

Europrene® Intol®

ESBR
HSR

ESBR

Emulsion Polymerized
Styrene-Butadiene Rubber

HSR

Emulsion Resin-Rubber
Masterbatch

Emulsion Polymerized Styrene-Butadiene Rubber (ESBR)

Grades	Bound styrene % wt ⁽¹⁾	Mooney viscosity ML (1+4) 100°C ⁽²⁾	Emulsifier	Coagulant
Dry Types				
Europrene / Intol 1500	23.5	52	Rosin acid	Acid + coag. aid
Europrene / Intol 1502	23.5	52	Fatty-rosin acid	Acid + coag. aid
Europrene 1502 F	23.5	52	Fatty-rosin acid	Acid + coag. aid
Europrene / Intol 1509	23.5	33	Fatty-rosin acid	Acid + coag. aid

Grades	Bound styrene % wt ⁽¹⁾	Mooney viscosity ML (1+4) 100°C ⁽²⁾	Type	Oil p.h.r. ⁽³⁾	Emulsifier
Oil Extended Types					
Europrene 1712	23.5	51	DAE	37.5	Fatty-rosin acid
Europrene / Intol 1723	23.5	48	TDAE	37.5	Fatty-rosin acid
Europrene 1732	32	49	MES	32.5	Fatty-rosin acid
Europrene / Intol 1739	40	52	TDAE	37.5	Fatty-rosin acid
Europrene 1778	23.5	49	NAPH	37.5	Fatty-rosin acid
Intol 1783	23.5	52	RAE	37.5	Fatty-rosin acid
Intol 1789	40	55	RAE	37.5	Fatty-rosin acid

Emulsion Resin-Rubber Masterbatch (HSR)

Grade	Bound styrene % wt ⁽¹⁾	Mooney viscosity ML (1+4) 100°C ⁽²⁾	Emulsifier	Coagulant
Europrene HS 630	63	56	Fatty-rosin acid	Acid + coag. aid

All grades are nitrosamine free.

(1) ASTM D 5775

(2) ASTM D 1646

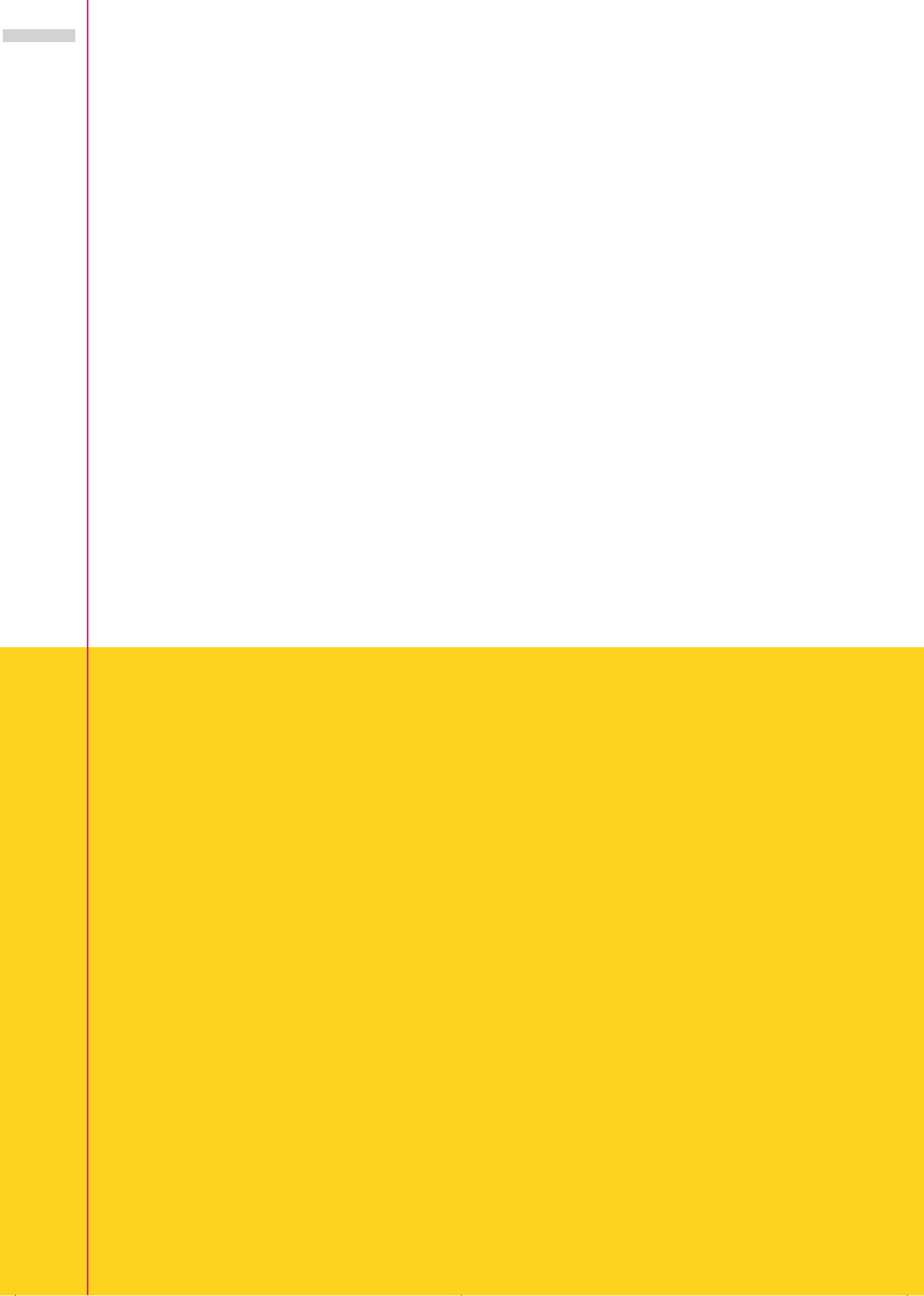
(3) ASTM D 5774

Storage conditions: store in vented, dry area at temperatures between 20°C and 30°C; no direct sunlight.

Stabilizer		Main applications
Non staining		Tyres, retreading, conveyor belts, hoses, mechanical goods
Non staining		Tyres, footwear, sheeting, light coloured mechanical goods, flooring, adhesives
Non staining		Articles in contact with foodstuffs
Non staining		Footwear, microcellular soles, injection moulding, carpet underlay, extruded and calendered goods

Coagulant	Stabilizer	Main applications
Acid + coag. aid	Non staining	Tyres, retreading, conveyor belts, hoses, mechanical goods
Acid + coag. aid	Non staining	Tyres, retreading, conveyor belts, hoses, mechanical goods
Acid + coag. aid	Non staining	
Acid + coag. aid	Non staining	High hysteresis tyre tread compounds with improved wet road grip
Acid + coag. aid	Non staining	Footwear, flooring, microcellular articles, hoses, light coloured goods
Acid + coag. aid	Non staining	Tyres, retreading, conveyor belts, hoses, mechanical goods
Acid + coag. aid	Non staining	High hysteresis tyre tread compounds with improved wet road grip

Stabilizer	Main applications
Non staining	High hardness soles and sheeting, microcellular sheeting, flooring, hoses, technical goods with high hardness



Europrene® SOL

SSBR

SSBR

Solution Polymerized
Styrene-Butadiene Rubber

Solution Polymerized Styrene-Butadiene Rubber (SSBR)

SSBR

Grades	Bound styrene % wt	Block styrene % wt	Mooney viscosity ML (1+4) 100°C	Viscosity cps 5% STY 25°C
Partial Block Types				
Europrene SOL 1205	25	18	53	10
Europrene SOL B 183	11	7	65	32

Grade	Bound styrene % wt	Vinyl content % wt ⁽¹⁾	Mooney viscosity ML (1+4) 100°C	Type	Oil p.h.r.
Random Dry Types					
Europrene SOL R C2525	26	24	52	-	-

Grades	Bound styrene % wt	Vinyl content % wt ⁽¹⁾	Mooney viscosity ML (1+4) 100°C	Type	Oil p.h.r.
Random Oil Extended Types					
Europrene SOL R 72612	25	67	48	MES	36.8
Europrene SOL R 72614	25	64	55	TDAE	37.5
Europrene SOL R C2564-T	25	64	50	TDAE	37.5

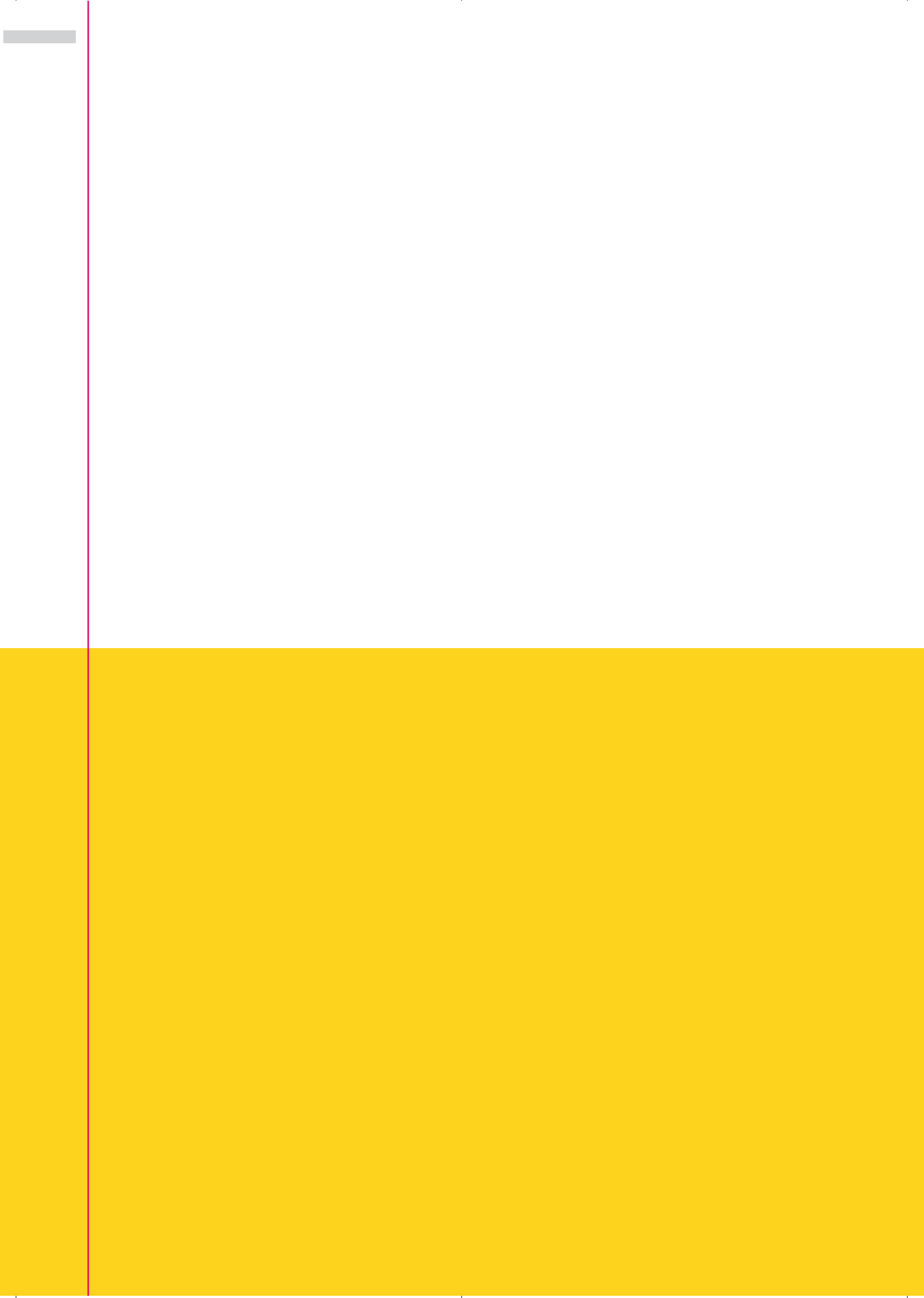
(1) Referred to butadiene portion.

Storage conditions: store in vented, dry area at temperatures between 20°C and 30°C; no direct sunlight.

Stabilizer		Main applications
Non staining		Calendered and extruded articles, cables, sheeting, flooring, adhesives, bitumen modification, HIPS
Non staining		Specially prepared material suitable for the manufacture of ABS and HIPS

Stabilizer		Main applications
Non staining		Carbon black based compounds for low rolling resistance tyre treads, mechanical goods, footwear

Stabilizer		Main applications
Non staining		Silica-based compounds for low rolling resistance tyre treads, winter tyre treads
Non staining		Silica-based compounds for low rolling resistance tyre treads, winter tyre treads
Non staining		Silica-based compounds for low rolling resistance tyre treads with improved wet grip, mechanical goods



Europrene Neocis[®] Intene[®]

BR

Polybutadiene Rubber

BR

Polybutadiene Rubber (BR)

Grades	Cis content % wt	Mooney viscosity ML (1+4) 100°C	Stabilizer
High cis Types			
Europrene Neocis BR 40	98	43	Non staining
Europrene Neocis BR 60	98	63	Non staining

Grades	Cis content % wt	Mooney viscosity ML (1+4) 100°C	Stabilizer
Low cis Types			
Intene 50	38	48	Non staining
Intene C 30 AF	38	40	Non staining

Grades	Cis content % wt	Viscosity cP 5% STY 25°C	Colour Alpha	STY insoluble % (325) filter
Low cis Types for HIPS				
Intene 40 AF	38	100	5	0.02
Intene 50 A	38	170	5	0.02
Intene 50 AF	38	170	5	0.02
Intene 60 AF	38	250	5	0.02
Intene C 30 AF	38	42	5	0.02

Grade	Vinyl content % wt	Mooney viscosity ML (1+4) 100°C	Stabilizer
High Vinyl Grade			
Europrene BR HV80	80	70	Non staining

Storage conditions: store in vented, dry area at temperatures between 20°C and 30°C; no direct sunlight.

Main applications

	Tyre tread and sidewall, camelback, conveyor belts, technical goods, hoses, golf balls

Main applications

	Tyres, belting, moulded and extruded articles

	Tyre bead area, solid tyres, high hardness/resilience compounds, moulded and extruded articles
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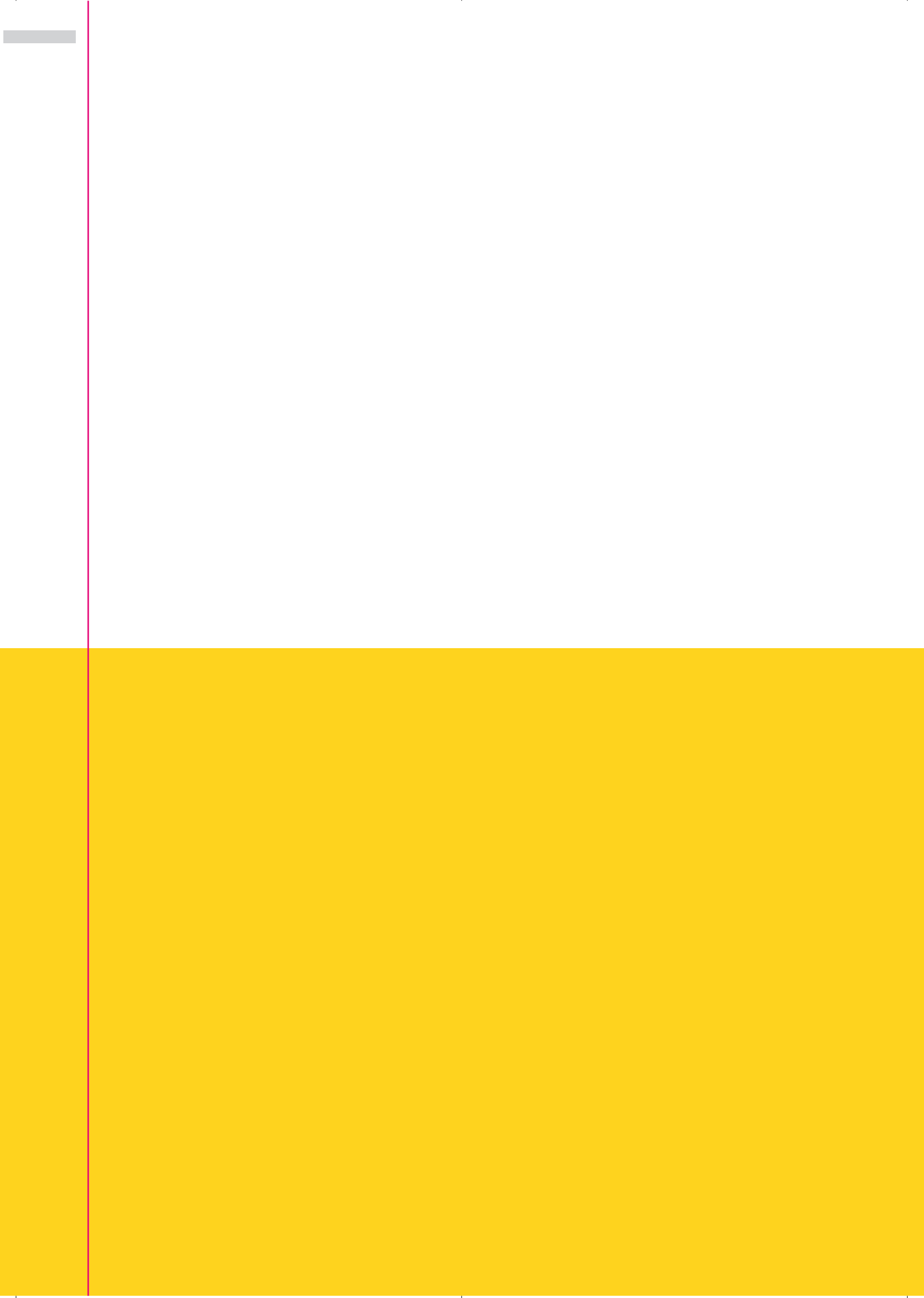
Stabilizer

Main applications

Food approved	Specially prepared materials suitable for the manufacture of ABS and high impact polystyrene	
Food approved		
Food approved		
Food approved		
Food approved	Specially prepared materials suitable for the manufacture of ABS, high impact and glossy polystyrene	

Main applications

	Tyre tread compounds with improved wet/ice grip



Europrene® SOL T

Europrene® SOL TH

TPR

Thermoplastic Rubber

TPR

Thermoplastic Rubber (TPR)

Grades	Bound styrene % wt	Structure	Oil p.h.r.	Diblock % wt	Brookfield viscosity ⁽¹⁾ cP	Melt flow index ⁽²⁾ g/10 min
Styrene-Butadiene (Dry SBS)						
Europrene SOL T 161 B	30	Radial	-	10	20000	< 1
Europrene SOL T 161 C	30	Radial	-	10	7500	< 1
Europrene SOL T 6205	25	Radial	-	10	7700	< 1
Europrene SOL T 6302	30	Linear	-	12	4000	< 1
Europrene SOL T 6306	37	Radial	-	10	22000	< 1
Europrene SOL T 166	30	Linear	-	10	1300	6
Europrene SOL T 6320	31	Linear	-	75	600	11
Europrene SOL T 6414	40	Radial	-	22	400	11
Europrene SOL T 6434	40	Radial	-	45	350	15

Grades	Bound styrene % wt	Structure	Oil p.h.r.	Diblock % wt	Brookfield viscosity ⁽¹⁾ cP	Melt flow index ⁽²⁾ g/10 min
Styrene-Butadiene (Oil Extended SBS)						
Europrene SOL T 172	31	Radial	45	-	-	9
Europrene SOL T 177	50	Radial	40	-	-	15

Grades	Bound styrene % wt	Structure	Oil p.h.r.	Diblock % wt	Brookfield viscosity ⁽¹⁾ cP	Melt flow index ⁽²⁾ g/10 min
Styrene-Isoprene (SIS)						
Europrene SOL T 190	16	Linear	-	25	1000	9
Europrene SOL T 9113	18	Linear	-	8	850	12
Europrene SOL T 9131	15	Linear	-	40	800	10
Europrene SOL T 9133	16	Linear	-	55	600	14
Europrene SOL T 9326	30	Linear	-	15	300	8

Grades	Bound styrene % wt	Structure	Oil p.h.r.	Diblock % wt	Brookfield viscosity ⁽⁶⁾ cP	Melt flow index ⁽⁵⁾ g/10 min
Styrene-Ethylene-Butylene (SEBS)						
Europrene SOL TH 2311	30	Linear	-	-	500	1
Europrene SOL TH 2312	30	Linear	-	-	1600	< 1
Europrene SOL TH 2314	31	Linear	-	-	-	< 1
Europrene SOL TH 2315	32	Linear	-	-	-	< 1

All reported figures are to be intended as typical values.

All grades are stabilized with a designed antioxidant package.

In general all clear grades (non oil-extended) are FDA approved.

For more detailed information please contact your versalis Sales Representative.

(1) Toluene solution, 25% by weight

(2) ASTM D 1238, P conditions (5 kg, 190°C)

(3) Values obtained on compression moulded specimen, according to ASTM D 2240 test method

(4) PL = dense pellets; G = granules; F = porous pellets; P = powder

(5) ASTM D 1238, G conditions (5 kg, 200°C)

(6) Toluene solution, 20% by weight

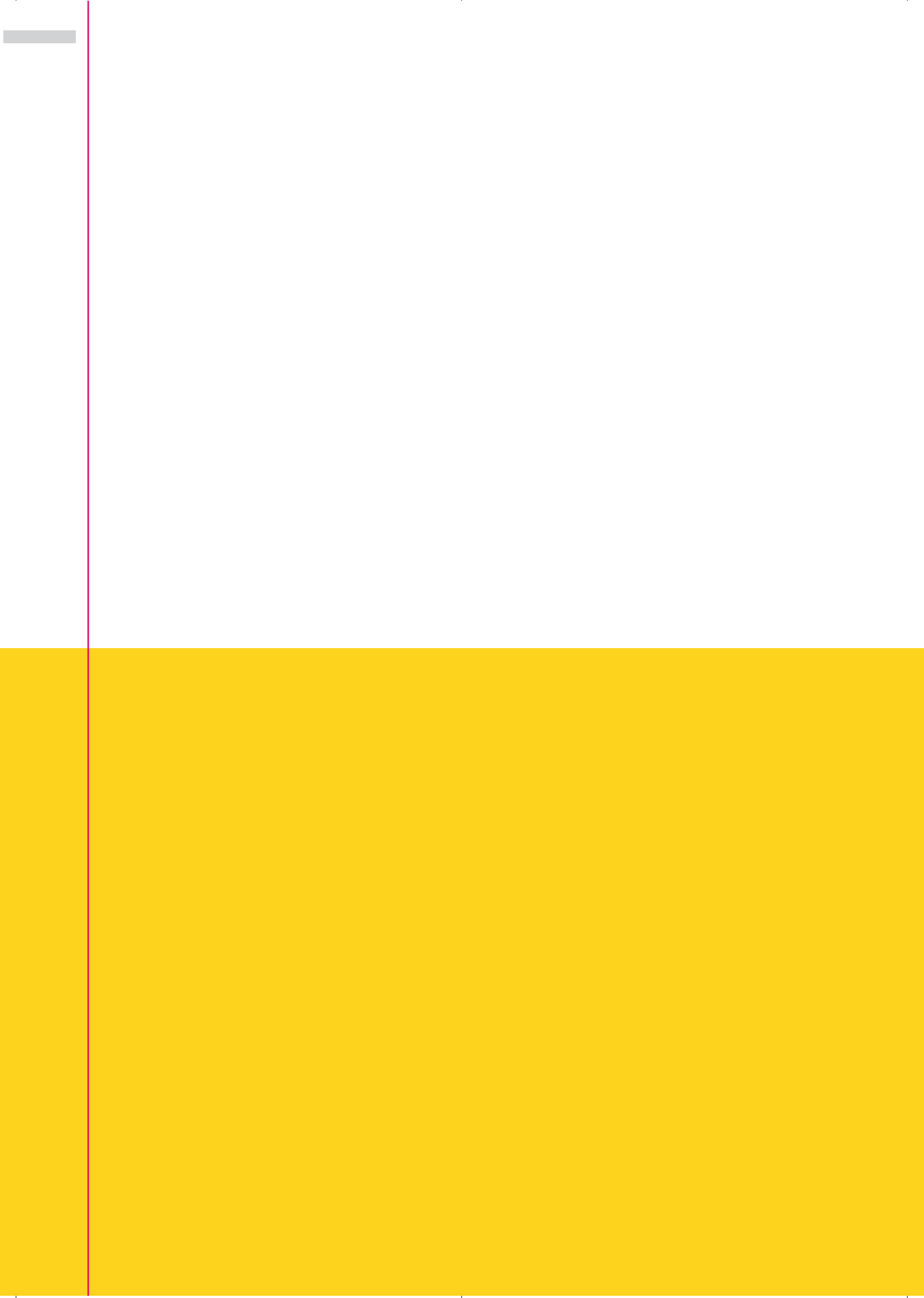
Storage conditions: store in vented, dry area at temperatures between 20°C and 30°C; no direct sunlight.

Hardness ⁽⁵⁾ Shore A	Physical form ⁽⁴⁾	Antioxidant	Main applications
82	G, P		Bitumen modification for roofing and road paving
82	G		
68	G		Bitumen modification for road paving, adhesives and sealants
80	G		Bitumen modification for roofing and road paving, compounding
90	G, P		Bitumen modification for roofing
72	PL	TNPP free	Moulded and extruded goods, polymer modification, adhesives
64	PL	TNPP free	Bitumen modification, adhesives, polymer modification
88	PL	TNPP free	Adhesives, compounding, polymer modification
87	PL	TNPP free	Low viscosity, high cohesion hot melt adhesives

Hardness ⁽⁵⁾ Shore A	Physical form ⁽⁴⁾	Antioxidant	Main applications
48	PL	TNPP free	Footwear, polymer modification and plastic recycling, technical goods
86	PL	TNPP free	Footwear, high hardness sheets and soles

Hardness ⁽⁵⁾ Shore A	Physical form ⁽⁴⁾	Antioxidant	Main applications
30	PL	TNPP free	General purposes grade for hot melt pressure sensitive adhesives
44	PL	TNPP free	Hot melt pressure sensitive adhesives for packaging tapes
25	PL	TNPP free	Hot melt pressure sensitive adhesives for labels and non woven
20	PL	TNPP free	Hot melt pressure sensitive adhesives for labels
60	PL	TNPP free	High cohesion hot melt adhesives, high colour and viscosity stability

Hardness ⁽⁵⁾ Shore A	Physical form ⁽⁴⁾	Antioxidant	Main applications
75	F	TNPP free	General purposes grade for hot melt adhesives, sealants and polymer modification
75	F	TNPP free	Compounding, adhesives, polymer modification
70	F	TNPP free	Compounding
68	F, P	TNPP free	Compounding



Dutral®

EP(D)M

Ethylene-Propylene Rubber

EP(D)M

Ethylene-Propylene Rubber (EP(D)M)

Grades	Propylene content % wt	Mooney viscosity ML (1+4) 125°C	Oil content % wt	Physical form ⁽²⁾
Copolymers				
Dutral CO 034	28	44 ⁽¹⁾	-	B, PL
Dutral CO 038	28	60	-	B, FB, PL
Dutral CO 043	45	33 ⁽¹⁾	-	B
Dutral CO 054	41	44 ⁽¹⁾	-	B
Dutral CO 058	48	80 ⁽¹⁾	-	B
Dutral CO 059	41	79	-	B

Grades	Propylene content % wt	Mooney viscosity ML (1+4) 125°C	Oil content % wt	Physical form ⁽²⁾
Terpolymers*				
Dutral TER 4033	25	30 ⁽¹⁾	-	FB
Dutral TER 4038 EP	27	60	-	EP, FB, PL
Dutral TER 4039	27	77	-	FB
Dutral TER 4044	35	44 ⁽¹⁾	-	B
Dutral TER 4047	40	55	-	B
Dutral TER 4049	40	76	-	B
Dutral TER 4334	27 ⁽⁴⁾	28	30	B
Dutral TER 4436	28 ⁽⁴⁾	43	40	B
Dutral TER 4437	32 ⁽⁴⁾	57	40	B
Dutral TER 4437 WO	32 ⁽⁴⁾	57	40 ⁽³⁾	B
Dutral TER 4535	32 ⁽⁴⁾	32	50	B
Dutral TER 6148	40 ⁽⁴⁾	65	15	B
Dutral TER 6235	32 ⁽⁴⁾	33	23	B
Dutral TER 6537	32 ⁽⁴⁾	43	50	B
Dutral TER 9046	31	67 ⁽¹⁾	-	B

* Diene termonomer ENB

Grades	MFI (230°C-5Kg) g /10 min	Volatiles wt max %	ASH wt max %	Physical form ⁽²⁾
Polyolefin Modifiers				
Dutral PM 06 PLE	1.8	0.2	0.3	PL
Dutral PM 8273	2.4	0.2	3.0	PL

Grades	Propylene content % wt	Mooney viscosity ML (1+4) 100°C	MFI (230°C-2.16Kg) g /10 min	Ash wt max %
Oil Modifiers				
Dutral OCP 2530 PL	34	-	8.5	0.4
Dutral OCP 5050	48	60	-	0.3

(1) ML (1+4) 100°C

(2) B = bales; EP = friable easy processing bales; PL = pellets; FB = friable bales;

PL ** = non-free flowing pellets

(3) Pure paraffinic oil

(4) Referred to polymer matrix

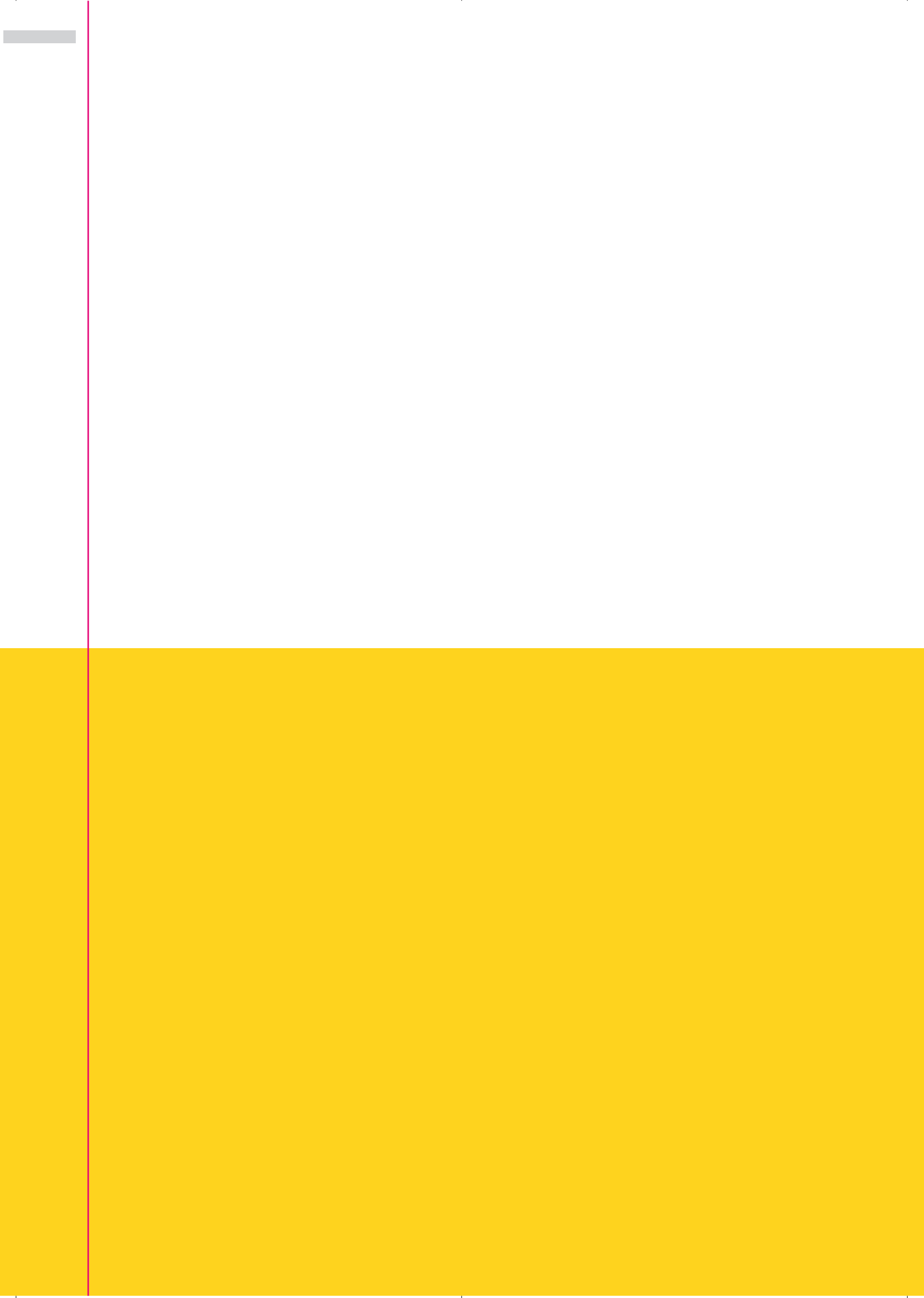
Storage conditions: store in vented, dry area at temperatures between 20°C and 30°C; no direct sunlight.

Unsaturation level	Main applications
-	Cables, appliances, polymer modification, oil viscosity modifier
-	Automotive, cables, appliances, polymer modification, oil viscosity modifier
-	Automotive, cables, appliances, polymer modification, oil viscosity modifier, bitumen modification
-	Automotive, cables, mechanical goods, building, bitumen modification, polymer modification, appliances
-	Appliances, polymer modification, oil viscosity modifier
-	Polymer modification, mechanical goods, building

Unsaturation level	Main applications
5	Automotive, cables, mechanical goods, high hardness profiles
4.4	Automotive, cables, mechanical goods, building, appliances, polymer modification
4.4	Automotive, cables, mechanical goods, building, appliances, polymer modification
4	Automotive, cables, mechanical goods, building, appliances
4.5	Automotive, mechanical goods, building
4.5	Automotive, cables, mechanical goods, building, appliances
4.7 ⁽⁴⁾	Automotive, cables, mechanical goods, building, appliances
5.5 ⁽⁴⁾	Automotive, mechanical goods, appliances, TPV
4.5 ⁽⁴⁾	Automotive, mechanical goods, appliances, TPV
4.5 ⁽⁴⁾	Automotive, mechanical goods, appliances, TPV, building
3.4 ⁽⁴⁾	Automotive, mechanical goods, building, appliances, cables
7 ⁽⁴⁾	Automotive, mechanical goods, building, appliances
7.4 ⁽⁴⁾	Automotive, mechanical goods, building, appliances, cables
8 ⁽⁴⁾	Automotive, mechanical goods, appliances, TPV, building
8.9	Automotive, mechanical goods, appliances, building

Pellet/size g/30 pellets	Main applications
0.45	Polymer modification
0.45	

Volatiles wt max %	Physical form ⁽²⁾	Main applications
0.2	PL**	Oil viscosity modifier
0.9	B	



Europrene® N

NBR

Acrylonitrile Butadiene Rubber

NBR-PVC Blend

NBR
NBR-PVC

Acrylonitrile-Butadiene Rubber (NBR)

Grades	Polymerization	Acrylonitrile content % wt	Mooney viscosity ML (1+4) 100°C	Physical form	Antisticking agent
Normal Types					
Europrene N 2845	Cold	28	45	Bales	-
Europrene N 2860	Cold	28	60	Bales	-
Europrene N 3330	Cold	33	30	Bales	-
Europrene N 3345	Cold	33	45	Bales	-
Europrene N 3360	Cold	33	60	Bales	-
Europrene N 3380	Cold	33	80	Bales	-
Europrene N 3945	Cold	39	45	Bales	-
Europrene N 3960	Cold	39	60	Bales	-
Europrene N 3980	Cold	39	80	Bales	-
Europrene N 4560	Cold	45	60	Bales	-
Green Types					
Europrene N 1945 GRN	Cold	19	45	Bales	-
Europrene N 2830 GRN	Cold	28	30	Bales	-
Europrene N 2845 GRN	Cold	28	45	Bales	-
Europrene N 2860 GRN	Cold	28	60	Bales	-
Europrene N 2875 GRN	Cold	28	75	Bales	-
Europrene N 3330 GRN	Cold	33	30	Bales	-
Europrene N 3345 GRN	Cold	33	45	Bales	-
Europrene N 3380 GRN	Cold	33	80	Bales	-
Europrene N 3945 GRN	Cold	39	45	Bales	-

NBR-PVC Blend

Grades	NBR/PVC	Acrylonitrile content % wt	Mooney viscosity ML (1+4) 100°C
Europrene N OZO 7028	70/30	19.5	75
Europrene N OZO 7028/60	70/30	19.5	60
Europrene N OZO 7033	70/30	23	75
Europrene N OZO 7033/60	70/30	23	60
Europrene N OZO 7039	70/30	27	75
Europrene N OZO 5033	50/50	16.5	70 ⁽¹⁾

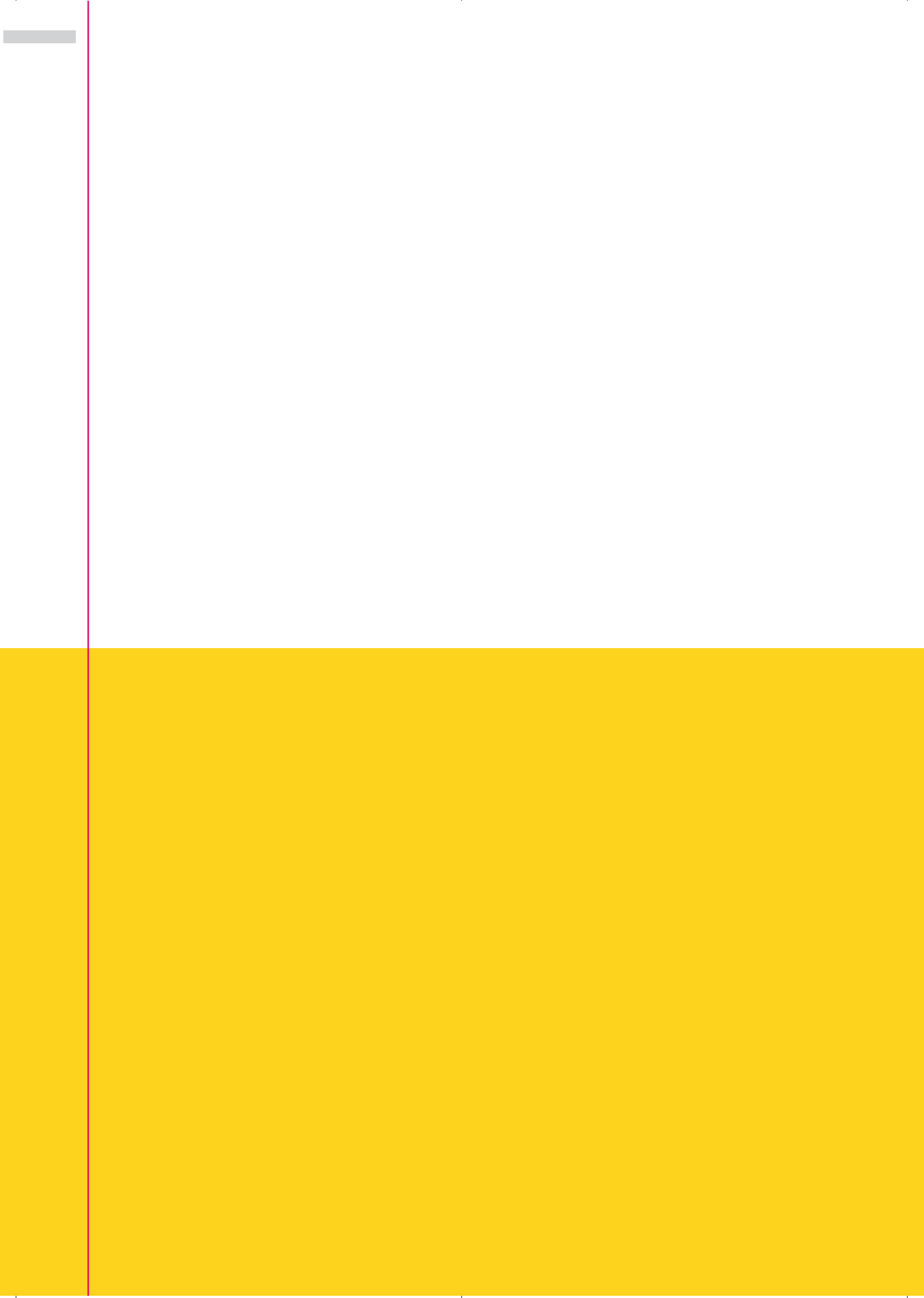
NBR
NBR-PVC

(1) ML (1+4) 121°C

Storage conditions: store in vented, dry area at temperatures between 20°C and 30°C; no direct sunlight.

Max particle size mm	Main applications
-	Applications requiring good processability, elasticity at low temperature and oil resistance
-	Applications requiring elasticity at low temperature, oil resistance and high mechanical performances
-	Wide range of oil-resistant technical articles requiring good processability
-	Wide range of oil-resistant technical articles
-	Technical goods with high mechanical properties
-	Technical goods with high mechanical properties, very good compression set and oil resistance
-	Wide range of technical articles requiring good processability and a very high oil and fuel resistance
-	Applications requiring very high oil and fuel resistance and excellent mechanical properties
-	Technical goods with good mechanical properties and excellent oil and fuel resistance
-	Technical goods requiring oil resistance and very good low temperature flexibility. Food contact applications
-	Grades with faster cure rate compared to Normal Types. Suitable for injection applications (low-mould fouling)
-	
-	
-	
-	
-	
-	

Main applications
Wide range of technical articles requiring good ozone and oil resistance
Wide range of technical articles requiring good ozone and oil resistance. Enhanced processability
Ozone resistant articles requiring higher oil resistance
Ozone resistant articles requiring higher oil resistance. Enhanced processability
Applications requiring very high oil and new gasolines resistance
Special NBR/PVC grades for extrusion and injection moulding applications. Outstanding ozone resistance



Europrene Lattice[®]

Intex[®]

SBR
XSBR
NBR

Synthetic Latices

Synthetic Latices (SBR, XSBR, NBR)

Grades	Total solids % wt	pH	Brookfield viscosity 20 rpm 25°C mPa.s	Emulsifier ⁽¹⁾	Bound styrene % wt
Styrene-Butadiene Latex					
Europrene Latice 5570	66	10.5	800	FA	26
Europrene Latice 5577	66	10.5	800	FA	30
Europrene Latice 2430	68	10.5	1100	FA	35
Europrene Latice B 010	52	11.5	25	FA	82
Intex 084	41	11	40	FA	24
Intex 131	66	10.3	1000	FA	32
Intex 132	66	10.3	1000	FA	25
Intex 2720	66	10.3	1000	FA	37
Carboxylated Styrene-Butadiene Latex					
Europrene Latice 405	50	8	300	SA	40
Europrene Latice 406	50	8	300	SA	40
Europrene Latice 440	50	8	300	SA	60
Europrene Latice 455	50	8	300	SA	47
Europrene Latice 1253	52	8	300	SA	55
Europrene Latice 5583	50	8	300	SA	40
Europrene Latice 5584	50	8	400	SA	60
Europrene Latice 5585	50	8	300	SA	47
Europrene Latice 5587	50	7.5	600	SA	75
Europrene Latice 5588	51	8	350	SA	50
Europrene Latice 8435	50	8	600	SA	69
Europrene Latice 8487	50	8	500	SA	67
Europrene Latice 5595	50	7	400	SA	-
Europrene Latice CC 136	50	7	300	SA	-
Acrylonitrile-Butadiene Latex					
Europrene Latice 2620	35	10.5	30	RA	38*

(1) FA = Fatty acid
SA = Synthetic anionic

* = ACN

Storage conditions: store in closed, vented tanks at temperatures between 5°C and 30°C.

Antioxidant	Main applications
-	Soft foams applications, adhesives, bitumen modification
-	Medium stiffness moulded foams, gel and non-gel carpet foams
-	High stiffness moulded foams, gel and non-gel carpet foams
-	Reinforcing latex to increase stiffness of soft latex including natural latex
-	Fabric impregnation in blend with VPL or natural latex
-	Medium stiffness foams, adhesives, bitumen modification
-	Soft foams applications, adhesives, bitumen modification
-	High stiffness moulded foams
Non staining	Paper saturation, adhesives
Non staining	Paper saturation
Non staining	Low odour water based adhesives
Non staining	Paper saturation
Non staining	Synthetic grass backing
Non staining	Soft handle textile impregnation
Non staining	Medium-firm handle carpet backsizing and textile impregnation
Non staining	Soft handle primary and secondary backings
Non staining	Very firm handle textile applications
Non staining	Soft handle primary backings, anchor coatings and secondary backings
Non staining	Very firm handle carpet backsizing and needlefelt impregnation
Non staining	Firm handle carpet backsizing and needlefelt impregnation
-	Offset and web-offset paper and board coating
-	Offset paper and board coating
Non staining	Solvent resistant articles. Specifically designed for beater addition process

