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CONTROLLED PYROLYZATES

GRATING SPECTRA

vol. 1

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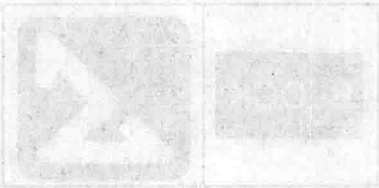
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CONTROLLED PYROLYSATES

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CONTROLLED PYROLYZATES

GRATING SPECTRA

The pyrolysis technique is commonly used in the infrared identification of polymers, this collection of reference spectra is intended to aid in the identification of the principle polymer types. The publication contains 300 grating absorption spectra representing the volatile and non-volatile pyrolyzed fractions of 150 polymers. The samples have been selected to serve as examples of over forty different polymer types.

Each page contains the description of the polymer together with the absorption spectrum of the raw sample prepared as a cast film, followed by the spectra of the volatile and non-volatile pyrolysis products labelled with the temperature of pyrolysis. The conventional spectrum is shown first, the volatile fraction is labelled as vapor phase and the non-volatile fraction is labelled as solid or condensed phase.

The experimental procedure of pyrolysis used in our laboratory is described below.

All of the spectra were prepared on a Perkin Elmer 521 grating spectrophotometer in the 4000 to 200 cm^{-1} frequency range and recorded on transmittance vs. linear wavenumber charts.

An alphabetical trade name index of the polymers in the publication and a classification index are provided with the spectra. The classification index, a scheme of chemically classifying the spectra, has been devised through several years of experience in using reference catalogs for practical studies. A list of the classifications and corresponding code numbers is given in the preface to the indexes.

EXPERIMENTAL PROCEDURE

Each sample was fired in a Model 40 Pyro-Chem Pyrolyzer* under vacuum. The sample (approx. 100 mg) was loosely wrapped in aluminum foil and placed on the heating element of the pyrolyzer. The heating element temperature was slowly increased to the point at which vapors were seen to be produced and the burning continued at this temperature for 30 seconds. The firing temperature was recorded and the pyrolyzer allowed to cool for a few minutes in order to equilibrate the vapor phase before the scanning of the vapor phase spectrum. The pyrolysis chamber was transferred directly to the spectrophotometer and the vapor phase spectrum recorded. A second firing was usually necessary to collect sufficient condensate on the plate to give an acceptable transmission spectrogram. The KRS-5 plate on which the high boiling pyrolysis products had condensed was then removed from the pyrolysis chamber and transferred to the spectrophotometer for measurement of the absorption spectrum of the condensed or solid phase.

* Available from Wilks Scientific Corp.

CONTROLLED PYROLYZATES

PRISM & GRATING SPECTRA

INDEXES

These are the alphabetical and classification indexes for the 300 prism spectra and 300 grating spectra in the Sadtler collection for Controlled Pyrolyzates. All spectrum numbers, both prism and grating, are included in the indexes.

The alphabetical arrangement is according to polymer trade name and the classification arrangement follows a scheme which has been devised according to the chemical nature of each material.

The three digit number in the column to the left of the trade name in the alphabetical index is the classification code, a list of the codes and corresponding polymer types is given below.

The code in the column to the left of the spectrum numbers is an arbitrarily assigned manufacturers code. Our index of manufacturers is updated annually and published with the Composite Alphabetical Index.

CLASSIFICATION SCHEME

Aliphatic Hydrocarbons

- 010 Polyethylene
- 020 Polypropylene
- 030 Petroleum hydrocarbon resins
- 050 Polybutene and butyl rubber
- 060 Polybutadiene
- 070 Synthetic polyisoprene and natural rubber
- 080 Other hydrocarbon polymers and copolymers

Cyclic Unsaturated Hydrocarbons

- 100 Polyterpene and naphthene resins

Aromatic Hydrocarbons

- 120 Polystyrene
- 130 Styrene-butadiene copolymers
- 140 Other styrene copolymers (excluding nitriles)

Fluorinated Hydrocarbons

- 170

Chlorinated Hydrocarbons

- 190

Silicone Polymers

- 210

Polymers Containing Nitrile Linkage

- 230 Acrylonitrile-butadiene-styrene resins
- 240 Polyurethane and urethane prepolymers
- 250 Butadiene-acrylonitrile copolymers
- 260 Other nitrile polymers

Polyethers

290

Anhydride Polymers

300

Epoxy Resins

- 310 Unmodified epoxy resins

Aliphatic Vinyl and Vinylidene Polymers

- 340 Vinyl chloride homopolymer
- 360 Vinyl chloride copolymers
- 370 Polyvinyl alcohol
- 390 Polyvinyl acetals
- 405 Polyvinyl acetate copolymers
- 420 Miscellaneous vinyl polymers

Cellulose Derivatives

- 450 Cellulose ethers
- 470 Cellulose esters and mixed esters

Phenoplasts

- 490 Phenolic resins
- 500 Modified phenolic resins

Acrylic and Methacrylic Polymers (excluding nitriles)

- 520 Acrylic copolymers
- 530 Polyacrylic and polymethacrylic esters

Polyesters

- 560 Polyesters
- 590 Alkyds

Rosin and Rosin Derivatives

660

Polyamides

690

Polyimides

700

Heterocyclic Vinyl Polymers

710 Polyvinylpyrrolidone

720 Polyvinylpyridine

Polysulfones

730

Cyanates, Isocyanates and Nitriles

840

Urea, Amides and Cyanurates

970

SADTLER COMMERCIAL SPECTRA
CONTROLLED PYROLYZATES, PRISM & GRATING ALPHABETICAL INDEX, INFRARED

CLASS		MFG CODE	GRATING	PRISM
405	A-C COPOLYMER GRADE 400 SOLID PHASE	120	DD118K	DD118
405	A-C COPOLYMER GRADE 400 VAPOR PHASE	120	DD117K	DD117
010	A-C POLYETHYLENE 1702 SOLID PHASE	120	DD 16K	DD 16
010	A-C POLYETHYLENE 1702 VAPOR PHASE	120	DD 15K	DD 15
010	A-C POLYETHYLENE 392 SOLID PHASE	120	DD 8K	DD 8
010	A-C POLYETHYLENE 392 VAPOR PHASE	120	DD 7K	DD 7
010	A-C POLYETHYLENE 615 SOLID PHASE	120	DD 10K	DD 10
010	A-C POLYETHYLENE 615 VAPOR PHASE	120	DD 9K	DD 9
010	A-C POLYETHYLENE 655 SOLID PHASE	120	DD 12K	DD 12
010	A-C POLYETHYLENE 655 VAPOR PHASE	120	DD 11K	DD 11
010	A-C POLYETHYLENE 656 SOLID PHASE	120	DD 16K	DD 6
010	A-C POLYETHYLENE 656 VAPOR PHASE	120	DD 5K	DD 5
010	A-C POLYETHYLENE 680 SOLID PHASE	120	DD 14K	DD 14
010	A-C POLYETHYLENE 680 VAPOR PHASE	120	DD 13K	DD 13
010	A-C POLYETHYLENE 7 SOLID PHASE	120	DD 2K	DD 2
010	A-C POLYETHYLENE 7 VAPOR PHASE	120	DD 1K	DD 1
010	A-C POLYETHYLENE 8 SOLID PHASE	120	DD 4K	DD 4
010	A-C POLYETHYLENE 8 VAPOR PHASE	120	DD 13K	DD 3
230	ABSON 89140 NATURAL ABS SOLID PHASE	3560	DD 84K	DD 84
230	ABSON 89140 NATURAL ABS VAPOR PHASE	3560	DD 83K	DD 83
470	ACETOPHANE CELLULOSE ACETATE CONDENSED PHASE	9102	DD296K	DD296
470	ACETOPHANE CELLULOSE ACETATE VAPOR PHASE	9102	DD295K	DD295
170	ACLAR 33C CTFE SOLID PHASE	120	DD 74K	DD 74
170	ACLAR 33C CTFE VAPOR PHASE	120	DD 73K	DD 73
405	ACRALEN EV STANDARD ETHYLENE- VINYL ACETATE CONDENSED PHASE	9260	DD298K	DD298
405	ACRALEN EV STANDARD ETHYLENE- VINYL ACETATE VAPOR PHASE	9260	DD297K	DD297
530	ACRYLOID B-66 100PCT ACRYLIC CONDENSED PHASE	7810	DD274K	DD274
530	ACRYLOID B-66 100PCT ACRYLIC VAPOR PHASE	7810	DD273K	DD273
240	ADIPRENE CM URETHANE RUBBER SOLID PHASE	2570	DD 90K	DD 90
240	ADIPRENE CM URETHANE RUBBER VAPOR PHASE	2570	DD 89K	DD 89
310	ARALDITE 7097 EPOXY RESIN CONDENSED PHASE	1590	DD174K	DD174
310	ARALDITE 7097 EPOXY RESIN VAPOR PHASE	1590	DD173K	DD173
340	BRAVEX G-689 PVC CONDENSED PHASE	193	DD154K	DD154
340	BRAVEX G-689 PVC VAPOR PHASE	193	DD153K	DD153
420	BREON GA 2003 VINYL COMPOUND CONDENSED PHASE	1032	DD162K	DD162
420	BREON GA 2003 VINYL COMPOUND VAPOR PHASE	1032	DD161K	DD161
050	BUTYL RUBBER EB 035 SOLID PHASE	2770	DD 46K	DD 46
050	BUTYL RUBBER EB 035 VAPOR PHASE	2770	DD 45K	DD 45
050	BUTYL RUBBER EB 268 SOLID PHASE	2770	DD 48K	DD 48
050	BUTYL RUBBER EB 268 VAPOR PHASE	2770	DD 47K	DD 47
050	BUTYL RUBBER EB 325 SOLID PHASE	2770	DD 50K	DD 50

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CONTROLLED PYROLYZATES, PRISM & GRATING ALPHABETICAL INDEX, INFRARED

CLASS		MFG CODE	GRATING	PRISM
050	BUTYL RUBBER EB 325 VAPOR PHASE	2770	DD 49K	DD 49
530	CARBOSET 525 RESIN ACRYLIC CONDENSED PHASE	3560	DD210K	DD210
530	CARBOSET 525 RESIN ACRYLIC VAPOR PHASE	3560	DD209K	DD209
240	CAROLUX URETHANE FOAM CONDENSED PHASE	6824	DD252K	DD252
240	CAROLUX URETHANE FOAM VAPOR PHASE	6824	DD251K	DD251
660	CELLOLYN 21 BALSIMIC RESIN SOLID PHASE	4240	DD132K	DD132
660	CELLOLYN 21 BALSIMIC RESIN VAPOR PHASE	4240	DD131K	DD131
080	CHEVRON 3094 PROPYLENE SOLID PHASE	1300	DD 62K	DD 62
080	CHEVRON 3094 PROPYLENE VAPOR PHASE	1300	DD 61K	DD 61
190	CHLORINATED POLYOLEFIN 110-6 SOLID PHASE	8950	DD 76K	DD 76
190	CHLORINATED POLYOLEFIN 110-6 VAPOR PHASE	8950	DD 75K	DD 75
190	CHLORINATED POLYOLEFIN 310-6 SOLID PHASE	8950	DD 78K	DD 78
190	CHLORINATED POLYOLEFIN 310-6 VAPOR PHASE	8950	DD 77K	DD 77
405	CORVIC D65-6 VINYL CL/VINYL AC CONDENSED PHASE	4650	DD230K	DD230
405	CORVIC D65-6 VINYL CL/VINYL AC VAPOR PHASE	4650	DD229K	DD229
240	CYANAPRENE A-8 URETHANE SOLID PHASE	160	DD 92K	DD 92
240	CYANAPRENE A-8 URETHANE VAPOR PHASE	160	DD 91K	DD 91
240	CYANAPRENE A-9 URETHANE SOLID PHASE	160	DD 94K	DD 94
240	CYANAPRENE A-9 URETHANE VAPOR PHASE	160	DD 93K	DD 93
240	CYANAPRENE D-5 URETHANE SOLID PHASE	160	DD 96K	DD 96
240	CYANAPRENE D-5 URETHANE VAPOR PHASE	160	DD 95K	DD 95
530	DIAKON-MG 100 ACRYLIC POLYMER CONDENSED PHASE	4650	DD232K	DD232
530	DIAKON-MG 100 ACRYLIC POLYMER VAPOR PHASE	4650	DD231K	DD231
490	DURITE AD 5042 PHENOLIC CONDENSED PHASE	930	DD156K	DD156
490	DURITE AD 5042 PHENOLIC VAPOR PHASE	930	DD155K	DD155
500	DYNOFEN D-113 PHENOLIC RESIN CONDENSED PHASE	6824	DD250K	DD250
500	DYNOFEN D-113 PHENOLIC RESIN VAPOR PHASE	6824	DD249K	DD249
010	EC-478 POLYETHYLENE SOLID PHASE	1620	DD 18K	DD 18
010	EC-478 POLYETHYLENE VAPOR PHASE	1620	DD 17K	DD 17
370	ELVANOL RH-611 SOLID PHASE	2570	DD112K	DD112
370	ELVANOL RH-611 VAPOR PHASE	2570	DD111K	DD111
370	ELVANOL RH-623 SOLID PHASE	2570	DD114K	DD114
370	ELVANOL RH-623 VAPOR PHASE	2570	DD113K	DD113
370	ELVANOL 70-05 SOLID PHASE	2570	DD116K	DD116
370	ELVANOL 70-05 VAPOR PHASE	2570	DD115K	DD115
010	EPOLENE E-10 POLYETHYLENE CONDENSED PHASE	8950	DD188K	DD188
010	EPOLENE E-10 POLYETHYLENE VAPOR PHASE	8950	DD187K	DD187
010	EPOLENE E-11 POLYETHYLENE CONDENSED PHASE	8950	DD190K	DD190

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CONTROLLED PYROLYZATES, PRISM & GRATING - ALPHABETICAL INDEX, INFRARED

CLASS		MFG CODE	GRATING	PRISM
010	EPOLENE E-11 POLYETHYLENE VAPOR PHASE	8950	DD189K	DD189
170	FLUON G163 PTFE CONDENSED PHASE	4650	DD228K	DD228
170	FLUON G163 PTFE VAPOR PHASE	4650	DD227K	DD227
240	FOAMTHANE POLYURETHANE FOAM CONDENSED PHASE	7342	DD258K	DD258
240	FOAMTHANE POLYURETHANE FOAM VAPOR PHASE	7342	DD257K	DD257
250	FR N-501 BUTADIENE- ACRYLONITRILE CONDENSED PHASE	9940	DD196K	DD196
250	FR N-501 BUTADIENE- ACRYLONITRILE VAPOR PHASE	9940	DD195K	DD195
250	FR-N 503 BUTADIENE- ACRYLONITRILE CONDENSED PHASE	9940	DD194K	DD194
250	FR-N 503 BUTADIENE- ACRYLONITRILE VAPOR PHASE	9940	DD193K	DD193
710	GANEX V-904 CONDENSED PHASE	3400	DD198K	DD198
710	GANEX V-904 VAPOR PHASE	3400	DD197K	DD197
300	GANTREZ AN-119 CONDENSED PHASE	3532	DD292K	DD292
300	GANTREZ AN-119 VAPOR PHASE	3532	DD291K	DD291
300	GANTREZ AN-169 CONDENSED PHASE	3400	DD200K	DD200
300	GANTREZ AN-169 VAPOR PHASE	3400	DD199K	DD199
690	GENBOND 205 POLYAMIDE CONDENSED PHASE	3450	DD204K	DD204
690	GENBOND 205 POLYAMIDE VAPOR PHASE	3450	DD203K	DD203
690	GENBOND 206 POLYAMIDE CONDENSED PHASE	3450	DD206K	DD206
690	GENBOND 206 POLYAMIDE VAPOR PHASE	3450	DD205K	DD205
690	GENBOND 207 POLYAMIDE CONDENSED PHASE	3450	DD208K	DD208
690	GENBOND 207 POLYAMIDE VAPOR PHASE	3450	DD207K	DD207
120	GORDON SUPERFLOW 390 CONDENSED PHASE	3895	DD222K	DD222
120	GORDON SUPERFLOW 390 VAPOR PHASE	3895	DD221K	DD221
020	HERCOFLAT 135 POLYPROPYLENE CONDENSED PHASE	4240	DD224K	DD224
020	HERCOFLAT 135 POLYPROPYLENE VAPOR PHASE	4240	DD223K	DD223
560	HETRON 32-A POLYESTER RESIN CONDENSED PHASE	4480	DD226K	DD226
560	HETRON 32-A POLYESTER RESIN VAPOR PHASE	4480	DD225K	DD225
840	ISONATE 123 P ISOCYANATE CONDENSED PHASE	9130	DD282K	DD282
840	ISONATE 123 P ISOCYANATE VAPOR PHASE	9130	DD281K	DD281
210	K-1045 SILICON RUBBER CONDENSED PHASE	1400	DD280K	DD280
210	K-1045 SILICON RUBBER VAPOR PHASE	1400	DD279K	DD279
420	KANE ACE /EP/ 8-16 POLYVINYL MODIFIER CONDENSED PHASE	4925	DD236K	DD236
420	KANE ACE /EP/ 8-16 POLYVINYL MODIFIER VAPOR PHASE	4925	DD235K	DD235
700	KAPTON POLYIMIDE FILM SOLID PHASE	2571	DD140K	DD140
700	KAPTON POLYIMIDE FILM VAPOR PHASE	2571	DD139K	DD139

SADTLER COMMERCIAL SPECTRA

CONTROLLED PYROLYZATES, PRISM & GRATING ALPHABETICAL INDEX, INFRARED

CLASS			MFG CODE	GRATING	PRISM
470	KELCO	SCS LV CONDUCTIVE POLYMER CONDENSED PHASE	4970	DD238K	DD238
470	KELCO	SCS LV CONDUCTIVE POLYMER VAPOR PHASE	4970	DD237K	DD237
520	KORACRYL H3	ACRYLIC COPOLYMER CONDENSED PHASE	5230	DD240K	DD240
520	KORACRYL H3	ACRYLIC COPOLYMER VAPOR PHASE	5230	DD239K	DD239
240	KOREL	POLYURETHANE FILM SOLID PHASE	3090	DD 98K	DD 98
240	KOREL	POLYURETHANE FILM VAPOR PHASE	3090	DD 97K	DD 97
970	LUBROL EA	SOLID PHASE	270	DD148K	DD148
970	LUBROL EA	VAPOR PHASE	270	DD147K	DD147
230	LUSTRAN 210-1000	ABS RESIN SOLID PHASE	6540	DD 86K	DD 86
230	LUSTRAN 210-1000	ABS RESIN VAPOR PHASE	6540	DD 85K	DD 85
120	LYTRON 602	POLYSTYRENE LATEX CONDENSED PHASE	6540	DD242K	DD242
120	LYTRON 602	POLYSTYRENE LATEX VAPOR PHASE	6540	DD241K	DD241
300	LYTRON 810	STYRENE/MALEIC CONDENSED PHASE	6540	DD244K	DD244
300	LYTRON 810	STYRENE/MALEIC VAPOR PHASE	6540	DD243K	DD243
690	MARANYL A-100	NYLON SOLID PHASE	9427	DD136K	DD136
690	MARANYL A-100	NYLON VAPOR PHASE	9427	DD135K	DD135
700	MELDIN PI-30X	POLYIMIDE SOLID PHASE	2350	DD142K	DD142
700	MELDIN PI-30X	POLYIMIDE VAPOR PHASE	2350	DD141K	DD141
700	MELDIN PI-45X	POLYIMIDE VAPOR PHASE	2530	DD143K	DD143
700	MELDIN PI-45X	POLYIMIDE SOLID PHASE	2350	DD144K	DD144
020	MOPLIN F-040	POLYPROPYLENE SOLID PHASE	6826	DD 32K	DD 32
020	MOPLIN F-040	POLYPROPYLENE VAPOR PHASE	6826	DD 31K	DD 31
390	MOWITAL B-60-T	CONDENSED PHASE	134	DD152K	DD152
390	MOWITAL B-60-T	VAPOR PHASE	134	DD151K	DD151
450	MSAT 300	CELLULOSE FILM CONDENSED PHASE	1034	DD170K	DD170
450	MSAT 300	CELLULOSE FILM VAPOR PHASE	1034	DD169K	DD169
450	MXXT 300	CELLULOSE FILM SOLID PHASE	1034	DD122K	DD122
450	MXXT 300	CELLULOSE FILM VAPOR PHASE	1034	DD121K	DD121
070	NATSYN 450	POLYISOPRENE SOLID PHASE	3580	DD 60K	DD 60
070	NATSYN 450	POLYISOPRENE VAPOR PHASE	3580	DD 59K	DD 59
030	NEBONY 60	HYDROCARBON RESIN CONDENSED PHASE	6790	DD248K	DD248
030	NEBONY 60	HYDROCARBON RESIN VAPOR PHASE	6790	DD247K	DD247
590	NEOCRIL B-734	ACRYLIC CONDENSED PHASE	7440	DD264K	DD264
590	NEOCRIL B-734	ACRYLIC VAPOR PHASE	7440	DD263K	DD263
120	NEVEX 100 RESIN	SOLID PHASE	6790	DD 68K	DD 68
120	NEVEX 100 RESIN	VAPOR PHASE	6790	DD 67K	DD 67
020	NOBLEN BJS-M	POLYPROPYLENE SOLID PHASE	6500	DD 36K	DD 36

SADTLER COMMERCIAL SPECTRA

CONTROLLED PYROLYZATES, PRISM & GRATING ALPHABETICAL INDEX, INFRARED

CLASS		MFG CODE	GRATING	PRISM
020	NOBLEN BJS-M POLYPROPYLENE VAPOR PHASE	6500	DD 35K	DD 35
020	NOBLEN GFL-425 POLYPROPYLENE SOLID PHASE	6500	DD 34K	DD 34
020	NOBLEN GFL-425 POLYPROPYLENE VAPOR PHASE	6500	DQ 33K	DD 33
020	NOBLEN JH-G POLYPROPYLENE SOLID PHASE	6500	DD 38K	DD 38
020	NOBLEN JH-G POLYPROPYLENE VAPOR PHASE	6500	DD 37K	DD 37
230	NOVODUR SM ABS COMPOUND SOLID PHASE	534	DD 88K	DD 88
230	NOVODUR SM ABS COMPOUND VAPOR PHASE	534	DD 87K	DD 87
260	NYSYN 30-5 ACRYLONITRILE SOLID PHASE	1831	DD102K	DD102
260	NYSYN 30-5 ACRYLONITRILE VAPOR PHASE	1831	DD101K	DD101
490	PB 17 PHENOLIC RESIN CONDENSED PHASE	7354	DD262K	DD262
490	PB 17 PHENOLIC RESIN VAPOR PHASE	7354	DD261K	DD261
660	PENTALYN 856 THERMOPLASTIC SOLID PHASE	4240	DD130K	DD130
660	PENTALYN 856 THERMOPLASTIC VAPOR PHASE	4240	DD129K	DD129
190	PENTON 9215 NAT. POLYETHER SOLID PHASE	4240	DD 80K	DD 80
190	PENTON 9215 NAT. POLYETHER VAPOR PHASE	4240	DD 79K	DD 79
190	PERGUT S-90 CHLORINATED ISOPRENE CONDENSED PHASE	6630	DD246K	DD246
190	PERGUT S-90 CHLORINATED ISOPRENE VAPOR PHASE	6630	DD245K	DD245
030	PICCOPALE 100-SF FLAKED SOLID PHASE	7220	DD 44K	DD 44
030	PICCOPALE 100-SF FLAKED VAPOR PHASE	7220	DD 43K	DD 43
490	PLENCO GENERAL PURPOSE PHENOLIC CONDENSED PHASE	7352	DD260K	DD260
490	PLENCO GENERAL PURPOSE PHENOLIC VAPOR PHASE	7352	DD259K	DD259
490	PLENCO MELAMINE PHENOLIC CONDENSED PHASE	7310	DD272K	DD272
490	PLENCO MELAMINE PHENOLIC VAPOR PHASE	7310	DD271K	DD271
190	PLIOFILM 120 FF RUBBER CONDENSED PHASE	3580	DD214K	DD214
190	PLIOFILM 120 FF RUBBER VAPOR PHASE	3580	DD213K	DD213
190	PLIOFILM 40 NI RUBBER CONDENSED PHASE	3580	DD216K	DD216
190	PLIOFILM 40 NI RUBBER VAPOR PHASE	3580	DD215K	DD215
130	PLIOLITE S-5 /MILLED/ CONDENSED PHASE	3580	DD218K	DD218
130	PLIOLITE S-5 /MILLED/ VAPOR PHASE	3580	DD217K	DD217
360	PLIOVIC MC-85 PVC COPOLYMER CONDENSED PHASE	3580	DD220K	DD220
360	PLIOVIC MC-85 PVC COPOLYMER VAPOR PHASE	3580	DD219K	DD219
490	PLYOPHEN 5510 CONDENSED PHASE	7630	DD268K	DD268
490	PLYOPHEN 5510 VAPOR PHASE	7630	DD267K	DD267
690	POLECTRON POLYMER. CONDENSED PHASE	180	DD202K	DD202
690	POLECTRON POLYMER VAPOR PHASE	180	DD201K	DD201
520	POLY-TEX 900 ACRYLIC COPOLYMER CONDENSED PHASE	4820	DD234K	DD234
520	POLY-TEX 900 ACRYLIC COPOLYMER VAPOR PHASE	4820	DD233K	DD233
020	POLYPROPYLENE 41-E-3 CONDENSED PHASE	2171	DD178K	DD178
020	POLYPROPYLENE 41-E-3 VAPOR PHASE	2171	DD177K	DD177

SADTLER COMMERCIAL SPECTRA

CONTROLLED PYROLYZATES, PRISM & GRATING ALPHABETICAL INDEX, INFRARED

CLASS		MFG CODE	GRATING	PRISM
720	POLYSAR 781 VINYL PYRIDINE SOLID PHASE	7367	DD146K	DD146
720	POLYSAR 781 VINYL PYRIDINE VAPOR PHASE	7367	DD145K	DD145
420	POLYVINYL PYRROLIDONE CONDENSED PHASE	1036	DD164K	DD164
420	POLYVINYL PYRROLIDONE VAPOR PHASE	1036	DD163K	DD163
020	PRO-FAX 6523 NAT. POLYPROPYLENE SOLID PHASE	4240	DD 40K	DD 40
020	PRO-FAX 6523 NAT. POLYPROPYLENE VAPOR PHASE	4240	DD 39K	DD 39
450	PT 300 CELLULOSE FILM CONDENSED PHASE	1034	DD166K	DD166
450	PT 300 CELLULOSE FILM VAPOR PHASE	1034	DD165K	DD165
450	PT 400 CELLULOSE FILM CONDENSED PHASE	1034	DD168K	DD168
450	PT 400 CELLULOSE FILM VAPOR PHASE	1034	DD167K	DD167
340	PVC-450 POLYVINYL CHLORIDE SOLID PHASE	2310	DD108K	DD108
340	PVC-450 POLYVINYL CHLORIDE VAPOR PHASE	2310	DD107K	DD107
340	PVC-500 POLYVINYL CHLORIDE SOLID PHASE	340	DD110K	DD110
340	PVC-500 POLYVINYL CHLORIDE VAPOR PHASE	340	DD109K	DD109
340	PVC-60 POLYVINYL CHLORIDE SOLID PHASE	2310	DD106K	DD106
340	PVC-60 POLYVINYL CHLORIDE VAPOR PHASE	2310	DD105K	DD105
470	RAYBRITE P SOLID PHASE	4761	DD126K	DD126
470	RAYBRITE P VAPOR PHASE	4761	DD125K	DD125
470	RAYOCORD X-G SOLID PHASE	8280	DD124K	DD124
470	RAYOCORD X-G VAPOR PHASE	8280	DD123K	DD123
450	RAYOPHANE 300 QSAT CELLULOSE CONDENSED PHASE	1034	DD172K	DD172
450	RAYOPHANE 300 QSAT CELLULOSE VAPOR PHASE	1034	DD171K	DD171
340	REYNOLON 5155 PVC CONDENSED PHASE	7702	DD266K	DD266
340	REYNOLON 5155 PVC VAPOR PHASE	7702	DD265K	DD265
010	SCLAIRFILM POLYETHYLENE FILM CONDENSED PHASE	2570	DD182K	DD182
010	SCLAIRFILM POLYETHYLENE FILM VAPOR PHASE	2570	DD181K	DD181
560	SHANCO 6000 RESIN POLYESTER SOLID PHASE	8280	DD128K	DD128
560	SHANCO 6000 RESIN POLYESTER VAPOR PHASE	8280	DD127K	DD127
060	SOLPRENE 201 POLYBUTADIENE CONDENSED PHASE	7300	DD254K	DD254
060	SOLPRENE 201 POLYBUTADIENE VAPOR PHASE	7300	DD253K	DD253
130	SOLPRENE 300 BUTADIENE/STYRENE CONDENSED PHASE	7300	DD256K	DD256
130	SOLPRENE 300 BUTADIENE/STYRENE VAPOR PHASE	7300	DD255K	DD255
120	SPC-956 POLYSTYRENE CONDENSED PHASE	8562	DD278K	DD278
120	SPC-956 POLYSTYRENE VAPOR PHASE	8562	DD277K	DD277
230	STYROPHANE ABS COPOLYMER CONDENSED PHASE	9202	DD294K	DD294
230	STYROPHANE ABS COPOLYMER VAPOR PHASE	9202	DD293K	DD293
970	SUCONOX-4 SOLID PHASE	6460	DD150K	DD150
970	SUCONOX-4 VAPOR PHASE	6460	DD149K	DD149
660	SYLVAROS HSP TALL OIL ROSIN SOLID PHASE	3520	DD134K	DD134
660	SYLVAROS HSP TALL OIL ROSIN VAPOR PHASE	3520	DD133K	DD133

SADTLER COMMERCIAL SPECTRA

CONTROLLED PYROLYZATES, PRISM & GRATING ALPHABETICAL INDEX, INFRARED

CLASS		MFG CODE	GRATING	PRISM
130	SYNPOL 8107 STYRENE/BUTADIENE CONDENSED PHASE	8992	DD276K	DD276
130	SYNPOL 8107 STYRENE/BUTADIENE VAPOR PHASE	8992	DD275K	DD275
060	SYNPOL 8407 POLYBUTADIENE SOLID PHASE	8992	DD 54K	DD 54
060	SYNPOL 8407 POLYBUTADIENE VAPOR PHASE	8992	DD 53K	DD 53
060	SYNPOL 8454 POLYBUTADIENE SOLID PHASE	8992	DD 56K	DD 56
060	SYNPOL 8454 POLYBUTADIENE VAPOR PHASE	8992	DD 55K	DD 55
060	SYNPOL 8458 POLYBUTADIENE SOLID PHASE	8992	DD 58K	DD 58
060	SYNPOL 8458 POLYBUTADIENE VAPOR PHASE	8992	DD 57K	DD 57
240	TENNFOAM POLYURETHANE FOAM SOLID PHASE	6565	DD100K	DD100
240	TENNFOAM POLYURETHANE FOAM VAPOR PHASE	6565	DD 99K	DD 99
240	THURANE POLYURETHANE FOAM CONDENSED PHASE	2470	DD180K	DD180
240	THURANE POLYURETHANE FOAM VAPOR PHASE	2470	DD179K	DD179
170	TL-126 PTFE SOLID PHASE	3980	DD 72K	DD 72
170	TL-126 PTFE VAPOR PHASE	3980	DD 71K	DD 71
690	TROGAMID T POLYAMIDE CONDENSED PHASE	2635	DD184K	DD184
690	TROGAMID T POLYAMIDE VAPOR PHASE	2635	DD183K	DD183
340	TROSIPLAST C POLYVINYL CL CONDENSED PHASE	2635	DD186K	DD186
340	TROSIPLAST C POLYVINYL CL VAPOR PHASE	2635	DD185K	DD185
240	TUFTANE TF-110 POLYURETHANE CONDENSED PHASE	3560	DD212K	DD212
240	TUFTANE TF-110 POLYURETHANE VAPOR PHASE	3560	DD211K	DD211
190	TYRIN QX2243.16 SOLID PHASE	2470	DD 82K	DD 82
190	TYRIN QX2243.16 VAPOR PHASE	2470	DD 81K	DD 81
010	TYVEK STYLE 1058 POLYETHYLENE SOLID PHASE	2570	DD 20K	DD 20
010	TYVEK STYLE 1058 POLYETHYLENE VAPOR PHASE	2570	DD 19K	DD 19
010	TYVEK STYLE 1073 POLYETHYLENE SOLID PHASE	2570	DD 22K	DD 22
010	TYVEK STYLE 1073 POLYETHYLENE VAPOR PHASE	2570	DD 21K	DD 21
010	TYVEK STYLE 1085 POLYETHYLENE SOLID PHASE	2570	DD 24K	DD 24
010	TYVEK STYLE 1085 POLYETHYLENE VAPOR PHASE	2570	DD 23K	DD 23
010	TYVEK STYLE 1421 POLYETHYLENE SOLID PHASE	2570	DD 26K	DD 26
010	TYVEK STYLE 1421 POLYETHYLENE VAPOR PHASE	2570	DD 25K	DD 25
010	TYVEK STYLE 1461 POLYETHYLENE SOLID PHASE	2570	DD 28K	DD 28
010	TYVEK STYLE 1461 POLYETHYLENE VAPOR PHASE	2570	DD 27K	DD 27
140	UBATOL R-400 SOLID PHASE	9120	DD 70K	DD 70
140	UBATOL R-400 VAPOR PHASE	9120	DD 69K	DD 69
010	UHMW 1900 POLYMER POLYETHYLENE SOLID PHASE	4240	DD 30K	DD 30
010	UHMW 1900 POLYMER POLYETHYLENE VAPOR PHASE	4240	DD 29K	DD 29
240	UNITHANE 651S URETHANE POLYMER CONDENSED PHASE	1990	DD176K	DD176
240	UNITHANE 651S URETHANE POLYMER VAPOR PHASE	1990	DD175K	DD175

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CONTROLLED PYROLYZATES, PRISM & GRATING ALPHABETICAL INDEX, INFRARED

CLASS		MFG CODE	GRATING	PRISM
490	VARCUM 1015 PHENOLIC RESIN CONDENSED PHASE	7630	DD270K	DD270
490	VARCUM 1015 PHENOLIC RESIN VAPOR PHASE	7630	DD269K	DD269
340	VC-32 VINYL CHLORIDE POLYMER CONDENSED PHASE	930	DD158K	DD158
340	VC-32 VINYL CHLORIDE POLYMER VAPOR PHASE	930	DD157K	DD157
340	VC-34 VINYL CHLORIDE POLYMER CONDENSED PHASE	930	DD160K	DD160
340	VC-34 VINYL CHLORIDE POLYMER VAPOR PHASE	930	DD159K	DD159
030	VELSICOL AQ-21 HYDROCARBON RESIN CONDENSED PHASE	9250	DD300K	DD300
030	VELSICOL AQ-21 HYDROCARBON RESIN VAPOR PHASE	9250	DD299K	DD299
340	VINNOL E 70 CG VINYL CHLORIDE HOMOPOLYMER CONDENSED PHASE	9320	DD284K	DD284
340	VINNOL E 70 CG VINYL CHLORIDE HOMOPOLYMER VAPOR PHASE	9320	DD283K	DD283
050	VISTANEX L-100 SOLID PHASE	2770	DD 52K	DD 52
050	VISTANEX L-100 VAPOR PHASE	2770	DD 51K	DD 51
050	VISTANEX LM-MS POLYISOBUTENE CONDENSED PHASE	2770	DD192K	DD192
050	VISTANEX LM-MS POLYISOBUTENE VAPOR PHASE	2770	DD191K	DD191
290	VITAPRENE POLYETHER FILM SOLID PHASE	1033	DD104K	DD104
290	VITAPRENE POLYETHER FILM VAPOR PHASE	1033	DD103K	DD103
420	VITRONE EMBOSSED FAWN 48 SOLID PHASE	8591	DD120K	DD120
420	VITRONE EMBOSSED FAWN 48 VAPOR PHASE	8591	DD119K	DD119
020	WESTLAKE NATURAL PROPYLUX SOLID PHASE	9427	DD 42K	DD 42
020	WESTLAKE NATURAL PROPYLUX VAPOR PHASE	9427	DD 41K	DD 41
690	WESTLAKE NYLUX NYLON SOLID PHASE	9427	DD138K	DD138
690	WESTLAKE NYLUX NYLON VAPOR PHASE	9427	DD137K	DD137
120	WESTLAKE STYROLUX POLYSTYRENE CONDENSED PHASE	9427	DD286K	DD286
120	WESTLAKE STYROLUX POLYSTYRENE VAPOR PHASE	9427	DD285K	DD285
730	WESTLAKE THERMALUX POLYSULFONE CONDENSED PHASE	9427	DD288K	DD288
730	WESTLAKE THERMALUX POLYSULFONE VAPOR PHASE	9427	DD287K	DD287
170	WHITCON 5 PTFE CONDENSED PHASE	9595	DD290K	DD290
170	WHITCON 5 PTFE VAPOR PHASE	9595	DD289K	DD289
100	ZONAREZ TYPE 8115 POLYTERPENE SOLID PHASE	340	DD 66K	DD 66
100	ZONAREZ TYPE 8115 POLYTERPENE VAPOR PHASE	340	DD 65K	DD 65
100	ZONAREZ TYPE 7115 POLYTERPENE SOLID PHASE	340	DD 64K	DD 64
100	ZONAREZ TYPE 7115 POLYTERPENE VAPOR PHASE	340	DD 63K	DD 63

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CONTROLLED PYROLYZATES, PRISM & GRATING CLASS INDEX, INFRARED

		MFG CODE	GRATING	PRISM
10	POLYETHYLENE			
	A-C POLYETHYLENE 1702 SOLID PHASE	120	DD 16K	DD 16
	A-C POLYETHYLENE 1702 VAPOR PHASE	120	DD 15K	DD 15
	A-C POLYETHYLENE 392 SOLID PHASE	120	DD 8K	DD 8
	A-C POLYETHYLENE 392 VAPOR PHASE	120	DD 7K	DD 7
	A-C POLYETHYLENE 615 SOLID PHASE	120	DD 10K	DD 10
	A-C POLYETHYLENE 615 VAPOR PHASE	120	DD 9K	DD 9
	A-C POLYETHYLENE 655 SOLID PHASE	120	DD 12K	DD 12
	A-C POLYETHYLENE 655 VAPOR PHASE	120	DD 11K	DD 11
	A-C POLYETHYLENE 656 SOLID PHASE	120	DD 6K	DD 6
	A-C POLYETHYLENE 656 VAPOR PHASE	120	DD 5K	DD 5
	A-C POLYETHYLENE 680 SOLID PHASE	120	DD 14K	DD 14
	A-C POLYETHYLENE 680 VAPOR PHASE	120	DD 13K	DD 13
	A-C POLYETHYLENE 7 SOLID PHASE	120	DD 2K	DD 2
	A-C POLYETHYLENE 7 VAPOR PHASE	120	DD 1K	DD 1
	A-C POLYETHYLENE 8 SOLID PHASE	120	DD 4K	DD 4
	A-C POLYETHYLENE 8 VAPOR PHASE	120	DD 3K	DD 3
	EC-478 POLYETHYLENE SOLID PHASE	1620	DD 18K	DD 18
	EC-478 POLYETHYLENE VAPOR PHASE	1620	DD 17K	DD 17
	EPOLENE E-10 POLYETHYLENE CONDENSED PHASE	8950	DD188K	DD188
	EPOLENE E-10 POLYETHYLENE VAPOR PHASE	8950	DD187K	DD187
	EPOLENE E-11 POLYETHYLENE CONDENSED PHASE	8950	DD190K	DD190
	EPOLENE E-11 POLYETHYLENE VAPOR PHASE	8950	DD189K	DD189
	SCLAIRFILM POLYETHYLENE FILM CONDENSED PHASE	2570	DD182K	DD182
	SCLAIRFILM POLYETHYLENE FILM VAPOR PHASE	2570	DD181K	DD181
	TYVEK STYLE 1058 POLYETHYLENE SOLID PHASE	2570	DD 20K	DD 20
	TYVEK STYLE 1058 POLYETHYLENE VAPOR PHASE	2570	DD 19K	DD 19
	TYVEK STYLE 1073 POLYETHYLENE SOLID PHASE	2570	DD 22K	DD 22
	TYVEK STYLE 1073 POLYETHYLENE VAPOR PHASE	2570	DD 21K	DD 21
	TYVEK STYLE 1085 POLYETHYLENE SOLID PHASE	2570	DD 24K	DD 24
	TYVEK STYLE 1085 POLYETHYLENE VAPOR PHASE	2570	DD 23K	DD 23
	TYVEK STYLE 1421 POLYETHYLENE SOLID PHASE	2570	DD 26K	DD 26
	TYVEK STYLE 1421 POLYETHYLENE VAPOR PHASE	2570	DD 25K	DD 25
	TYVEK STYLE 1461 POLYETHYLENE SOLID PHASE	2570	DD 28K	DD 28
	TYVEK STYLE 1461 POLYETHYLENE VAPOR PHASE	2570	DD 27K	DD 27
	UHMW 1900 POLYMER POLYETHYLENE SOLID PHASE	4240	DD 30K	DD 30
	UHMW 1900 POLYMER POLYETHYLENE VAPOR PHASE	4240	DD 29K	DD 29
20	POLYPROPYLENE			
	HERCOFLAT 135 POLYPROPYLENE CONDENSED PHASE	4240	DD224K	DD224
	HERCOFLAT 135 POLYPROPYLENE VAPOR PHASE	4240	DD223K	DD223
	MOPLIN F-040 POLYPROPYLENE SOLID PHASE	6826	DD 32K	DD 32

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CONTROLLED PYROLYZATES, PRISM & GRATING

CLASS INDEX, INFRARED

	MFG CODE	GRATING	PRISM
MOPLIN F-040 POLYPROPYLENE VAPOR PHASE	6826	DD 31K	DD 31
NOBLEN BJS-M POLYPROPYLENE SOLID PHASE	6500	DD 36K	DD 36
NOBLEN BJS-M POLYPROPYLENE VAPOR PHASE	6500	DD 35K	DD 35
NOBLEN GFL-425 POLYPROPYLENE SOLID PHASE	6500	DD 34K	DD 34
NOBLEN GFL-425 POLYPROPYLENE VAPOR PHASE	6500	DD 33K	DD 33
NOBLEN JH-G POLYPROPYLENE SOLID PHASE	6500	DD 38K	DD 38
NOBLEN JH-G POLYPROPYLENE VAPOR PHASE	6500	DD 37K	DD 37
POLYPROPYLENE 41-E-3 CONDENSED PHASE	2171	DD178K	DD178
POLYPROPYLENE 41-E-3 VAPOR PHASE	2171	DD177K	DD177
PRO-FAX 6523 NAT. POLYPROPYLENE SOLID PHASE	4240	DD 40K	DD 40
PRO-FAX 6523 NAT. POLYPROPYLENE VAPOR PHASE	4240	DD 39K	DD 39
WESTLAKE NATURAL PROPYLUX SOLID PHASE	9427	DD 42K	DD 42
WESTLAKE NATURAL PROPYLUX VAPOR PHASE	9427	DD 41K	DD 41
30 PETROLEUM HYDROCARBON RESINS			
NEBONY 60 HYDROCARBON RESIN CONDENSED PHASE	6790	DD248K	DD248
NEBONY 60 HYDROCARBON RESIN VAPOR PHASE	6790	DD247K	DD247
PICCOPALE 100-SF FLAKED SOLID PHASE	7220	DD 44K	DD 44
PICCOPALE 100-SF FLAKED VAPOR PHASE	7220	DD 43K	DD 43
VELSICOL AO-21 HYDROCARBON RESIN CONDENSED PHASE	9250	DD300K	DD300
VELSICOL AO-21 HYDROCARBON RESIN VAPOR PHASE	9250	DD299K	DD299
50 POLYBUTENE AND BUTYL RUBBER			
BUTYL RUBBER EB 035 SOLID PHASE	2770	DD 46K	DD 46
BUTYL RUBBER EB 035 VAPOR PHASE	2770	DD 45K	DD 45
BUTYL RUBBER EB 268 SOLID PHASE	2770	DD 48K	DD 48
BUTYL RUBBER EB 268 VAPOR PHASE	2770	DD 47K	DD 47
BUTYL RUBBER EB 325 SOLID PHASE	2770	DD 50K	DD 50
BUTYL RUBBER EB 325 VAPOR PHASE	2770	DD 49K	DD 49
VISTANEX L-100 SOLID PHASE	2770	DD 52K	DD 52
VISTANEX L-100 VAPOR PHASE	2770	DD 51K	DD 51
VISTANEX LM-MS POLYISOBUTENE CONDENSED PHASE	2770	DD192K	DD192
VISTANEX LM-MS POLYISOBUTENE VAPOR PHASE	2770	DD191K	DD191
60 POLYBUTADIENE			
SOLPRENE 201 POLYBUTADIENE CONDENSED PHASE	7300	DD254K	DD254
SOLPRENE 201 POLYBUTADIENE VAPOR PHASE	7300	DD253K	DD253
SYNPOL 8407 POLYBUTADIENE SOLID PHASE	8992	DD 54K	DD 54
SYNPOL 8407 POLYBUTADIENE VAPOR PHASE	8992	DD 53K	DD 53
SYNPOL 8454 POLYBUTADIENE SOLID PHASE	8992	DD 56K	DD 56
SYNPOL 8454 POLYBUTADIENE VAPOR PHASE	8992	DD 55K	DD 55
SYNPOL 8458 POLYBUTADIENE SOLID PHASE	8992	DD 58K	DD 58
SYNPOL 8458 POLYBUTADIENE VAPOR PHASE	8992	DD 57K	DD 57