ELASTOMERS

Technical information

versalis

Introduction

Versalis, Eni's chemical company, is market leader in elastomers for tyre industry, automotive and transportation, technical goods, adhesives, paper, construction, medical and pharma, polymer modification and compounding.

The most traditional trademarks commercialized by Versalis are Europrene®, Neocis®, Intene®, Dutral® and Europrene® Latice®.

Trademarks recently available are:
- **Agon®, high performance elastomers;**
- **Versalis Revive®**, a line of products that gives rubbers a new life by recycling elastomeric materials from end-of-life goods to increase the sustainability content of Versalis final products.
- **Balance®**

SSBR

S-SBR is the family of choice for the manufacturing of top performance tyre. The anionic polymerization allows to obtain tailored micro and macro-structure to optimize the trade off between wet grip and rolling resistance and abrasion resistance.

Europrene® SOL B/R and FZ

Versalis is one of the few Manufacturers able to supply S-SBR grades obtained through batch and continuous processes. The SOL R grades are suitable for Carbon Black and Silica based compounds in fuel-efficient tyres. Partial block (SOL B) grades are advantageously used in adhesives, bitumen modification and ABS/PS manufacturing. Functionalized grades FZ represent the next generation materials for high performance "green" tyres.

ESBR

E-SBR is a general purpose rubber characterized by ease of processing mechanical properties and abrasion resistance. It has a limited resistance to oil and weather but properly compounded, it is suitable for use in outdoor applications.

Europrene®

Versalis offers one of the widest product portfolios on the market ranging from dry to oil extended to high styrene grades. All grades are well recognized for their quality and performance consistency. A variety of safe oil extended grades is available TDAE and RAE containing grades.

TPR

The Thermoplastic Rubbers are styrenic block copolymers characterized by high elasticity and mechanical properties together with good low temperature performance. The properties are strongly influenced by the co-monomer used, micro and macro structure and the unsaturation level. The product range includes grades with low/high bound styrene and di-block content, various molecular weights and viscosities to meet the requirements of the different final applications.

Europrene® SOL T/TH

Under Europrene® SOL T/TH trademark the following products are offered: Styrene-Butadiene-Styrene block copolymers (dry and oil extended) to be used in bitumen modification for roofing and road paving, adhesives, technical compounds, plastic modification and footwear; Styrene-Isoprene-Styrene block copolymers to be used in hot melt and pressure sensitive adhesives for tapes, labels and hygiene; Styrene-Ethylene-Butylene-Styrene fully saturated block copolymers to be used in technical compounds for the building, automotive, appliances, healthcare industry, hot melt adhesives and polymer modification.

BR

Butadiene elastomers are characterized by an excellent resistance to abrasion, high resilience/rebound, good resistance to fatigue cracking and crack growth. Their extremely low glass transition temperature provides enhanced low temperature performance compared to other general purpose rubbers.

Europrene Neocis®/Intene®

The Versalis portfolio is among the widest offered on the market. Lithium initiator is used for low-cis grades or high vinyl grade. High-cis grades are obtained through a Nd based coordination catalyst providing superior elastic behavior low. Main applications for Neocis®/Intene® are tyre, rubber goods, HIPS and ABS manufacturing.

NBR

NBR is the first elastomer family to be taken into account when a vulcanizate has to be resistant to oil. Resistance to apolar fluids like oil and gasoline as well as low temperature flexibility are influenced by the acrylonitrile content in the copolymer.

Europrene® N/GRN/N OZO

Europrene® N can be considered the worldwide reference for compositional homogeneity of the polymer chain that allows the best possible trade off between oil and low temperatures resistance. Furthermore, GRN grades prove an extremely low mould fouling and high cure and speed rate so to be considered the elastomers of choice for massive productions, particularly when high temperature injection moulding cycles are adopted Europrene® N family ranges from Mooney viscosity as low as 30 up to 80 MU. When ozone resistance has to be combined to oil resistance the use of Europrene® N OZO is required. This elastomer family is obtained fluxing PVC to an appropriate Europrene® N grade.

LATEX

Latex is an aqueous anionic dispersion of a styrene-butadiene copolymer obtained by emulsion polymerization. High Solid Latices are the elastomeric family of choice when resilient foamed items have to be manufactured. Low Solid Latices are widely used for cord dipping in tyre manufacturing. For paper impregnation and coating styrene-butadiene copolymer modified with carboxylic groups are used.

Europrene Latice®

Europrene Latice® HSL are used for the production of moulded foams (pillows, mattresses, toppers), carpet foams, adhesives and bitumen modification. Europrene Latice® LSL can be used as a reinforcing additive of the other latices, alone in specific application such as fiber saturation for footwear or in cord dipping applications for tyre typically together with VPL. Europrene Latice® NB is used in beater addition processes to obtain articles used in oil resistant applications. Europrene Latice® XSB are used in paper and board coating, paper saturation, adhesives, carpet backing, textile and needle felt impregnation.

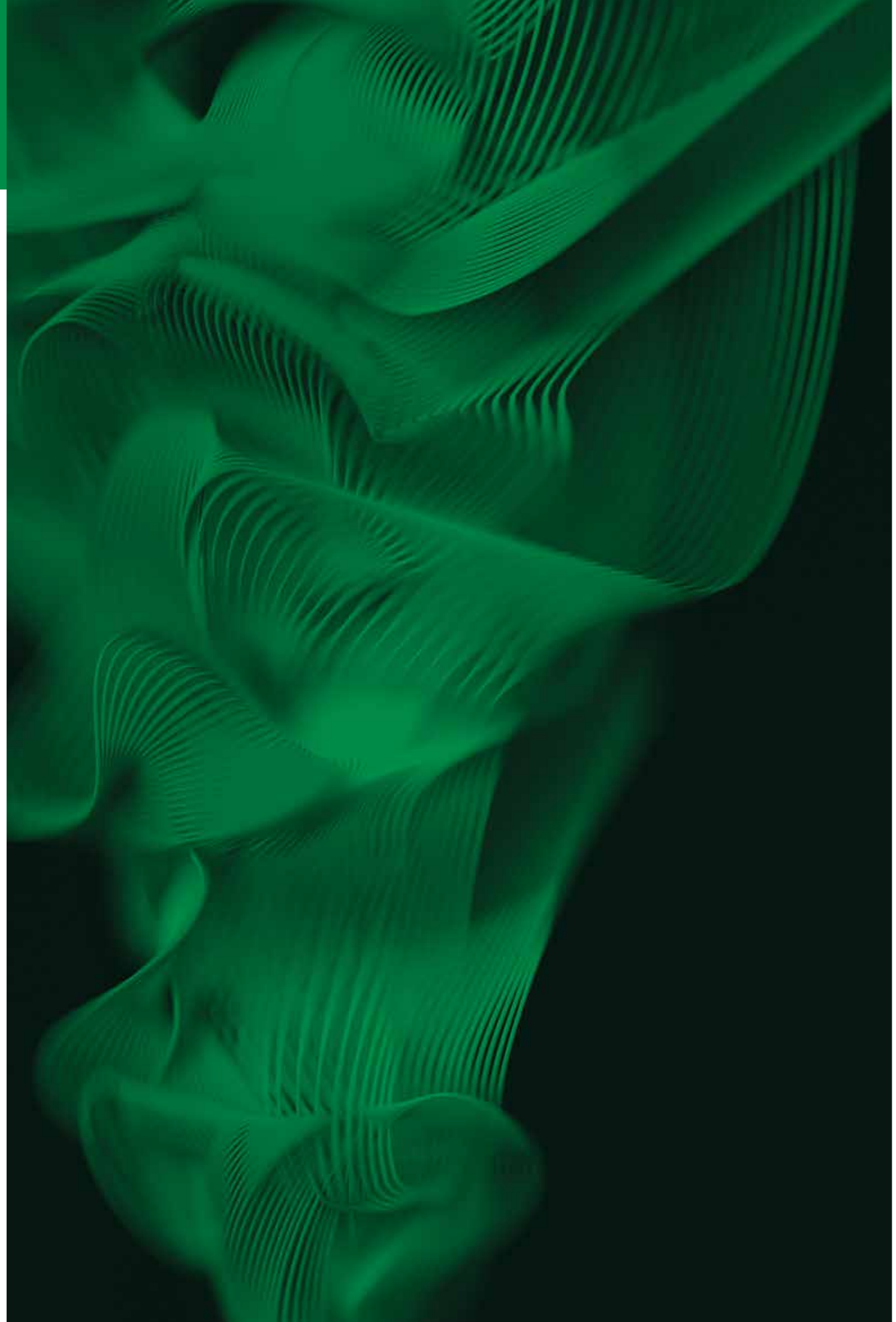
EP(D)M

EP(D)M elastomers are characterized by excellent resistance to ageing and weathering, good resistance to both high and low temperatures, low permanent set values and good resistance to a large number of chemicals. Now represent the single largest synthetic rubber for non-tyre application.

Dutral® CO/TER/BTR/PM/OCP

The first synthesis of an Ethylene Propylene Elastomer Copolymer in the World was performed in Ferrara based laboratories by prof. Natta and his Team in the late 50's. Under the Dutral® trademark, the following types are offered Ethylene-Propylene Copolymer (Dutral® CO), Ethylene-Propylene – ENB Terpolymer (Dutral® TER and BTR), Copolymers specifically developed for polyolefin modification (Dutral® PM) and Copolymers to be used as Viscosity Modifier in lubricants (Dutral® OCP). The main applications are Automotive, Building, Wire&Cable, Appliances, TPV and Rubber Mechanical Goods.

All families of the elastomers portfolio are available as Balance® where the bio-attribution share can vary depending on the product. Bio Attribute, Bio-Circular Attribute and Circular Attributed polymers, manufactured with the same technology used for standard polymers but using monomers obtained from sustainable feedstocks managed according to Mass Balance approach, guarantee the same performances, quality, and properties of standard products, as they do not differ in chemical composition and molecular structure. BA, BCA and CA products are ISCC PLUS certified and are provided with a sustainability declaration reporting the percentage of Bio, Bio-Circular or Circular Attributed component.



Europrene®
ESBR
HSR
Versalis Revive®
ESBR

EMULSION POLYMERIZED STYRENE-BUTADIENE RUBBER
EMULSION RESIN-RUBBER MASTERBATCH

ESBR – HSR

EUROPRENE® ESBR

Dry types	Bound styrene % wt[1]	Mooney viscosity ML (1+4) 100°C[2]	Stabilizer	Main applications
Europrene® 1500	23.5	52	Non staining	Tyres, retreading, conveyor belts, hoses, mechanical goods
Europrene® 1502	23.5	52	Non staining	Tyres, footwear, sheeting, light coloured mechanical goods, flooring, adhesives
Europrene® 1502 F	23.5	52	Non staining	Articles in contact with foodstuffs
Europrene® 1509	23.5	35	Non staining	Footwear, microcellular soles, injection moulding, carpet underlay, extruded and calendered goods
Europrene® 1509 F	23.5	30	Non staining	Footwear, microcellular soles, carpet underlay, injection moulded, extruded and calendered goods

Oil extended types	Bound styrene % wt[1]	Mooney viscosity ML (1+4) 100°C[2]	Oil		Stabilizer	Main applications
			Type	p.h.r.[3]		
Europrene® 1723	23.5	50	TDAE	37.5	Non staining	Tyres, retreading, conveyor belts, hoses, mechanical goods
Europrene® 1739	40	52	TDAE	37.5	Non staining	High hysteresis tyre tread compounds with improved wet road grip
Europrene® 1783	23.5	50	RAE	37.5	Non staining	Tyres, retreading, conveyor belts, hoses, mechanical goods
Europrene® 1789	40	55	RAE	37.5	Non staining	High hysteresis tyre tread compounds with improved wet road grip

EUROPRENE® HSR

Grades	Bound styrene % wt[1]	Mooney viscosity ML (1+4) 100°C[2]	Stabilizer	Main applications
Europrene® HS 630	63	56	Non staining	High hardness soles and sheeting, microcellular sheeting, flooring, hoses, technical goods with high hardness

VERSALIS REVIVE® ESBR

Grades	Bound styrene % wt[1]	Mooney viscosity ML (1+4) 100°C[2]	Oil content%	ELT %	Stabilizer	Main applications
Versalis Revive® 12D02	23.5	60		12	Non staining	Tyre manufacturing, pre-cured tread, footwear, conveyor belts and technical goods
Versalis Revive® 17O23	23.5	70	25	17	Non staining	Tyre manufacturing, pre-cured tread, footwear, conveyor belts and technical goods

Note
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.

ESBR – HSR

Europrene® Sol
Agon® Sol
SSBR

SOLUTION POLYMERIZED
STYRENE-BUTADIENE RUBBER

SSBR

EUROPRENE® SOL, AGON® SOL SSBR

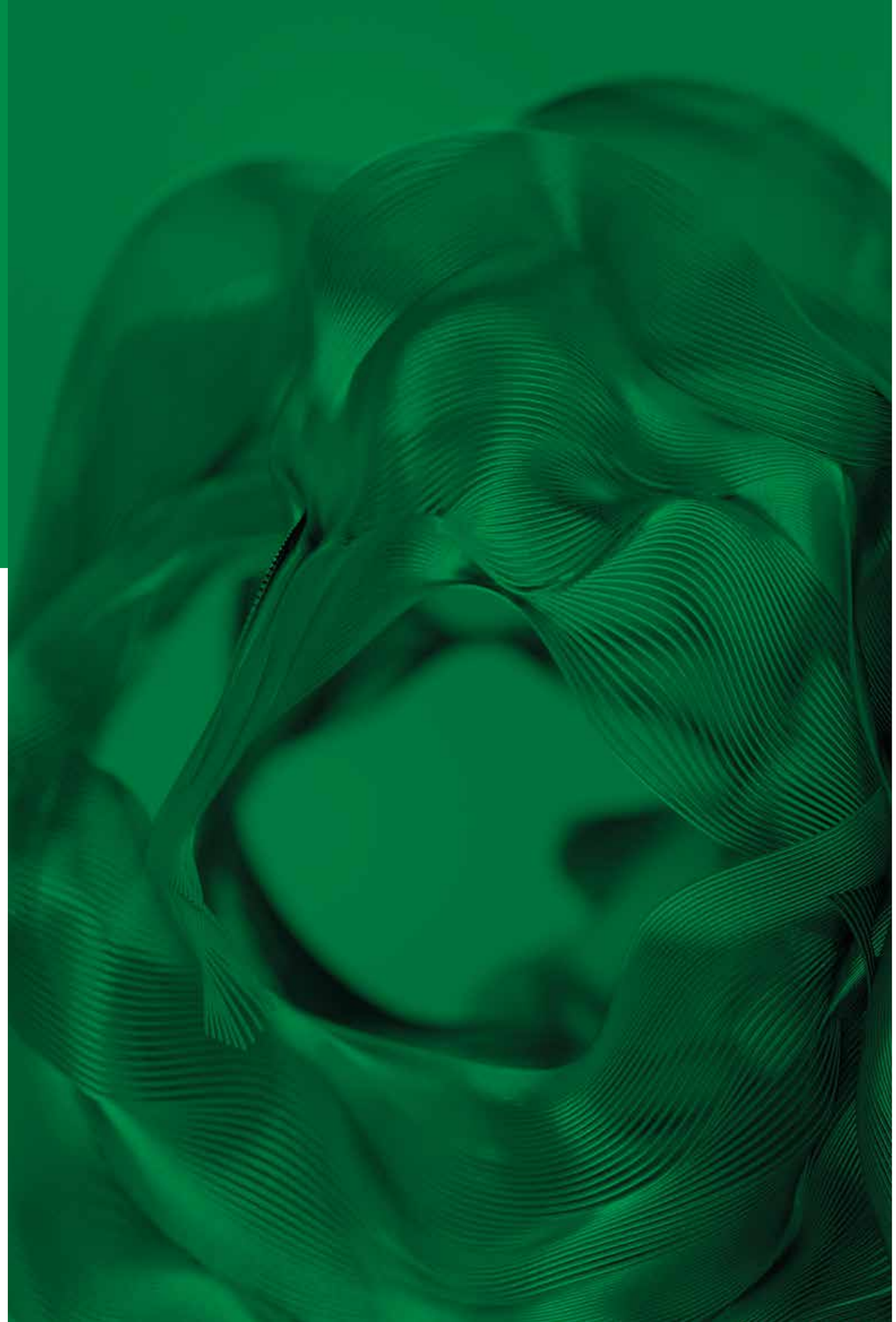
Partial block types	Bound styrene % wt	Block styrene % wt	Mooney viscosity ML (1+4) 100°C	Viscosity cP 5% STY 25°C	Main applications
Europrene® SOL B 1205	26	18	50	10	Calendered and extruded Technical Rubber Goods, flooring, footwear, adhesives, bitumen modification, HIPS manufacturing
Agon® SOL C 283	11	8	-	30	**High performace grades** recommended for construction, polymer modification, manufacture of ABS and HIPS

Random oil extended types	Bound styrene % wt	Vinyl content % wt(1)	Mooney viscosity ML (1+4) 100°C	Oil		Main applications
				Type	p.h.r.	
Europrene® SOL R 72614	25	64	55	TDAE	37.5	Silica-based compounds for low rolling resistance tyre treads, winter tyre treads
Europrene® SOL R C3737	36.5	38	75	TDAE	37.5	Silica-based compounds for high grip and low rolling resistance tyre treads (HP/UHP)
Europrene® SOL R C3743	36.5	43	75	TDAE	37.5	Silica-based compounds for high grip and low rolling resistance tyre treads (HP/UHP)
Europrene® SOL R 74618T	35	58	60	TDAE	37.5	UHP tyre tread compounds
Agon® SOL R 73521	35	58	80	TDAE	25	**High performace grades** recommended for tyre tread compound for HP/UHP tyres. It shows enchanced balance between grip and rolling resistance

Functionalized random types	Bound styrene % wt	Vinyl content % wt(1)	Mooney viscosity ML (1+4) 100°C	Oil		Main applications
				Type	p.h.r.	
Europrene® SOL R 72616	21	63	68	-	-	Functionalised for silica premium tyre treads compounds with low rolling resistance
Agon® SOL R X FZ 360	15	32	60	-		**New generation low Tg functionalized polymer.** Recommended for silica based compounds for winter and all season tyres.
Agon® SOL R X FZ 595	27	59	61	-	-	**New generation functionalized polymer.** Recommended for silica-based compounds for premium tyres, in particular summer and all-season types

Note
(1) Referred to butadiene portion.
Storage conditions: store in vented, dry area at temperatures between 20°C and 30°C; no direct sunlight.

SSBR



Europrene Neocis®
Intene®
Agon®
BR

POLYBUTADIENE RUBBER

BR

EUROPRENE NEOCIS®, INTENE®, AGON® BR

High cis types	Cis content % wt	Mooney viscosity ML (1+4) 100°C	Stabilizer	Main applications
Europrene Neocis® BR 40	97	43	Non staining	Tyre tread and sidewall, camelback, conveyor belts, technical goods, hoses, golf balls
Europrene Neocis® BR 60	97	63	Non staining	
Europrene Neocis® BR 450	95	44	Non staining	
Europrene Neocis® BR X 45 EP	97	44	Non staining	Tyre tread and sidewall, conveyor belts, technical goods, hoses, golf balls EP grades show improved processability
Europrene Neocis® BR X 61 EP	97	60	Non staining	
Agon® HCIS X 41 HP	97	44	Non staining	**High performance** tyre tread and sidewall. Recommended for silica tread compounds containing functionalised polymers

Low cis types	Cis content % wt	Mooney viscosity ML (1+4) 100°C	Stabilizer	Main applications
Intene® 50	38	48	Non staining	Tyres, belting, moulded and extruded articles
Intene® C 30 AF	38	40	Non staining	Tyre bead area, solid tyres, high hardness/resilience compounds, moulded and extruded articles

Low cis types for hips	Cis content % wt	Viscosity cP 5% STY 25°C	Stabilizer	Main applications
Intene® 30 AF	38	65	Food approved	Specially prepared materials suitable for the manufacture of abs and high impact polystyrene
Intene® 40 AF	38	100	Food approved	
Intene® 50 AF	38	170	Food approved	
Intene® 60 AF	38	250	Food approved	
Intene C 30 AF	38	42	Food approved	Specially prepared materials suitable for the manufacture of abs, high impact and glossy polystyrene

High Vinyl grade	vinyl content % wt	Mooney viscosity ML (1+4) 100°C	Stabilizer	Main applications
Europrene® BR HV80	77	70	Non staining	Tyre tread compounds with improved wet/ice grip

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

BR

Europrene® SOL T
Europrene® SOL TH
TPR

THERMOPLASTIC RUBBER

TPR

EUROPRENE® SOL T / TH TPR

Styrene-butadiene (dry SBS)	Bound styrene % wt	Structure	Oil p.h.r.	Diblock % wt	Melt flow index[1] g/10 min	Hardness[2] shore A	Physical form[3]	Main applications
Europrene® SOL T 161 B	30	Radial	-	10	< 1	82	G, P	Bitumen modification for roofing and road paving
Europrene® SOL T 161 C	30	Radial	-	10	< 1	82	G	Bitumen modification for roofing and road paving, compounding
Europrene® SOL T 6205	25	Radial	-	10	< 1	68	G	Bitumen modification for road paving
Europrene® SOL T 6302	30	Linear	-	12	< 1	80	G	Bitumen modification for roofing and road paving, compounding
Europrene® SOL T 6306	37	Radial	-	10	< 1	90	G, P	Bitumen modification for roofing
Europrene® SOL T 166	30	Linear	-	10	6	72	PL	Moulded and extruded goods, polymer modifications, adhesives
Europrene® SOL T 6320	31	Linear	-	75	11	64	PL	Bitumen modification, adhesives, polymer modification
Europrene® SOL T 6414	40	Radial	-	22	11	88	PL	Adhesives, compounding, polymer modification

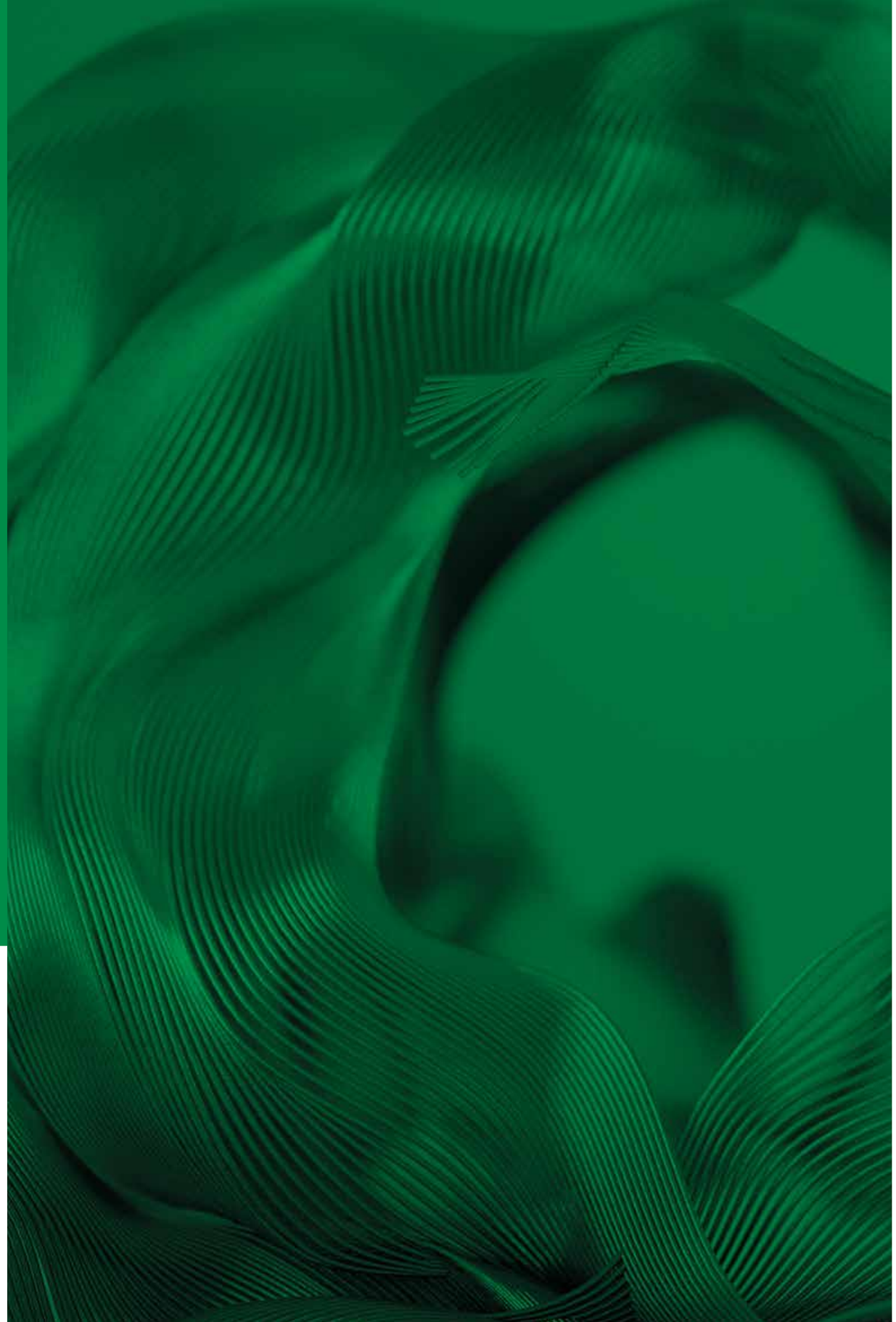
Styrene-butadiene (oil extended SBS)	Bound styrene % wt	Structure	Oil p.h.r.	Diblock % wt	Melt flow index[1] g/10 min	Hardness[2] shore A	Physical form[3]	Main applications
Europrene® SOL T 172 C	31	Radial	45	-	9	48	PL	Footwear, polymer modification and plastic recycling, technical goods
Europrene® SOL T 177 C	50	Radial	40	-	15	86	PL	Footwear, high hardness sheets and soles

Styrene-Isoprene (SIS)	Bound styrene % wt	Structure	Oil p.h.r.	Diblock % wt	Melt flow index[1] g/10 min	Hardness[2] shore A	Physical form[3]	Main applications
Europrene® SOL T 190	16	Linear	-	25	9	30	PL	General purpose grade for hot melt pressure sensitive adhesives
Europrene® SOL T 9113	18	Linear	-	8	12	44	PL	Hot melt pressure sensitive adhesives for packaging tapes
Europrene® SOL T 9133	16	Linear	-	55	14	20	PL	Hot melt pressure sensitive adhesives for labels
Europrene® SOL T 9242	24	Linear	-	68	20	35	PL	Hot melt pressure sensitive adhesives for labels
Europrene® SOL T 9326	30	Linear	-	15	8	60	PL	High cohesion hot melt adhesives, high colour and viscosity stability

Styrene-ethylene -butylene (SEBS)	Bound styrene % wt	Structure	Oil p.h.r.	Other characteristics	Melt flow index[4] g/10 min	Hardness[2] shore A	Physical form[3]	Main applications
Europrene® SOL TH 2311	30	Linear	-	-	6	75	F	General purpose grade for hot melt adhesives, sealants and polymer modification
Europrene® SOL TH 2312	30	Linear	-	-	< 1	75	F	Compounding, adhesives, polymer modification
Europrene® SOL TH 2315	32	Linear	-	-	< 1	68	F, P	Compounding
Europrene® SOL TH 2316	32	Linear	7,5	pharmaceutical oil added	<1	-	F	High performance compounds
Europrene® SOL TH 3300	30	Linear	-	1 % Maleic Anhydride bonded	12	-	PL	Technical compounds (overmolding)
Europrene® SOL THX 1050	7	Multi-arm	-	TP: 4,5 (cSt); SSI: 12 (%)	-	-	C	Oil viscosity modifier

Note
(1) ASTM D 1238, (5 kg, 190°C).
(2) Values obtained on compression moulded specimen, according to ASTM D 2240 test method.
(3) PL = dense pellets; G = granules; F = porous pellets; P = powder; C = compact form.
(4) ASTM D 1238, (5 kg 230°C).
Storage conditions: store in vented, dry area at temperatures between 20°C and 30°C; no direct sunlight.

TPR



Dutral®
EP(D)M

ETHYLENE-PROPYLENE RUBBER

EP(D)M

DUTRAL® EP(D)M

Copolymers	Propylene content % wt	Mooney viscosity ML (1+4) 125°C	Oil content % wt	Physical form[2]	Unsaturation level	Main applications
Dutral® CO 033	**28**	**30[1]**	**-**	**B**	**-**	Automotive belts, cables, polymer modifications
Dutral® CO 034	**28**	**44[1]**	**-**	**B, PL**	**-**	Cables, applicances, polymer, modification, oil viscosity modifier
Dutral® CO 038	**28**	**60**	**-**	**B, FB, PL**	**-**	Automotive, cables, appliances, polymer modification, oil viscosity modifier
Dutral® CO 043	**45**	**33[1]**	**-**	**B**	**-**	Automotive, cables, appliances, polymer modification, oil viscosity modifier, bitumen modification
Dutral® CO 054	**41**	**44[1]**	**-**	**B**	**-**	Automotive, cables, mechanical goods, building, bitumen modification, polymer modification, appliances
Dutral® CO 058	**48**	**80[1]**	**-**	**B**	**-**	Appliances, polymer modification, oil viscosity modificer
Dutral® CO 059	**41**	**79**	**-**	**B**	**-**	Polymer modification, mechanical goods, building

Terpolymers*	Propylene content % wt	Mooney viscosity ML (1+4) 125 °C	Oil content % wt	Physical form[2]	Unsaturation level	Main applications
Dutral® TER 2038 PL	**28**	**57**	**-**	**PL**	**1.5**	Automotive, cables, mechanical goods, buildings, appliances, polymer modification
Dutral® TER 4033	**25**	**30[1]**	**-**	**FB**	**5**	Automotive, cables, mechanical goods, high hardness profiles
Dutral® TER 4038 EP	**27**	**60**	**-**	**EP, FB, PL**	**4.4**	Automotive, cables, mechanical goods, building, appliances, polymer modification
Dutral® TER 4039	**27**	**77**	**-**	**FB, EP**	**4.4**	Automotive, cables, mechanical goods, building, appliances, polymer modification
Dutral® TER 4044	**35**	**44[1]**	**-**	**B**	**4**	Automotive, cables, mechanical goods, building, appliances
Dutral® TER 4047	**40**	**55**	**-**	**B**	**4.5**	Automotive, mechanical goods, building
Dutral® TER 4049	**40**	**76**	**-**	**B**	**4.5**	Automotive, cables, mechanical goods, building, appliances
Dutral® TER 4334	**27 [4]**	**28**	**30**	**B**	**4.7 [4]**	Automotive, cables, mechanical goods, building, appliances
Dutral® TER 4436	**28 [4]**	**43**	**40**	**B**	**5.5 [4]**	Automotive, mechanical goods, appliances, tpv
Dutral® TER 4437	**32 [4]**	**57**	**40**	**B**	**4.5 [4]**	Automotive, mechanical goods, appliances, tpv
Dutral® TER 4437 WO	**32 [4]**	**57**	**40[3]**	**B**	**4.5 [4]**	Automotive, mechanical goods, appliances, tpv, building
Dutral® TER 4535	**32 [4]**	**32**	**50**	**B**	**3.4 [4]**	Automotive, mechanical goods, building, appliances, cables
Dutral® TER 4548	**36 [4]**	**47[4]**	**50[3]**	**B**	**4.5 [3]**	Automotive, cables, mechanical goods, building, appliances
Dutral® TER 6537	**32 [4]**	**43**	**50**	**B**	**8 [4]**	Automotive, mechanical goods, appliances, tpv, building
Dutral® TER 7040	**40**	**87**	**-**	**B**	**6.5**	Automotive, mechanical goods, appliances, tpv, building
Dutral® TER 9046	**31**	**67[1]**	**-**	**B**	**8.9**	Automotive, mechanical goods, appliances, building

Polyolefin modifiers	MFI (230°C-5 Kg) g/10 min	Volatiles wt max %	ASH wt max %	Physical form[2]	Pellet/size g/30 pellets	Main applications
Dutral® PM 06 PLE	**1.8**	**0.2**	**0.3**	**PL**	**0.45**	Polymer modification
Dutral® PM 8273	**2.4**	**0.2**	**3.0**	**PL**	**0.45**	

Oil modifiers	Propylene content % wt	Mooney viscosity ML (1+4) 100°C	MFI (230°C-2.16 Kg) g/10 min	ASH wt max %	Volatiles wt max %	Physical form[2]	Main applications
Dutral® OCP 2530 PL	**34**	**-**	**8.5**	**0.4**	**0.2**	**PL****	Oil viscosity modifier
Dutral® OCP 2550	**48**	**-**	**8.3**	**0.4**	**0.2**	**B**	
Dutral® OCP 3550	**48**	**-**	**2.9**	**0.4**	**0.2**	**B**	
Dutral® OCP 4530	**28**	**-**	**0.5**	**0.4**	**0.9**	**B, P**	
Dutral® OCP 5050	**48**	**60**	**-**	**0.3**	**0.9**	**B**	

Branched terpolymer	Propylene content % wt	Mooney viscosity ML (1+4) 100°C	Oil content	Physical form[2]	Unsaturation level	Main applications
Dutral® BTR 4049	**40**	**76**	**-**	**B**	**4.5**	Automotive compact profiles, building, mechanical goods
Dutral® BTR 6049	**40**	**85**	**-**	**B**	**6**	
Dutral® BTR 8148 WO	**39**	**75**	**17**	**B**	**8.5**	Automotive sponge and solid profiles, building, mechanical goods
Dutral® BTX 9049	**39**	**90**	**-**	**EP**	**9.5**	

Note
(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.
(5) MFI (230°C-2.16 kg).
* Diene termonomer ENB.
Storage conditions: store in vented, dry area at temperatures between 20°C and 30°C; no direct sunlight.

EP(D)M

Europrene® N

NBR

NBR - PVC BLEND

ACRYLONITRILE BUTADIENE RUBBER

NBR – NBR PVC

EUROPRENE® N NBR

Normal types	Polymerization	Acrylonitrile content % wt	Mooney viscosity ML (1+4) 100°C	Physical form	Antisticking agent	Max particle sixe mm	Main applications
Europrene® N 2845	**Cold**	**28**	**45**	**Bales**	**-**	**-**	Applications requiring good processability, elasticity at low temperature and oil resistance
Europrene® N 2860	**Cold**	**28**	**60**	**Bales**	**-**	**-**	Applications requiring elasticity at low temperature, oil resistance and high mechanical performances
Europrene® N 3330	**Cold**	**33**	**30**	**Bales**	**-**	**-**	Wide range of oil-resistant technical articles requiring good processability
Europrene® N 3345	**Cold**	**33**	**45**	**Bales**	**-**	**-**	Wide range of oil-resistant technical articles
Europrene® N 3360	**Cold**	**33**	**60**	**Bales**	**-**	**-**	Technical goods with high mechanical properties
Europrene® N 3380	**Cold**	**33**	**80**	**Bales**	**-**	**-**	Technical goods with high mechanical properties, very good compression set and oil resistance
Europrene® N 3945	**Cold**	**39**	**45**	**Bales**	**-**	**-**	Wide range of technical articles requiring good processability and a very high oil and fuel resistance
Europrene® N 3960	**Cold**	**39**	**60**	**Bales**	**-**	**-**	Applications requiring very high oil and fuel resistance and excellent mechanical properties
Europrene® N 3980	**Cold**	**39**	**80**	**Bales**	**-**	**-**	
Europrene® N 4560	**Cold**	**45**	**60**	**Bales**	**-**	**-**	Technical goods with good mechanical properties and excellent oil and fuel resistance

Green types	Polymerization	Acrylonitrile content % wt	Mooney viscosity ML (1+4) 100°C	Physical form	Antisticking agent	Max particle sixe mm	Main applications
Europrene® N 1945 GRN	**Cold**	**19**	**45**	**Bales**	**-**	**-**	Technical goods requiring oil resistance and very good low temperature flexibility Food contact applications
Europrene® N 2830 GRN	**Cold**	**28**	**30**	**Bales**	**-**	**-**	Grades with faster cure rate compared to normal types Suitable for injection applications (low-mould fouling)
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**	**-**	**-**	

EUROPRENE® N NBR - PVC BLEND

Grades	NBR/PVC	Acrylonitrile content % wt	Mooney viscosity ML (1+4) 100°C	Main applications
Europrene® N OZO 7028	**70/30**	**19.5**	**75**	Wide range of technical articles requiring good ozone and oil resistance
Europrene® N OZO 7028/60	**70/30**	**19.5**	**60**	Wide range of technical articles requiring good ozone and oil resistance. Enhanced processability
Europrene® N OZO 7033	**70/30**	**23**	**75**	Ozone resistant articles requiring higher oil resistance
Europrene® N OZO 7033/60	**70/30**	**23**	**60**	Ozone resistant articles requiring higher oil resistance. Enhanced processability
Europrene® N OZO 7039	**70/30**	**27**	**75**	Applications requiring very high oil and new gasolines resistance

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

Europrene Latice®

SB

XSB

NB

SYNTHETIC LATICES

SB - XSB - NB

EUROPRENE LATICE® SB - XSB - NB

Styrene-butadiene latex	Total solids % wt	pH	Brook ield viscosity 20 rpm 25°C mPa.s	Emulsifier[1]	Bound styrene % wt	Antioxidant	Main applications
Europrene Latice® 5570	**66**	**10.5**	**800**	**FA**	**26**	**-**	Soft moulded foams applications, adhesives, bitumen modification
Europrene Latice® 5577	**66**	**10.5**	**800**	**FA**	**30**	**-**	Medium stiffness moulded foams, footwear in-soles, gel and no-gel carpet foams
Europrene Latice® 2430	**67**	**10.5**	**1100**	**FA**	**35**	**-**	High stiffness moulded foams, footwear in-soles, gel and no-gel carpet foams
Europrene Latice® B 010	**51**	**11**	**25**	**FA**	**82**	**-**	Reinforcing latex to increase stiffness of soft latex including natural latex
Europrene Latice® 084	**41**	**11**	**50**	**FA**	**24**	**-**	Fabric impregnation in blend with vpl or natural latex

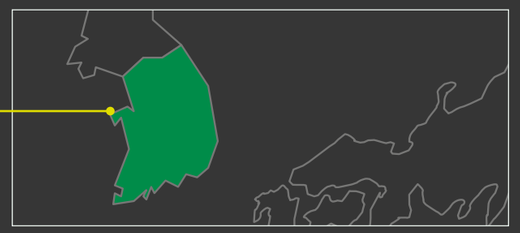
Carboxylated styrene -butadiene latex	Total solids % wt	pH	Brook ield viscosity 20 rpm 25°C mPa.s	Emulsifier[1]	Bound styrene % wt	Antioxidant	Main applications
Europrene Latice® 405	**50**	**8**	**300**	**SA**	**40**	**Non staining**	Paper saturation, adhesives
Europrene Latice® 406	**50**	**8**	**300**	**SA**	**40**	**Non staining**	Paper saturation
Europrene Latice® 440	**50**	**8**	**300**	**SA**	**60**	**Non staining**	Low odour water based adhesives
Europrene Latice® 455	**50**	**8**	**300**	**SA**	**47**	**Non staining**	Paper saturation
Europrene Latice® 5583	**50**	**8**	**300**	**SA**	**40**	**Non staining**	Soft handle textile impregnation
Europrene Latice® 5584	**50**	**8**	**400**	**SA**	**60**	**Non staining**	Medium-firm handle carpet backsizing and textile impregnation
Europrene Latice® 5585	**50**	**8**	**300**	**SA**	**47**	**Non staining**	Soft handle primary and secondary backings
Europrene Latice® 5587	**50**	**7.5**	**600**	**SA**	**75**	**Non staining**	Very firm handle textile applications
Europrene Latice® 5588	**51**	**7.8**	**350**	**SA**	**50**	**Non staining**	Soft handle primary backings, anchor coatings and secondary backings
Europrene Latice® 5589	**51**	**7.8**	**250**	**SA**	**50**	**Non staining**	Soft handle primary backings, anchor coatings and secondary backings. Recommended for very high filler loading
Europrene Latice® 8435	**50**	**7.5**	**600**	**SA**	**69**	**Non staining**	Very firm handle carpet backsizing and needlefelt impregnation
Europrene Latice® 8487	**50**	**7.5**	**500**	**SA**	**67**	**Non staining**	Firm handle carpet backsizing and needlefelt impregnation
Europrene Latice® 1152	**50**	**6.2**	**220**	**SA**	**-**	**-**	Offset, web offset and board coating

Acrylonitrile-butadiene latex	Total solids % wt	pH	Brook ield viscosity 20 rpm 25°C mPa.s	Emulsifier[1]	Bound ACN % wt	Antioxidant	Main applications
Europrene Latice® 2620	**34**	**10.5**	**30**	**RA**	**38**	**Non staining**	Solvent resistant articles. specifically designed for beater addition process

Note
(1) FFA = Fatty acid; SA = Synthetic anionic; RA = Rosin acid

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

Elastomers sites



Additional Safety Information
It is not intended to provide with this data a complete and in-depth analysis of health and safety information.
Further and more detailed data are available in the relevant Safety Data Sheet on the web site www.versalis.eni.com

Disclaimer
The information contained herein is intended as advice only and whilst the information is provided in utmost good faith and has been based on the best information available at the moment of writing, it is to be relied upon at the user's own risk. versalis is available to provide the guaranteed values for each product on demand.

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