

Designations	FFKM	ETP	FKM	NBR	HNBR	EPDM	TFE/P	VQM	FVQM	AU	PTFE
Relative Cost	*****	****	***	*	**	*	***	**	***	***	***
Rating Descriptions*	1 = Good (<15% Swell) 2 = Fair (15-25% Swell) 3 = Poor (25-40% Swell) 4 = Not Recommended - = Not Tested										
ACRYLIC ACID, ETHYL ESTER	1	4	4	2	4	3	4	4	4	4	1
ACRYLONITRILE	1	3	4	4	4	4	2	4	4	4	1
ADIPIC ACID	1	1	2	1	1	2	2	-	1	-	1
AERO LUBRIPLATE	1	1	1	1	1	4	1	2	1	1	-
AERO SHELL 17 GREASE	1	1	1	1	1	4	1	2	1	1	-
AERO SHELL 1AC GREASE	1	1	1	1	1	4	1	2	1	1	-
AERO SHELL 750	1	1	1	2	2	4	1	4	2	4	-
AERO SHELL 7A GREASE	1	1	1	2	2	4	1	2	1	1	-
AEROSAFE 2300	1	3	4	4	4	1	3	3	3	4	-
AEROSAFE 2300W	1	3	4	4	4	1	2	3	3	4	-
AEROZENE 50, 50% HYDRAZINE 50% UDMH	2	3	4	3	3	1	2	4	4	4	-
AIR BELOW 200°F	1	1	1	1	1	1	1	1	1	1	1
AIR, 200 - 300° F	1	1	1	3	3	2	1	1	1	3	-
AIR, 300 - 400° F	1	1	1	4	4	4	1	1	1	4	-
AIR, 400 - 500° F	2	2	3	4	4	4	3	2	4	4	-
AIR, OIL-CONTAINING	1	-	1	1	1	4	-	1	1	1	1
ALIPHATIC DICARBOXYLIC ACID	1	1	1	2	2	4	-	-	2	3	-
ALKANES	1	1	1	1	1	4	-	2	1	1	-
ALKANESULFONIC ACID	1	1	1	1	1	4	-	2	1	1	-
ALKAZENE	1	1	2	4	4	4	2	4	2	4	1
ALKENES	1	1	1	2	2	4	-	-	2	3	-
ALKYL ACETONE	1	3	4	3	3	1	-	2	1	4	-
ALKYL ALCOHOL	1	1	4	1	1	4	-	2	1	1	-
ALKYL AMINE	1	2	4	1	1	4	-	2	1	1	-
ALKYL ARYL SULFONATES	1	1	1	1	1	4	-	2	1	1	-
ALKYL ARYL SULFONICS	1	1	1	1	1	4	-	2	1	1	-
ALKYL BENZENE	1	1	2	2	2	4	-	-	2	3	-
ALKYL CHLORIDE	1	1	2	2	2	4	-	-	2	3	-

ALKYL NAPHTHALENE SULFONIC ACID	1	1	1	1	1	4	-	2	1	1	-
Designations	FFKM	ETP	FKM	NBR	HNBR	EPDM	TFEP	VQM	FVQM	AU	PTFE
Relative Cost	*****	****	***	*	**	*	***	**	***	***	***
Rating Descriptions*	1 = Good (<15% Swell) 2 = Fair (15-25% Swell) 3 = Poor (25-40% Swell) 4 = Not Recommended - = Not Tested										
ALKYL SULFIDE	1	1	1	2	2	4	-	-	2	3	-
ALLYL ALCOHOL	1	-	4	2	2	1	-	-	-	4	1
ALLYL CHLORIDE	1	2	2	2	2	1	2	-	-	-	-
ALLYLIDENE DIACETATE	1	2	3	3	3	1	-	2	1	4	-
ALPHA PICOLINE	1	1	3	3	3	1	-	2	1	4	-
ALUM POTASH	1	1	4	2	2	1	1	3	3	4	-
ALUMINUM ACETATE	1	3	4	2	2	1	1	4	4	4	1
ALUMINUM BROMIDE	1	1	1	1	1	1	1	1	1	3	-
ALUMINUM CHLORATE	1	1	3	3	3	1	-	2	1	4	-
ALUMINUM CHLORIDE	1	1	1	1	1	1	1	2	1	3	1
ALUMINUM FLUORIDE	1	1	1	1	1	1	1	2	1	3	1
ALUMINUM FORMATE	1	3	4	3	3	1	-	2	1	4	-
ALUMINUM HYDRATE	1	2	2	2	2	2	1	2	-	-	-
ALUMINUM HYDROXIDE	1	1	1	2	2	2	1	2	-	-	-
ALUMINUM LINOLEATE	1	1	1	1	1	4	-	2	1	1	-
ALUMINUM NITRATE	1	1	1	1	1	1	1	2	-	3	1
ALUMINUM OXALATE	1	1	3	3	3	1	-	2	1	4	-
ALUMINUM PHOSPHATE	1	1	1	1	1	1	1	1	-	-	-
ALUMINUM POTASSIUM SULFATE	1	1	1	3	3	1	-	2	1	4	-
ALUMINUM SALTS	1	1	1	1	1	1	1	1	1	3	-
ALUMINUM SODIUM SULFATE	1	1	1	3	3	1	-	2	1	4	-
ALUMINUM SULFATE	1	1	1	1	1	1	1	1	1	4	1
ALUMS	1	1	1	1	1	1	2	1	4	-	1
AMBREX 33	1	1	1	1	1	4	1	4	3	2	-
AMBREX 830	1	1	1	1	1	3	1	2	1	1	-
AMINES MIXED (ALLYL, ETHYL, ETC.)	1	3	4	4	4	2	2	2	4	4	-
AMINO BENZENE	1	1	2	4	4	2	2	4	3	4	1
AMINO BENZOIC ACID	1	2	2	4	4	2	1	-	-	-	-
AMINOETHANOL (2-AMINOETHANOL)	1	4	4	4	2	2	-	2	4	3	-

AMINOMETHANE	1	1	4	4	4	1	-	2	1	4	1
AMINOPYRIDINE	1	4	4	4	4	2	3	-	-	-	-
Designations	FFKM	ETP	FKM	NBR	HNBR	EPDM	TFE/P	VQM	FVQM	AU	PTFE
Relative Cost	*****	*****	***	*	**	*	***	**	***	***	***
Rating Descriptions*	1 = Good (<15% Swell) 2 = Fair (15-25% Swell) 3 = Poor (25-40% Swell) 4 = Not Recommended - = Not Tested										
AMMONIA	2	4	4	2	2	1	2	2	4	4	1
AMMONIA AND LITHIUM METAL IN SOLUTION	4	4	4	4	2	2	4	4	4	4	-
AMMONIA GAS, COLD	1	2	4	1	1	1	1	1	4	2	1
AMMONIA GAS, HOT	1	2	4	4	4	2	2	1	4	4	1
AMMONIA, ANHYDROUS LIQUID	1	2	4	2	2	1	3	2	4	4	-
AMMONIUM ACETATE	1	3	4	1	1	1	-	2	1	4	1
AMMONIUM ARSENATE	1	1	3	3	3	1	-	2	1	4	-
AMMONIUM BENZOATE	1	1	3	3	3	1	-	2	1	4	-
AMMONIUM BICARBONATE	1	3	4	3	3	1	-	2	1	4	-
AMMONIUM BISULFITE	1	1	3	3	3	1	-	2	1	4	-
AMMONIUM BROMIDE	1	1	1	1	1	1	1	-	-	1	-
AMMONIUM CARBAMATE	1	1	3	3	3	1	-	2	1	4	-
AMMONIUM CARBONATE	1	1	1	4	1	1	1	3	-	4	1
AMMONIUM CHLORIDE	1	1	1	1	1	1	1	3	4	4	1
AMMONIUM CITRATE, DIBASIC	1	1	3	3	3	1	-	2	1	4	-
AMMONIUM DICHROMATE	1	1	3	3	3	1	-	2	1	4	-
AMMONIUM DIPHOSPHATE	1	1	1	3	3	1	-	2	1	4	-
AMMONIUM FLUORIDE	1	1	1	1	1	1	1	-	-	1	1
AMMONIUM FORMATE	1	1	3	3	3	1	-	2	1	4	-
AMMONIUM HYDROXIDE, 3 MOLAR	2	2	3	1	1	1	2	1	1	4	-
AMMONIUM HYDROXIDE, CONCENTRATED	1	1	2	4	4	1	1	1	1	4	1
AMMONIUM HYDROXIDE, GRADE 2	1	-	2	3	3	1	1	-	-	-	-
AMMONIUM IODIDE	1	1	1	1	1	1	1	-	-	1	-
AMMONIUM LACTATE	1	1	3	3	3	1	-	2	1	4	-
AMMONIUM METAPHOSPHATE	1	1	3	3	3	1	-	2	1	4	-
AMMONIUM MOLYBDENATE	1	1	3	3	3	1	-	2	1	4	-
AMMONIUM NITRATE	1	1	1	1	1	1	1	2	3	-	1
AMMONIUM NITRITE	1	1	3	1	1	1	2	2	-	-	-

AMMONIUM OXALATE	1	1	3	3	3	1	-	2	1	4	-
AMMONIUM PERCHLORATE	1	1	3	3	3	1	-	2	1	4	-
Designations	FFKM	ETP	FKM	NBR	HNBR	EPDM	TFE/P	VQM	FVQM	AU	PTFE
Relative Cost	*****	*****	***	*	**	*	***	**	***	***	***
Rating Descriptions*	1 = Good (<15% Swell) 2 = Fair (15-25% Swell) 3 = Poor (25-40% Swell) 4 = Not Recommended - = Not Tested										
AMMONIUM PERSULFATE	1	1	1	4	4	1	1	4	1	4	1
AMMONIUM PHOSPHATE	1	1	1	1	1	1	2	1	-	4	1
AMMONIUM PHOSPHATE, DIBASIC	1	1	1	1	1	1	1	1	-	-	-
AMMONIUM PHOSPHATE, MONOBASIC	1	1	1	1	1	1	2	1	-	-	-
AMMONIUM PHOSPHATE, TRIBASIC	1	1	1	1	1	1	2	1	-	-	-
AMMONIUM PHOSPHITE	1	1	3	3	3	1	-	2	1	4	-
AMMONIUM PICRATE	1	1	3	3	3	1	-	2	1	4	-
AMMONIUM POLYSULFIDE	1	1	3	3	3	1	-	2	1	4	-
AMMONIUM SALICYLATE	1	1	3	3	3	1	-	2	1	4	-
AMMONIUM SALTS	1	2	3	1	1	1	1	1	3	-	-
AMMONIUM SULFAMATE	1	3	4	3	3	1	-	2	1	4	-
AMMONIUM SULFATE	1	1	2	1	1	1	1	1	1	4	1
AMMONIUM SULFATE NITRATE	1	1	4	1	1	1	2	-	-	-	-
AMMONIUM SULFIDE	1	1	2	1	1	1	1	-	-	4	1
AMMONIUM SULFITE	1	1	1	3	3	1	-	2	1	4	-
AMMONIUM THIOCYANATE	1	1	1	3	3	1	-	2	1	4	-
AMMONIUM THIOGLYCOLLATE	1	1	3	3	3	1	-	2	1	4	-
AMMONIUM THIOSULFATE	1	1	1	3	3	1	-	2	1	4	-
AMMONIUM TUNGSTATE	1	1	3	3	3	1	-	2	1	4	-
AMMONIUM VALERATE	1	1	3	3	3	1	-	2	1	4	-
AMYL ACETATE	1	2	4	4	4	1	4	4	4	4	1
AMYL ALCOHOL	1	1	2	2	2	1	1	4	1	4	1
AMYL BORATE	1	1	1	1	1	4	1	4	-	-	1
AMYL BUTYRATE	1	1	2	1	1	4	-	2	1	1	-
AMYL CHLORIDE	1	1	1	1	1	4	1	4	2	-	-
AMYL CHLORONAPHTHALENE	1	1	1	4	4	4	2	4	2	4	1
AMYL CINNAMIC ALDEHYDE	1	3	4	2	2	4	-	-	2	3	-
AMYL HYDRIDE	1	1	1	1	1	4	-	4	3	4	1

AMYL LAURATE	1	1	2	2	2	4	-	-	2	3	-
AMYL MERCAPTAN	1	1	1	2	2	4	-	-	2	3	-
AMYL NAPHTHALENE	1	1	1	4	4	4	2	4	1	4	-
Designations	FFKM	ETP	FKM	NBR	HNBR	EPDM	TFE/P	VQM	FVQM	AU	PTFE
Relative Cost	*****	****	***	*	**	*	***	**	***	***	***
Rating Descriptions*	1 = Good (<15% Swell) 2 = Fair (15-25% Swell) 3 = Poor (25-40% Swell) 4 = Not Recommended - = Not Tested										
AMYL NITRATE	1	1	3	3	3	1	-	2	1	4	-
AMYL NITRITE	1	1	3	3	3	1	-	2	1	4	-
AMYL PHENOL	1	1	1	4	-	-	-	-	-	-	1
AMYL PROPIONATE	1	1	2	1	1	4	-	2	1	1	-
AN-0-3 GRADE M	1	1	1	1	1	4	1	2	1	1	-
AN-0-366	1	1	1	1	1	4	1	4	1	1	-
AN-0-6	1	1	1	1	1	4	1	4	1	1	-
ANDEROL L-774 (DIESTER)	1	1	1	2	2	4	2	4	2	4	-
ANDEROL L-826 (DIESTER)	1	1	1	2	2	4	2	4	2	4	-
ANDEROL L-829 (DIESTER)	1	1	1	2	2	4	2	4	2	4	-
ANG-25 (DIESTER BASE)	1	1	1	2	2	4	2	2	2	4	-
ANG-25 (GLYCERAL ESTER)	1	1	1	2	2	1	2	2	2	4	-
ANILINE	1	1	2	4	4	2	2	4	3	4	1
ANILINE DYES	1	1	2	4	4	2	1	3	2	4	-
ANILINE HYDROCHLORIDE	1	1	2	4	4	3	1	4	2	4	1
ANILINE OIL	1	2	4	4	4	2	2	4	3	4	1
ANILINE SULFATE	1	1	3	3	3	1	-	2	1	4	-
ANILINE SULFITE	1	1	3	3	3	1	-	2	1	4	-
ANIMAL FATS	1	1	1	1	1	2	1	2	1	1	1
ANIMAL OIL	1	1	1	1	1	2	2	2	1	2	1
ANISOLE	1	1	3	4	4	-	-	-	-	-	1
ANON	1	-	-	4	4	4	-	-	-	-	1
ANSUL ETHER 161, 181	1	3	4	3	3	3	1	4	3	2	-
ANT OIL	2	4	4	4	4	2	4	4	4	4	1
ANTHRACENE	1	1	1	2	2	4	-	-	2	3	-
ANTHRAQUINONE SULPHONIC ACID	1	-	-	2	2	1	-	-	-	4	1
ANTIFREEZE (AUTOMOTIVE)	1	1	2	1	1	1	-	1	1	4	1

ANTIMONY CHLORIDE	1	1	2	1	1	1	1	1	1	1	1
ANTIMONY PENTACHLORIDE	1	1	2	1	1	4	1	4	1	1	-
ANTIMONY PENTAFLUORIDES	2	2	-	4	-	-	-	-	-	-	1
ANTIMONY TRIBROMIDE	1	1	1	1	1	4	1	4	1	1	-
Designations	FFKM	ETP	FKM	NBR	HNBR	EPDM	TFE/P	VQM	FVQM	AU	PTFE
Relative Cost	*****	****	***	*	**	*	***	**	***	***	***
Rating Descriptions*	1 = Good (<15% Swell) 2 = Fair (15-25% Swell) 3 = Poor (25-40% Swell) 4 = Not Recommended - = Not Tested										
ANTIMONY TRICHLORIDE	1	1	1	1	1	1	1	4	1	1	1
ANTIMONY TRIFLUORIDE	2	1	1	1	1	4	1	4	1	1	-
ANTIMONY TRIOXIDE	1	1	1	1	1	1	1	4	1	1	-
AN-VV-0-366B HYDRAULIC	1	1	1	1	1	4	1	4	1	2	-
AQUA REGIA	2	1	2	4	3	3	3	4	3	4	1
ARGON	1	1	1	1	1	1	1	2	2	1	1
ARGON GAS	1	-	1	1	1	1	1	-	-	-	-
AROCLOR 1248	1	1	1	3	3	2	1	2	2	4	-
AROCLOR 1254	1	1	1	4	4	2	1	3	1	4	-
AROCLOR 1260	1	1	1	1	1	2	1	1	1	4	-
AROMATIC FUEL 50%	1	1	1	2	2	4	2	4	2	4	-
AROMATIC FUELS	1	1	2	2	2	4	2	4	2	-	-
ARSENIC ACID	1	1	1	1	1	1	1	1	1	4	1
ARSENIC TRICHLORIDE	1	3	4	1	1	4	4	-	-	-	-
ARSENIC TRIOXIDE	1	1	4	1	1	4	-	-	-	-	-
ARSENIC TRISULFIDE	1	1	4	1	1	4	-	-	-	-	-
ASCORBIC ACID	1	1	1	3	3	1	-	2	1	4	-
ASKAREL TRANSFORMER OIL	1	1	1	2	2	4	1	4	2	4	1
ASPARTIC ACID	1	2	3	3	3	1	-	2	1	4	-
ASPHALT	1	1	1	2	2	4	2	4	2	2	1
ASTM FUEL A	1	1	1	1	1	4	2	4	1	2	1
ASTM FUEL B	1	1	1	2	1	4	4	4	1	4	1
ASTM FUEL C	1	1	1	2	2	4	4	4	2	4	1
ASTM FUEL D	1	1	1	2	2	4	4	4	-	2	-
ASTM OIL NO. 1	1	1	1	1	1	4	1	1	1	1	1
ASTM OIL NO. 2	1	1	1	1	1	4	2	4	1	2	1

[illegible]

BEET SUGAR LIQUIDS	1	1	1	1	1	1	1	-	-	-	-
BEET SUGAR LIQUORS	1	1	1	1	1	1	1	1	1	4	-
BENZALDEHYDE	2	3	4	4	4	1	2	4	4	4	1
BENZAMIDE	1	1	1	2	2	4	-	-	2	3	-
BENZANTHRONE	1	1	2	2	2	4	-	-	2	3	-
BENZENE	1	1	2	4	4	4	2	4	2	4	1
Designations	FFKM	ETP	FKM	NBR	HNBR	EPDM	TFE/P	VQM	FVQM	AU	PTFE
Relative Cost	*****	****	***	*	**	*	***	**	***	***	***
Rating Descriptions*	1 = Good (<15% Swell) 2 = Fair (15-25% Swell) 3 = Poor (25-40% Swell) 4 = Not Recommended - = Not Tested										
BENZENE CARBONAL	2	4	4	4	4	1	2	4	4	4	1
BENZENE CARBOXYLIC ACID	1	1	1	4	1	4	1	4	2	4	1
BENZENE SULFONIC ACID	1	1	1	4	4	4	1	4	2	4	1
BENZIDINE	1	1	1	2	2	4	-	-	2	3	-
BENZIDINE 3 SULFONIC ACID	1	1	1	2	2	4	-	-	2	3	-
BENZIL	1	1	1	2	2	4	-	-	2	3	-
BENZILIC ACID	1	1	1	2	2	4	-	-	2	3	-
BENZINE	1	1	1	1	1	4	2	4	1	2	1
BENZOCATECHOL	1	1	1	2	2	4	-	-	2	3	-
BENZOCHLORIDE	1	1	1	4	4	1	1	-	1	-	-
BENZOIC ACID	1	1	1	4	1	4	1	4	2	4	1
BENZOIN	1	1	1	2	2	4	-	-	2	3	-
BENZONITRILE	1	1	3	3	3	1	-	2	1	4	-
BENZOPHENONE	1	1	2	4	4	2	1	4	1	4	-
BENZOQUINONE	1	1	1	-	-	2	2	-	-	4	-
BENZOTRICHLORIDE	1	1	1	4	4	1	3	-	-	-	-
BENZOTRIFLUORIDE	1	1	1	4	4	1	1	-	-	-	-
BENZOYL CHLORIDE	1	1	2	4	4	4	2	-	2	3	-
BENZOYL SULFONILIC ACID	1	1	1	2	2	4	-	-	2	3	-
BENZYL ACETATE	1	3	4	3	3	1	-	2	1	4	-
BENZYL ALCOHOL	1	1	1	4	4	2	2	2	2	4	1
BENZYL BENZOATE	1	1	1	4	4	2	3	4	1	4	1
BENZYL BROMIDE	1	1	1	4	4	4	2	4	1	4	-
BENZYL BUTYL PHTHALATE	1	1	3	3	3	1	-	2	1	4	-

BENZYL CHLORIDE	1	1	1	4	4	4	2	4	1	4	1
BENZYL PHENOL	1	1	2	2	2	4	-	-	2	3	-
BENZYL SALICYLATE	1	1	1	2	2	4	-	-	2	3	-
BERYLLIUM CHLORIDE	1	1	1	1	1	1	1	3	3	3	-
BERYLLIUM FLUORIDE	1	1	1	1	1	1	1	3	3	3	-
BERYLLIUM OXIDE	1	1	1	1	1	1	1	3	3	3	-
BERYLLIUM SULFATE	1	1	3	3	3	1	-	2	1	4	-
Designations	FFKM	ETP	FKM	NBR	HNBR	EPDM	TFE\P	VQM	FVQM	AU	PTFE
Relative Cost	*****	*****	***	*	**	*	***	**	***	***	***
Rating Descriptions*	1 = Good (<15% Swell) 2 = Fair (15-25% Swell) 3 = Poor (25-40% Swell) 4 = Not Recommended - = Not Tested										
BIPHENYL	1	1	1	4	4	4	2	4	2	4	1
BISMUTH CARBONATE	1	1	1	3	3	1	-	2	1	4	-
BISMUTH NITRATE	1	1	3	3	3	1	-	2	1	4	-
BISMUTH OXYCHLORIDE	1	1	3	3	3	1	-	2	1	4	-
BISULFITE LYE	2	-	-	2	2	1	-	-	-	4	1
BITUMEN	1	-	1	4	4	-	-	-	-	-	1
BLACK LIQUOR	3	1	1	2	2	2	2	-	-	-	-
BLACK LYE	1	-	1	2	2	1	-	-	-	-	1
BLACK POINT 77	1	1	1	1	1	1	1	3	3	3	-
BLAST FURNACE GAS	1	1	1	4	2	4	1	1	2	4	1
BLEACH LIQUOR	1	1	1	3	2	1	1	2	2	4	1
BLEACH SOLUTIONS	1	1	1	-	-	1	-	-	-	-	-
BLEACHING LYE	1	-	2	4	4	1	-	-	-	4	1
BONE OIL	1	1	2	1	1	2	1	2	1	1	1
BORAX	1	1	1	2	2	1	1	2	2	1	-
BORAX SOLUTIONS	1	1	1	2	1	1	1	1	1	4	1
BORDEAUX MIXTURE	1	1	1	2	2	1	1	2	2	4	-
BORIC ACID	1	1	1	1	1	1	1	1	1	4	1
BORIC OXIDE	1	2	3	3	3	1	-	2	1	4	-
BORNEOL	1	1	2	2	2	4	-	-	2	3	-
BORNYL ACETATE	1	2	4	2	2	4	-	-	2	3	-
BORNYL CHLORIDE	1	1	1	2	2	4	-	-	2	3	-
BORNYL FORMATE	1	1	1	2	2	4	-	-	2	3	-

BORON FLUIDS	1	1	1	2	2	4	1	4	2	4	-
BORON TRICHLORIDE	1	1	1	2	2	4	1	-	-	-	-
BORON TRIFLUORIDE	1	1	1	2	2	4	1	-	-	-	-
BRAKE FLUID DOT3, GLYCOL TYPE	4	4	4	4	3	1	2	1	1	4	1
BRAKE FLUID, WAGNER 21B	4	4	4	3	3	1	1	3	4	4	1
BRAY GG-130	1	1	1	2	2	4	2	4	2	4	-
BRAYCO 719-R	4	4	4	3	3	1	2	2	2	4	-
BRAYCO 885	1	1	1	2	2	4	2	4	2	1	-
Designations	FFKM	ETP	FKM	NBR	HNBR	EPDM	TFE/P	VQM	FVQM	AU	PTFE
Relative Cost	*****	****	***	*	**	*	***	**	***	***	***
Rating Descriptions*	1 = Good (<15% Swell) 2 = Fair (15-25% Swell) 3 = Poor (25-40% Swell) 4 = Not Recommended - = Not Tested										
BRAYCO 910	1	2	4	2	2	1	3	4	4	3	-
BRET 710	4	4	4	2	2	1	2	4	4	3	-
BRINE	1	1	1	1	1	1	1	1	1	-	-
BROM - 113	-	-	-	3	3	4	3	4	-	-	-
BROM - 114	1	1	2	2	2	4	3	4	-	-	-
BROMIC ACID	1	1	3	3	3	1	-	2	1	4	-
BROMINE	1	1	1	4	4	4	1	4	2	4	1
BROMINE PENTAFLUORIDE	2	3	4	4	4	4	4	4	4	4	-
BROMINE TRIFLUORIDE	2	3	4	4	4	4	4	4	4	4	-
BROMINE WATER	1	1	1	4	4	2	3	4	2	4	1
BROMINE, ANHYDROUS	1	1	1	4	4	4	1	4	2	-	-
BROMINE, LIQUID	-	-	-	4	4	-	-	-	-	-	1
BROMOBENZENE	1	1	1	4	4	4	4	4	1	4	1
BROMOBENZENE CYANIDE	1	1	3	3	3	1	-	2	1	4	-
BROMOCHLOROMETHANE	1	2	4	4	-	2	3	4	2	-	-
BROMOCHLOROTRIFLUOROETHANE	1	1	1	4	4	4	1	4	2	4	-
BROMOETHANE	1	-	1	2	2	4	1	-	-	-	-
BROMOFORM	1	1	1	2	2	4	-	-	2	3	-
BROMOMETHANE	1	1	1	2	2	4	1	-	1	-	-
BROMOTRIFLUOROMETHANE	2	2	1	1	-	1	-	4	2	-	-
BRUCINE SULFATE	1	1	3	3	3	1	-	2	1	4	-
BUNKER OIL	1	1	1	1	1	4	2	2	1	2	1

BUNKER C FUEL OIL	1	1	1	1	1	4	2	-	-	-	-
BUTADIENE	1	1	3	4	4	4	2	4	1	4	1
BUTANE	1	1	1	1	1	4	2	4	1	1	1
BUTANE, 2, 2-DIMETHYL	1	1	1	1	1	4	2	4	3	4	-
BUTANE, 2, 3-DIMETHYL	1	1	1	1	1	4	2	4	3	4	-
BUTANEDIOL	1	1	3	1	1	1	-	2	1	4	1
BUTANOL	1	1	1	4	4	1	1	2	1	4	1
BUTENE 2-ETHYL	1	1	1	1	1	4	1	4	3	4	-
BUTTER	1	1	1	1	1	1	1	2	1	1	1
Designations	FFKM	ETP	FKM	NBR	HNBR	EPDM	TFE\P	VQM	FVQM	AU	PTFE
Relative Cost	*****	****	***	*	**	*	***	**	***	***	***
Rating Descriptions*	1 = Good (<15% Swell) 2 = Fair (15-25% Swell) 3 = Poor (25-40% Swell) 4 = Not Recommended - = Not Tested										
BUTYL ACETATE	1	3	4	4	4	2	4	4	4	4	1
BUTYL ACETYL RICINOLEATE	1	1	1	2	2	1	1	-	2	4	-
BUTYL ACRYLATE	1	3	4	4	4	4	4	2	4	-	-
BUTYL ALCOHOL	1	1	1	1	4	2	1	2	1	4	1
BUTYL ALCOHOL, SECONDARY	1	1	1	2	2	2	1	2	2	4	-
BUTYL ALCOHOL, TERTIARY	1	1	1	2	2	2	1	2	2	4	-
BUTYL BENZOATE	1	1	1	4	3	1	-	2	1	4	-
BUTYL BUTYRATE	1	1	1	4	4	1	-	-	1	-	-
BUTYL CARBITOL	1	1	3	4	4	1	2	4	4	4	1
BUTYL CELLOSOLVE	1	2	4	3	3	2	3	4	4	4	1
BUTYL CELLOSOLVE ACETATE	1	3	4	4	3	2	2	2	2	4	-
BUTYL CELLOSOLVE ADIPATE	1	1	2	4	4	2	2	2	2	4	-
BUTYL CHLORIDE	1	1	1	1	1	4	-	2	1	1	-
BUTYL ETHER	1	3	4	3	3	3	-	4	3	3	-
BUTYL GLYCOLATE	1	1	3	3	3	1	-	2	1	4	-
BUTYL LACTATE	1	1	3	3	3	1	-	2	1	4	-
BUTYL LAURATE	1	1	2	3	3	1	-	2	1	4	-
BUTYL MERCAPTAN	1	2	4	4	4	4	-	4	-	4	-
BUTYL METHACRYLATE	1	2	4	3	3	1	-	2	1	4	-
BUTYL OLEATE	1	1	1	4	4	2	1	-	2	-	-
BUTYL OXALATE	1	1	3	3	3	1	-	2	1	4	-

BUTYL PHENOL	1	1	2	4	4	4	-	4	-	4	1
BUTYL STEARATE	1	1	1	2	2	4	1	-	2	-	-
BUTYLAMINE	1	4	4	3	1	4	2	4	4	4	-
BUTYLBENZOIC ACID	1	1	1	2	2	4	-	-	2	3	-
BUTYLENE	1	1	1	2	1	4	2	4	2	1	1
BUTYLENE GLYCOL	1	-	2	1	1	1	-	1	1	1	1
BUTYNE DIOL	2	-	2	1	1	1	-	-	-	1	1
BUTYRALDEHYDE	2	3	4	4	4	2	4	4	4	4	1
BUTYRIC ACID	1	2	3	4	1	2	1	-	-	-	1
BUTYRIC ANHYDRIDE	1	1	3	3	3	1	-	2	1	4	-
Designations	FFKM	ETP	FKM	NBR	HNBR	EPDM	TFE\P	VQM	FVQM	AU	PTFE
Relative Cost	*****	****	***	*	**	*	***	**	***	***	***
Rating Descriptions*	1 = Good (<15% Swell) 2 = Fair (15-25% Swell) 3 = Poor (25-40% Swell) 4 = Not Recommended - = Not Tested										
BUTYROLACETONE	1	2	3	3	3	1	-	2	1	4	-
BUTYRYL CHLORIDE	1	1	1	2	2	4	-	-	2	3	-
CADMIUM CHLORIDE	1	1	3	3	3	1	-	2	1	4	-
CADMIUM CYANIDE	1	1	1	1	3	1	1	2	1	4	-
CADMIUM NITRATE	1	1	2	3	3	1	-	2	1	4	-
CADMIUM OXIDE	1	1	3	3	3	1	-	2	1	4	-
CADMIUM SULFATE	1	1	3	3	3	1	-	2	1	4	-
CADMIUM SULFIDE	1	1	3	3	3	1	-	2	1	4	-
CALCINE LIQUORS	1	1	1	1	1	1	1	-	1	4	-
CALCIUM ACETATE	1	3	4	2	2	1	1	4	4	4	-
CALCIUM ARSENATE	1	1	1	1	3	1	1	2	1	4	-
CALCIUM BENZOATE	1	1	1	2	2	4	-	-	2	3	-
CALCIUM BICARBONATE	1	1	2	3	3	1	-	2	1	4	-
CALCIUM BISULFIDE	1	1	1	3	3	1	-	2	1	4	-
CALCIUM BISULFITE	1	1	1	1	1	4	1	3	3	1	1
CALCIUM BROMIDE	1	1	1	1	1	1	1	1	1	1	-
CALCIUM CARBONATE	1	1	1	1	1	1	1	1	1	3	1
CALCIUM CHLORATE	1	1	1	3	3	1	-	2	1	4	-
CALCIUM CHLORIDE	1	1	1	1	1	1	1	1	1	4	1
CALCIUM CHROMATE	1	1	3	3	3	1	-	2	1	4	-

CALCIUM CYANIDE	1	1	1	1	1	1	1	1	-	-	-
CALCIUM FLUORIDE	1	1	1	1	1	1	1	1	1	1	-
CALCIUM GLUCONATE	1	1	3	3	3	1	-	2	1	4	-
CALCIUM HYDRIDE	1	1	1	1	1	1	1	1	1	1	-
CALCIUM HYDROGEN SULFITE	1	1	1	4	-	4	1	1	1	-	-
CALCIUM HYDROSULFIDE	1	1	3	3	3	1	-	2	1	4	-
CALCIUM HYDROXIDE	1	1	1	1	1	1	1	1	1	4	1
CALCIUM HYPOCHLORITE	1	1	1	2	2	1	1	2	2	4	1
CALCIUM HYPOPHOSPHITE	1	1	3	3	3	1	-	2	1	4	-
CALCIUM LACTATE	1	1	3	3	3	1	-	2	1	4	-
CALCIUM NITRATE	1	1	1	1	1	1	1	2	1	1	1
Designations	FFKM	ETP	FKM	NBR	HNBR	EPDM	TFE\P	VQM	FVQM	AU	PTFE
Relative Cost	*****	****	***	*	**	*	***	**	***	***	***
Rating Descriptions*	1 = Good (<15% Swell) 2 = Fair (15-25% Swell) 3 = Poor (25-40% Swell) 4 = Not Recommended - = Not Tested										
CALCIUM OXALATE	1	1	3	3	3	1	-	2	1	4	-
CALCIUM OXIDE	1	1	1	1	1	1	1	1	1	1	-
CALCIUM PHENOLSULFONATE	1	1	3	3	3	1	-	2	1	4	-
CALCIUM PHOSPHATE	1	1	1	1	1	1	1	1	1	1	1
CALCIUM PHOSPHATE ACID	1	1	3	3	3	1	-	2	1	4	-
CALCIUM PROPIONATE	1	1	3	3	3	1	-	2	1	4	-
CALCIUM SALTS	1	1	1	1	1	1	1	2	1	1	-
CALCIUM SILICATE	1	1	1	1	1	1	1	-	-	-	-
CALCIUM STEARATE	1	1	1	2	2	4	-	-	2	3	-
CALCIUM SULFAMATE	1	1	1	2	2	4	-	-	2	3	-
CALCIUM SULFATE	1	1	2	3	3	1	-	2	1	4	-
CALCIUM SULFIDE	1	1	1	1	1	1	1	2	1	1	1
CALCIUM SULFITE	1	1	1	1	1	1	1	1	1	1	-
CALCIUM THIOCYANATE	1	1	3	3	3	1	-	2	1	4	-
CALCIUM THIOSULFATE	1	1	1	2	2	1	1	1	1	1	-
CALCIUM TUNGSTATE	1	1	3	3	3	1	-	2	1	4	-
CALICHE LIQUORS	1	1	1	1	1	1	1	2	1	1	-
CAMPHENE	1	1	2	2	2	4	-	-	2	3	-
CAMPHOR	1	1	2	1	1	1	1	-	2	3	1

CAMPHORATED OIL	1	-	2	1	2	4	-	-	-	-	1
CAMPHORIC ACID	1	1	2	2	2	4	-	-	2	3	-
CANE SUGAR LIQUORS	1	1	1	1	1	1	1	1	1	4	-
CAPRIC ACID	1	1	2	1	1	4	-	2	1	1	-
CAPROIC ACID	1	1	2	1	1	4	-	2	1	1	-
CAPROIC ALDEHYDE	1	3	4	-	-	2	3	2	4	4	-
CAPROLACTAM	1	3	4	1	1	1	2	2	1	1	-
CAPRONALDEHYDE	1	1	1	1	1	4	-	2	1	1	-
CARBAMATE	1	1	1	3	3	2	1	-	1	4	-
CARBITOL	1	2	3	2	2	2	1	2	2	4	-
CARBITOL 2	1	-	2	2	-	2	-	2	2	4	1
CARBOLIC ACID	1	1	1	4	4	2	1	4	1	3	1
Designations	FFKM	ETP	FKM	NBR	HNBR	EPDM	TFE\P	VQM	FVQM	AU	PTFE
Relative Cost	*****	*****	***	*	**	*	***	**	***	***	***
Rating Descriptions*	1 = Good (<15% Swell) 2 = Fair (15-25% Swell) 3 = Poor (25-40% Swell) 4 = Not Recommended - = Not Tested										
CARBOLINEUM	1	-	1	4	4	4	-	4	1	1	1
CARBON BISULFIDE	1	1	1	4	4	4	2	4	1	-	-
CARBON DIOXIDE	1	1	1	1	1	1	1	1	1	1	-
CARBON DIOXIDE, DRY	1	1	1	1	1	2	1	2	2	-	1
CARBON DIOXIDE, EXPLOSIVE DECOMPRESSION USE	1	1	1	1	1	1	1	1	1	1	-
CARBON DIOXIDE, WET	1	1	1	1	1	2	1	-	-	-	-
CARBON DISULFIDE	1	1	2	4	4	4	1	4	1	4	1
CARBON FLUORIDES	1	1	1	2	2	4	2	4	2	4	-
CARBON MONOXIDE	1	1	1	1	1	1	1	1	2	1	1
CARBON MONOXIDE, DRY	1	-	1	1	1	1	-	1	1	1	1
CARBON MONOXIDE, WET	1	-	1	1	1	1	-	1	1	-	1
CARBON TETRACHLORIDE	1	1	1	2	2	4	4	4	2	4	1
CARBON TETRAFLUORIDE	1	1	1	2	2	4	2	4	2	4	-
CARBONIC ACID	1	1	1	4	1	1	1	1	1	1	1
CASEIN	1	1	1	3	3	1	-	2	1	4	-
CASTOR OIL	1	1	1	1	1	2	1	1	1	1	1
CAUSTIC LIME	1	1	1	1	3	1	1	1	1	4	-

CAUSTIC POTASH	1	1	1	2	2	1	1	3	3	4	1
CAUSTIC SODA	1	2	4	2	2	1	1	2	2	4	1
CELLOSOLVE	1	3	4	4	4	2	1	4	4	4	1
CELLOSOLVE ACETATE	1	3	4	4	4	2	3	4	4	4	-
CELLOSOLVE BUTYL	4	4	4	4	4	2	2	4	4	4	-
CELLUGUARD	1	1	1	1	1	1	1	1	1	4	-
CELLULOSE ACETATE	1	2	4	3	3	1	-	2	1	4	-
CELLULOSE ACETATE BUTYRATE	1	1	3	3	3	1	-	2	1	4	-
CELLULOSE ETHER	1	2	3	3	3	1	-	2	1	4	-
CELLULOSE NITRATE	1	1	3	3	3	1	-	2	1	4	-
CELLULOSE TRIPROPIONATE	1	1	3	3	3	1	-	2	1	4	-
CELLULUBE A60	1	1	3	4	4	2	2	2	3	-	-
CELLULUBE, PHOSPHATE ESTERS	1	1	1	4	-	1	2	1	3	-	-
Designations	FFKM	ETP	FKM	NBR	HNBR	EPDM	TFE/P	VQM	FVQM	AU	PTFE
Relative Cost	*****	****	***	*	**	*	***	**	***	***	***
Rating Descriptions*	1 = Good (<15% Swell) 2 = Fair (15-25% Swell) 3 = Poor (25-40% Swell) 4 = Not Recommended - = Not Tested										
CELLUTHERM 2505A	1	1	1	2	2	4	1	4	2	4	-
CEMENT, PORTLAND	1	1	1	1	-	1	1	-	-	-	-
CERIUM SULFATE	1	1	3	3	3	1	-	2	1	4	-
CEROUS CHLORIDE	1	1	3	3	3	1	-	2	1	4	-
CEROUS FLUORIDE	1	1	3	3	3	1	-	2	1	4	-
CEROUS NITRATE	1	1	3	3	3	1	-	2	1	4	-
CETANE (HEXADECANE)	1	1	1	1	1	4	1	4	3	4	-
CETYL ALCOHOL	1	1	1	1	1	4	-	2	1	1	-
CHINA WOOD OIL	1	1	1	1	1	4	2	4	2	3	1
CHLORACETIC ACID	1	-	4	4	4	2	-	-	4	4	1
CHLORAL	1	3	4	3	3	1	-	2	1	4	-
CHLORAL HYDRATE, AQUEOUS	1	-	2	4	4	2	-	-	-	-	1
CHLORAMINE	1	3	4	1	1	1	-	-	-	-	1
CHLORANTHRAQUINONE	1	2	1	2	2	4	-	-	2	3	-
CHLORDANE	1	1	1	2	2	4	1	4	2	-	-
CHLORETHANOL	2	-	4	4	4	2	-	-	-	-	1
CHLOREXTOL	1	1	1	2	2	4	1	4	2	4	-

CHLORIC ACID	1	1	2	4	4	2	-	2	1	4	1
CHLORIDE OF LIME, AQUEOUS	1	-	1	4	4	1	-	-	-	4	1
CHLORINATED NAPHTHALENE	1	1	2	4	-	4	4	4	2	-	-
CHLORINATED SALT BRINE	1	1	1	4	4	4	1	-	-	-	-
CHLORINATED SOLVENTS	1	1	1	4	4	4	4	4	1	4	1
CHLORINATED SOLVENTS, DRY	1	1	1	4	4	4	2	4	1	4	-
CHLORINATED SOLVENTS, WET	1	1	1	4	4	4	2	4	1	4	-
CHLORINE	1	1	1	2	2	4	3	-	2	3	-
CHLORINE DIOXIDE	2	1	1	4	4	3	3	3	2	4	1
CHLORINE DIOXIDE, 8% CL AS NACLO2 IN SOLUTION	1	1	1	4	4	4	2	-	2	4	-
CHLORINE TRIFLUORIDE	2	3	4	4	4	4	4	4	4	4	1
CHLORINE WATER	1	1	1	3	3	2	1	4	-	-	1
CHLORINE, DRY GAS	1	1	1	4	3	4	3	4	1	4	1
Designations	FFKM	ETP	FKM	NBR	HNBR	EPDM	TFE\P	VQM	FVQM	AU	PTFE
Relative Cost	*****	****	***	*	**	*	***	**	***	***	***
Rating Descriptions*	1 = Good (<15% Swell) 2 = Fair (15-25% Swell) 3 = Poor (25-40% Swell) 4 = Not Recommended - = Not Tested										
CHLORINE, LIQUID	2	-	2	4	4	2	-	-	-	-	1
CHLORINE, PLASMA	3	3	-	-	-	-	-	-	-	-	-
CHLORINE, WET	2	1	2	4	4	2	2	4	2	2	1
CHLORINE, WET GAS	2	2	2	4	4	2	-	-	-	-	1
CHLORO 1-NITRO ETHANE	1	3	4	4	4	4	3	4	4	4	-
CHLORO OXYFLUORIDES	2	2	-	-	-	-	-	-	-	-	-
CHLORO XYLENOLS	1	1	1	2	2	4	-	-	2	3	-
CHLOROACETALDEHYDE	2	3	4	3	3	1	-	2	1	4	-
CHLOROACETIC ACID	1	2	4	4	4	2	2	-	4	4	-
CHLOROACETONE	1	2	4	4	4	1	4	4	4	4	-
CHLOROAMINO BENZOIC ACID	1	1	3	3	3	1	-	2	1	4	-
CHLOROANILINE	1	3	3	4	3	2	2	2	1	4	-
CHLOROBENZALDEHYDE	1	3	4	3	3	1	-	2	1	4	-
CHLOROBENZENE	1	1	1	4	4	4	2	4	2	4	1
CHLOROBENZENE CHLORIDE	1	1	1	2	2	4	-	-	2	3	-
CHLOROBENZENE TRIFLUORIDE	1	1	1	2	2	4	-	-	2	3	-

CHLOROBENZOCHLORIDE	1	1	1	2	2	4	-	-	2	3	-
CHLOROBENZOTRIFLUORIDE	1	1	1	4	2	4	-	4	2	3	-
CHLOROBROMOMETHANE	1	1	1	4	4	2	3	4	2	4	1
CHLOROBROMOPROPANE	1	1	1	2	2	4	-	-	2	3	-
CHLOROBUTADIENE	1	1	1	4	4	4	3	4	2	4	-
CHLOROBUTANE	1	1	1	1	1	4	-	2	1	1	-
CHLORODODECANE	1	1	1	4	4	4	2	4	1	4	-
CHLOROETHANE	1	1	1	1	1	4	-	2	1	1	-
CHLOROETHANE SULFONIC ACID	1	1	3	3	3	1	-	2	1	4	-
CHLOROETHYLBENZENE	1	1	1	2	2	4	4	-	2	3	-
CHLOROFORM	1	1	2	4	4	4	4	4	3	4	1
CHLOROHYDRIN	1	1	1	1	3	1	1	2	1	4	-
CHLORONAPHTHALENE	1	1	1	4	4	4	4	4	2	4	-
CHLORONITROBENZENE	1	1	3	3	3	1	-	2	1	4	-
CHLORONITROETHANE	1	2	4	4	-	4	-	4	4	-	-
Designations	FFKM	ETP	FKM	NBR	HNBR	EPDM	TFE\P	VQM	FVQM	AU	PTFE
Relative Cost	*****	*****	***	*	**	*	***	**	***	***	***
Rating Descriptions*	1 = Good (<15% Swell) 2 = Fair (15-25% Swell) 3 = Poor (25-40% Swell) 4 = Not Recommended - = Not Tested										
CHLOROPHENOL	1	1	1	4	-	4	-	4	2	-	-
CHLOROPHENOL, ORTHO	1	1	2	3	3	1	-	2	1	4	-
CHLOROPHENOL, PARA	1	1	2	3	3	1	-	2	1	4	-
CHLOROPICRIN	1	1	1	2	2	4	-	-	2	3	-
CHLOROPRENE	1	1	1	4	2	4	3	4	2	3	-
CHLOROSULFONIC ACID	1	2	4	4	4	4	4	4	4	4	1
CHLOROTOLUENE	1	1	1	4	4	4	2	4	2	4	-
CHLOROTOLUENE SULFONIC ACID	1	1	3	3	3	1	-	2	1	4	-
CHLOROTOLUIDINE	1	2	4	2	2	4	-	-	2	3	-
CHLOROTRIFLUOROETHYLENE	2	2	-	-	-	-	-	-	-	-	-
CHLOROX	1	1	1	2	2	2	1	-	1	4	-
CHLORSULPHONIC ACID	-	-	-	4	4	4	-	4	4	-	1
CHOLESTEROL	1	1	1	2	2	4	-	-	2	3	-
CHROME ALUM	1	1	1	1	1	1	3	1	-	-	-
CHROME PLATING SOLUTION	1	1	1	4	4	2	1	2	2	4	1

CHROMIC ACID	1	1	1	4	4	2	1	3	2	3	1
CHROMIC OXIDE	1	1	1	4	4	2	1	-	-	-	-
CHROMIUM POTASSIUM SULFATE	1	1	1	2	2	2	2	-	-	-	-
CINNAMIC ACID	1	1	1	2	2	4	-	-	2	3	-
CINNAMIC ALCOHOL	1	1	1	2	2	4	-	-	2	3	-
CINNAMIC ALDEHYDE	1	2	3	2	2	4	-	-	2	3	-
CIRCO LIGHT PROCESS OIL	1	1	1	1	1	4	1	4	1	1	-
CITRIC ACID	1	1	1	1	1	1	1	1	1	1	1
CITY SERVICE 65, 120, 250	1	1	1	1	1	4	1	4	1	2	-
CITY SERVICE KOOL MOTOR OIL 140	1	1	1	1	1	4	1	4	1	1	-
CITY SERVICE PACEMAKER NO. 2	1	1	1	1	1	4	1	4	1	2	-
CLOPHEN	-	-	2	-	-	4	-	4	-	1	-
CLOPHEN-A TYPES	1	-	1	4	4	-	-	1	1	4	1
CLOROX	1	1	1	2	-	2	-	2	2	-	-
COAL TAR	1	1	1	1	1	4	1	4	1	-	-
COBALT CHLORIDE	1	1	1	1	1	1	1	2	1	1	-
Designations	FFKM	ETP	FKM	NBR	HNBR	EPDM	TFE/P	VQM	FVQM	AU	PTFE
Relative Cost	*****	****	***	*	**	*	***	**	***	***	***
Rating Descriptions*	1 = Good (<15% Swell) 2 = Fair (15-25% Swell) 3 = Poor (25-40% Swell) 4 = Not Recommended - = Not Tested										
COBALT CHLORIDE, 2N	1	1	1	1	1	1	1	1	1	4	-
COBALTOUS ACETATE	1	3	4	3	3	1	-	2	1	4	-
COBALTOUS BROMIDE	1	1	1	1	1	1	1	1	1	4	-
COBALTOUS CHLORIDE	1	1	1	1	-	1	1	2	1	-	-
COBALTOUS SULFATE	1	1	3	3	3	1	-	2	1	4	-
COCONUT FAT	1	-	1	1	1	4	-	1	1	1	1
COCONUT FATTY ALCOHOL	1	-	1	1	1	2	-	-	-	-	1
COCONUT OIL	1	1	1	1	1	3	1	1	1	3	1
COD LIVER OIL	1	1	1	1	1	1	1	2	1	1	1
CODEINE	1	1	1	2	2	4	-	-	2	3	-
COFFEE	1	1	1	1	1	1	1	1	1	4	-
COKE OVEN GAS	1	1	1	4	4	4	1	2	2	4	1
COLICHE LIQUORS	-	-	-	2	2	2	2	-	-	-	-
CONVELEX 10	1	1	1	4	4	3	2	4	-	2	-

COOLANOL	1	1	1	1	1	4	1	4	1	1	-
COPPER ACETATE	1	3	4	2	2	1	4	4	4	4	-
COPPER AMMONIUM ACETATE	1	1	3	3	3	1	-	2	1	4	-
COPPER CARBONATE	1	1	1	3	3	1	-	2	1	4	-
COPPER CHLORIDE	1	1	1	1	1	1	1	1	1	1	1
COPPER CYANIDE	1	1	1	1	1	1	2	1	1	1	-
COPPER FLUORIDE	1	-	1	1	1	1	-	-	-	-	1
COPPER GLUCONATE	1	1	3	3	3	1	-	2	1	4	-
COPPER NITRATE	1	1	1	2	1	2	2	-	-	-	1
COPPER OXIDE	1	1	1	1	1	1	1	1	1	1	-
COPPER SALTS	1	1	1	1	1	1	1	1	1	1	-
COPPER SULFATE	1	1	1	1	1	1	1	1	1	1	1
COPPER SULFATE 10%	1	1	1	1	1	1	1	1	1	2	-
COPPER SULFATE 50%	1	1	1	1	1	1	1	1	1	3	-
CORN OIL	1	1	1	1	1	3	1	1	1	1	1
COTTONSEED OIL	1	1	1	1	1	3	1	1	1	1	1
CREOSOTE, COAL TAR	1	1	1	1	1	4	1	4	1	3	1
Designations	FFKM	ETP	FKM	NBR	HNBR	EPDM	TFE\P	VQM	FVQM	AU	PTFE
Relative Cost	*****	*****	***	*	**	*	***	**	***	***	***
Rating Descriptions*	1 = Good (<15% Swell) 2 = Fair (15-25% Swell) 3 = Poor (25-40% Swell) 4 = Not Recommended - = Not Tested										
CREOSOTE, WOOD	1	1	1	1	1	4	2	4	1	3	-
CREOSYLIC ACID	1	-	1	4	1	4	1	-	-	4	-
CRESOL	1	1	1	4	4	4	1	4	2	1	1
CRESYLIC ACID	1	1	1	4	4	4	1	4	2	4	-
CROTONALDEHYDE	1	2	4	2	2	1	-	-	2	3	1
CROTONIC ACID	1	1	2	4	2	2	-	4	4	3	-
CRUDE OIL, ASPHALT BASE	1	1	1	2	2	4	1	4	2	1	1
CUMALDEHYDE	1	1	1	2	2	4	-	-	2	3	-
CUMENE	1	1	1	4	4	4	3	4	2	4	-
CUPRIC SULFATE	1	1	1	1	1	1	1	-	-	-	-
CUTTING OIL	1	1	1	1	1	4	1	4	1	1	-
CYANOGEN CHLORIDE	1	2	2	4	3	3	3	-	-	-	-
CYCLOHEXANE	1	1	1	1	1	4	2	4	2	1	1

CYCLOHEXANOL	1	1	1	1	1	4	1	4	1	1	1
CYCLOHEXANONE	1	3	4	4	4	2	3	4	4	4	1
CYCLOHEXENE	1	2	3	2	2	4	-	-	2	3	-
CYCLOHEXYLAMINE	1	3	4	4	4	4	-	2	1	1	1
CYCLOHEXYLAMINE LAURATE	1	1	1	1	1	4	-	2	1	1	-
CYCLOPENTADIENE	1	2	3	2	2	4	-	-	2	3	-
CYCLOPENTANE	1	1	1	1	1	4	2	4	1	1	-
CYCLOPOLYOLEFINS	1	1	3	1	1	4	2	4	1	1	-
CYMENE	1	1	1	4	-	4	-	4	2	3	-
DDT (Dichlorodiphenyltrichloroethane)	1	1	1	4	2	4	-	4	1	3	-
DECAHYDRONAPHTHALENE	1	1	1	4	-	4	-	4	1	-	-
DECALIN	1	1	1	4	4	4	2	4	1	-	-
DECANE	1	1	1	1	1	4	1	2	1	2	-
DEIONIZED WATER	1	1	1	2	2	2	2	2	1	4	-
DELCO BRAKE FLUID	1	4	4	3	3	1	1	3	4	-	-
DELTA H	2	-	2	4	4	4	-	-	-	-	1
DELVAC 1100, 1110, 1120, 1130	1	1	1	1	1	4	1	1	-	-	-
DENATURED ALCOHOL	1	1	1	1	1	1	1	1	1	4	1
Designations	FFKM	ETP	FKM	NBR	HNBR	EPDM	TFE/P	VQM	FVQM	AU	PTFE
Relative Cost	*****	****	***	*	**	*	***	**	***	***	***
Rating Descriptions*	1 = Good (<15% Swell) 2 = Fair (15-25% Swell) 3 = Poor (25-40% Swell) 4 = Not Recommended - = Not Tested										
DESMODUR	-	-	-	-	4	4	-	4	-	2	4
DESMOPHEN 2000	-	-	-	1	1	-	-	-	-	-	1
DETERGENT SOLUTIONS	1	1	1	1	1	1	1	1	1	4	1
DETERGENTS	2	-	2	1	1	1	-	-	-	-	1
DEVELOPING FLUIDS	1	1	1	1	1	2	1	1	1	-	-
DEXRON	1	1	1	1	1	4	2	4	2	2	-
DEXTRIN	1	1	1	1	1	1	-	1	1	4	1
DEXTRO LACTIC ACID	1	1	3	3	3	1	-	2	1	4	-
DEXTRON	1	1	1	1	1	4	1	4	2	-	-
DEXTROSE	1	1	1	3	3	1	-	2	1	4	-
DIACETONE	1	2	4	4	4	1	2	4	4	4	1
DIACETONE ALCOHOL	1	2	4	4	4	1	4	4	4	4	1

DIALKYL SULFATES	1	1	3	3	3	1	-	2	1	4	-
DIAMYLAMINE	1	3	4	1	1	4	-	2	1	1	-
DIAZINON	1	1	2	3	3	4	4	4	2	-	-
DIBENZYL	1	1	2	2	2	4	-	-	2	3	-
DIBENZYL ETHER	1	3	4	4	4	2	3	-	-	2	1
DIBENZYL SEBACATE	1	1	2	4	4	2	1	3	3	2	-
DIBROMODIFLUOROMETHANE	1	-	-	4	-	2	-	4	-	-	-
DIBROMOETHANE	1	1	1	2	2	4	-	-	2	3	-
DIBROMOETHYLBENZENE	1	1	2	4	4	4	4	4	2	4	-
DIBROMOTETRAFLUROETHANE	2	2	2	2	-	4	4	4	-	-	-
DIBUTYL CELLOSOLVE ADIPATE	1	1	3	3	3	1	-	2	1	4	-
DIBUTYL ETHER	1	2	3	4	4	3	4	4	3	2	1
DIBUTYL METHYLENEDITHIO GLYCOLATE	1	1	1	2	2	4	-	-	2	3	-
DIBUTYL PHTHALATE	1	2	3	4	4	2	2	2	3	3	1
DIBUTYL SEBACATE	1	1	4	4	4	2	2	2	2	4	1
DIBUTYL THIOGLYCOLATE	1	1	1	2	2	4	-	-	2	3	-
DIBUTYL THIOUREA	1	1	1	2	2	4	-	-	2	3	-
DIBUTYLAMINE	1	3	4	4	4	4	2	3	4	4	-
DICAPRYL PHTHALATE	1	1	2	4	-	2	-	3	2	-	-
Designations	FFKM	ETP	FKM	NBR	HNBR	EPDM	TFE\P	VQM	FVQM	AU	PTFE
Relative Cost	*****	****	***	*	**	*	***	**	***	***	***
Rating Descriptions*	1 = Good (<15% Swell) 2 = Fair (15-25% Swell) 3 = Poor (25-40% Swell) 4 = Not Recommended - = Not Tested										
DICHCLOROBUTANE	1	-	1	2	2	4	1	-	-	-	-
DICHLORACETIC ACID	2	3	4	4	4	1	-	-	-	4	1
DICHLORETHANE	2	-	2	4	4	4	-	4	-	4	1
DICHLORETHYLENE	2	-	2	4	4	-	-	-	-	-	1
DICHLOROACETIC ACID	1	1	1	2	2	4	-	-	2	3	-
DICHLOROANILINE	1	1	4	3	3	1	-	2	1	4	-
DICHLOROBENZENE	1	1	1	4	4	4	3	4	2	4	1
DICHLOROBUTANE	1	1	1	2	2	4	1	4	2	4	1
DICHLOROBUTENE	1	1	2	4	4	4	-	-	2	3	1
DICHLORODIETHYL SULFIDE	1	-	-	-	-	1	-	1	-	-	-
DICHLORODIPHENYLDICHLOROETHANE	1	1	1	2	2	4	-	-	2	3	-

DICHLOROETHANE	1	1	1	2	2	4	-	-	2	3	-
DICHLOROETHYLENE	1	1	2	2	2	4	-	-	2	3	-
DICHLOROHYDRIN	1	1	3	3	3	1	-	2	1	4	-
DICHLOROISOPROPYL ETHER	1	2	3	4	4	3	3	4	3	2	-
DICHLOROMETHANE	1	1	3	4	4	4	-	4	2	4	1
DICHLOROPHENOL	1	1	2	2	2	4	-	-	2	3	-
DICHLOROPHENOXYACETIC ACID	1	1	1	2	2	4	-	-	2	3	-
DICHLOROPROPANE	1	1	1	2	2	4	-	-	2	3	-
DICHLOROPROPENE	1	1	2	2	2	4	-	-	2	3	-
DICYCLOHEXYLAMINE	1	2	4	3	1	4	3	2	4	4	-
DICYCLOHEXYLAMMONIUM NITRATE	1	1	3	3	3	1	-	2	1	4	-
DIELDRIN	1	2	4	2	2	4	-	-	2	3	-
DIESEL FUEL	1	1	1	1	1	4	-	2	1	2	1
DIESEL OIL	1	1	1	1	1	4	1	4	1	3	1
DI-ESTER SYNTHETIC LUBRICANTS	1	1	1	2	2	4	1	4	2	4	-
DIETHANOLAMINE	1	2	3	3	3	1	-	2	1	4	-
DIETHYL CARBONATE	1	1	1	3	3	1	-	2	1	4	-
DIETHYL ETHER	1	3	4	4	4	4	4	4	3	1	1
DIETHYL PHTHALATE	1	1	1	2	2	4	-	-	2	3	-
DIETHYL SEBACATE	1	2	2	4	3	2	2	2	2	4	1
Designations	FFKM	ETP	FKM	NBR	HNBR	EPDM	TFE\P	VQM	FVQM	AU	PTFE
Relative Cost	*****	*****	***	*	**	*	***	**	***	***	***
Rating Descriptions*	1 = Good (<15% Swell) 2 = Fair (15-25% Swell) 3 = Poor (25-40% Swell) 4 = Not Recommended - = Not Tested										
DIETHYL SULFATE	1	4	3	4	4	1	2	2	-	-	-
DIETHYLAMINE	1	4	4	2	2	2	4	2	4	4	1
DIETHYLANILINE	1	1	3	3	3	1	-	2	1	4	-
DIETHYLBENZENE	1	1	1	4	4	4	3	4	3	-	-
DIETHYLENE GLYCOL	1	1	1	1	1	1	1	2	1	4	1
DIETHYLENE GLYCOL BUTYL ETHER	1	2	3	4	-	1	2	4	4	-	-
DIETHYLHEXYL PHTHALATE	1	1	2	4	-	2	2	3	2	-	-
DIETHYLHEXYL SEBACATE	1	1	1	4	-	2	1	3	3	-	-
DIFLUORODIBROMOMETHANE	1	1	-	4	4	2	2	4	-	4	-
DIFLUOROETHANE	1	1	4	2	2	4	-	-	2	3	-

DINITROTOLUENE	1	3	4	4	4	4	4	4	4	4	-
DINONYL PHTHALATE	2	-	4	4	4	-	-	-	-	-	1
DIOCTYL PHTHALATE	1	1	1	4	4	2	2	3	2	4	1
DIOCTYL SEBACATE	1	1	1	4	4	2	2	3	3	2	1
DIOCTYLAMINE	1	1	1	1	1	4	-	2	1	1	-
DIOXANE	1	3	4	4	4	2	4	4	4	4	1
DIOXOLANE	1	3	4	4	4	2	4	4	4	4	-
DIPENTENE	1	1	1	2	2	4	3	4	3	4	1
DIPHENYL	1	1	1	4	4	4	2	4	2	4	1
DIPHENYL OXIDES	1	1	1	4	4	4	2	3	2	4	1
DIPHENYLAMINE	1	2	4	2	2	4	-	-	2	3	-
DIPHENYLPROPANE	1	1	2	2	2	4	-	-	2	3	-
DISILANE	1	4	-	-	-	-	-	-	-	-	-
DODECYLBENZENE	1	1	1	2	2	4	-	-	2	3	-
DOW CHEMICAL 50-4	2	3	4	3	3	1	4	-	4	-	-
DOW CHEMICAL ET378	2	3	3	4	4	3	3	4	-	2	-
DOW CHEMICAL ET588	2	3	4	3	3	1	4	-	4	-	-
DOW CORNING 11	1	1	1	1	2	1	1	3	1	1	-
DOW CORNING 1208, 4050, 6620, F-60, XF-60	1	1	1	1	1	1	1	1	-	-	-
DOW CORNING 1265 FLUOROSILICONE FLUID	1	1	1	2	2	1	1	1	3	1	-
DOW CORNING 200	1	1	1	1	2	1	1	3	2	1	-
DOW CORNING 220	1	1	1	1	1	1	1	-	-	-	-
Designations	FFKM	ETP	FKM	NBR	HNBR	EPDM	TFE\P	VQM	FVQM	AU	PTFE
Relative Cost	*****	*****	***	*	**	*	***	**	***	***	***
Rating Descriptions*	1 = Good (<15% Swell) 2 = Fair (15-25% Swell) 3 = Poor (25-40% Swell) 4 = Not Recommended - = Not Tested										
DOW CORNING 3	1	1	1	1	2	1	1	3	1	1	-
DOW CORNING 33	1	1	1	1	2	1	1	3	2	1	-
DOW CORNING 4	1	1	1	1	2	1	1	3	1	1	-
DOW CORNING 44	1	1	1	1	2	1	1	3	2	1	-
DOW CORNING 5	1	1	1	1	2	1	1	3	2	1	-
DOW CORNING 510	1	1	1	2	2	1	1	3	2	1	-
DOW CORNING 55	1	1	1	1	2	1	1	3	2	1	-
DOW CORNING 550	1	1	1	1	1	1	1	3	2	1	1

DOW CORNING 704	1	1	1	2	2	1	-	3	2	1	-
DOW CORNING 705	1	1	1	2	2	1	1	3	2	1	-
DOW CORNING 710	1	1	1	2	2	1	1	3	2	1	-
DOW CORNING F-60 FLUID	1	1	1	1	1	1	1	4	1	1	-
DOW CORNING F-61 FLUID	1	1	1	1	1	1	1	4	1	1	-
DOW GUARD	1	1	1	1	1	1	1	1	1	3	-
DOWTHERM 209	1	1	1	3	3	1	1	3	3	-	-
DOWTHERM A	1	1	1	4	4	4	2	4	2	4	1
DOWTHERM E	1	1	1	4	4	4	1	4	2	4	-
DRINKING WATER	1	1	1	1	1	1	1	1	1	4	-
DRY CLEANING FLUIDS	2	1	1	3	3	4	3	4	2	4	-
DTE 20 SERIES	1	1	1	2	2	4	2	4	2	1	-
DTE LIGHT OIL	1	1	1	1	1	4	1	3	1	1	-
ELCO 28-EP LUBRICANT	1	1	1	1	1	4	1	2	1	1	-
ENGINE OILS	1	-	1	1	1	4	-	2	1	2	1
EPICHLOROHYDRIN	1	3	4	4	4	2	4	4	4	4	1
EPOXY RESINS	1	2	4	3	3	1	2	-	-	-	-
ESAM-6 FLUID	1	2	4	4	4	1	4	-	4	-	-
ESSENTIAL OILS	1	-	2	4	4	4	-	-	-	-	1
ESSO FUEL 208	1	1	1	1	1	4	1	4	1	4	-
ESSO GOLDEN GASOLINE	1	1	1	2	2	4	3	4	1	4	-
ESSO MOTOR OIL	1	1	1	1	1	4	1	4	1	4	-
ESSO TRANSMISSION FLUID, TYPE A	1	1	1	1	1	4	1	4	1	3	-
Designations	FFKM	ETP	FKM	NBR	HNBR	EPDM	TFE\P	VQM	FVQM	AU	PTFE
Relative Cost	*****	****	***	*	**	*	***	**	***	***	***
Rating Descriptions*	1 = Good (<15% Swell) 2 = Fair (15-25% Swell) 3 = Poor (25-40% Swell) 4 = Not Recommended - = Not Tested										
ESSO WS2812	1	1	1	1	1	4	1	4	1	4	-
ESSO XP90-EP LUBRICANT	1	1	1	1	1	4	1	4	1	1	-
ESSTIC 42, 43	1	1	1	1	1	4	1	4	1	2	-
ETHANAL	2	4	4	4	3	2	4	2	4	4	1
ETHANE	1	1	1	1	1	4	-	4	2	1	1
ETHANETHIOL	1	1	2	4	-	3	-	3	-	-	-
ETHANOL	1	1	3	3	3	1	1	2	1	4	1

ETHANOL WITH ACETIC ACID, FERMENTATION MIXTURE	1	-	-	4	4	1	-	-	-	-	1
ETHANOLAMINE	1	3	4	4	2	2	-	2	4	3	-
ETHERS	1	3	4	4	4	4	4	4	3	2	-
ETHOXYETHYL ACETATE	1	2	3	3	3	1	-	2	1	4	-
ETHYL ACETATE	1	3	4	4	4	2	4	2	4	4	1
ETHYL ACETOACETATE	1	3	4	4	4	2	4	2	4	4	-
ETHYL ACRYLATE	1	3	4	4	4	2	3	2	4	4	1
ETHYL ALCOHOL	1	1	2	1	3	1	1	2	1	4	1
ETHYL BENZENE	1	1	1	4	4	4	3	4	1	4	1
ETHYL BENZOATE	1	1	1	4	4	4	3	4	1	4	1
ETHYL BROMIDE	1	1	1	2	2	4	1	-	1	-	-
ETHYL CELLOSOLVE	1	2	4	4	4	2	-	4	4	4	-
ETHYL CELLULOSE	1	3	4	2	2	2	-	3	4	2	1
ETHYL CHLORIDE	1	1	1	1	1	2	2	4	1	2	1
ETHYL CHLOROCARBONATE	1	1	1	4	4	4	2	4	2	4	1
ETHYL CHLOROFORMATE	1	1	4	4	4	2	-	4	4	4	-
ETHYL CYANIDE	1	3	4	1	-	4	1	-	-	-	-
ETHYL CYCLOPENTANE	1	1	1	1	1	4	2	4	1	-	-
ETHYL DIBROMIDE	1	1	1	4	4	3	2	-	-	-	-
ETHYL DICHLORIDE	1	1	1	4	4	3	1	-	-	-	-
ETHYL ETHER	1	3	4	4	4	3	4	4	4	4	1
ETHYL FORMATE	2	1	1	4	4	2	1	-	1	-	1
ETHYL HEXANOL	1	1	1	1	1	1	-	2	1	4	1
Designations	FFKM	ETP	FKM	NBR	HNBR	EPDM	TFE\P	VQM	FVQM	AU	PTFE
Relative Cost	*****	****	***	*	**	*	***	**	***	***	***
Rating Descriptions*	1 = Good (<15% Swell) 2 = Fair (15-25% Swell) 3 = Poor (25-40% Swell) 4 = Not Recommended - = Not Tested										
ETHYL LACTATE	1	1	3	3	3	1	-	2	1	4	-
ETHYL MERCAPTAN	1	1	2	4	4	-	-	3	-	1	1
ETHYL NITRITE	1	1	3	3	3	1	-	2	1	4	-
ETHYL OXALATE	1	1	1	4	4	1	-	4	2	1	1
ETHYL PENTACHLOROBENZENE	1	1	1	4	4	4	-	4	2	4	1
ETHYL PYRIDINE	1	1	1	2	2	4	-	-	2	3	-

ETHYL SILICATE	1	1	1	1	1	1	-	4	1	4	1
ETHYL STEARATE	1	1	1	2	2	4	-	-	2	3	-
ETHYL SULFATE	1	1	4	4	4	1	1	-	-	-	-
ETHYL T-BUTYL ETHER	1	1	1	3	3	3	2	-	-	-	-
ETHYL VALERATE	1	1	1	2	2	4	-	-	2	3	-
ETHYLACRYLIC ACID	-	-	-	4	4	2	-	4	4	4	-
ETHYLAMINE	1	4	4	3	3	1	-	2	1	4	-
ETHYLENE	1	1	1	1	2	2	-	4	1	4	1
ETHYLENE CHLORIDE	1	1	2	4	2	4	-	4	2	2	1
ETHYLENE CHLOROHYDRIN	1	1	1	4	4	2	1	3	2	4	-
ETHYLENE CYANOHYDRIN	1	1	1	2	2	4	-	-	2	3	-
ETHYLENE DIAMINE	2	3	4	4	4	1	2	4	4	4	1
ETHYLENE DIBROMIDE	1	1	2	4	4	3	-	4	3	4	-
ETHYLENE DICHLORIDE	1	1	1	4	4	3	1	4	3	4	1
ETHYLENE GLYCOL	1	1	1	1	1	1	1	1	1	4	1
ETHYLENE GLYCOL BUTYL ETHER	1	3	4	3	-	2	3	-	4	-	-
ETHYLENE GLYCOL BUTYL ETHER ACETATE	1	3	4	4	-	2	2	2	2	-	-
ETHYLENE GLYCOL ETHYL ETHER ACETATE	1	3	4	4	-	2	3	4	4	-	-
ETHYLENE HYDROCHLORIDE	1	1	1	4	4	3	-	4	3	4	-
ETHYLENE OXIDE	1	4	4	4	4	3	4	4	4	4	1
ETHYLENE OXIDE, 12% AND FREON 12, 80%	4	4	4	3	3	2	-	4	4	4	-
ETHYLENE TRICHLORIDE	1	1	1	4	4	3	4	4	3	4	1
ETHYLENEDIAMINE	2	3	4	1	-	1	2	1	4	-	-
ETHYLMORPHOLINE	1	1	1	2	2	4	-	-	2	3	-
ETHYLMORPHOLINE STANNOUS OCTOATE	1	3	4	4	-	2	-	-	-	-	-
Designations	FFKM	ETP	FKM	NBR	HNBR	EPDM	TFE\P	VQM	FVQM	AU	PTFE
Relative Cost	*****	****	***	*	**	*	***	**	***	***	***
Rating Descriptions*	1 = Good (<15% Swell) 2 = Fair (15-25% Swell) 3 = Poor (25-40% Swell) 4 = Not Recommended - = Not Tested										
ETHYL SULFURIC ACID	1	1	3	3	3	1	-	2	1	4	-
EXHAUST GASES, CONTAINING CARBON DIOXIDE	1	-	1	1	1	1	-	1	1	-	1
EXHAUST GASES, CONTAINING CARBON MONOXIDE	1	-	1	1	1	1	-	1	1	1	1

EXHAUST GASES, CONTAINING HYDROGEN CHLORIDE	1	-	1	2	2	1	-	-	-	-	1
EXHAUST GASES, CONTAINING HYDROGEN FLUORIDE	1	-	1	1	1	1	-	-	-	-	1
EXHAUST GASES, CONTAINING NITROUS GASES	1	-	1	-	-	1	-	4	2	-	1
EXHAUST GASES, CONTAINING SULPHUR DIOXIDE	1	-	1	2	2	1	-	-	-	-	1
EXHAUST GASES, CONTAINING SULPHURIC ACID	1	-	1	4	4	1	-	-	-	-	1
FAM TEST FUELS DIN 51 604-A	1	-	1	2	2	4	-	4	1	1	1
FAM TEST FUELS DIN 51 604-C	1	-	-	4	4	4	-	4	2	4	1
FATTY ACIDS	1	1	1	2	2	3	1	3	-	-	1
FATTY ALCOHOL	1	-	1	1	1	2	-	1	-	-	1
FC 11 (Trichlorofluoromethane)	2	2	2	2	2	4	4	4	2	-	1
FC 112 (1,2-Difluorotetrachloroethane)	1	1	1	2	2	4	4	4	2	2	1
FC 113 (1,1,2-Trichloro-1,2,2-trifluoroethane)	2	2	2	1	1	4	4	4	4	2	1
FC 113 AND HIGH & LOW ANILINE OIL	3	3	2	1	1	4	4	-	-	-	-
FC 114 (1,2-Dichlorotetrafluoroethane)	2	1	1	1	1	1	4	4	2	1	1
FC 114B2 (Dibromotetrafluoroethane)	2	2	2	2	2	4	4	4	-	-	1
FC 115 (Chloropentafluoroethane)	2	2	2	1	1	1	4	-	-	-	-
FC 116 (Hexafluoroethane)	2	2	2	1	1	1	-	-	-	-	-
FC 12 (Dichlorodifluoromethane)	2	1	2	1	2	2	4	4	4	1	1
FC 12 AND ASTM OIL #2, 50/50 MIXTURE	1	1	1	2	2	4	4	4	2	-	-
FC 12 AND SUNISO 4G, 50/50 MIXTURE	1	1	1	2	2	4	-	4	2	-	-
FC 123 (Dichlorotrifluoroethane)	1	3	-	-	-	-	-	-	-	-	-
Designations	FFKM	ETP	FKM	NBR	HNBR	EPDM	TFE\P	VQM	FVQM	AU	PTFE
Relative Cost	*****	****	***	*	**	*	***	**	***	***	***
Rating Descriptions*	1 = Good (<15% Swell) 2 = Fair (15-25% Swell) 3 = Poor (25-40% Swell) 4 = Not Recommended - = Not Tested										
FC 124 (2-chloro-1,1,1,2-tetrafluoroethane)	2	2	-	-	-	-	-	-	-	-	-
FC 125 (Pentafluoroethane)	2	2	-	-	-	-	-	-	-	-	-
FC 13 (Chlorotrifluoromethane)	2	1	1	1	2	1	-	4	4	2	1
FC 134A (1,1,1,2-tetrafluoroethane)	1	3	4	2	2	1	-	-	-	-	1

FC 13B1 (Bromotrifluoromethane)	2	2	2	1	1	1	-	4	2	-	-
FC 14 (Tetrafluoromethane)	1	1	1	1	1	1	-	4	-	1	-
FC 142B (Difluorochloroethane)	2	2	2	2	2	4	4	-	-	-	-
FC 143A (1,1,1-Trifluoroethane)	1	1	1	4	-	4	2	4	2	-	-
FC 152A (Difluoroethane)	1	4	4	1	-	1	-	-	-	-	-
FC 21 (Dichlorofluoromethane)	1	4	4	4	4	4	-	4	-	-	1
FC 218	2	1	1	1	-	1	-	-	-	-	-
FC 22 (Chlorodifluoromethane)	1	4	4	4	4	2	-	4	3	2	1
FC 22 AND ASTM OIL #2, 50/50 MIXTURE	1	1	2	4	4	4	-	4	2	-	-
FC 31	2	4	4	4	4	1	-	-	-	-	1
FC 32	1	4	4	1	1	1	4	-	-	-	1
FC 43	1	3	1	1	1	1	1	1	1	-	-
FC 502, F22 AND F316	2	2	2	2	2	1	-	-	-	-	-
FC 70	2	2	1	-	-	-	-	-	-	-	-
FC 75	4	2	2	1	1	1	3	1	2	-	-
FC 77, FLUOROCARBON	1	1	2	1	1	1	-	1	2	-	-
FC BF	2	1	1	2	2	4	-	4	-	-	-
FC C316	2	1	1	1	-	1	-	-	-	-	-
FC C318 (Octafluoro-tetraethylene)	2	2	2	1	1	1	4	-	-	-	1
FC K-142B	4	4	4	1	1	1	-	-	-	-	-
FC K-152A	4	4	4	1	1	1	-	-	-	-	-
FC MF	2	2	2	2	2	4	4	4	-	3	-
FC PCA	3	2	2	1	1	4	4	4	-	1	-
FC TA	2	3	3	1	-	2	-	3	-	-	-
FC TC	2	1	1	1	-	2	-	4	-	-	-
FC TF (1,1,2-Trichloro-1,2,2-trifluoroethane)	3	2	2	1	1	2	4	4	4	-	1
FC TMC	2	1	1	2	-	3	-	3	-	-	-
Designations	FFKM	ETP	FKM	NBR	HNBR	EPDM	TFE\P	VQM	FVQM	AU	PTFE
Relative Cost	*****	*****	***	*	**	*	***	**	***	***	***
Rating Descriptions*	1 = Good (<15% Swell) 2 = Fair (15-25% Swell) 3 = Poor (25-40% Swell) 4 = Not Recommended - = Not Tested										
FC T-P35	2	1	1	1	-	1	-	1	-	-	-
FC T-WD602	2	1	1	2	-	2	-	4	-	-	-
FERMENTATION GAS	1	-	1	1	1	-	-	1	4	2	1

FERRIC ACETATE	1	3	4	3	3	1	-	2	1	4	-
FERRIC AMMONIUM SULFATE	1	1	3	3	3	1	-	2	1	4	-
FERRIC CHLORIDE	1	1	1	1	1	1	1	2	1	1	-
FERRIC FERROCYANIDE	1	1	3	3	3	1	-	2	1	4	-
FERRIC HYDROXIDE	1	1	1	3	3	1	-	2	1	4	-
FERRIC NITRATE	1	1	1	1	1	1	1	3	1	1	-
FERRIC PERSULFATE	1	1	1	1	1	1	1	-	-	-	-
FERRIC SULFATE	1	1	1	1	1	1	1	2	1	-	-
FERROUS AMMONIUM CITRATE	1	1	3	3	3	1	-	2	1	4	-
FERROUS AMMONIUM SULFATE	1	1	2	3	3	1	-	2	1	4	-
FERROUS CARBONATE	1	1	3	3	3	1	-	2	1	4	-
FERROUS IODIDE	1	1	3	3	3	1	-	2	1	4	-
FERROUS SULFATE	1	1	1	3	3	1	-	2	1	4	-
FERROUS TARTRATE	1	1	3	3	3	1	-	2	1	4	-
FISH OIL	1	1	1	1	1	4	-	1	1	3	1
FLUORINATED CYCLIC ETHERS	1	1	-	-	-	1	-	-	-	-	-
FLUORINE GAS	2	1	2	4	4	4	-	4	-	-	1
FLUORINE LIQUID	2	2	2	4	4	4	-	-	-	-	-
FLUOROBENZENE	1	1	1	4	4	4	-	4	2	3	1
FLUOROBORIC ACID	1	1	-	1	-	1	-	-	-	-	-
FLUOROCARBON OILS	2	2	-	-	-	1	-	1	-	-	1
FLUOROLUBE	2	1	2	1	1	1	2	1	2	-	-
FLUOROSILICIC ACID	1	1	1	1	1	2	1	4	4	-	1
FOMBLIN	1	1	1	-	-	-	-	-	-	-	-
FORMALDEHYDE	1	3	4	2	2	2	4	2	4	4	1
FORMAMIDE	1	3	3	3	3	1	2	2	1	4	1
FORMIC ACID	2	3	4	2	4	1	3	2	3	4	1
FRUIT JUICE	1	-	1	2	2	1	-	1	-	4	1
Designations	FFKM	ETP	FKM	NBR	HNBR	EPDM	TFE\P	VQM	FVQM	AU	PTFE
Relative Cost	*****	****	***	*	**	*	***	**	***	***	***
Rating Descriptions*	1 = Good (<15% Swell) 2 = Fair (15-25% Swell) 3 = Poor (25-40% Swell) 4 = Not Recommended - = Not Tested										
FUEL OIL	1	1	1	1	1	4	1	4	1	-	1
FUEL OIL NO. 6	1	1	1	2	2	4	1	1	1	2	-

FUEL OIL, 1 AND 2	1	1	1	1	1	4	-	4	1	2	-
FUEL OIL, ACIDIC	1	1	1	1	1	4	1	1	1	2	-
FUMARIC ACID	1	1	1	1	1	2	1	2	1	-	-
FURALDEHYDE	2	3	4	4	4	2	4	-	-	-	-
FURAN	1	3	4	4	4	4	4	4	-	4	1
FURANE	2	-	4	-	-	-	-	-	-	4	1
FURFURAL	2	3	4	4	4	2	4	4	4	4	1
FURFURYL ALCOHOL	1	1	2	4	4	2	2	4	4	4	1
FURNACE GAS, DRY	1	-	1	4	4	1	-	1	1	-	1
FURYL CARBINOL	1	4	4	4	4	2	2	4	4	4	-
FYRQUEL 150, 220, 300, 550	1	1	1	4	4	1	1	1	2	4	-
FYRQUEL 90, 100, 150, 220, 500	1	1	1	4	4	1	1	1	3	-	-
FYRQUEL A60	1	1	1	4	4	2	2	1	3	-	-
GALDEN	4	2	1	-	-	-	2	-	-	-	-
GALLIC ACID	1	1	1	2	2	2	1	-	1	4	1
GAS LIQUOR	1	-	1	1	1	4	-	4	4	-	1
GAS OIL	1	-	1	1	1	4	-	2	1	1	1
GASOHOL	1	-	-	4	4	4	-	4	2	4	1
GASOLINE	1	1	1	1	1	4	2	4	1	2	1
GELATIN	1	1	1	1	1	1	-	1	1	4	1
GIRLING BRAKE FLUID	4	2	3	3	3	1	-	-	4	-	-
GLAUBER'S SALT	1	1	1	4	1	2	1	-	1	-	1
GLUCONIC ACID	1	2	3	3	3	1	-	2	1	4	-
GLUCOSE	1	1	1	1	1	1	1	1	1	4	1
GLUTAMIC ACID	1	2	3	3	3	1	-	2	1	4	-
GLYCERIN	1	1	1	1	1	1	1	1	1	4	1
GLYCEROL CHLORHYDRIN	2	-	-	4	4	2	-	-	-	-	1
GLYCEROL DICHLOROXYDRIN	1	1	3	3	3	1	-	2	1	4	-
GLYCEROL MONOCHLOROXYDRIN	1	1	3	3	3	1	-	2	1	4	-
Designations	FFKM	ETP	FKM	NBR	HNBR	EPDM	TFE\P	VQM	FVQM	AU	PTFE
Relative Cost	*****	****	***	*	**	*	***	**	***	***	***
Rating Descriptions*	1 = Good (<15% Swell) 2 = Fair (15-25% Swell) 3 = Poor (25-40% Swell) 4 = Not Recommended - = Not Tested										
GLYCEROL TRIACETATE	1	1	3	3	3	1	-	2	1	4	-

[illegible]

HEPTALDEHYDE	1	3	4	1	1	4	-	2	1	1	-
HEPTANE	1	1	1	1	1	4	3	4	3	2	1
HEPTANOIC ACID	1	1	1	1	1	4	-	2	1	1	-
HEXACHLOROACETONE	1	4	4	4	3	1	4	2	1	4	-
HEXACHLOROBUTADIENE	1	1	1	4	4	4	-	-	2	3	1
HEXACHLOROBUTENE	1	1	1	2	2	4	-	-	2	3	-
HEXACHLOROCYCLOHEXANE	1	-	1	-	-	-	-	-	-	2	1
HEXACHLOROETHANE	1	1	2	2	2	4	-	-	2	3	-
HEXADECANE	1	1	1	1	-	4	1	4	3	-	-
HEXAFLUOROETHANE	2	2	2	1	1	1	3	-	-	-	-
HEXALDEHYDE	1	3	4	4	4	1	-	2	4	2	1
HEXAMETHYLENE	1	1	1	1	1	4	-	2	1	1	-
HEXAMETHYLENE DIAMMONIUM ADIPATE	1	1	1	2	2	4	-	-	2	3	-
HEXAMETHYLENEDIAMINE	2	3	4	3	3	1	-	2	1	4	-
HEXAMETHYLENETETRAMINE	2	3	4	3	3	1	-	2	1	4	-
HEXANE	1	1	1	1	1	4	2	4	1	2	1
HEXANE TRIOL	1	-	1	1	1	1	-	1	1	-	1
HEXENE-1	1	1	1	2	2	4	3	4	1	1	1
HEXONE	1	3	4	3	3	1	-	2	1	4	-
HEXYL ACETATE	1	3	4	1	1	4	-	2	1	1	-
HEXYL ALCOHOL	1	1	1	1	1	3	-	2	2	4	1
HEXYLENE GLYCOL	1	1	1	3	3	1	-	2	1	4	-
HEXYLRESORCINOL	1	1	2	2	2	4	-	-	2	3	-
HIGH VISCOSITY LUBRICANT H2	1	1	1	1	1	1	1	1	2	4	-
HIGH VISCOSITY LUBRICANT U4	1	1	1	1	1	1	1	1	2	4	-
HI-LO MS NO. 1	4	4	4	4	4	1	3	3	3	4	-
HOUGHTO-SAFE 1010 PHOSPHATE ESTER	1	1	1	4	4	1	-	3	2	-	-
HOUGHTO-SAFE 1055 PHOSPHATE ESTER	1	1	1	4	4	1	-	3	2	-	-
HOUGHTO-SAFE 1120 PHOSPHATE ESTER	1	1	1	4	4	2	-	3	2	4	-
HOUGHTO-SAFE 271 (WATER & GLYCOL BASE)	1	1	2	1	1	1	1	2	2	4	-
Designations	FFKM	ETP	FKM	NBR	HNBR	EPDM	TFE\P	VQM	FVQM	AU	PTFE
Relative Cost	*****	****	***	*	**	*	***	**	***	***	***

Rating Descriptions*	1 = Good (<15% Swell) 2 = Fair (15-25% Swell) 3 = Poor (25-40% Swell) 4 = Not Recommended - = Not Tested										
HOUGHTO-SAFE 416 & 500 SERIES	-	-	-	1	1	1	-	-	-	-	-
HOUGHTO-SAFE 5040 (WATER & OIL EMULSION)	1	1	1	1	1	4	-	3	2	4	-
HOUGHTO-SAFE 620 (WATER & GLYCOL BASE)	1	1	2	1	1	1	1	2	2	4	-
HYDRAULIC FLUIDS, HYDRAULIC OILS DIN 51524	1	-	1	1	1	4	-	2	1	1	1
HYDRAULIC FLUIDS, OIL-IN-WATER EMULSIONS HFA	1	-	-	1	1	4	-	-	-	-	1
HYDRAULIC FLUIDS, PHOSPHORIC ACID ESTER HFD	1	-	-	4	4	-	-	4	4	4	1
HYDRAULIC FLUIDS, POLYGLYCOL-WATER EMULSIONS HFC	1	-	1	1	1	1	-	1	1	-	1
HYDRAULIC FLUIDS, WATER-IN-OIL EMULSIONS HFB	1	-	-	-	-	4	-	-	-	-	1
HYDRAULIC OIL, PETROLEUM BASE AIRCRAFT	1	1	1	1	1	4	1	2	1	-	1
HYDRAULIC OIL, PETROLEUM BASE INDUSTRIAL	1	1	1	1	1	4	-	2	1	1	1
HYDRAULIC OILS, SYNTHETIC BASE	1	1	3	2	2	4	-	-	2	3	-
HYDRAZINE	2	3	4	2	2	1	1	3	4	4	1
HYDRAZINE DIHYDROCHLORIDE	1	3	4	3	3	1	-	2	1	4	-
HYDRAZINE HYDRATE	1	3	4	2	2	1	-	2	2	2	1
HYDRAZINE, ANHYDROUS	1	1	4	4	4	2	2	-	4	4	-
HYDRIODIC ACID	1	1	1	2	2	4	-	-	2	3	-
HYDROBROMIC ACID	1	1	1	4	2	1	1	4	3	4	1
HYDROBROMIC ACID, 40%	1	1	1	4	4	1	-	4	3	4	-
HYDROBROMIC ACID, GAS	-	-	1	4	-	1	-	4	4	4	1
HYDROCARBONS, SATURATED	1	1	1	1	1	4	-	4	1	2	-
HYDROCHLORIC ACID	1	-	1	1	2	1	1	-	-	4	1
HYDROCHLORIC ACID, 3 MOLAR TO 158°F	1	1	1	2	2	1	-	4	3	4	-
Designations	FFKM	ETP	FKM	NBR	HNBR	EPDM	TFE\P	VQM	FVQM	AU	PTFE

Relative Cost	*****	*****	***	*	**	*	***	**	***	***	***
Rating Descriptions*	1 = Good (<15% Swell) 2 = Fair (15-25% Swell) 3 = Poor (25-40% Swell) 4 = Not Recommended - = Not Tested										
HYDROCHLORIC ACID, COLD 37%	1	1	1	4	2	3	1	-	-	-	-
HYDROCHLORIC ACID, CONCENTRATED	1	1	1	2	4	2	-	4	3	-	1
HYDROCHLORIC ACID, CONCENTRATED TO 158°F	1	1	1	4	4	4	-	4	4	4	-
HYDROCHLORIC ACID, HOT 37%	1	1	1	4	4	3	1	3	2	3	-
HYDROCYANIC ACID	1	1	1	2	2	1	1	3	2	4	1
HYDRO-DRIVE MIH-10, PETROLEUM BASE	1	1	1	1	1	4	-	2	1	2	-
HYDRO-DRIVE MIH-50, PETROLEUM BASE	1	1	1	1	1	4	-	2	1	2	-
HYDROFLUORIC ACID	1	1	1	4	4	4	2	4	4	4	1
HYDROFLUORIC ACID, ANHYDROUS	1	3	4	4	-	3	-	4	4	-	-
HYDROFLUORIC ACID, CONCENTRATED COLD	2	1	-	-	-	2	-	-	-	-	1
HYDROFLUORIC ACID, CONCENTRATED HOT	1	3	4	4	-	4	-	4	4	-	-
HYDROFLUOROSILICIC ACID	1	1	1	2	2	1	1	4	4	-	-
HYDROGEN BROMIDE	1	-	1	3	3	1	2	-	-	-	-
HYDROGEN CHLORIDE, ANHYDROUS	1	1	1	4	-	1	1	-	-	-	-
HYDROGEN CHLORIDE, GAS	1	1	1	4	4	1	1	-	-	-	1
HYDROGEN CYANIDE	1	1	2	1	4	1	1	-	-	-	-
HYDROGEN FLUORIDE	1	1	4	4	4	3	1	-	-	-	-
HYDROGEN FLUORIDE, ANHYDROUS	2	3	4	4	4	2	2	4	4	-	-
HYDROGEN GAS	1	1	1	1	1	1	1	3	3	1	1
HYDROGEN GAS, HOT	1	1	1	1	1	1	-	3	3	1	-
HYDROGEN PEROXIDE	1	1	1	2	4	1	1	2	2	-	1
HYDROGEN PEROXIDE, 90%	1	1	2	4	4	3	1	2	2	-	-
HYDROGEN SULFIDE, DRY COLD	1	3	4	1	1	1	1	3	3	-	1
HYDROGEN SULFIDE, DRY HOT	1	4	4	1	4	1	1	3	3	-	-
HYDROGEN SULFIDE, WET COLD	1	4	4	1	2	1	1	3	3	-	1
HYDROGEN SULFIDE, WET HOT	1	4	4	1	4	1	1	3	3	-	-
HYDROLUBE, WATER & ETHYLENE GLYCOL	1	1	1	1	1	1	1	2	2	4	-
HYDROQUINOL	2	2	1	4	4	4	3	-	-	-	-
HYDROQUINONE	2	1	2	3	1	4	3	2	2	-	1
HYDROSULPHITE, AQUEOUS	2	-	-	2	2	1	-	-	-	-	1

Designations	FFKM	ETP	FKM	NBR	HNBR	EPDM	TFE\P	VQM	FVQM	AU	PTFE
Relative Cost	*****	****	***	*	**	*	***	**	***	***	***
Rating Descriptions*	1 = Good (<15% Swell) 2 = Fair (15-25% Swell) 3 = Poor (25-40% Swell) 4 = Not Recommended - = Not Tested										
HYDROXYACETIC ACID	1	2	3	3	3	1	-	2	1	4	-
HYDROXYCITRONELLAL	1	1	1	-	-	-	-	-	2	3	-
HYDROXYLAMINE SULFATE	2	-	-	1	1	1	-	1	1	-	1
HYDYNE	2	4	4	2	2	1	-	4	4	-	-
HYJET	1	4	4	4	4	1	2	4	4	-	-
HYJET IV AND IVA	4	4	4	4	4	1	-	4	4	4	-
HYJET S4	1	1	4	4	4	1	2	-	-	-	-
HYJET W	1	3	4	4	4	1	2	-	-	-	-
HYPOCHLOROUS ACID	1	1	1	4	4	2	-	-	-	-	-
INDOLE	1	1	1	-	-	-	-	-	2	3	-
INDUSTRON FF44	1	1	1	1	1	4	1	4	1	2	-
INDUSTRON FF48	1	1	1	1	1	4	1	4	1	2	-
INDUSTRON FF53	1	1	1	1	1	4	1	4	1	2	-
INDUSTRON FF80	1	1	1	1	1	4	1	4	1	2	-
INK	1	-	2	1	2	1	-	1	1	1	1
INSULIN	1	1	3	3	3	1	-	2	1	4	-
IODIC ACID	1	1	3	3	3	1	-	2	1	4	-
IODINE	1	1	1	2	1	2	1	3	1	4	1
IODINE PENTAFLUORIDE	2	3	4	4	4	4	4	4	4	4	-
IODINE, TINCTURE	1	-	1	1	1	1	-	2	2	4	1
ODOFORM	1	2	3	-	-	1	-	-	2	3	1
IRON(III) CHLORIDE	1	-	1	1	1	1	-	-	-	-	1
ISOAMYL ACETATE	1	3	4	3	3	1	-	2	1	4	-
ISOAMYL BUTYRATE	1	2	4	3	3	1	-	2	1	4	-
ISOAMYL VALERATE	1	1	1	3	3	1	-	2	1	4	-
ISOBOREOL	1	1	1	-	-	-	-	-	2	3	-
ISOBUTANE	1	1	1	1	1	4	-	2	1	1	-
ISOBUTANOL	1	-	1	2	2	1	-	1	2	4	1
ISOBUTYL ACETATE	1	3	4	3	3	1	-	2	1	4	-
ISOBUTYL ALCOHOL	1	1	1	2	2	1	1	1	2	4	1

ISOBUTYL CHLORIDE	1	1	2	4	4	4	4	-	-	-	-
Designations	FFKM	ETP	FKM	NBR	HNBR	EPDM	TFEP	VQM	FVQM	AU	PTFE
Relative Cost	*****	****	***	*	**	*	***	**	***	***	***
Rating Descriptions*	1 = Good (<15% Swell) 2 = Fair (15-25% Swell) 3 = Poor (25-40% Swell) 4 = Not Recommended - = Not Tested										
ISOBUTYL ETHER	1	3	4	2	2	4	4	-	-	-	-
ISOBUTYL METHYL KETONE	1	3	4	3	3	1	-	2	1	4	-
ISOBUTYL N-BUTYRATE	1	1	1	4	4	1	1	-	1	-	-
ISOBUTYL PHOSPHATE	1	1	3	3	3	1	-	2	1	4	-
ISOBUTYLENE	1	1	1	-	-	-	-	-	2	3	-
ISOBUTYRALDEHYDE	2	4	4	3	2	2	4	-	-	-	-
ISOBUTYRIC ACID	1	2	3	2	1	2	3	2	-	-	-
ISOCROTYL CHLORIDE	1	1	1	-	-	-	-	-	2	3	-
ISODECANOL	1	1	2	1	1	4	-	2	1	1	-
ISODODECANE	1	1	1	1	1	4	1	4	1	-	-
ISOEUGENOL	1	1	2	1	1	4	-	2	1	1	-
ISOOCTANE	1	1	1	1	1	4	2	4	1	2	1
ISOPENTANE	1	1	1	1	1	4	-	2	1	1	-
ISOPHORONE	1	3	4	4	4	1	2	4	4	2	1
ISOPROPANOL	1	1	1	2	2	1	1	1	2	4	1
ISOPROPYL ACETATE	1	2	4	4	4	2	4	4	4	4	1
ISOPROPYL CHLORIDE	1	1	1	4	4	4	4	4	2	4	1
ISOPROPYL ETHER	1	3	4	2	2	4	4	4	3	4	1
ISOPROPYLACETONE	1	2	3	3	3	1	-	2	1	4	-
ISOPROPYLAMINE	1	1	3	3	3	1	-	2	1	4	-
JET FUEL A	1	1	1	2	2	4	-	-	2	3	-
JP-10	1	1	1	3	3	4	-	4	1	3	-
JP-3	1	1	1	1	1	4	2	4	1	2	1
JP-4	1	1	1	1	1	4	2	4	2	2	1
JP-5	1	1	1	1	1	4	2	4	2	2	1
JP-6	1	1	1	1	1	4	2	4	2	2	1
JP-8	1	1	1	4	1	4	2	4	2	1	-
JP-9	1	1	1	3	3	4	-	4	2	3	-
JP-9 -11	1	1	1	4	4	4	-	4	2	4	-

JPX	1	3	4	1	1	4	2	-	-	-	-
KEL-F LIQUIDS	3	1	3	1	1	1	3	1	2	-	-
Designations	FFKM	ETP	FKM	NBR	HNBR	EPDM	TFE/P	VQM	FVQM	AU	PTFE
Relative Cost	*****	****	***	*	**	*	***	**	***	***	***
Rating Descriptions*	1 = Good (<15% Swell) 2 = Fair (15-25% Swell) 3 = Poor (25-40% Swell) 4 = Not Recommended - = Not Tested										
KEROSENE	1	1	1	1	1	4	2	4	1	1	1
KEYSTONE #87HX-GREASE	1	1	1	1	1	4	1	4	1	1	-
LACQUER SOLVENTS	1	2	4	4	4	4	4	4	4	4	1
LACQUERS	1	2	4	4	4	4	4	4	4	4	1
LACTAMS	1	1	2	4	4	2	3	-	4	-	1
LACTIC ACID, COLD	1	1	1	1	1	1	-	1	1	-	-
LACTIC ACID, HOT	1	1	1	4	4	4	-	2	2	-	-
LACTONES	4	4	4	4	4	2	-	2	4	4	-
LARD	1	1	1	1	1	2	1	2	1	1	1
LAURIC ACID	1	1	1	1	1	4	-	2	1	1	-
LAURYL ALCOHOL	1	-	1	1	1	2	-	-	-	-	1
LAVENDER OIL	1	1	1	2	2	4	1	4	2	-	1
LB 135	1	1	1	1	1	1	1	-	-	-	-
LEAD ACETATE	1	2	4	2	2	1	4	4	4	4	1
LEAD ARSENATE	1	1	3	3	3	1	-	2	1	4	-
LEAD BROMIDE	1	1	3	3	3	1	-	2	1	4	-
LEAD CARBONATE	1	1	3	3	3	1	-	2	1	4	-
LEAD CHLORIDE	1	1	1	3	3	1	-	2	1	4	-
LEAD CHROMATE	1	1	3	3	3	1	-	2	1	4	-
LEAD DIOXIDE	1	1	2	3	3	1	-	2	1	4	-
LEAD LINOLEATE	1	1	3	3	3	1	-	2	1	4	-
LEAD NITRATE	1	1	1	1	1	1	2	2	1	4	1
LEAD OXIDE	1	1	2	1	3	1	1	2	1	4	-
LEAD SULFAMATE	1	1	1	2	2	1	-	2	1	-	-
LEHIGH X1169	1	1	1	1	1	4	1	4	1	1	-
LEHIGH X1170	1	1	1	1	1	4	1	4	1	1	-
LEMON JUICE, UNDILUTED	1	-	-	1	1	-	-	1	-	-	1
LIGHT GREASE	1	1	1	1	1	4	1	-	-	-	-

[illegible]

MAGNESIUM HYDROXIDE	1	1	1	2	2	1	1	-	-	4	-
MAGNESIUM SALTS	1	1	1	1	1	1	1	1	1	1	-
MAGNESIUM SULFATE	1	1	1	1	1	1	-	1	1	-	1
MAGNESIUM SULFITE	1	1	2	1	1	1	-	1	1	-	-
Designations	FFKM	ETP	FKM	NBR	HNBR	EPDM	TFE\P	VQM	FVQM	AU	PTFE
Relative Cost	*****	****	***	*	**	*	***	**	***	***	***
Rating Descriptions*	1 = Good (<15% Swell) 2 = Fair (15-25% Swell) 3 = Poor (25-40% Swell) 4 = Not Recommended - = Not Tested										
MAIZE OIL	1	-	1	1	1	4	-	-	-	-	1
MALATHION	1	1	2	2	2	4	-	4	2	4	-
MALEIC ACID	1	1	1	4	4	4	1	4	-	-	1
MALEIC ANHYDRIDE	1	2	4	4	4	4	1	-	-	-	-
MALEIC HYDRAZIDE	1	1	3	3	3	1	-	2	1	4	-
MALIC ACID	1	1	1	1	1	4	1	2	1	-	-
MANDELIC ACID	1	3	4	3	3	1	-	2	1	4	-
MANGANESE ACETATE	1	2	4	3	3	1	-	2	1	4	-
MANGANESE CARBONATE	1	1	2	3	3	1	-	2	1	4	-
MANGANESE CHLORIDE	1	1	3	3	3	1	-	2	1	4	-
MANGANESE DIOXIDE	1	1	3	3	3	1	-	2	1	4	-
MANGANESE GLUCONATE	1	1	3	3	3	1	-	2	1	4	-
MANGANESE HYPOPHOSPHITE	1	1	3	3	3	1	-	2	1	4	-
MANGANESE LINOLEATE	1	1	3	3	3	1	-	2	1	4	-
MANGANESE PHOSPHATE	1	1	3	3	3	1	-	2	1	4	-
MANGANESE SULFATE	1	1	1	3	3	1	-	2	1	4	-
MANGANOUS CHLORIDE	1	1	3	3	3	1	-	2	1	4	-
MANGANOUS PHOSPHATE	1	1	3	3	3	1	-	2	1	4	-
MANGANOUS SULFATE	1	1	3	3	3	1	-	2	1	4	-
MANNITOL	1	1	3	3	3	1	-	2	1	4	-
MARGARINE	1	-	1	1	1	4	-	1	1	1	1
MARSH GAS	1	-	1	1	1	2	-	1	1	-	1
MCS 312	1	1	1	4	4	4	-	1	1	-	-
MCS 352	4	4	4	4	4	1	-	3	3	4	-
MCS 463	4	4	4	4	4	1	-	3	3	4	-
MEA (Ethanalamine)	1	3	4	4	-	2	-	2	4	-	-

MENTHOL	1	-	2	4	4	4	-	-	-	-	1
MERCAPTAN	1	2	3	1	1	4	-	2	1	1	-
MERCAPTOBENZOTHAZOLE	1	1	1	3	3	1	1	-	2	3	-
MERCURIC ACETATE	1	2	4	3	3	1	-	2	1	4	-
MERCURIC CHLORIDE	1	1	1	1	1	1	1	1	1	1	1
Designations	FFKM	ETP	FKM	NBR	HNBR	EPDM	TFE\P	VQM	FVQM	AU	PTFE
Relative Cost	*****	****	***	*	**	*	***	**	***	***	***
Rating Descriptions*	1 = Good (<15% Swell) 2 = Fair (15-25% Swell) 3 = Poor (25-40% Swell) 4 = Not Recommended - = Not Tested										
MERCURIC CYANIDE	1	1	2	3	3	1	-	2	1	4	-
MERCURIC IODIDE	1	1	3	3	3	1	-	2	1	4	-
MERCURIC NITRATE	1	1	3	3	3	1	-	2	1	4	-
MERCURIC SULFATE	1	1	2	3	3	1	-	2	1	4	-
MERCURIC SULFITE	1	1	3	3	3	1	-	2	1	4	-
MERCUROUS NITRATE, HYDRATED	1	1	2	3	3	1	-	2	1	4	-
MERCURY	1	1	1	1	1	1	1	1	1	1	1
MERCURY CHLORIDE	1	1	3	3	3	1	-	2	1	4	-
MERCURY FULMINATE	1	1	3	3	3	1	-	2	1	4	-
MERCURY SALTS	1	1	1	1	1	1	-	1	1	4	1
MERCURY VAPOR	1	1	1	1	1	1	1	-	-	-	-
MESITYL OXIDE	1	3	4	4	4	2	4	4	4	4	1
METALDEHYDE	1	3	4	3	3	1	-	2	1	4	-
METHACRYLIC ACID	1	4	3	3	3	2	2	4	4	4	-
METHALLYL CHLORIDE	1	1	1	-	-	-	-	-	2	3	-
METHANE	1	1	1	1	1	4	2	4	2	3	1
METHANOL	1	1	4	1	2	1	1	1	1	4	1
METHOXY BUTANOL	1	-	1	1	1	2	-	-	-	-	1
METHOXYETHANOL	1	1	3	3	3	1	-	2	1	4	-
METHYL 2-PYRROLIDONE	1	1	2	-	-	2	-	2	2	-	-
METHYL ABIETATE	1	1	2	-	-	-	-	-	2	3	-
METHYL ACETATE	1	2	4	4	4	2	4	4	4	4	1
METHYL ACETOACETATE	1	2	4	4	4	2	4	2	4	4	-
METHYL ACETOPHENONE	1	2	4	-	-	-	-	-	2	3	-
METHYL ACRYLATE	1	3	4	4	4	2	4	4	4	4	1

METHYL ACRYLIC ACID	1	1	3	4	4	2	-	4	4	4	1
METHYL AMYLKETONE	1	2	4	3	3	1	-	2	1	4	-
METHYL ANTHRANILATE	1	1	2	-	-	-	-	-	2	3	-
METHYL BENZOATE	1	2	1	4	4	4	2	4	1	4	-
METHYL BROMIDE	1	1	1	2	2	4	2	4	1	4	1
METHYL BUTANETHIOL	1	1	1	4	-	4	1	4	-	-	-
Designations	FFKM	ETP	FKM	NBR	HNBR	EPDM	TFE/P	VQM	FVQM	AU	PTFE
Relative Cost	*****	****	***	*	**	*	***	**	***	***	***
Rating Descriptions*	1 = Good (<15% Swell) 2 = Fair (15-25% Swell) 3 = Poor (25-40% Swell) 4 = Not Recommended - = Not Tested										
METHYL BUTANOL	1	1	1	2	2	1	1	4	1	4	1
METHYL BUTYL KETONE	1	2	4	4	4	1	4	4	4	4	1
METHYL BUTYRATE CELLOSOLVE	1	1	3	3	3	1	-	2	1	4	-
METHYL BUTYRATE CHLORIDE	1	1	3	3	3	1	-	2	1	4	-
METHYL CARBONATE	1	1	1	4	4	4	2	4	2	4	-
METHYL CELLOSOLVE	1	2	4	3	3	2	1	4	4	4	1
METHYL CELLULOSE	1	2	4	2	2	2	1	2	4	2	-
METHYL CHLORIDE	1	1	2	4	4	3	4	4	2	2	1
METHYL CHLOROACETATE	1	2	4	3	3	1	-	2	1	4	-
METHYL CHLOROFORM	1	1	2	4	4	4	4	4	2	-	-
METHYL CHLOROFORMATE	1	1	2	4	4	4	1	4	2	4	-
METHYL CYANIDE	1	1	2	3	3	1	1	2	1	4	-
METHYL CYCLOHEXANONE	1	3	4	1	1	4	-	2	1	1	-
METHYL DICHLORIDE	1	1	1	-	-	-	-	-	2	3	-
METHYL ETHER	1	2	4	1	1	2	4	1	1	-	1
METHYL ETHYL KETONE	1	2	4	4	4	1	4	4	4	4	1
METHYL ETHYL KETONE PEROXIDE	1	4	4	4	4	4	-	2	4	4	-
METHYL ETHYL OLEATE	1	1	1	-	-	-	-	-	2	3	-
METHYL FORMATE	1	2	4	4	4	2	4	-	-	-	-
METHYL HEXYL KETONE	1	2	4	3	3	1	-	2	1	4	-
METHYL IODIDE	1	1	1	1	1	4	-	2	1	1	-
METHYL ISOBUTYL KETONE	1	2	4	4	4	3	4	4	4	4	1
METHYL ISOCYANATE	1	2	4	3	3	1	-	2	1	4	-
METHYL ISOPROPYL KETONE	1	2	4	4	4	2	-	4	4	4	-

METHYL ISOVALERATE	1	1	1	-	-	-	-	-	2	3	-
METHYL LACTATE	1	1	3	3	3	1	-	2	1	4	-
METHYL MERCAPTAN	1	1	3	-	-	1	-	-	-	-	1
METHYL METHACRYLATE	1	2	4	4	4	4	4	4	4	4	1
METHYL OLEATE	1	1	2	4	4	2	1	-	2	-	1
METHYL PENTADIENE	1	1	1	-	-	-	-	-	2	3	-
METHYL PHENYLACETATE	1	2	4	-	-	-	-	-	2	3	-
Designations	FFKM	ETP	FKM	NBR	HNBR	EPDM	TFE\P	VQM	FVQM	AU	PTFE
Relative Cost	*****	*****	***	*	**	*	***	**	***	***	***
Rating Descriptions*	1 = Good (<15% Swell) 2 = Fair (15-25% Swell) 3 = Poor (25-40% Swell) 4 = Not Recommended - = Not Tested										
METHYL PROPYL SALICYLATE	-	-	2	4	-	2	2	-	-	-	1
METHYL SALICYLATE	1	1	2	4	4	2	-	-	-	-	-
METHYL T-BUTYL ETHER	1	2	4	3	3	3	2	-	-	-	-
METHYL VALERATE	1	1	1	-	-	-	-	-	2	3	-
METHYLAMINE	1	1	4	4	4	1	-	2	1	4	1
METHYLAMYL ACETATE	1	2	3	3	3	1	-	2	1	4	-
METHYLCYCLOPENTANE	1	2	1	4	4	4	2	4	2	4	-
METHYLENE BROMIDE	1	2	3	2	-	4	-	-	1	3	-
METHYLENE CHLORIDE	1	2	3	4	4	4	2	4	2	4	1
METHYLENE DI-P-PHENYLENE ISOCYANATE	1	1	3	3	3	1	-	2	1	4	-
METHYLENE IODIDE	1	1	1	-	-	-	-	-	2	3	-
METHYLGLYCEROL	1	1	3	3	3	1	-	2	1	4	-
METHYLISOBUTYL CARBINOL	1	1	1	1	1	4	-	2	1	1	-
METHYLPYRROLIDINE	1	1	1	-	-	-	-	-	2	3	-
METHYLPYRROLIDONE	1	1	1	-	-	-	-	-	2	3	-
METHYLSULFURIC ACID	1	1	3	3	3	1	-	2	1	4	-
MIL-A-6091	1	1	1	2	2	1	-	1	1	4	-
MIL-C-4339	1	1	1	1	1	4	-	3	1	1	-
MIL-C-7024	1	1	1	1	1	4	-	4	1	1	-
MIL-C-8188	1	1	2	2	2	4	-	4	2	4	-
MIL-E-9500	1	1	1	1	1	1	-	1	1	4	-
MIL-F-16884	1	1	1	1	1	4	-	4	1	3	-
MIL-F-17111	1	1	1	1	1	4	-	4	2	3	-

MIL-F-25558	1	1	1	1	1	4	1	4	1	1	-
MIL-F-25656	1	1	1	1	1	4	-	4	2	2	-
MIL-F-5566	1	1	1	2	2	1	-	1	1	2	-
MIL-F-81912	1	1	1	3	3	4	-	4	2	3	-
MIL-F-82522	1	1	1	2	2	4	1	4	1	1	-
MIL-G-10924	1	1	1	1	1	4	-	4	1	1	-
MIL-G-15793	1	1	1	1	1	4	-	4	2	1	-
MIL-G-21568	1	1	1	1	1	1	-	4	1	1	-
Designations	FFKM	ETP	FKM	NBR	HNBR	EPDM	TFE\P	VQM	FVQM	AU	PTFE
Relative Cost	*****	****	***	*	**	*	***	**	***	***	***
Rating Descriptions*	1 = Good (<15% Swell) 2 = Fair (15-25% Swell) 3 = Poor (25-40% Swell) 4 = Not Recommended - = Not Tested										
MIL-G-25013	1	1	1	1	1	1	-	4	1	3	-
MIL-G-25537	1	1	1	1	1	4	-	4	1	1	-
MIL-G-25760	1	1	1	2	2	4	-	4	2	2	-
MIL-G-3278	1	1	1	2	2	4	-	4	2	2	-
MIL-G-3545	1	1	1	1	1	4	-	4	1	1	-
MIL-G-4343	1	1	1	2	2	3	-	3	1	1	-
MIL-G-5572	1	1	1	1	1	4	-	4	1	2	-
MIL-G-7118	1	1	1	2	2	4	-	4	1	3	-
MIL-G-7187	1	1	1	1	1	4	-	4	1	1	-
MIL-G-7421	1	1	1	2	2	4	-	4	2	2	-
MIL-G-7711	1	1	1	1	1	4	-	2	1	1	-
MIL-H-13910	1	1	1	1	1	1	-	4	2	4	-
MIL-H-19457	1	1	1	4	4	2	-	3	4	4	-
MIL-H-22251	-	-	-	2	2	1	-	4	-	-	-
MIL-H-27601	1	1	1	1	1	4	-	4	2	3	-
MIL-H-46170 -15°F TO +400°F	1	1	1	1	1	4	-	4	1	2	-
MIL-H-46170 -20°F TO +275°F	1	1	1	1	1	4	-	4	1	2	-
MIL-H-46170 -55°F TO +275°F	1	1	1	1	1	4	-	4	1	2	-
MIL-H-46170 -65°F TO +275°F	1	1	1	1	1	4	-	4	1	2	-
MIL-H-5606 -65°F TO +235°F	1	1	1	1	1	4	1	4	1	2	-
MIL-H-5606 -65°F TO +275°F	1	1	1	1	1	4	1	4	1	2	-
MIL-H-6083	1	1	1	1	1	4	-	4	1	1	-

MIL-H-7083	1	1	2	1	1	1	-	1	1	4	-
MIL-H-8446	1	1	1	2	2	4	1	4	1	4	-
MIL-J-5161	1	1	1	2	2	4	-	4	1	2	-
MILK	1	1	1	1	1	1	1	1	1	1	1
MILK OF LIME	1	-	1	4	4	-	-	-	-	-	1
MIL-L-15016	1	1	1	1	1	4	-	4	2	1	-
MIL-L-15017	1	1	1	1	1	4	-	4	2	1	-
MIL-L-17331	1	1	1	1	1	4	-	4	-	-	-
MIL-L-2104	1	1	1	1	1	4	-	4	1	1	-
Designations	FFKM	ETP	FKM	NBR	HNBR	EPDM	TFE\P	VQM	FVQM	AU	PTFE
Relative Cost	*****	****	***	*	**	*	***	**	***	***	***
Rating Descriptions*	1 = Good (<15% Swell) 2 = Fair (15-25% Swell) 3 = Poor (25-40% Swell) 4 = Not Recommended - = Not Tested										
MIL-L-21260	1	1	1	1	1	4	-	4	1	1	-
MIL-L-23699	1	1	1	2	2	4	1	4	2	3	-
MIL-L-25681	1	1	1	2	2	1	-	4	2	3	-
MIL-L-3150	1	1	1	1	1	4	-	4	1	2	-
MIL-L-6081	1	1	1	1	1	4	-	4	1	1	-
MIL-L-6082	1	1	1	1	1	4	-	3	1	1	-
MIL-L-6085	1	1	1	2	2	4	-	4	2	3	-
MIL-L-6387	1	1	1	2	2	4	-	4	2	1	-
MIL-L-7808	1	1	1	2	2	4	1	4	2	4	1
MIL-L-7808A	1	1	1	2	2	4	1	4	2	4	-
MIL-L-7870	1	1	1	1	1	4	-	4	1	2	-
MIL-L-9000	1	1	1	1	1	4	-	4	2	3	-
MIL-L-9236	1	1	1	2	2	4	-	4	2	2	-
MIL-O-3503	1	1	1	1	1	4	-	4	1	1	-
MIL-P-27402	-	-	-	2	2	1	-	4	-	-	-
MIL-R-25576	1	1	1	1	1	4	1	4	1	1	-
MIL-S-3136 TYPE I FUEL	1	1	1	1	1	4	-	4	1	1	-
MIL-S-3136 TYPE II FUEL	1	1	1	2	2	4	-	4	2	2	-
MIL-S-3136 TYPE III FUEL	1	1	1	2	2	4	-	4	2	2	-
MIL-S-3136 TYPE IV OIL, HIGH SWELL	1	1	1	1	1	4	-	2	1	1	-
MIL-S-3136 TYPE IV OIL, LOW SWELL	1	1	1	1	1	4	-	3	1	1	-

MIL-S-3136 TYPE V OIL, MEDIUM SWELL	1	1	1	2	1	1	1	1	1	1	-
MIL-S-81087	1	1	1	1	1	1	-	3	2	1	-
MIL-T-5624	1	1	1	1	1	4	2	4	2	2	-
MIL-T-83133	1	1	1	1	1	4	2	4	2	1	-
MINERAL OILS	1	1	1	1	1	3	1	2	1	1	1
MINERAL WATER	1	-	1	1	1	1	-	1	1	-	1
MIXED ACID ETCHANTS	1	2	3	4	-	4	3	4	4	-	-
MIXED ACIDS	1	1	3	3	3	1	-	2	1	4	-
MLO-7277	1	1	1	3	3	4	1	4	3	3	-
MLO-7557	1	1	1	3	3	4	1	4	3	3	-
Designations	FFKM	ETP	FKM	NBR	HNBR	EPDM	TFE\P	VQM	FVQM	AU	PTFE
Relative Cost	*****	****	***	*	**	*	***	**	***	***	***
Rating Descriptions*	1 = Good (<15% Swell) 2 = Fair (15-25% Swell) 3 = Poor (25-40% Swell) 4 = Not Recommended - = Not Tested										
MLO-8200	1	1	1	2	2	4	1	4	1	1	-
MLO-8515	1	1	1	2	2	4	1	4	1	1	-
MOBIL 24DTE	1	1	1	1	1	4	1	-	-	-	-
MOBIL HF	1	1	1	1	1	4	2	-	-	-	-
MOBIL SHC 500 SERIES	1	1	1	3	3	4	-	2	2	2	-
MOBIL SHC 600 SERIES	1	1	1	3	3	4	-	3	2	1	-
MOBIL THERM 600	1	1	1	1	1	4	1	-	-	-	-
MOBIL VELOCITE C	1	1	1	1	1	4	1	-	-	-	-
MOBILGAS WA200 ATF	1	1	1	1	1	4	1	-	-	-	-
MOBILGEAR 600 SERIES	1	1	1	3	3	3	-	1	1	2	-
MOBILGEAR SHC ISO SERIES	1	1	1	3	3	3	-	1	1	2	-
MOBILGREASE HP	1	1	1	2	2	4	-	2	1	1	-
MOBILGREASE HTS	1	1	1	2	2	4	-	2	1	1	-
MOBILGREASE SM	1	1	1	2	2	4	-	2	1	1	-
MOBILITH AW SERIES	1	1	1	2	2	4	-	2	1	1	-
MOBILITH SHC SERIES	1	1	1	2	2	4	-	2	1	1	-
MOBILMISTLUBE SERIES	1	1	1	3	3	3	-	1	1	2	-
MOBILOIL SAE 20	1	1	1	1	1	4	1	-	-	-	-
MOBILUX	1	1	1	1	1	4	1	-	-	-	-
MOLASSES	1	-	1	1	1	2	-	-	-	-	1

MOLYBDENUM DISULFIDE GREASE	1	1	2	1	1	4	1	-	-	-	-
MOLYBDENUM OXIDE	1	1	3	3	3	1	-	2	1	4	-
MOLYBDENUM TRIOXIDE	1	1	3	3	3	1	-	2	1	4	-
MOLYBDIC ACID	1	1	3	3	3	1	-	2	1	4	-
MONOBROMOBENZENE	1	1	2	4	4	4	4	4	4	4	1
MONOBROMOTOLUENE	1	1	1	-	-	-	-	-	2	3	-
MONOCHLORACETIC ACID	2	-	-	2	2	1	-	-	-	4	1
MONOCHLORACETIC ACID, ETHYL ESTER	1	-	2	4	4	2	-	4	4	4	1
MONOCHLORACETIC ACID, METHYL ESTER	1	-	2	4	4	1	-	4	4	4	1
MONOCHLOROACETIC ACID	1	2	4	3	3	1	-	2	1	4	-
MONOCHLOROBENZENE	1	1	2	4	4	4	4	4	2	4	-
Designations	FFKM	ETP	FKM	NBR	HNBR	EPDM	TFE/P	VQM	FVQM	AU	PTFE
Relative Cost	*****	****	***	*	**	*	***	**	***	***	***
Rating Descriptions*	1 = Good (<15% Swell) 2 = Fair (15-25% Swell) 3 = Poor (25-40% Swell) 4 = Not Recommended - = Not Tested										
MONOCHLOROBUTENE	1	1	1	-	-	-	-	-	2	3	-
MONOETHANOLAMINE	1	2	4	4	4	2	-	2	4	4	-
MONOETHYL AMINE	1	1	3	3	3	1	-	2	1	4	-
MONOISOPROPYLAMINE	1	1	3	3	3	1	-	2	1	4	-
MONOMETHYL ANILINE	1	1	2	4	4	1	2	2	1	4	-
MONOMETHYL ETHER	1	1	1	-	-	-	-	-	-	-	-
MONOMETHYL HYDRAZINE	2	2	4	2	2	1	2	4	-	-	-
MONOMETHYLAMINE	1	1	3	3	3	1	-	2	1	4	-
MONOMETHYLANILINE	1	1	3	4	4	4	2	-	-	4	-
MONONITROTOLUENE	1	1	3	3	3	1	-	2	1	4	-
MONONITROTOLUENE, 40% & DINITROTOLUENE, 60%	2	2	3	4	4	1	3	4	3	4	-
MONOVINYL ACETATE	-	-	-	4	-	2	-	4	1	4	1
MONOVINYL ACETYLENE	1	1	1	1	1	1	3	2	-	-	-
MOPAR BRAKE FLUID	1	4	4	3	3	1	1	3	4	-	-
MORPHOLINE	1	1	1	4	4	2	-	-	2	3	1
MOTOR OILS	1	1	1	1	1	4	-	2	1	1	-
MYRISTIC ACID	1	1	1	-	-	-	-	-	2	3	-
MYRISTYL ALCOHOL	1	-	1	1	1	1	-	-	-	-	1

NAFTOLEN ZD	1	-	1	2	2	4	-	-	-	-	1
NAPHTHA	1	1	1	2	4	4	2	4	2	4	1
NAPHTHALENE	1	1	1	4	4	4	3	4	1	2	1
NAPHTHALENE CHLORIDE	1	1	1	-	-	-	-	-	2	3	-
NAPHTHALENE SULFONIC ACID	1	1	1	-	-	-	-	-	2	3	-
NAPHTHALENIC	1	-	1	2	-	4	1	4	1	-	1
NAPHTHALENIC ACID	1	1	1	-	-	-	-	-	2	3	-
NAPHTHALONIC ACID	1	1	1	-	-	-	-	-	2	3	-
NAPHTHENIC ACID	1	1	1	2	2	4	1	4	1	-	-
NAPHTHOIC ACID	1	-	1	2	2	-	-	-	1	-	1
NAPTHA	1	1	1	2	2	4	-	4	2	2	-
NATURAL GAS	1	1	1	1	1	4	1	2	3	2	1
Designations	FFKM	ETP	FKM	NBR	HNBR	EPDM	TFE\P	VQM	FVQM	AU	PTFE
Relative Cost	*****	*****	***	*	**	*	***	**	***	***	***
Rating Descriptions*	1 = Good (<15% Swell) 2 = Fair (15-25% Swell) 3 = Poor (25-40% Swell) 4 = Not Recommended - = Not Tested										
NEATSFOOT OIL	1	1	1	1	1	2	1	2	1	1	1
NEON	1	1	1	1	1	1	1	1	1	1	-
NEVILLE ACID	1	1	1	4	4	2	1	4	2	-	-
NEVILLE-WINTER ACID	1	1	1	4	-	2	1	4	2	-	-
NICKEL ACETATE	1	2	4	2	2	1	4	4	4	4	1
NICKEL AMMONIUM SULFATE	1	1	2	1	3	1	1	2	1	4	-
NICKEL CHLORIDE	1	1	1	1	1	1	1	1	1	3	1
NICKEL CYANIDE	1	1	3	3	3	1	-	2	1	4	-
NICKEL NITRATE	1	1	1	3	3	1	-	2	1	4	-
NICKEL SALTS	1	1	1	1	1	1	1	1	1	3	-
NICKEL SULFATE	1	1	1	1	1	1	1	1	1	3	1
NICOTINAMIDE	1	1	1	-	-	-	-	-	2	3	-
NICOTINAMIDE HYDROCHLORIDE	1	1	3	3	3	1	-	2	1	4	-
NICOTINE	1	1	2	-	-	-	-	-	2	3	-
NICOTINE SULFATE	1	1	3	3	3	1	-	2	1	4	-
NITER CAKE	1	1	1	1	1	1	1	1	1	1	-
NITRIC ACID, 0 - 50%	1	1	1	4	2	3	2	2	2	-	1
NITRIC ACID, 3M TO 158°F	2	2	2	4	4	2	-	4	4	4	-

NITRIC ACID, 50 - 100%	1	1	2	4	-	4	3	4	4	-	-
NITRIC ACID, CONCENTRATED	1	2	4	4	4	4	2	-	-	4	1
NITRIC ACID, CONCENTRATED TO 158°F	4	4	4	4	4	4	-	4	4	4	-
NITRIC ACID, RED FUMING	1	2	3	4	4	4	3	4	4	-	-
NITRIC ACID, WHITE FUMING	2	2	4	4	4	4	-	-	-	4	1
NITROANILINE	1	1	3	3	3	1	-	2	1	4	-
NITROANILINE, META	1	1	3	3	3	1	-	2	1	4	-
NITROBENZENE	1	1	3	4	4	4	1	4	4	4	1
NITROBENZOIC ACID	1	1	3	3	3	1	-	2	1	4	-
NITROCELLULOSE	1	1	3	3	3	1	-	2	1	4	-
NITROCHLOROBENZENE	1	1	3	3	3	1	-	2	1	4	-
NITROCHLOROFORM	1	1	3	3	3	1	-	2	1	4	-
NITRODIETHYLANILINE	1	1	3	3	3	1	-	2	1	4	-
Designations	FFKM	ETP	FKM	NBR	HNBR	EPDM	TFE/P	VQM	FVQM	AU	PTFE
Relative Cost	*****	****	***	*	**	*	***	**	***	***	***
Rating Descriptions*	1 = Good (<15% Swell) 2 = Fair (15-25% Swell) 3 = Poor (25-40% Swell) 4 = Not Recommended - = Not Tested										
NITROETHANE	1	3	4	4	4	2	1	4	4	4	1
NITROFLUOROBENZENE	1	1	3	3	3	1	-	2	1	4	-
NITROGEN	1	1	1	1	1	1	1	1	1	1	1
NITROGEN DIOXIDE	1	2	4	-	-	-	-	-	-	-	-
NITROGEN OXIDES	1	3	4	3	3	1	-	2	1	4	-
NITROGEN TETROXIDE	2	3	4	4	4	4	3	4	4	4	1
NITROGEN TRIFLUORIDE	1	2	-	-	-	-	-	-	-	-	-
NITROGLYCERINE	1	1	1	4	4	1	-	2	1	4	1
NITROGLYCOL	1	-	1	4	4	1	-	-	-	-	1
NITROGLYCEROL	1	1	3	3	3	1	-	2	1	4	-
NITROISOPROPYLBENZENE	1	1	3	3	3	1	-	2	1	4	-
NITROMETHANE	1	3	4	4	4	2	3	4	4	4	1
NITROPHENOL	1	3	4	3	3	1	-	2	1	4	-
NITROPROPANE	1	3	4	4	4	2	2	4	4	4	1
NITROTHIOPHENE	1	1	3	3	3	1	-	2	1	4	-
NITROTOLUENE	1	2	3	3	3	1	-	2	1	4	-
NITROTOLUENE, ORTHO	1	2	3	4	4	4	-	4	4	4	1

NITROUS ACID	1	2	3	3	3	1	-	2	1	4	-
NITROUS GASES	1	-	1	4	4	1	-	4	4	4	1
NITROUS OXIDE	1	1	1	1	1	1	3	1	1	1	1
NIVAC 20, 30	1	1	1	1	1	1	1	-	-	-	-
NONANE	1	1	1	1	1	4	-	2	1	1	-
NORYL GE PHENOLIC	-	-	-	1	1	1	-	-	-	-	-
NYVAC FR200 MOBIL	1	1	1	1	1	1	-	-	-	-	-
OCTACHLOROTOLUENE	1	1	1	4	4	4	-	4	2	4	-
OCTADECANE	1	1	1	1	1	4	1	4	1	1	-
OCTAFLUOROCYCLOBUTANE	2	2	2	-	-	1	-	-	-	-	-
OCTANAL	1	3	4	1	1	4	-	2	1	1	-
OCTANE	1	1	1	2	1	4	-	4	2	4	1
OCTYL ACETATE	1	2	4	3	3	1	-	2	1	4	-
OCTYL ALCOHOL	1	1	1	2	2	1	1	2	2	4	1
Designations	FFKM	ETP	FKM	NBR	HNBR	EPDM	TFE\P	VQM	FVQM	AU	PTFE
Relative Cost	*****	****	***	*	**	*	***	**	***	***	***
Rating Descriptions*	1 = Good (<15% Swell) 2 = Fair (15-25% Swell) 3 = Poor (25-40% Swell) 4 = Not Recommended - = Not Tested										
OCTYL CHLORIDE	1	1	2	1	1	4	-	2	1	1	-
OCTYL CRESOL	2	-	2	-	-	4	-	4	4	-	1
OCTYL PHTHALATE	1	1	3	-	-	-	-	-	2	3	-
OIL OF TURPENTINE	1	-	1	2	2	4	-	-	-	-	1
OLEFINS	1	1	1	-	-	-	-	-	2	3	-
OLEIC ACID	1	1	2	3	1	4	1	4	2	2	1
OLEUM	1	1	2	4	4	4	1	4	2	4	1
OLEUM SPIRITS	1	1	1	2	2	4	-	4	2	3	-
OLEYL ALCOHOL	1	1	1	1	1	1	-	1	1	4	1
OLIVE OIL	1	1	1	1	1	2	1	3	1	1	1
ORONITE 8200	1	1	1	2	2	4	1	4	1	1	-
ORONITE 8515	1	1	1	2	2	4	1	4	1	1	-
ORTHOCHLOROETHYL BENZENE	1	1	2	4	4	4	4	4	2	4	-
OS 70	1	1	1	2	2	4	1	4	2	4	-
OS45 TYPE 111, SILICATE ESTER BASED	1	1	1	2	2	4	1	4	2	4	-
OS45 TYPE 1V	1	1	1	2	2	4	1	4	2	4	-

OXALIC ACID	1	1	1	2	2	1	1	2	1	2	1
OXYGEN, COLD	1	1	1	2	2	1	4	1	1	1	1
OXYGEN, HOT	1	1	2	4	4	4	4	2	1	4	1
OXYGEN, LIQUID	2	4	4	4	4	4	4	-	-	-	-
OZONATED DEIONIZED WATER	1	1	3	3	3	2	-	2	1	4	-
OZONE	1	1	1	4	3	1	1	1	1	1	1
PAINT THINNER, DUCO	1	1	3	4	4	4	3	4	2	4	-
PALM KERNEL FATTY ACID	1	-	1	1	1	4	-	-	-	-	1
PALMITIC ACID	1	1	1	1	1	2	1	4	1	1	1
PARAFFIN EMULSIONS	1	-	1	1	1	4	-	1	1	1	1
PARAFFIN OIL	1	-	1	1	1	4	-	1	1	1	1
PARAFFINS	1	1	1	1	1	4	-	2	1	1	1
PARALDEHYDE	1	3	4	3	3	1	-	2	1	4	-
PAR-AL-KETONE	2	3	4	4	4	4	4	4	4	4	-
PARATHION	1	1	1	-	-	-	-	-	2	3	-
Designations	FFKM	ETP	FKM	NBR	HNBR	EPDM	TFE\P	VQM	FVQM	AU	PTFE
Relative Cost	*****	*****	***	*	**	*	***	**	***	***	***
Rating Descriptions*	1 = Good (<15% Swell) 2 = Fair (15-25% Swell) 3 = Poor (25-40% Swell) 4 = Not Recommended - = Not Tested										
PARKER O-LUBE	1	1	1	1	1	4	1	2	1	1	-
PEANUT OIL	1	1	1	1	1	3	1	1	1	2	1
PECTIN	1	1	1	1	1	1	-	1	1	1	1
PENICILLIN	1	1	1	-	-	-	-	-	2	3	-
PENTACHLORODIPHENYL	-	-	-	4	4	4	-	-	-	-	1
PENTACHLOROETHANE	1	1	2	-	-	-	-	-	2	3	-
PENTACHLOROPHENOL	1	1	2	3	3	1	-	2	1	4	-
PENTAERYTHRITOL	1	1	1	1	3	1	1	2	1	4	-
PENTAERYTHRITOL TETRANITRATE	1	1	3	3	3	1	-	2	1	4	-
PENTAFLUOROETHANE	2	2	-	-	-	-	-	-	-	-	-
PENTANE	1	1	1	1	1	4	-	4	3	4	1
PENTANE, 2-4-DIMETHYL	1	1	1	1	1	4	-	4	3	4	-
PENTANE, 2-METHYL	1	1	1	1	1	4	-	4	3	4	-
PENTANE, 3-METHYL	1	1	1	1	1	4	-	4	3	4	-
PENTYL PENTANOATE	1	1	1	1	1	4	-	2	1	1	-

PERACETIC ACID	1	1	3	3	3	1	-	2	1	4	-
PERACETIC ACID, < 1%	1	-	1	4	4	1	-	4	4	4	1
PERACETIC ACID, < 10%	1	-	-	4	4	2	-	4	4	4	1
PERCHLORIC ACID	1	1	1	4	4	2	1	4	1	4	1
PERCHLOROETHYLENE	1	1	1	2	4	4	4	4	2	4	1
PERFLUOROPROPANE	2	2	-	-	-	-	-	-	-	-	-
PERFLUOROTRIETHYLAMINE	2	2	-	-	-	-	-	-	-	-	-
PETRO OIL, CRUDE ABOVE 250	1	-	2	4	4	4	2	-	-	-	-
PETRO OIL, CRUDE BELOW 250	1	-	1	1	1	4	1	-	-	-	-
PETROL	1	-	1	2	2	4	-	4	1	1	1
PETROL/BENZENE MIXTURE, 50/50%	1	-	1	4	4	4	-	4	2	2	1
PETROL/BENZENE MIXTURE, 60/40%	1	-	1	4	4	4	-	4	2	2	1
PETROL/BENZENE MIXTURE, 70/30%	1	-	1	2	4	4	-	4	1	1	1
PETROL/BENZENE MIXTURE, 80/20%	1	-	1	2	4	4	-	4	1	1	1
PETROL/BENZENE/ETHANOL, 50/30/20%	1	-	-	4	4	4	-	4	2	4	1
PETROLATUM	1	1	1	1	1	4	-	4	1	1	-
Designations	FFKM	ETP	FKM	NBR	HNBR	EPDM	TFE/P	VQM	FVQM	AU	PTFE
Relative Cost	*****	****	***	*	**	*	***	**	***	***	***
Rating Descriptions*	1 = Good (<15% Swell) 2 = Fair (15-25% Swell) 3 = Poor (25-40% Swell) 4 = Not Recommended - = Not Tested										
PETROLATUM ETHER	1	1	2	1	1	4	-	2	1	1	-
PETROLEUM < 121°C/250°F	1	1	2	1	1	4	1	2	2	1	1
PETROLEUM > 121°C/250°F	1	2	3	4	1	4	2	4	4	1	1
PETROLEUM ETHER	1	-	1	1	2	4	-	2	1	1	1
PETROLEUM OIL, ABOVE 250°F	1	1	2	4	4	4	-	4	4	4	-
PETROLEUM OIL, BELOW 250°F	1	1	1	1	1	4	-	2	2	2	1
PETROLEUM OIL, CRUDE	1	1	2	1	1	4	1	4	1	1	-
PHENETOLE	1	4	4	4	-	4	4	4	4	-	-
PHENOL	1	1	1	4	4	4	1	4	2	4	-
PHENOL, 70%	1	1	1	4	4	4	-	4	2	4	-
PHENOL, 85%	1	1	2	4	4	4	-	4	2	4	1
PHENOLICSULFONATE	1	1	3	3	3	1	-	2	1	4	-
PHENOLSULFONICACID	1	1	1	3	3	1	-	2	1	4	-
PHENYL AMINE	1	1	2	4	4	2	2	4	3	4	1

PHENYL ETHYLETHER	2	-	4	4	4	4	4	4	4	4	1
PHENYLHYDRAZINE	1	-	2	2	2	4	1	-	-	-	1
PHENYLACETAMIDE	1	1	1	-	-	-	-	-	2	3	-
PHENYLACETATE	1	2	4	3	3	1	-	2	1	4	-
PHENYLACETIC ACID	1	1	3	3	3	1	-	2	1	4	-
PHENYLBENZENE	1	1	1	4	4	4	3	4	2	4	-
PHENYLENEDIAMINE	1	3	4	-	-	-	-	-	-	-	-
PHENYLETHYL ALCOHOL	1	1	1	-	-	-	-	-	2	3	-
PHENYLETHYL ETHER	1	2	4	4	4	4	4	4	4	4	-
PHENYLETHYL MALONIC ESTER	1	1	1	-	-	-	-	-	2	3	-
PHENYLGLYCERINE	1	1	3	3	3	1	-	2	1	4	-
PHENYLHYDRAZINE	1	2	3	4	4	4	1	4	-	-	1
PHENYLHYDRAZINE CHLORHYDRATE	2	-	2	2	2	1	-	-	-	-	1
PHENYLHYDRAZINE HYDROCHLORIDE	1	1	3	3	3	1	-	2	1	4	-
PHENYLMERCURIC ACETATE	1	3	4	3	3	1	-	2	1	4	-
PHORONE	1	3	4	4	4	1	4	4	4	4	-
PHOSGENE	1	4	4	-	-	-	-	-	-	-	1
Designations	FFKM	ETP	FKM	NBR	HNBR	EPDM	TFE\P	VQM	FVQM	AU	PTFE
Relative Cost	*****	*****	***	*	**	*	***	**	***	***	***
Rating Descriptions*	1 = Good (<15% Swell) 2 = Fair (15-25% Swell) 3 = Poor (25-40% Swell) 4 = Not Recommended - = Not Tested										
PHOSPHINE	1	1	2	4	4	1	-	-	-	-	1
PHOSPHORIC ACID	1	-	1	4	4	1	1	4	3	-	1
PHOSPHORIC ACID, 20%	1	1	1	4	-	1	1	3	2	-	-
PHOSPHORIC ACID, 3M TO 158°F	1	1	1	1	1	1	1	2	2	4	-
PHOSPHORIC ACID, 80%	1	1	1	4	-	1	1	4	3	-	-
PHOSPHORIC ACID, CONCENTRATED ROOM TEMP	1	1	1	2	2	1	-	3	3	4	-
PHOSPHORIC ACID, CONCENTRATED TO 158°F	1	1	1	4	4	1	-	4	3	4	-
PHOSPHOROUS OXYCHLORIDE	1	1	-	4	4	-	-	-	-	-	1
PHOSPHOROUS TRICHLORIDE	1	1	1	4	4	1	1	-	1	-	1
PHOSPHOROUS TRICHLORIDE ACID	1	1	1	4	4	1	1	-	-	-	-
PHOTOGRAPHIC DEVELOPER	1	-	1	2	2	1	-	-	-	-	1

PHOTOGRAPHIC EMULSIONS	1	-	1	1	1	1	-	-	-	-	1
PHOTOGRAPHIC FIXING BATHS	1	-	1	2	2	1	-	-	-	-	1
PHTHALIC ACID	1	1	2	1	1	1	-	2	1	4	1
PHTHALIC ANHYDRIDE	1	3	4	3	3	2	3	2	1	4	-
PICKLING SOLUTION	1	1	1	4	4	3	2	4	4	4	1
PICRIC ACID	1	1	1	2	2	2	-	4	2	2	1
PICRIC ACID, AQUEOUS	1	1	1	1	1	1	-	1	1	-	1
PICRIC ACID, MOLTEN	1	1	1	2	2	2	-	4	2	-	-
PINE NEEDLE OIL	1	-	1	2	2	4	-	2	1	1	1
PINE OIL	1	1	1	1	1	4	1	4	1	1	1
PINE TAR	1	1	1	1	1	4	-	2	1	1	-
PINENE	1	1	1	2	2	4	1	4	1	2	1
PIPERAZINE	1	1	1	-	-	-	-	-	2	3	-
PIPERIDINE	1	3	4	4	4	4	-	4	4	3	1
PLATING SOLUTION, CHROME	1	1	1	4	4	2	1	4	2	4	-
PLATING SOLUTION, COBALT	1	1	1	1	1	1	1	-	-	-	-
PLATING SOLUTION, COPPER	1	1	1	1	1	1	1	-	-	-	-
PLATING SOLUTION, GOLD	1	1	1	1	1	1	1	-	-	-	-
Designations	FFKM	ETP	FKM	NBR	HNBR	EPDM	TFE/P	VQM	FVQM	AU	PTFE
Relative Cost	*****	****	***	*	**	*	***	**	***	***	***
Rating Descriptions*	1 = Good (<15% Swell) 2 = Fair (15-25% Swell) 3 = Poor (25-40% Swell) 4 = Not Recommended - = Not Tested										
PLATING SOLUTION, INDIUM	1	1	1	1	1	1	1	-	-	-	-
PLATING SOLUTION, IRON	1	1	1	1	1	1	1	-	-	-	-
PLATING SOLUTION, LEAD	1	1	1	1	1	1	1	-	-	-	-
PLATING SOLUTION, NICKEL	1	1	1	1	1	1	1	-	-	-	-
PLATING SOLUTION, OTHERS	1	1	1	1	1	1	1	4	-	-	-
PLATING SOLUTION, SILVER	1	1	1	1	1	1	1	-	-	-	-
PLATING SOLUTION, TIN	1	1	1	1	1	1	1	-	-	-	-
PLATING SOLUTION, ZINC	1	1	1	1	1	1	1	-	-	-	-
PNEUMATIC SERVICE	1	1	1	1	1	1	1	4	4	1	-
POLYETHYLENE GLYCOL	1	1	1	2	2	1	1	-	-	-	-
POLYGLYCEROL	1	1	3	3	3	1	-	2	1	4	-
POLYGLYCOL	1	1	3	3	3	1	-	2	1	4	-

POLYVINYL ACETATE EMULSION	1	3	3	1	1	1	1	-	-	-	-
POTASH, AQUEOUS	1	-	1	1	1	1	-	1	1	-	1
POTASSIUM ACETATE	1	3	4	2	2	1	-	4	4	2	1
POTASSIUM ACID SULFATE	1	1	3	3	3	1	-	2	1	4	-
POTASSIUM ALUM	1	1	3	3	3	1	-	2	1	4	-
POTASSIUM ALUMINUM SULFATE	1	1	3	3	3	1	-	2	1	4	-
POTASSIUM ANTIMONATE	1	1	3	3	3	1	-	2	1	4	-
POTASSIUM BICARBONATE	1	1	1	3	3	1	-	2	1	4	-
POTASSIUM BICHROMATE	1	1	3	3	3	1	-	2	1	4	-
POTASSIUM BIFLUORIDE	1	1	3	3	3	1	-	2	1	4	-
POTASSIUM BISULFATE	1	1	1	1	1	1	-	2	1	4	1
POTASSIUM BISULFITE	1	1	1	3	3	1	-	2	1	4	-
POTASSIUM BITARTRATE	1	1	3	3	3	1	-	2	1	4	-
POTASSIUM BORATE, AQUEOUS	1	-	1	1	1	1	-	-	-	4	1
POTASSIUM BROMATE, 10%	1	-	1	1	1	1	-	-	-	4	1
POTASSIUM BROMIDE	1	1	2	1	1	1	-	2	1	4	1
POTASSIUM CARBONATE	1	1	2	1	1	1	-	1	1	4	1
POTASSIUM CHLORATE	1	1	2	4	4	1	-	2	1	4	1
POTASSIUM CHLORIDE	1	1	1	1	1	1	1	1	1	4	1
Designations	FFKM	ETP	FKM	NBR	HNBR	EPDM	TFE\P	VQM	FVQM	AU	PTFE
Relative Cost	*****	****	***	*	**	*	***	**	***	***	***
Rating Descriptions*	1 = Good (<15% Swell) 2 = Fair (15-25% Swell) 3 = Poor (25-40% Swell) 4 = Not Recommended - = Not Tested										
POTASSIUM CHROMATE	1	1	2	2	2	1	-	2	1	4	1
POTASSIUM CITRATE	1	1	3	3	3	1	-	2	1	4	-
POTASSIUM COPPER CYANIDE	1	1	1	1	-	1	1	1	1	-	-
POTASSIUM CUPRO CYANIDE	1	1	1	1	1	1	1	1	1	1	-
POTASSIUM CYANATE	1	1	3	3	3	1	-	2	1	4	-
POTASSIUM CYANIDE	1	1	1	1	1	1	1	1	1	1	1
POTASSIUM DICHROMATE	1	1	1	1	1	1	1	1	1	2	1
POTASSIUM DIPHOSPHATE	1	1	3	3	3	1	-	2	1	4	-
POTASSIUM FERRICYANIDE	1	1	2	3	3	1	-	2	1	4	-
POTASSIUM FLUORIDE	1	1	1	3	3	1	-	2	1	4	-
POTASSIUM GLUCOCYANATE	1	1	3	3	3	1	-	2	1	4	-

POTASSIUM HYDROXIDE	1	1	4	2	2	1	1	3	3	4	-
POTASSIUM HYPOCHLORITE	1	2	4	3	3	1	-	2	1	4	-
POTASSIUM IODATE	1	1	3	3	3	1	-	2	1	4	-
POTASSIUM IODIDE	1	1	1	1	1	1	-	2	1	4	1
POTASSIUM METABISULFATE	1	1	3	3	3	1	-	2	1	4	-
POTASSIUM METACHROMATE	1	1	3	3	3	1	-	2	1	4	-
POTASSIUM MONOCHROMATE	1	1	3	3	3	1	-	2	1	4	-
POTASSIUM NITRATE	1	1	1	1	1	1	1	1	1	4	1
POTASSIUM NITRITE	1	1	3	3	3	1	-	2	1	4	-
POTASSIUM OXALATE	1	1	3	3	3	1	-	2	1	4	-
POTASSIUM PERCHLORATE	1	1	1	4	4	1	-	2	1	4	1
POTASSIUM PERFLUORO ACETATE	1	2	-	-	-	-	-	-	-	-	-
POTASSIUM PERMANGANATE	1	1	2	4	4	1	-	2	1	4	1
POTASSIUM PERSULFATE	1	1	1	4	4	1	-	2	1	4	1
POTASSIUM PHOSPHATE, ACIDIC	1	1	3	3	3	1	-	2	1	4	-
POTASSIUM PHOSPHATE, ALKALINE	1	1	3	3	3	1	-	2	1	4	-
POTASSIUM PHOSPHATE, DIBASIC OR TRIBASIC	1	1	3	3	3	1	-	2	1	4	-
POTASSIUM PYROSULFATE	1	1	3	3	3	1	-	2	1	4	-
POTASSIUM SALTS	1	1	1	1	1	1	1	1	1	1	-
Designations	FFKM	ETP	FKM	NBR	HNBR	EPDM	TFE\P	VQM	FVQM	AU	PTFE
Relative Cost	*****	*****	***	*	**	*	***	**	***	***	***
Rating Descriptions*	1 = Good (<15% Swell) 2 = Fair (15-25% Swell) 3 = Poor (25-40% Swell) 4 = Not Recommended - = Not Tested										
POTASSIUM SODIUM TARTRATE	1	1	3	3	3	1	-	2	1	4	-
POTASSIUM STANNATE	1	1	3	3	3	1	-	2	1	4	-
POTASSIUM STEARATE	1	1	2	3	3	1	-	2	1	4	-
POTASSIUM SULFATE	1	1	1	1	1	1	1	1	1	1	1
POTASSIUM SULFIDE	1	1	1	3	3	1	-	2	1	4	-
POTASSIUM SULFITE	1	1	1	1	1	1	-	1	1	1	-
POTASSIUM TARTRATE	1	1	3	3	3	1	-	2	1	4	-
POTASSIUM THIOCYANATE	1	1	3	3	3	1	-	2	1	4	-
POTASSIUM THIOSULFATE	1	1	3	3	3	1	-	2	1	4	-
POTASSIUM TRIPHOSPHATE	1	1	3	3	3	1	-	2	1	4	-

POTASSIUM, MOLTEN	4	4	-	-	-	-	-	-	-	-	-
PRESTONE ANTIFREEZE	1	1	2	1	1	1	2	1	1	4	-
PRL-HIGH TEMP, HYDRAULIC OIL	1	1	1	2	2	4	1	2	1	2	-
PRODUCER GAS	1	1	1	1	1	4	1	2	2	1	2
PROPANE	1	1	1	1	1	4	1	4	2	1	1
PROPANOIC ACID NITRILE	1	3	3	4	4	4	2	4	4	4	1
PROPANOL	1	1	1	1	1	1	1	1	1	4	1
PROPANONE (2-PROPANONE)	1	3	4	4	4	1	4	4	4	4	1
PROPARGYL ALCOHOL	1	-	1	1	1	1	-	-	-	-	1
PROPIONALDEHYDE	1	3	4	3	3	1	-	2	1	4	-
PROPIONIC ACID	1	2	4	1	1	1	-	2	1	4	1
PROPIONITRILE	1	3	4	1	1	4	1	-	-	-	-
PROPYL ACETATE	1	3	4	4	4	2	4	4	4	4	4
PROPYL ACETONE	1	2	4	4	4	1	4	4	4	4	-
PROPYL NITRATE	1	1	1	4	4	2	-	4	4	-	-
PROPYL PROPIONATE	1	4	4	4	3	2	-	4	4	4	-
PROPYLAMINE	2	3	4	3	3	1	-	2	1	4	-
PROPYLBENZENE	1	1	1	-	-	-	-	-	2	3	-
PROPYLENE	1	1	1	4	4	4	1	4	2	4	1
PROPYLENE CHLORIDE	1	1	1	-	-	-	-	-	2	3	-
PROPYLENE CHLOROHYDRIN	1	1	1	-	-	-	-	-	2	3	-
Designations	FFKM	ETP	FKM	NBR	HNBR	EPDM	TFE\P	VQM	FVQM	AU	PTFE
Relative Cost	*****	****	***	*	**	*	***	**	***	***	***
Rating Descriptions*	1 = Good (<15% Swell) 2 = Fair (15-25% Swell) 3 = Poor (25-40% Swell) 4 = Not Recommended - = Not Tested										
PROPYLENE DICHLORIDE	1	1	2	-	-	-	-	-	2	3	-
PROPYLENE GLYCOL	1	1	1	1	1	1	1	2	1	4	1
PROPYLENE IMINE	1	1	1	-	-	-	-	-	2	3	-
PROPYLENE OXIDE	1	4	4	4	4	2	4	4	4	4	1
PRS-3000	1	1	2	-	-	2	-	2	2	-	-
PYDRAUL 10E	2	1	1	4	4	1	1	1	4	4	1
PYDRAUL 115E	2	1	1	4	4	1	1	4	3	4	-
PYDRAUL 230C, 312C, 540C & A200	2	1	1	4	4	4	1	4	4	4	1
PYDRAUL 29ELT, 30E, 50E, 65E & 90E	2	1	1	4	4	1	1	1	1	4	1

PYRANOL TRANSFORMER OIL	1	1	1	1	1	4	1	4	1	2	-
PYRIDINE	1	3	4	4	4	2	2	4	4	4	1
PYRIDINE OIL	4	4	4	4	4	2	-	4	4	-	-
PYRIDINE SULFATE	1	1	3	3	3	1	-	2	1	4	-
PYRIDINE SULFONIC ACID	1	1	3	3	3	1	-	2	1	4	-
PYROGALLOL	1	1	1	2	2	4	-	-	2	3	-
PYROGARD 42, 43, 53 & 55	1	1	2	4	4	1	2	4	4	4	1
PYROGARD C&D	1	1	1	1	1	4	1	3	2	1	-
PYROLIGNEOUS ACID	1	3	4	4	4	2	4	-	4	4	-
PYROLUBE	1	1	1	4	4	2	1	2	2	4	-
PYROSULFURIC ACID	1	1	3	3	3	1	-	2	1	4	-
PYROSULFURYL CHLORIDE	1	1	1	2	2	4	-	-	2	3	-
PYRROLE	1	2	4	4	4	4	-	2	4	-	1
PYRUVIC ACID	1	1	3	3	3	1	-	2	1	4	-
QUINIDINE	1	1	1	2	2	4	-	-	2	3	-
QUININE	1	1	1	2	2	4	-	-	2	3	-
QUININE BISULFATE	1	1	3	3	3	1	-	2	1	4	-
QUININE HYDROCHLORIDE	1	1	3	3	3	1	-	2	1	4	-
QUININE SULFATE	1	1	3	3	3	1	-	2	1	4	-
QUININE TARTRATE	1	1	3	3	3	1	-	2	1	4	-
QUINIZARIN	1	1	1	2	2	4	-	-	2	3	-
QUINOLINE	1	1	1	2	2	4	-	-	2	3	-
Designations	FFKM	ETP	FKM	NBR	HNBR	EPDM	TFE\P	VQM	FVQM	AU	PTFE
Relative Cost	*****	*****	***	*	**	*	***	**	***	***	***
Rating Descriptions*	1 = Good (<15% Swell) 2 = Fair (15-25% Swell) 3 = Poor (25-40% Swell) 4 = Not Recommended - = Not Tested										
QUINONE	1	1	2	2	2	4	-	-	2	3	-
RADIATION, GAMMA, 1.0 E+07 RADS	2	4	4	3	3	2	1	2	4	4	1
RAFFINATE	1	1	1	2	2	4	-	-	2	3	-
RAPESEED OIL	1	1	1	2	2	1	1	4	1	2	1
RED LINE 100 OIL	1	1	1	1	1	4	1	4	1	1	-
RED OIL (MIL-H-5606)	1	1	1	1	1	3	1	4	1	1	1
RESORCINOL	1	1	1	4	3	4	1	2	1	4	-
RIBOFLAVIN	1	1	1	2	2	4	-	-	2	3	-

RICINOLEIC ACID	1	1	1	2	2	4	-	-	2	3	-
ROSIN	1	1	1	2	2	4	-	-	2	3	-
SACCHARIN SOLUTION	1	1	3	3	3	1	-	2	1	4	-
SAGROTAN	1	-	1	2	2	1	-	1	1	4	1
SAL AMMONIAC	1	1	1	1	1	1	1	2	1	1	-
SALICYLIC ACID	1	1	1	2	2	1	1	-	1	1	1
SALT WATER	1	1	1	1	1	1	1	1	1	-	1
SANTOSAFE 300	1	1	1	4	4	3	1	1	1	-	-
SEA SALT	1	-	1	1	1	1	1	-	-	-	-
SEA WATER	1	1	1	1	1	1	1	1	1	2	1
SEBACIC ACID	1	1	2	3	3	1	-	2	1	4	-
SELENIC ACID	1	1	3	3	3	1	-	2	1	4	-
SELENIOUS ACID	1	1	3	3	3	1	-	2	1	4	-
SEWAGE	1	1	1	1	1	1	1	1	1	4	-
SF 1147 GE SILICONE FLUID	1	1	1	2	2	3	-	4	-	-	-
SF 1154 GE SILICONE FLUID	1	1	1	2	2	1	-	4	1	2	-
SF 96 GE SILICONE FLUID	1	1	1	2	2	1	-	4	1	2	-
SHELL 3XF MINE FLUID	1	1	1	1	1	4	1	-	1	4	-
SHELL ALVANIA GREASE	1	1	1	1	1	4	1	2	1	1	-
SHELL CARNEA 19 & 29	1	1	1	1	1	4	1	-	1	2	-
SHELL DIALA	1	1	1	1	1	4	1	4	1	2	-
SHELL IRUS 905	1	1	1	1	1	4	1	4	1	1	-
SHELL LO HYDRAX 27 AND 29	1	1	1	1	1	4	-	4	1	2	-
Designations	FFKM	ETP	FKM	NBR	HNBR	EPDM	TFE\P	VQM	FVQM	AU	PTFE
Relative Cost	*****	****	***	*	**	*	***	**	***	***	***
Rating Descriptions*	1 = Good (<15% Swell) 2 = Fair (15-25% Swell) 3 = Poor (25-40% Swell) 4 = Not Recommended - = Not Tested										
SHELL MACOME 72	1	1	1	1	1	4	-	4	1	2	-
SHELL TELLUS 27, PETROLEUM BASE	1	1	1	1	1	4	1	4	1	-	-
SHELL TELLUS 32, PETROLEUM BASE	1	1	1	1	1	4	-	4	1	1	-
SHELL TELLUS 33	1	1	1	1	1	4	1	-	-	-	-
SHELL TELLUS 68	1	1	1	1	1	4	-	4	1	1	-
SHELL UMF, 5% AROMATIC	1	1	1	1	1	4	1	4	1	1	-
SHELLAC	1	1	2	3	3	1	-	2	1	4	-

SILICATE ESTERS	1	1	1	2	2	4	1	4	1	1	-
SILICIC ACID, AQUEOUS	1	-	1	1	1	1	-	-	-	-	1
SILICON TETRACHLORIDE	2	1	-	-	-	-	-	-	-	-	-
SILICON TETRAFLUORIDE	2	1	-	-	-	-	-	-	-	-	-
SILICONE GREASES	1	1	1	1	1	1	1	3	1	1	1
SILICONE OILS	1	1	1	1	1	1	1	4	1	1	1
SILVER BROMIDE	1	1	3	3	3	1	-	2	1	4	-
SILVER CHLORIDE	1	1	3	3	3	1	-	2	1	4	-
SILVER CYANIDE	1	1	2	3	3	1	-	2	1	4	-
SILVER NITRATE	1	1	1	2	2	1	1	1	1	1	1
SILVER SALTS, AQUEOUS	1	-	1	2	2	1	-	1	1	-	1
SILVER SULFATE	1	1	2	3	3	1	-	2	1	4	-
SINCLAIR OPALINE CX-EP LUBE	1	1	1	1	1	4	1	4	2	1	-
SKELLY, SOLVENT B, C, E	1	1	1	1	1	4	-	-	1	-	-
SKYDROL 500	1	3	4	4	4	1	1	3	3	4	1
SKYDROL 500 B4	1	3	4	4	4	1	-	3	3	4	-
SKYDROL 7000	1	1	3	4	4	1	1	3	3	-	-
SKYDROL LD-4	4	3	4	4	4	1	-	3	3	4	-
SOAP SOLUTIONS	1	1	1	1	1	1	1	1	1	1	1
SOCONY MOBILE TYPE A	1	1	1	1	1	4	1	4	2	2	-
SOCONY VACUUM AMV AC781 GREASE	1	1	1	1	1	4	1	4	2	2	-
SOCONY VACUUM PD959B	1	1	1	1	1	4	1	4	1	1	-
SODA ASH	1	1	1	1	1	1	1	1	1	-	-
SODA, AQUEOUS	1	-	1	1	1	1	-	1	1	-	1
Designations	FFKM	ETP	FKM	NBR	HNBR	EPDM	TFE\P	VQM	FVQM	AU	PTFE
Relative Cost	*****	****	***	*	**	*	***	**	***	***	***
Rating Descriptions*	1 = Good (<15% Swell) 2 = Fair (15-25% Swell) 3 = Poor (25-40% Swell) 4 = Not Recommended - = Not Tested										
SODIUM ACETATE	1	4	4	2	2	1	2	4	4	3	-
SODIUM ACID BISULFATE	1	1	3	3	3	1	-	2	1	4	-
SODIUM ACID FLUORIDE	1	1	3	3	3	1	-	2	1	4	-
SODIUM ACID SULFATE	1	1	3	3	3	1	-	2	1	4	-
SODIUM ALUMINATE	1	1	2	3	3	1	-	2	1	4	-
SODIUM ALUMINATE SULFATE	1	1	3	3	3	1	-	2	1	4	-

SODIUM ANTHRAQUINONE DISULFATE	1	1	3	3	3	1	-	2	1	4	-
SODIUM ANTIMONATE	1	1	3	3	3	1	-	2	1	4	-
SODIUM ARSENATE	1	1	2	3	3	1	-	2	1	4	-
SODIUM ARSENITE	1	1	3	3	3	1	-	2	1	4	-
SODIUM BENZOATE	1	1	2	1	1	1	-	2	1	4	1
SODIUM BICARBONATE	1	1	1	1	1	1	1	1	1	1	1
SODIUM BICHROMATE	1	1	3	3	3	1	-	2	1	4	-
SODIUM BIFLUORIDE	1	1	3	3	3	1	-	2	1	4	-
SODIUM BISULFATE	1	1	1	1	1	1	1	1	1	-	-
SODIUM BISULFIDE	1	1	3	3	3	1	-	2	1	4	-
SODIUM BISULFITE	1	1	1	1	1	1	1	1	1	-	1
SODIUM BITARTRATE	1	1	3	3	3	1	-	2	1	4	-
SODIUM BORATE	1	1	1	1	1	1	1	1	1	-	-
SODIUM BROMATE	1	1	3	3	3	1	-	2	1	4	-
SODIUM BROMIDE	1	1	2	3	3	1	-	2	1	4	-
SODIUM CARBONATE	1	1	1	1	1	1	1	1	1	2	1
SODIUM CHLORATE	1	1	2	4	4	1	-	2	1	4	1
SODIUM CHLORIDE	1	1	1	1	1	1	1	1	1	1	1
SODIUM CHLORITE	1	1	3	3	3	1	-	2	1	4	-
SODIUM CHLOROACETATE	1	2	3	3	3	1	-	2	1	4	-
SODIUM CHROMATE	1	1	2	3	3	1	-	2	1	4	-
SODIUM CITRATE	1	1	3	3	3	1	-	2	1	4	-
SODIUM CYANAMIDE	1	1	3	3	3	1	-	2	1	4	-
SODIUM CYANATE	1	1	3	3	3	1	-	2	1	4	-
SODIUM CYANIDE	1	1	1	1	1	1	1	1	1	-	-
Designations	FFKM	ETP	FKM	NBR	HNBR	EPDM	TFE\P	VQM	FVQM	AU	PTFE
Relative Cost	*****	****	***	*	**	*	***	**	***	***	***
Rating Descriptions*	1 = Good (<15% Swell) 2 = Fair (15-25% Swell) 3 = Poor (25-40% Swell) 4 = Not Recommended - = Not Tested										
SODIUM DIACETATE	1	2	4	3	3	1	-	2	1	4	-
SODIUM DIPHENYL SULFONATE	1	1	3	3	3	1	-	2	1	4	-
SODIUM DIPHOSPHATE	1	1	3	3	3	1	-	2	1	4	-
SODIUM DISILICATE	1	1	3	3	3	1	-	2	1	4	-
SODIUM ETHYLATE	1	1	3	3	3	1	-	2	1	4	-

SODIUM FERRICYANIDE	1	1	1	3	3	1	-	2	1	4	-
SODIUM FERROCYANIDE	1	1	1	3	3	1	-	2	1	4	-
SODIUM FLUORIDE	1	1	1	3	3	1	-	2	1	4	-
SODIUM FLUOROSILICATE	1	1	3	3	3	1	-	2	1	4	-
SODIUM GLUTAMATE	1	1	3	3	3	1	-	2	1	4	-
SODIUM HYDROGEN SULFATE	1	1	3	3	3	1	-	2	1	4	-
SODIUM HYDROSULFIDE	1	1	2	3	3	1	-	2	1	4	-
SODIUM HYDROSULFITE	1	1	3	3	3	1	-	2	1	4	-
SODIUM HYDROXIDE	1	1	2	2	2	1	1	2	2	2	-
SODIUM HYDROXIDE PELLETS	1	-	4	2	2	1	1	-	-	-	-
SODIUM HYPOCHLORITE	1	1	1	2	2	1	1	2	2	4	1
SODIUM HYPOPHOSPHATE	1	1	3	3	3	1	-	2	1	4	-
SODIUM HYPOPHOSPHITE	1	1	3	3	3	1	-	2	1	4	-
SODIUM HYPOSULFITE	1	1	3	3	3	1	-	2	1	4	-
SODIUM IODIDE	1	1	2	3	3	1	-	2	1	4	-
SODIUM LACTATE	1	1	3	3	3	1	-	2	1	4	-
SODIUM METAPHOSPHATE	1	1	1	1	1	1	1	-	1	-	-
SODIUM METASILICATE	1	1	2	3	3	1	-	2	1	4	-
SODIUM METHYLATE	1	1	3	3	3	1	-	2	1	4	-
SODIUM MONOPHOSPHATE	1	1	3	3	3	1	-	2	1	4	-
SODIUM NITRATE	1	1	1	2	2	1	1	4	-	-	1
SODIUM NITRITE	1	-	1	2	2	1	-	-	-	-	1
SODIUM OLEATE	1	1	3	3	3	1	-	2	1	4	-
SODIUM ORTHOSILICATE	1	1	3	3	3	1	-	2	1	4	-
SODIUM OXALATE	1	1	3	3	3	1	-	2	1	4	-
SODIUM PERBORATE	1	1	1	2	2	1	1	2	1	-	-
Designations	FFKM	ETP	FKM	NBR	HNBR	EPDM	TFE\P	VQM	FVQM	AU	PTFE
Relative Cost	*****	****	***	*	**	*	***	**	***	***	***
Rating Descriptions*	1 = Good (<15% Swell) 2 = Fair (15-25% Swell) 3 = Poor (25-40% Swell) 4 = Not Recommended - = Not Tested										
SODIUM PERCARBONATE	1	1	3	3	3	1	-	2	1	4	-
SODIUM PERCHLORATE	1	1	3	3	3	1	-	2	1	4	-
SODIUM PEROXIDE	1	1	2	2	2	1	1	4	1	4	-
SODIUM PERSULFATE	1	1	3	3	3	1	-	2	1	4	-

SODIUM PHENOLATE	1	1	3	3	3	1	-	2	1	4	-
SODIUM PHENOXIDE	1	1	3	3	3	1	-	2	1	4	-
SODIUM PHOSPHATE, DIBASIC	1	1	1	1	1	1	1	4	-	1	1
SODIUM PHOSPHATE, TRIBASIC	1	1	1	1	1	1	1	1	-	1	-
SODIUM PHOSPHATE, MONOBASIC	1	1	1	1	1	1	1	4	-	1	-
SODIUM PLUMBITE	1	1	3	3	3	1	-	2	1	4	-
SODIUM PYROPHOSPHATE	1	1	3	3	3	1	-	2	1	4	-
SODIUM RESINATE	1	1	3	3	3	1	-	2	1	4	-
SODIUM SALICYLATE	1	1	3	3	3	1	-	2	1	4	-
SODIUM SALTS	1	1	1	1	1	1	1	1	1	1	-
SODIUM SILICATE	1	1	1	1	1	1	1	-	-	-	1
SODIUM STANNATE	1	1	3	3	3	1	-	2	1	4	-
SODIUM SULFATE	1	1	1	1	1	1	-	1	1	1	1
SODIUM SULFATE DECAHYDRATE	1	1	1	4	-	2	1	-	1	-	-
SODIUM SULFATE, ANHYDROUS	1	1	1	1	-	1	-	1	1	-	-
SODIUM SULFIDE	1	1	1	2	2	1	-	1	1	1	1
SODIUM SULFITE	1	1	1	1	1	1	1	1	1	1	-
SODIUM SULFOCYANIDE	1	1	3	3	3	1	-	2	1	4	-
SODIUM TARTRATE	1	1	3	3	3	1	-	2	1	4	-
SODIUM TETRABORATE	1	1	3	3	3	1	-	2	1	4	-
SODIUM TETRAPHOSPHATE	1	1	3	3	3	1	-	2	1	4	-
SODIUM TETRASULFIDE	1	1	3	3	3	1	-	2	1	4	-
SODIUM THIOARSENATE	1	1	3	3	3	1	-	2	1	4	-
SODIUM THIOCYANATE	1	1	1	3	3	1	-	2	1	4	-
SODIUM THIOSULFATE	1	1	1	2	4	1	-	1	1	1	1
SODIUM TRICHLOROACETATE	1	1	3	3	3	1	-	2	1	4	-
SODIUM TRIPHOSPHATE	1	1	3	3	3	1	-	2	1	4	-
Designations	FFKM	ETP	FKM	NBR	HNBR	EPDM	TFE\P	VQM	FVQM	AU	PTFE
Relative Cost	*****	*****	***	*	**	*	***	**	***	***	***
Rating Descriptions*	1 = Good (<15% Swell) 2 = Fair (15-25% Swell) 3 = Poor (25-40% Swell) 4 = Not Recommended - = Not Tested										
SODIUM TRIPOLYPHOSPHATE	1	2	2	4	-	1	1	-	-	-	-
SODIUM, MOLTEN	4	4	-	-	-	-	-	-	-	-	-
SOLVASOL 1, 2 & 3	1	1	2	1	1	4	4	4	1	2	-

SOLVASOL 73	1	1	1	2	2	4	4	4	1	2	-
SOLVASOL 74	1	1	1	2	2	4	4	4	1	2	-
SORBITOL	1	1	2	3	3	1	-	2	1	4	-
SOUR CRUDE OIL	1	2	4	3	3	4	-	4	4	4	-
SOUR NATURAL GAS	1	2	4	3	3	4	-	4	4	4	-
SOYBEAN OIL	1	1	1	1	1	3	1	1	1	2	1
SPERMACETI	1	-	1	1	1	4	-	-	-	-	1
SPINDLE OIL	1	-	1	1	1	4	-	1	1	1	1
SPRY	1	1	1	1	1	2	1	1	1	1	-
SR-10 FUEL	1	1	1	1	1	4	1	4	1	2	-
SR-6 FUEL	1	1	1	2	2	4	1	4	1	2	-
STANDARD CLEAN 2	1	-	-	-	-	-	-	4	4	-	-
STANDARD OIL MOBILUBE GX90-EP LUBE	1	1	1	1	1	4	1	4	1	1	-
STANNIC AMMONIUM CHLORIDE	1	1	3	3	3	1	-	2	1	4	-
STANNIC CHLORIDE	1	1	1	1	1	1	1	2	1	-	-
STANNIC CHLORIDE, 50%	1	1	1	1	1	1	-	2	1	-	-
STANNIC TETRACHLORIDE	1	1	3	3	3	1	-	2	1	4	-
STANNOUS BISULFATE	1	1	3	3	3	1	-	2	1	4	-
STANNOUS BROMIDE	1	1	3	3	3	1	-	2	1	4	-
STANNOUS CHLORIDE	1	1	1	1	1	1	1	2	1	-	-
STANNOUS FLUORIDE	1	1	1	3	3	1	-	2	1	4	-
STANNOUS SULFATE	1	1	3	3	3	1	-	2	1	4	-
STARCH SYRUP	1	-	1	1	1	1	-	-	-	-	1
STARCH, AQUEOUS	1	-	1	1	1	1	-	1	1	-	1
STAUFFER 7700	1	1	1	2	2	4	3	4	2	-	-
STEAM	2	1	2	4	4	1	-	4	4	4	1
STEAM < 149°C/300°F	1	2	2	4	4	1	2	3	4	-	-
STEAM > 149°C/300°F	2	3	4	4	4	4	3	4	4	-	-
Designations	FFKM	ETP	FKM	NBR	HNBR	EPDM	TFE\P	VQM	FVQM	AU	PTFE
Relative Cost	*****	****	***	*	**	*	***	**	***	***	***
Rating Descriptions*	1 = Good (<15% Swell) 2 = Fair (15-25% Swell) 3 = Poor (25-40% Swell) 4 = Not Recommended - = Not Tested										
STEAM BELOW 400°F	2	1	4	4	4	3	1	3	4	4	1
STEAM, 400°-500°F	4	3	4	4	4	3	-	4	4	4	-

STEARIC ACID	1	1	1	2	2	2	1	2	1	1	1
STODDARD SOLVENT	1	1	1	1	1	4	2	4	1	1	1
STRONTIUM ACETATE	1	3	4	3	3	1	-	2	1	4	-
STRONTIUM CARBONATE	1	1	3	3	3	1	-	2	1	4	-
STRONTIUM CHLORIDE	1	1	3	3	3	1	-	2	1	4	-
STRONTIUM HYDROXIDE	1	1	3	3	3	1	-	2	1	4	-
STRONTIUM NITRATE	1	1	3	3	3	1	-	2	1	4	-
STYRENE	1	1	2	4	4	4	4	4	3	3	1
SUCCINIC ACID	1	1	2	1	1	1	-	2	1	4	1
SUCROSE SOLUTIONS	1	1	1	1	1	1	-	1	1	4	1
SUGAR SYRUP	1	-	1	1	1	1	-	-	-	-	1
SULFAMIC ACID	1	1	2	3	3	1	-	2	1	4	-
SULFANILIC ACID	1	1	3	3	3	1	-	2	1	4	-
SULFANILIC CHLORIDE	1	1	1	2	2	4	-	-	2	3	-
SULFANILIMIDE	1	1	1	2	2	4	-	-	2	3	-
SULFITE LIQUORS	1	1	2	2	3	2	-	4	2	4	-
SULFOLANE	1	2	2	2	2	1	1	-	-	-	-
SULFONATED OILS	1	1	1	2	2	4	-	-	2	3	-
SULFONIC ACID	1	1	3	3	3	1	-	2	1	4	-
SULFONYL CHORIDE	2	2	3	3	3	1	-	2	1	4	-
SULFUR	1	1	1	4	4	1	-	-	1	-	1
SULFUR (MOLTEN 250°F)	1	1	1	4	4	3	1	3	1	4	-
SULFUR CHLORIDE	1	1	1	4	4	4	1	3	1	3	1
SULFUR DIOXIDE	1	2	3	4	-	1	2	2	2	-	-
SULFUR DIOXIDE GAS, DRY	1	1	2	4	4	1	2	2	2	-	1
SULFUR DIOXIDE GAS, WET	1	1	2	4	4	1	2	2	2	3	1
SULFUR DIOXIDE, LIQUEFIED	1	1	2	4	4	1	2	2	2	-	1
SULFUR HEXAFLUORIDE	2	1	2	2	2	1	3	2	2	2	1
SULFUR LIQUORS	1	1	1	2	2	2	-	4	2	-	-
Designations	FFKM	ETP	FKM	NBR	HNBR	EPDM	TFE\P	VQM	FVQM	AU	PTFE
Relative Cost	*****	****	***	*	**	*	***	**	***	***	***
Rating Descriptions*	1 = Good (<15% Swell) 2 = Fair (15-25% Swell) 3 = Poor (25-40% Swell) 4 = Not Recommended - = Not Tested										
SULFUR MONOCHLORIDE	1	1	1	1	1	4	-	2	1	1	-

[illegible]

TERPINEOL	1	1	1	2	2	3	1	-	1	2	-
TERPINYL ACETATE	1	2	4	2	2	4	-	-	2	3	-
TETRABROMOETHANE	1	1	1	4	4	4	3	4	2	4	-
TETRABROMOMETHANE	1	1	1	4	2	4	3	4	2	3	-
TETRABUTYL TITANATE	1	1	1	2	2	1	1	4	4	-	1
TETRACHLOROETHANE	1	1	1	4	4	4	4	4	2	4	1
TETRACHLOROETHYLENE	1	1	1	4	4	1	4	4	2	4	1
TETRAETHYL LEAD	1	1	1	2	2	4	3	-	2	2	1
TETRAETHYL LEAD BLEND	1	1	1	2	2	4	3	-	2	-	-
TETRAETHYLORTHOSILICATE	1	1	1	1	-	1	-	4	1	-	-
TETRAFLUOROMETHANE	1	1	1	1	-	1	-	4	-	-	-
TETRAHYDROFURAN	1	3	4	4	4	3	4	4	4	3	1
TETRAHYDRONAPHTHALENE	1	1	1	4	4	4	4	4	1	4	1
TETRAMETHYL AMMONIUM HYDROXIDE	1	1	3	3	3	1	-	2	1	4	-
TETRAMETHYLDIHYDROPYRIDINE	1	1	1	2	2	4	-	-	2	3	-
TETRAPHOSPHOGLUCOSATE	1	1	3	3	3	1	-	2	1	4	-
TEXACO 3450 GEAR OIL	1	1	1	1	1	4	1	4	1	1	-
TEXACO CAPELLA A & AA	1	1	1	1	1	4	1	4	1	2	-
TEXACO MEROPA 220, NO LEAD	1	1	1	1	1	4	1	4	1	2	-
TEXACO REGAL B	1	1	1	1	1	4	1	4	1	1	-
TEXACO UNI-TEMP GREASE	1	1	1	1	1	4	1	2	1	1	-
TEXAMATIC A 1581 FLUID	1	1	1	1	1	4	-	4	2	2	-
TEXAMATIC A 3401 FLUID	1	1	1	1	1	4	1	4	2	2	-
TEXAMATIC A 3525 FLUID	1	1	1	1	1	4	1	4	2	2	-
TEXAMATIC A 3528 FLUID	1	1	1	1	1	4	1	4	2	2	-
TEXAMATIC A TRANSMISSION OIL	1	1	1	1	1	4	1	4	2	2	-
TEXAS 1500 OIL	1	1	1	1	1	4	1	2	1	1	-
THERMINOL 44	1	1	1	4	4	4	-	4	-	-	-
THERMINOL 55	1	1	1	2	2	4	-	4	-	-	-
THERMINOL VP-1, 60, 65	1	1	1	4	4	4	-	2	-	-	-
THIOAMYL ALCOHOL	1	1	1	1	1	4	-	2	1	1	-
Designations	FFKM	ETP	FKM	NBR	HNBR	EPDM	TFE\P	VQM	FVQM	AU	PTFE
Relative Cost	*****	****	***	*	**	*	***	**	***	***	***

Rating Descriptions*	1 = Good (<15% Swell) 2 = Fair (15-25% Swell) 3 = Poor (25-40% Swell) 4 = Not Recommended - = Not Tested										
THIODIACETIC ACID	1	1	3	3	3	1	-	2	1	4	-
THIOETHANOL	1	1	3	3	3	1	-	2	1	4	-
THIOGLYCOLIC ACID	1	1	3	3	3	1	-	2	1	4	-
THIOKOL TP-90B	1	1	2	4	4	1	1	-	2	-	-
THIOKOL TP-95	1	1	2	4	4	1	1	-	2	-	-
THIONYL CHLORIDE	1	1	2	4	4	3	-	-	2	3	1
THIOPHENE	1	3	4	4	4	4	-	-	2	3	1
THIOPHOSPHORYL CHLORIDE	1	1	3	3	3	1	-	2	1	4	-
THIOUREA	1	1	3	3	3	1	-	2	1	4	-
THORIUM NITRATE	1	1	3	3	3	1	-	2	1	4	-
TIDEWATER MULTIGEAR, 140 EP LUBE	1	1	1	1	1	4	1	4	1	1	-
TIDEWATER OIL, BEEDOL	1	1	1	1	1	4	1	2	1	1	-
TIN AMMONIUM CHLORIDE	1	1	3	3	3	1	-	2	1	4	-
TIN CHLORIDE	1	1	1	1	1	1	-	2	1	1	1
TIN TETRACHLORIDE	1	1	1	1	1	4	-	2	1	1	-
TITANIC ACID	1	1	3	3	3	1	-	2	1	4	-
TITANIUM DIOXIDE	1	1	2	3	3	1	-	2	1	4	-
TITANIUM SULFATE	1	1	3	3	3	1	-	2	1	4	-
TITANIUM TETRACHLORIDE	2	1	1	2	2	4	2	4	2	1	1
TOLUENE	1	1	2	4	4	4	4	4	2	4	1
TOLUENE DIISOCYANATE	1	3	4	4	4	2	4	4	4	-	-
TOLUENE SULFONIC ACID	1	1	3	3	3	1	-	2	1	4	-
TOLUENE SULFONYL CHLORIDE	1	1	1	2	2	4	-	-	2	3	-
TOLUENESULFONIC ACID	1	1	3	3	3	1	-	2	1	4	-
TOLUIDINE	1	2	3	2	2	4	-	-	2	3	-
TOLUOL	1	1	3	3	3	1	-	2	1	4	-
TOLUQUINONE	1	1	1	2	2	4	-	-	2	3	-
TOLYLALDEHYDE, PARA	1	1	3	3	3	1	-	2	1	4	-
TOSYL ARGININE METHYL ESTER	1	-	4	4	4	3	4	-	-	-	-
TOWN GAS, BENZENE FREE	1	-	1	1	1	4	-	1	1	1	1
TRANSFORMER OIL	1	1	1	1	1	4	1	2	1	1	1
Designations	FFKM	ETP	FKM	NBR	HNBR	EPDM	TFE/P	VQM	FVQM	AU	PTFE

Relative Cost	*****	*****	***	*	**	*	***	**	***	***	***
Rating Descriptions*	1 = Good (<15% Swell) 2 = Fair (15-25% Swell) 3 = Poor (25-40% Swell) 4 = Not Recommended - = Not Tested										
TRANSMISSION FLUID, TYPE A	1	1	1	1	1	4	1	2	1	1	1
TRIACETIN	1	2	4	2	2	1	4	-	4	4	1
TRIALLYL PHOSPHATE	1	1	1	4	-	1	1	3	2	-	-
TRIARYL PHOSPHATE	1	1	1	4	4	1	1	3	2	4	-
TRIBROMOMETHYLBENZENE	1	1	1	2	2	4	-	-	2	3	-
TRIBUTOXYETHYL PHOSPHATE	1	1	2	4	4	1	1	-	2	4	1
TRIBUTYL CITRATE	1	3	4	3	3	1	-	2	1	4	-
TRIBUTYL MERCAPTAN	1	1	2	4	4	4	-	4	3	-	-
TRIBUTYL PHOSPHATE	1	3	4	4	4	1	2	4	4	4	1
TRICHLOROACETIC ACID	1	2	4	2	2	2	3	-	4	4	1
TRICHLOROACETYL CHLORIDE	1	1	1	2	2	4	-	-	2	3	-
TRICHLOROBENZENE	1	1	2	2	2	4	-	-	2	3	-
TRICHLOROETHANE	1	1	1	4	4	4	4	4	2	4	-
TRICHLOROETHANOLAMINE	1	1	3	3	3	1	-	2	1	4	-
TRICHLOROETHYL PHOSPHATE	2	-	4	4	4	-	-	-	-	-	1
TRICHLOROETHYLENE	1	1	1	3	3	4	4	4	2	4	1
TRICHLOROFLUOROMETHANE	2	2	2	2	-	4	4	4	2	-	-
TRICHLOROMETHANE	1	1	1	4	4	4	-	4	2	4	-
TRICHLORONITROMETHANE	1	1	3	3	3	1	-	2	1	4	-
TRICHLOROPROPANE	1	1	1	4	4	4	-	4	2	4	-
TRICHLOROSILANE	1	1	1	4	4	4	-	4	2	4	-
TRICHLOROTRIFLUOROETHANE	2	2	2	2	1	4	4	4	4	-	-
TRICRESYL PHOSPHATE	1	1	1	4	4	1	1	3	2	2	1
TRIETHANOLAMINE	2	3	4	3	3	2	1	4	4	4	1
TRIETHYL ALUMINIUM	1	1	2	4	-	3	-	-	-	-	1
TRIETHYL BORANE	1	1	1	4	-	3	-	-	-	-	1
TRIETHYL PHOSPHATE	1	1	1	2	2	4	-	-	2	3	-
TRIETHYLENE GLYCOL	1	1	2	3	3	1	-	2	1	4	-
TRIETHYLENETETRAMINE	1	3	4	3	3	1	-	2	1	4	-
TRIFLUOROACETIC ACID	2	2	3	3	3	1	-	2	1	4	-
TRIFLUOROETHANE	1	1	1	4	4	4	2	4	2	4	-

Designations	FFKM	ETP	FKM	NBR	HNBR	EPDM	TFE\P	VQM	FVQM	AU	PTFE
Relative Cost	*****	****	***	*	**	*	***	**	***	***	***
Rating Descriptions*	1 = Good (<15% Swell) 2 = Fair (15-25% Swell) 3 = Poor (25-40% Swell) 4 = Not Recommended - = Not Tested										
TRIFLUOROMETHANE	1	1	1	4	4	4	-	4	2	4	-
TRIFLUOROVINYLCHLORIDE	1	1	1	2	2	4	-	-	2	3	-
TRIGLYCOL	1	-	1	1	1	1	-	-	-	-	1
TRIISOPROPYLBENZYLCHLORIDE	1	1	1	2	2	4	-	-	2	3	-
TRIMETHYL BORATE	1	1	1	2	2	4	-	-	2	3	-
TRIMETHYLAMINE	2	3	4	3	3	1	-	2	1	4	-
TRIMETHYLBENZENE	1	1	1	2	2	4	-	-	2	3	-
TRIMETHYLOLPROPANE	1	-	1	4	4	2	-	-	-	-	1
TRIMETHYLPENTANE	1	1	1	1	1	4	-	2	1	1	-
TRINITROTOLUENE	1	1	2	4	4	4	2	-	2	-	1
TRIOCTYL PHOSPHATE	1	1	2	4	4	2	1	3	2	4	1
TRIPHENYL PHOSPHITE	1	1	3	3	3	1	-	2	1	4	-
TRIPOLY PHOSPHATE	1	1	2	4	4	1	1	3	1	4	-
TRIPOTASSIUM PHOSPHATE	1	1	3	3	3	1	-	2	1	4	-
TRISODIUM PHOSPHATE	1	1	1	1	1	1	-	1	1	4	1
TUNG OIL	1	1	1	1	1	4	1	4	2	3	-
TUNGSTEN HEXAFLUORIDE	1	2	-	-	-	-	-	-	-	-	-
TURBINE OIL	1	1	1	1	1	4	1	4	1	1	1
TURBO OIL #35	1	1	1	1	1	4	1	4	1	1	-
TURPENTINE	1	1	2	1	1	4	1	4	2	4	1
UCON HYDROLUBE J-4	1	1	1	2	1	1	1	1	2	4	-
UCON LUBRICANT 50-HB-100	1	1	1	1	1	1	-	1	1	-	-
UCON LUBRICANT 50-HB-260	1	1	1	1	1	1	-	1	1	-	-
UCON LUBRICANT 50-HB-5100	1	1	1	1	1	1	-	1	1	-	-
UCON LUBRICANT 50-HB-55	1	1	1	1	1	1	-	1	1	-	-
UCON LUBRICANT 50-HB-660	1	1	1	1	1	1	-	1	1	-	-
UCON LUBRICANT LB-1145	1	1	1	1	1	1	-	1	1	-	-
UCON LUBRICANT LB-135	1	1	1	1	1	1	-	1	1	-	-
UCON LUBRICANT LB-285	1	1	1	1	1	1	-	1	1	-	-
UCON LUBRICANT LB-300X	1	1	1	1	1	1	-	1	1	-	-

UCON LUBRICANT LB-625	1	1	1	1	1	1	-	1	1	-	-
Designations	FFKM	ETP	FKM	NBR	HNBR	EPDM	TFEP	VQM	FVQM	AU	PTFE
Relative Cost	*****	****	***	*	**	*	***	**	***	***	***
Rating Descriptions*	1 = Good (<15% Swell) 2 = Fair (15-25% Swell) 3 = Poor (25-40% Swell) 4 = Not Recommended - = Not Tested										
UCON LUBRICANT LB-65	1	1	1	1	1	1	1	1	1	-	-
UCON OIL 50-HB-280X	1	1	3	2	2	1	1	-	-	-	-
UCON OIL HEAT TRANSFER 500	1	1	1	1	1	1	-	1	1	-	-
UCON OIL LB-385	1	2	4	1	1	1	1	1	1	-	-
UCON OIL LB-400X	1	2	4	1	1	1	1	1	1	-	-
ULTRA PURE DEIONIZED WATER	1	1	2	3	3	2	2	2	1	4	-
UNDECYLENIC ACID	1	1	1	2	2	4	-	-	2	3	-
UNDECYLIC ACID	1	1	1	2	2	4	-	-	2	3	-
UNIVIS 40 HYDRAULIC FLUID	1	1	1	1	1	4	1	4	1	1	-
UNIVOLT NO. 35 MINERAL OIL	1	1	1	1	1	4	1	4	1	1	-
UNSYMMETRICAL DIMETHYL HYDRAZINE	2	3	4	2	2	1	3	4	4	-	-
URANIUM HEXACHLORIDE	1	1	1	-	-	-	-	-	-	-	-
UREA	1	-	1	1	1	1	-	-	-	-	1
URIC ACID	1	1	3	3	3	1	-	2	1	4	-
VALERALDEHYDE	1	3	4	3	3	1	-	2	1	4	-
VALERIC ACID	1	1	1	3	3	1	-	2	1	4	-
VANADIUM OXIDE	1	1	1	1	1	4	-	2	1	1	-
VANADIUM PENTOXIDE	1	1	1	1	1	4	-	2	1	1	-
VARNISH	1	1	1	2	2	4	2	4	2	3	1
VASELINE	1	-	1	1	1	4	-	2	1	-	1
VASELINE OIL	1	-	1	1	1	4	-	2	1	-	1
VEGETABLE OILS	1	1	1	1	1	3	1	1	1	-	-
VERSILUBE F44, F55	1	1	1	1	1	1	1	3	1	-	-
VERSILUBE F-50	1	1	1	1	1	1	1	3	1	1	-
VINEGAR	1	1	1	2	2	1	-	3	3	4	1
VINYL ACETATE	1	3	4	4	2	2	4	-	-	-	1
VINYL BENZENE	1	1	1	2	2	4	-	-	2	3	-
VINYL BENZOATE	1	1	1	2	2	4	-	-	2	3	-
VINYL CHLORIDE	1	1	2	4	2	4	-	-	2	3	1

VINYL CYANIDE	1	3	3	4	4	4	2	4	4	4	1
VINYL FLUORIDE	1	1	2	2	2	4	-	-	2	3	-
Designations	FFKM	ETP	FKM	NBR	HNBR	EPDM	TFE/P	VQM	FVQM	AU	PTFE
Relative Cost	*****	****	***	*	**	*	***	**	***	***	***
Rating Descriptions*	1 = Good (<15% Swell) 2 = Fair (15-25% Swell) 3 = Poor (25-40% Swell) 4 = Not Recommended - = Not Tested										
VINYLDENE CHLORIDE	1	1	1	2	2	4	-	-	2	3	-
VINYLPYRIDINE	1	1	1	2	2	4	-	-	2	3	-
VITRIOL, WHITE	1	1	3	3	3	1	-	2	1	4	-
WATER	1	1	1	1	1	1	1	2	1	4	1
WAX ALCOHOL	1	-	1	1	2	4	-	-	-	-	1
WEMCO C	1	1	1	1	1	4	1	4	1	1	-
WHISKEY	1	1	1	1	1	1	1	1	1	1	1
WHITE LIQUOR	1	1	1	1	1	1	1	-	-	-	-
WHITE LYE	2	-	4	2	2	1	-	-	-	-	1
WHITE OIL	1	1	1	1	1	4	1	1	1	1	1
WHITE PINE OIL	1	1	1	2	2	4	1	4	1	-	-
WHITE PINE TAR	1	-	1	2	2	4	-	4	1	-	1
WHITE SPIRIT	1	-	1	1	2	4	-	-	-	-	1
WINE	1	1	1	1	1	1	1	1	1	1	1
WOLMAR SALTS	1	1	1	1	1	1	1	1	1	1	-
WOOD ALCOHOL	1	1	4	1	1	1	-	1	1	4	-
WOOD OIL	1	1	1	1	1	4	1	4	2	3	-
WOOL FAT	1	-	1	1	1	1	-	1	1	1	1
XENON	1	1	1	1	1	1	1	1	1	1	-
XYLAMON, WOOD PRESERVATIVE	1	-	2	4	4	4	-	-	-	2	1
XYLENE	1	1	2	4	4	4	4	4	1	4	1
XYLIDENES-MIXED-AROMATIC AMINES	1	1	4	3	3	1	2	4	4	4	-
XYLIDINE	1	3	4	3	-	4	2	4	4	-	-
XYLOL	1	1	1	4	4	4	4	4	1	4	-
YEAST, AQUEOUS	1	1	1	1	1	1	-	1	1	-	1
ZEOLITES	1	1	1	5	1	1	1	1	1	1	1
ZINC ACETATE	1	2	4	2	2	1	3	4	4	1	1
ZINC AMMONIUM CHLORIDE	1	2	3	3	3	1	-	2	1	4	-

ZINC CHLORIDE	1	1	1	1	1	1	1	1	1	-	-
ZINC CHROMATE	1	2	3	3	3	1	-	2	1	4	-
ZINC CYANIDE	1	2	3	3	3	1	-	2	1	4	-
ZINC DIETHYLDITHIOCARBAMATE	1	2	3	3	3	1	-	2	1	4	-
ZINC DIHYDROGEN PHOSPHATE	1	1	3	3	3	1	-	2	1	4	-
ZINC HYDROSULFITE	1	2	3	3	3	1	-	2	1	4	-
ZINC NITRATE	1	1	1	1	1	1	-	-	1	-	-
ZINC OXIDE	1	1	1	1	1	1	-	-	1	-	-
ZINC PHENOLSULFONATE	1	2	3	3	3	1	-	2	1	4	-
ZINC PHOSPHATE	1	1	1	1	1	1	-	1	1	1	-
ZINC SALTS	1	1	1	1	1	1	1	1	1	1	-
ZINC STEARATE	1	1	3	3	3	1	-	2	1	4	-
ZINC SULFATE	1	1	1	1	1	1	1	1	1	4	-
ZINC SULFIDE	1	2	3	3	3	1	-	2	1	4	-
ZIRCONIUM NITRATE	1	1	1	1	1	1	-	1	1	4	-

Material Compatibility and Chemical Resistance Chart

Material compatibility is a key factor in sealing performance. Choosing the right material based on chemical and temperature exposure minimizes costly failures. This chart was developed as a quick reference guide for material compatibility, with all information based on isolated material testing in optimal conditions at room temperature and pressure.

Find the right material for your application to maximize performance and reliability.

* Basic compatibility information is believed to be accurate and reliable. However, no warranty, expressed or implied of actual performance in specific applications. It's the customers responsibility to evaluate specific material compatibility with their chemical supplier prior to use.