	4	4	4	4	4	1	4	4	2	4	4
Tetrabromomethane	1		4	4	1	4	4	4	4	4	4	4	1	4	4	2	4	4
Tetrabutyl titanate (TBT)	1	1	2	2	1	1		2	2			2	1		2	1	1	2
Tetrachlorodifluoroethane	1		3	2	1	4	3	4	2	4	4	4	1	4		4	2	4
Tetrachloroethane	1	4	4	4	1	4	4	4	4	4	4	4	1	4	4	2	4	4
Tetrachloroethylene	1	4	4	4	1	4	4	4	4	4	4	4	1	4	4	2	4	4
Tetrachloromethane	1	4	4	4	1	4	2	4	3	4	3	4	1	4	3	2	4	4
Tetraethyl lead	1	3	3	3	1	4	2	4	2	4	4	4	1	4	2	2	4	4
Tetraethylene glycol (TEG)	1		1			1		1	1			1	1	1		1		1
Tetrafluoromethane	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	3	1	4
Tetrahydrofuran (THF)	1	4	4	4	1	3	4	3	4	4	4	4	4	4	4	4	4	4
Tetralin (Tetrahydronaphthalene)	1	4	4	4	1	4	4	4	4	4	4	4	1	4	4	1	4	4
Thioglycolic acid	1		4	1	1	1			3	4		1	3		3	1		2
Thionyl chloride	1		4	4	1	4	4	4	4	4	4	4	1	4	4	4	4	4
Thiophene (Thiofuran)	1		4	4	1	4		4	4			4	3					4
Titanium sulfate	1		4	1	1	1			3	4		1	3		3	1		2
Titanium tetrachloride	2	2	4	4	1	4	4	4	3	4	4	4	1	4	2	2	4	4
Toluene (Toluol)	1	4	4	4	1	4	4	4	4	4	4	4	1	4	3	2	4	4
Toluene di-isocyanide (TDI)	1	4	4	4	1	2	4	2	4	4	4	4	4	4	4	4	4	4
Toluidine	1		4			4			4		3		2		2			4
Transformer oil	1	1	4	2	1	4	1	4	1	2	1	4	1	1	1	1	4	2
Transmission fluid, type A	1	1	4	2	1	4	1	4	1	1	1	4	1	1	1	1	2	2
Triacetin	1	4	3	2	1	1	3	1	2	4	4	2	4	4	2	4	2	1
Trialkyl phosphate	1	1	4	4	1	2	4	2	4	4	4	4	4	4	4	4	4	4
Triaryl phosphate	1	1	4	4	1	1	4	2	4	4	4	4	1	4	4	2	4	3
Tributoxyl ethyl phosphate	1	1	2	4	1	1		1	4	4	4	3	1	4	4	2	4	
Tributyl mercaptan	1		4	4	1	4		4	4	4		4	1	4		3	4	4
Tributyl phosphate (TBP)	1	2	4	4	1	1		2	4	4	4	2	4	4	4	4	4	3
Trichloroacetic acid (TCA)	1*	3	4	4	1	2	2	2	2	4	4	3	3	4	2	3	4	3
Trichlorobenzene	1		4	4	1			4	4			4	2					4
Trichloroethane	1	2	4	4	1	4	4	4	4	4	4	4	1	4	4	2	4	4
Trichloroethylene	1	4	4	4	1	4	4	4	4	4	4	4	1	4	4	2	4	4
Trichlorofluoromethane	1	4	4	3	1	4	3	4	2	4	4	4	2	2		2	4	4
Trichloropropane	1		4		1	1		4	4			4	2			4		4
Trichlorotrifluoroethane	1	4	2	1	1	3	1	4	1	4	2	3	2	3		4	1	4
Tricresyl phosphate (TCP)	1	1	4	4	1	2	4	2	4	4	4	4	2	4	4	2	4	3
Tridecyl alcohol (Tridecanol)	1		1			1			1	1		1	1					1
Triethanol amine (TEA)	2	1	2	2	1	2	3	2	3	4	4	2	3	3	3	3	3	3
Triethyl aluminium (ATE)	1		4	3	1	3		3	4	4	4		2	4				4
Triethyl amine	1		3	3	1	4	4	4	3	3	3	4	2	4	3	3	3	4
Triethyl borane	1		4	4	1	3		3	4	4	4		1	4				4
Triethyl phosphate (TEP)	1					4				3			4		2	2		

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Chemical or Media	Dynamic And Static Applications															Static Only			
Triethylene glycol (TEG)	1	1	1	1	1	1		1	1			1	1	1			1		
Trifluoroacetic Acid (TFA)	1*		4	1	1			1			4	1	1	3	3	1		1	
Trifluoroethane	1	2	4	4	1	4		4	4		4	4	4	1	4	2	4	4	
Trimethylpentane (Iso-octane)	1	2	4	3	1	4		1	4	1	1	2	4	1	1	1	2	4	
Trinitrotoluene (TNT)	1	2	4	2	1	4		4	4		4		4	2	4	2	2	3	
Trioctyl phosphate	1	1	4	4	1	1		1	4		4	4	4	2	4	2	4	3	
Triolein (Olein)	1		4	4	1	4		2	3		2	4	4	2				4	
Triphenyl phosphite	1	1	4	4	1	1			4		4	4		3				4	
Tritolyl phosphate (Lindol)	1	1	4	4	1	1		4	1	4	4	4	4	2	4	3	4	3	
Tung oil	1	1	4	2	1	4		3	1		1	3	4	1	1	2	3	4	
Turbine oil	1	1	4	4	1	4		1	4	2	2	2	4	1	1	2	4	4	
Turpentine	1	2	4	4	1	4		1	4	1	2	4	4	1	3	2	4	4	
Type I fuel (Mil-S-3136)	1	3	4	2	1	4		1	4	1	2	1	4	1	1	1	2	4	
Type II fuel (Mil-S-3136)	1		4	4	1	4		1	4	2	4	2	4	1		2	4	4	
Type III fuel (Mil-S-3136)	1	4	4	4	1	4		2	4	1	4	2	4	1	3	1	4	4	
Unsymmetrical dimethylhydrazine	2	3	2	2	1	1		2	1	2	4	4	1	4	4	4	1	4	
Urea (Carbamide)	1	1	1	1	1	1		1	2			2		1			1		
Uric acid	1		4		1				1		4	4	1			1		2	
Valeric acid	1			4	1	1		1	4			1				1			
Varnish	1	2	4	4	1	4		4	2		4	3	4	1	4	2	2	4	4
Vegetable oils & fats	1	1	4	3	1	3		1	3	1	1	2	4	1	2	1	1	2	2
Vinegar	1	2	2	1	1	1		2	1	2	4	4	2	1	4	2	2	1	1
Vinyl acetate	1	4	4	2	1	2		4	2	4		4		4	4		4		
Vinyl chloride (Chloroethylene)	1	2	4	4	1	3		4	3	4	4	4	4	1	4	4	2	4	4
Vinyl cyanide (Acrylonitrile)	1	2	3	3	1	4		4	4	4	4	4	3	3	4	4	4	3	4
Vinylbenzene (Styrene)	1	2	4	4	1	4		4	4	4	4	4	4	2	4	4	3	4	4
Water, cold	1	1	1	2	1	1		2	1	1	4	4	1	1	3	1	1	1	1
Water, hot	1	1			1	1		2		2	4	4	3	1	4	1	1		1
Water, potable					1	1			1					1					1
Whiskey & wines	1			1	1	1		1		1	4	4	1	1	4	1	1		1
White oil	1	1	4	2	1	4		1	4	1	1	1	4	1	1	1	1	4	4
White pine oil	1	1	4	4	1	4		4	2			4		1		2	1	4	4
Wood alcohol (Methanol)	1	1	1	1	1	1		2	1	2	4	4	1	1	1	1	2	1	2
Wood oil	1	1	4	2	1	4		3	1		1	3	4	1	1	1	2	3	4
Xenon	1	1	1	1	1	1		1	1	1	1	1	1	1	1	1	1	1	1
Xylene (Xylol)	1	3	4	4	1	4		4	4	4	4	4	4	1	4	4	1	4	4
Xylidine (Xylidin)	1	1	4	4	1	4		4	4	3	4	4	4	4	4	3	4	4	4
Zeolites	1	1	1	1	1	1			1	1		1		1	1	1	1	1	1
Zinc acetate	1	3	3	2	1	1		3	1	3	4	4	2	4	4	2	4	4	4
Zinc ammonium chloride	1				1				1										1
Zinc carbonate	1		1		1	1			1	1		1	1	1	1			1	
Zinc chloride	1	1	1	1	1	1		2	1	1	4	4	1	1	3	1	1	1	1
Zinc cyanide	1				1	1			1					3	1			1	
Zinc hydrosulfite	1			1	1	1			1					1	1			1	
Zinc nitrate	1				1	1			1					1	1			1	
Zinc phosphate solution	1				1	1			1		1	1		1	1			1	
Zinc salts	1	1	1	1	1	1			1	1	4	1	1	1	1		1	1	1
Zinc sulfate	1	1	2	1	1	1		2	1	1	4	4	2	1	3	1	1	1	1

Online Elastomer Compatibility & Chemical Resistance Guide

If you prefer to look up the chemical resistance of elastomers online a free, easy-to-use guide is available on the Precision Polymer Engineering website.

Simply register your details and log in for access.

1. Select from over 1000 chemicals that match your criteria.
2. Enter the minimum and maximum operating temperature range of your application (optional).
3. Choose from the 16 different types of elastomer, the best fit for your requirements.

Elastomers (High - Low Performance)

Select Material	FFKM-Perlast	FEPM	FKM	HINBR	FVMQ	EPDM	NBR	VMQ	CR	ACM	ECO	AEM	CSM	IIR	SBR	NR & IR
Min Temperature °C	-15	0	-10	-20	-55	-30	-30	-100	-25	-20	-40	-25	-25	-30	-30	-50
Max Temperature °C	327	250	250	180	225	288	135	250	100	120	120	120	100	100	70	60
Overall Compatibility Rating	1	2	1	3	3	4	4	4	4	4	4	4	4	4	4	4
Glycol	1	1	1	2	1	1	2	1	1	4	2	1	1	1	1	2
Helium	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
n-Hexane	1	2	1	2	1	4	1	4	2	1	1	1	2	4	4	4
Nitric acid (3 molar)	1	2	1	3	3	2	4	4	4	4	4	4	4	1	4	4
Water, hot	1	1	1	1	1	1	2	1	--	4	2	1	--	--	--	3

4. Browse the material grades, available from PPE, that match your chemical and temperature parameters. Relevant approvals and certifications are shown for each material.

The list can be sorted by physical properties such as colour, hardness, compression set, etc, or filtered by industry. You have the option to print the list, export to Excel, or copy to clipboard to paste into your own document.

Material Grade	Material Type	Hardness	Min Temperature	Max Temperature	Description	Datasheet	Compare	Request a Quote	Export
S40H	VMQ	40	-60 (°C) -76 (°F)	250 (°C) 482 (°F)	FDA compliant silicone	↓	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
E50Q	EPDM	53	-40 (°C) -40 (°F)	150 (°C) 302 (°F)	FDA & USP compliant, terpolymer EPDM	↓	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
N60W	NBR	57	-40 (°C) -40 (°F)	120 (°C) 248 (°F)	FDA compliant copolymer nitrile	↓	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
V61C	FKM	58	-51 (°C) -60 (°F)	225 (°C) 437 (°F)	Low temp fluoroelastomer, terpolymer	↓	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
G60A	FFKM	60	-15 (°C) 5 (°F)	260 (°C) 500 (°F)	Perlast perfluoroelastomer, general purpose grade	↓	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
S60H	VMQ	60	-60 (°C) -76 (°F)	250 (°C) 482 (°F)	FDA & USP compliant silicone	↓	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Find the Online Elastomer Chemical Compatibility Guide, plus other useful tools and information, in the 'Engineers Hub' section of the Precision Polymer Engineering website: www.prepol.com



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