

ELASTOMERS

# Technical information





# 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<sup>®</sup>, Neocis<sup>®</sup>, Dutral<sup>®</sup> and Europrene<sup>®</sup> Latice<sup>®</sup>.

Trademarks recently available are:

- **Agon<sup>®</sup>, high performance elastomers;**
- **Versalis Revive<sup>®</sup>, 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<sup>®</sup>**

## 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<sup>®</sup> and Agon<sup>®</sup> SOL R**

Versalis is one of the few Manufacturers able to supply S-SBR grades obtained through batch processes. The SOL R grades are suitable for Carbon Black and Silica based compounds in fuel-efficient tyres. Functionalized Agon<sup>®</sup> SOL R FZ grades 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<sup>®</sup>**

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®

High-cis grades are obtained through a Nd based coordination catalyst providing superior elastic behavior low. Main applications for Neocis® are tyre and technical rubber goods.

## 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 Lattice®

Europrene Lattice® HSL are used for the production of moulded foams (pillows, mattresses, toppers), carpet foams, adhesives and bitumen modification. Europrene Lattice® 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 Lattice® NB is used in beater addition processes to obtain articles used in oil resistant applications. Europrene Lattice® XSB are used in paper and board coating, paper saturation, adhesives, carpet backing, textile and needle felt impregnation.

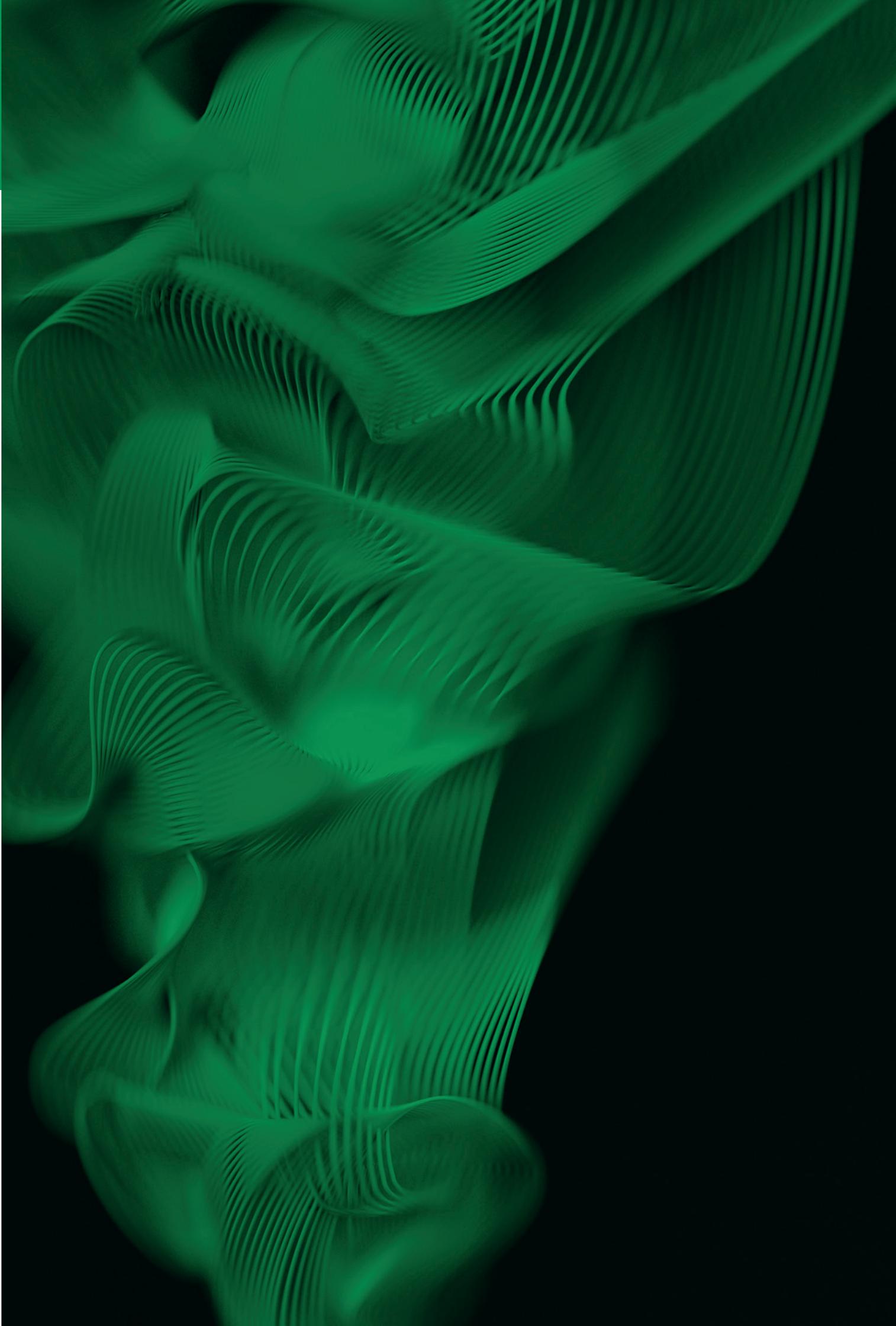
## EP(D)M

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

## EUROPRENE<sup>®</sup> ESBR

Dry types	Bound styrene % wt <sup>(1)</sup>	Mooney viscosity ML (1+4) 100°C <sup>(2)</sup>
<b>Europrene<sup>®</sup> 1500</b>	23.5	52
<b>Europrene<sup>®</sup> 1502</b>	23.5	52
<b>Europrene<sup>®</sup> 1502 F</b>	23.5	52
<b>Europrene<sup>®</sup> 1509</b>	23.5	35
<b>Europrene<sup>®</sup> 1509 F</b>	23.5	30

Oil extended types	Bound styrene % wt <sup>(1)</sup>	Mooney viscosity ML (1+4) 100°C <sup>(2)</sup>	Oil	
			Type	p.h.r. <sup>(3)</sup>
<b>Europrene<sup>®</sup> 1723</b>	23.5	50	TDAE	37.5
<b>Europrene<sup>®</sup> 1739</b>	40	52	TDAE	37.5
<b>Europrene<sup>®</sup> 1783</b>	23.5	50	RAE	37.5
<b>Europrene<sup>®</sup> 1789</b>	40	55	RAE	37.5

## EUROPRENE<sup>®</sup> HSR

Grades	Bound styrene % wt <sup>(1)</sup>	Mooney viscosity ML (1+4) 100°C <sup>(2)</sup>
<b>Europrene<sup>®</sup> HS 630</b>	63	56

## VERSALIS REVIVE<sup>®</sup> ESBR

Grades	Bound styrene % wt <sup>(1)</sup>	Mooney viscosity ML (1+4) 100°C <sup>(2)</sup>
<b>Versalis Revive<sup>®</sup> 12D02</b>	23.5	60
<b>Versalis Revive<sup>®</sup> 17O23</b>	23.5	70

### 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.

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
Non staining	Footwear, microcellular soles, carpet underlay, injection moulded, extruded and calendered goods

Stabilizer	Main applications
Non staining	Tyres, retreading, conveyor belts, hoses, mechanical goods
Non staining	High hysteresis tyre tread compounds with improved wet road grip
Non staining	Tyres, retreading, conveyor belts, hoses, mechanical goods
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

Oil content%	ELT %	Stabilizer	Main applications
	12	Non staining	Tyre manufacturing, pre-cured tread, footwear, conveyor belts and technical goods
25	17	Non staining	Tyre manufacturing, pre-cured tread, footwear, conveyor belts and technical goods



# Europrene<sup>®</sup> SOL R

# Agon<sup>®</sup> SOL R

# SSBR

SOLUTION POLYMERIZED  
STYRENE-BUTADIENE RUBBER

# EUROPRENE® AND AGON® SOL R SSBR

Functionalized random types	Bound styrene % wt	Vinyl content % wt <sup>(1)</sup>	Mooney viscosity ML (1+4) 100°C
<b>Europrene® SOL R 72616</b>	21	63	68
<b>Agon® SOL R X FZ 360</b>	15	32	60
<b>Agon® SOL R X FZ 595</b>	27	59	61

**Note**

(1) Referred to butadiene portion.

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

Oil Type	p.h.r.	Main applications
-	-	Functionalised for silica premium tyre treads compounds with low rolling resistance
-		<b>New generation low Tg functionalized polymer.</b> Recommended for silica based compounds for winter and all season tyres.
-	-	<b>New generation functionalized polymer.</b> Recommended for silica-based compounds for premium tyres, in particular summer and all-season types



# Europrene Neocis<sup>®</sup>

## Agon<sup>®</sup>

### BR

POLYBUTADIENE RUBBER

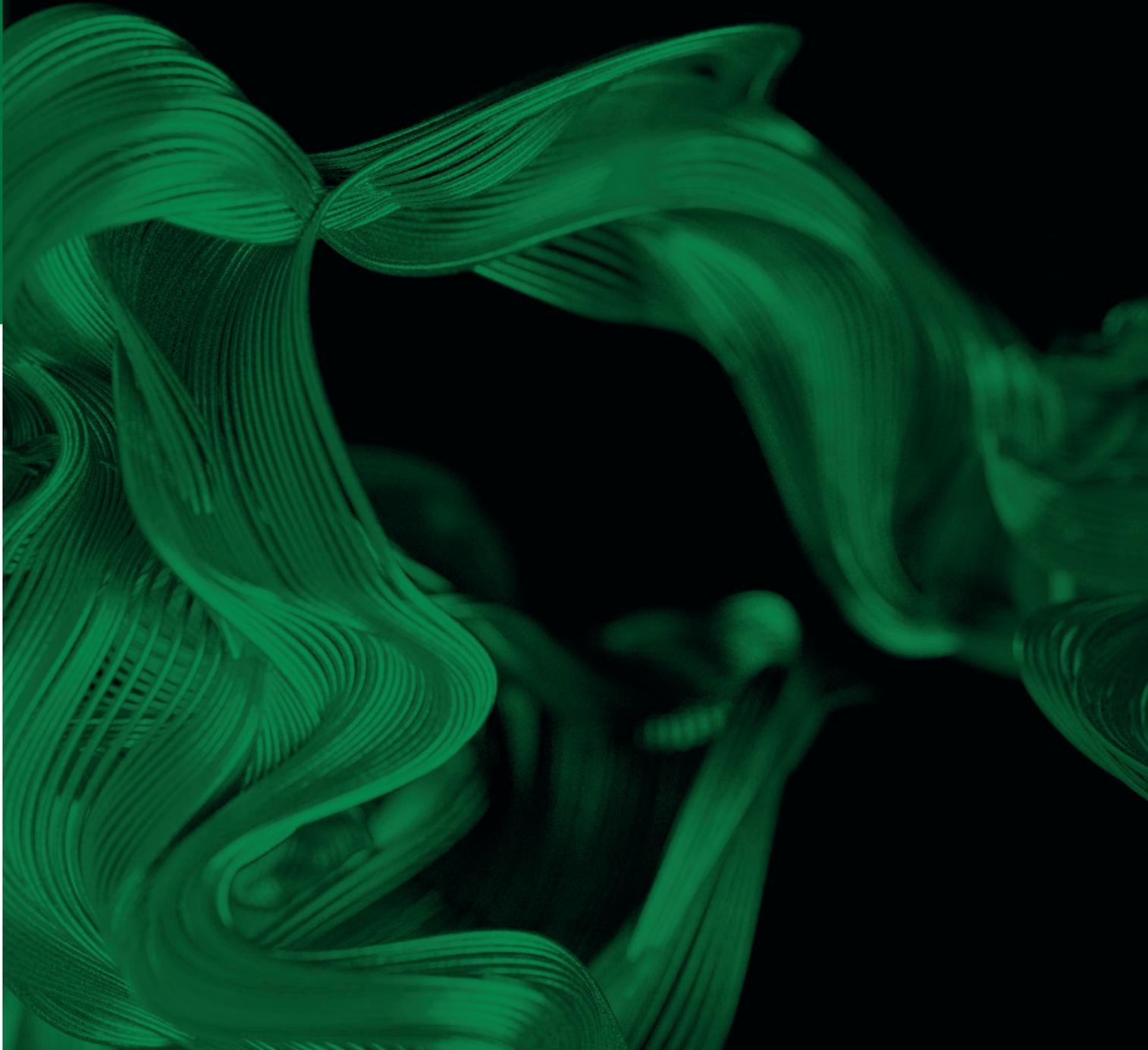
## EUOPRENE NEOCIS<sup>®</sup>, AGON<sup>®</sup> BR

High cis types	Cis content % wt	Mooney viscosity ML (1+4) 100°C
<b>Europrene Neocis<sup>®</sup> BR 40</b>	97	43
<b>Europrene Neocis<sup>®</sup> BR 60</b>	97	63
<b>Europrene Neocis<sup>®</sup> BR 450</b>	95	44
<b>Europrene Neocis<sup>®</sup> BR X 61 EP</b>	97	60
<b>Agon<sup>®</sup> HCIS X 41 HP</b>	97	44

### Note

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

Stabilizer	Main applications
Non staining	
Non staining	Tyre tread and sidewall, camelback, conveyor belts, technical goods, hoses, golf balls
Non staining	
Non staining	Tyre tread and sidewall, conveyor belts, technical goods, hoses, golf balls EP grades show improved processability
Non staining	<b>High performance</b> tyre tread and sidewall. Recommended for silica tread compounds containing functionalised polymers



# Europrene<sup>®</sup> SOL T

# Europrene<sup>®</sup> SOL TH

# TPR

THERMOPLASTIC RUBBER

# EUROPRENE® SOL T / TH TPR

Styrene-butadiene (dry SBS)	Bound styrene % wt	Structure	Oil p.h.r.	Diblock % wt
<b>Europrene® SOL T 161 B</b>	30	Radial	-	10
<b>Europrene® SOL T 161 C</b>	30	Radial	-	10
<b>Europrene® SOL T 6205</b>	25	Radial	-	10
<b>Europrene® SOL T 6302</b>	30	Linear	-	12
<b>Europrene® SOL T 6306</b>	37	Radial	-	10
<b>Europrene® SOL T 166</b>	30	Linear	-	10
<b>Europrene® SOL T 6320</b>	31	Linear	-	75
<b>Europrene® SOL T 6414</b>	40	Radial	-	22

Styrene-butadiene (oil extended SBS)	Bound styrene % wt	Structure	Oil p.h.r.	Diblock % wt
<b>Europrene® SOL T 172 C</b>	31	Radial	45	-
<b>Europrene® SOL T 177 C</b>	50	Radial	40	-

Styrene-Isoprene (SIS)	Bound styrene % wt	Structure	Oil p.h.r.	Diblock % wt
<b>Europrene® SOL T 190</b>	16	Linear	-	25
<b>Europrene® SOL T 9113</b>	18	Linear	-	8
<b>Europrene® SOL T 9133</b>	16	Linear	-	55
<b>Europrene® SOL T 9242</b>	24	Linear	-	68
<b>Europrene® SOL T 9326</b>	30	Linear	-	15

Styrene-ethylene -butylene (SEBS)	Bound styrene % wt	Structure	Oil p.h.r.	Other characteristics
<b>Europrene® SOL TH 2311</b>	30	Linear	-	-
<b>Europrene® SOL TH 2312</b>	30	Linear	-	-
<b>Europrene® SOL TH 2315</b>	32	Linear	-	-
<b>Europrene® SOL TH 2316</b>	32	Linear	7,5	pharmaceutical oil added
<b>Europrene® SOL TH 3300</b>	30	Linear	-	1 % Maleic Anhydride bonded
<b>Europrene® SOL THX 1050</b>	7	Multi-arm	-	TP: 4,5 (cSt); SSI: 12 (%)

## 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.

	Melt flow index <sup>(1)</sup> g/10 min	Hardness <sup>(2)</sup> shore A	Physical form <sup>(3)</sup>	Main applications
	< 1	82	G, P	Bitumen modification for roofing and road paving
	< 1	82	G	Bitumen modification for roofing and road paving, compounding
	< 1	68	G	Bitumen modification for road paving
	< 1	80	G	Bitumen modification for roofing and road paving, compounding
	< 1	90	G, P	Bitumen modification for roofing
	6	72	PL	Moulded and extruded goods, polymer modifications, adhesives
	11	64	PL	Bitumen modification, adhesives, polymer modification
	11	88	PL	Adhesives, compounding, polymer modification

	Melt flow index <sup>(1)</sup> g/10 min	Hardness <sup>(2)</sup> shore A	Physical form <sup>(3)</sup>	Main applications
	9	48	PL	Footwear, polymer modification and plastic recycling, technical goods
	15	86	PL	Footwear, high hardness sheets and soles

	Melt flow index <sup>(1)</sup> g/10 min	Hardness <sup>(2)</sup> shore A	Physical form <sup>(3)</sup>	Main applications
	9	30	PL	General purpose grade for hot melt pressure sensitive adhesives
	12	44	PL	Hot melt pressure sensitive adhesives for packaging tapes
	14	20	PL	Hot melt pressure sensitive adhesives for labels
	20	35	PL	Hot melt pressure sensitive adhesives for labels
	8	60	PL	High cohesion hot melt adhesives, high colour and viscosity stability

	Melt flow index <sup>(4)</sup> g/10 min	Hardness <sup>(2)</sup> shore A	Physical form <sup>(3)</sup>	Main applications
	6	75	F	General purpose grade for hot melt adhesives, sealants and polymer modification
	< 1	75	F	Compounding, adhesives, polymer modification
	< 1	68	F, P	Compounding
	< 1	-	F	High performance compounds
	12	-	PL	Technical compounds (overmolding)
	-	-	C	Oil viscosity modifier

(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.



# Dutral<sup>®</sup>

## EP(D)M

ETHYLENE-PROPYLENE RUBBER

# DUTRAL® EP(D)M

Copolymers	Propylene content % wt	Mooney viscosity ML (1+4) 125°C	Oil content % wt	Physical form <sup>(2)</sup>
Dutral® CO 033	28	30 <sup>(1)</sup>	-	B
Dutral® CO 034	28	44 <sup>(1)</sup>	-	B, PL
Dutral® CO 038	28	60	-	B, FB, PL
Dutral® CO 043	45	33 <sup>(1)</sup>	-	B
Dutral® CO 054	41	44 <sup>(1)</sup>	-	B
Dutral® CO 058	48	80 <sup>(1)</sup>	-	B
Dutral® CO 059	41	79	-	B

Terpolymers*	Propylene content % wt	Mooney viscosity ML (1+4) 125 °C	Oil content % wt	Physical form <sup>(2)</sup>
Dutral® TER 2038 PL	28	57	-	PL
Dutral® TER 4033	25	30 <sup>(1)</sup>	-	FB
Dutral® TER 4038 EP	27	60	-	EP, FB, PL
Dutral® TER 4039	27	77	-	FB, EP
Dutral® TER 4044	35	44 <sup>(1)</sup>	-	B
Dutral® TER 4049	40	76	-	B
Dutral® TER 4334	27 <sup>(4)</sup>	28	30	B
Dutral® TER 4436	28 <sup>(4)</sup>	43	40	B
Dutral® TER 4437	32 <sup>(4)</sup>	57	40	B
Dutral® TER 4437 WO	32 <sup>(4)</sup>	57	40 <sup>(3)</sup>	B
Dutral® TER 4535	32 <sup>(4)</sup>	32	50	B
Dutral® TER 4548	36 <sup>(4)</sup>	47 <sup>(4)</sup>	50 <sup>(3)</sup>	B
Dutral® TER 6537	32 <sup>(4)</sup>	43	50	B
Dutral® TER 7040	40	87	-	B
Dutral® TER 9046	31	67 <sup>(1)</sup>	-	B

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

Oil modifiers	Propylene content % wt	Mooney viscosity ML (1+4) 100°C	MFI (230°C-2.16 Kg) g/10 min
Dutral® OCP 2530 PL	34	-	8.5
Dutral® OCP 2550	48	-	8.3
Dutral® OCP 3550	48	-	2.9
Dutral® OCP 4530	28	-	0.5
Dutral® OCP 5050	48	60	-

Branched terpolymer	Propylene content % wt	Mooney viscosity ML (1+4) 125°C	Oil content	Physical form <sup>(2)</sup>
Dutral® BTR 4049	40	76	-	B
Dutral® BTR 6049	40	85	-	B
Dutral® BTR 8148 WO	39	75	17	B
Dutral® BTX 4055	45	45 <sup>(1)</sup>	-	B
Dutral® BTX 9049	39	90	-	EP

## 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.

Unsaturation level	Main applications
-	Automotive belts, cables, polymer modifications
-	Cables, applicances, 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
<b>1.5</b>	Automotive, cables, mechanical goods, buildings, appliances, polymer modification
<b>5</b>	Automotive, cables, mechanical goods, high hardness profiles
<b>4.4</b>	Automotive, cables, mechanical goods, building, appliances, polymer modification
<b>4.4</b>	Automotive, cables, mechanical goods, building, appliances, polymer modification
<b>4</b>	Automotive, cables, mechanical goods, building, appliances
<b>4.5</b>	Automotive, cables, mechanical goods, building, appliances
<b>4.7</b> <sup>(4)</sup>	Automotive, cables, mechanical goods, building, appliances
<b>5.5</b> <sup>(4)</sup>	Automotive, mechanical goods, appliances, tpv
<b>4.5</b> <sup>(4)</sup>	Automotive, mechanical goods, appliances, tpv
<b>4.5</b> <sup>(4)</sup>	Automotive, mechanical goods, appliances, tpv, building
<b>3.4</b> <sup>(4)</sup>	Automotive, mechanical goods, building, appliances, cables
<b>4.5</b> <sup>(3)</sup>	Automotive, cables, mechanical goods, building, appliances
<b>8</b> <sup>(4)</sup>	Automotive, mechanical goods, appliances, tpv, building
<b>6.5</b>	Automotive, mechanical goods, appliances, tpv, building
<b>8.9</b>	Automotive, mechanical goods, appliances, building

Pellet/size g/30 pellets	Main applications
<b>0.45</b>	Polymer modification
<b>0.45</b>	

ASH wt max %	Volatiles wt max %	Physical form <sup>(2)</sup>	Main applications
<b>0.4</b>	<b>0.2</b>	<b>PL**</b>	Oil viscosity modifier
<b>0.4</b>	<b>0.2</b>	<b>B</b>	
<b>0.4</b>	<b>0.2</b>	<b>B</b>	
<b>0.4</b>	<b>0.9</b>	<b>B, P</b>	
<b>0.3</b>	<b>0.9</b>	<b>B</b>	

Unsaturation level	Main applications
<b>4.5</b>	Automotive compact profiles, building, mechanical goods
<b>6</b>	
<b>8.5</b>	Automotive sponge and solid profiles, building, mechanical goods
<b>4.2</b>	Automotive brake system, Mechanical Goods for injection molding
<b>9.5</b>	Automotive sponge and solid profiles, building, mechanical goods

(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.



# **Europrene<sup>®</sup> N**

## **NBR**

## **NBR - PVC BLEND**

ACRYLONITRILE BUTADIENE RUBBER

## EUROPRENE® N NBR

Normal types	Polymerization	Acrylonitrile content % wt	Mooney viscosity ML (1+4) 100°C
<b>Europrene® N 2845</b>	Cold	28	45
<b>Europrene® N 2860</b>	Cold	28	60
<b>Europrene® N 3330</b>	Cold	33	30
<b>Europrene® N 3345</b>	Cold	33	45
<b>Europrene® N 3360</b>	Cold	33	60
<b>Europrene® N 3380</b>	Cold	33	80
<b>Europrene® N 3945</b>	Cold	39	45
<b>Europrene® N 3960</b>	Cold	39	60
<b>Europrene® N 3980</b>	Cold	39	80
<b>Europrene® N 4560</b>	Cold	45	60

Green types	Polymerization	Acrylonitrile content % wt	Mooney viscosity ML (1+4) 100°C
<b>Europrene® N 1945 GRN</b>	Cold	19	45
<b>Europrene® N 2830 GRN</b>	Cold	28	30
<b>Europrene® N 2845 GRN</b>	Cold	28	45
<b>Europrene® N 2860 GRN</b>	Cold	28	60
<b>Europrene® N 2875 GRN</b>	Cold	28	75
<b>Europrene® N 3330 GRN</b>	Cold	33	30
<b>Europrene® N 3345 GRN</b>	Cold	33	45
<b>Europrene® N 3380 GRN</b>	Cold	33	80
<b>Europrene® N 3945 GRN</b>	Cold	39	45

## EUROPRENE® N NBR - PVC BLEND

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

### Note

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

Physical form	Antisticking agent	Max particle size mm	Main applications
<b>Bales</b>	-	-	Applications requiring good processability, elasticity at low temperature and oil resistance
<b>Bales</b>	-	-	Applications requiring elasticity at low temperature, oil resistance and high mechanical performances
<b>Bales</b>	-	-	Wide range of oil-resistant technical articles requiring good processability
<b>Bales</b>	-	-	Wide range of oil-resistant technical articles
<b>Bales</b>	-	-	Technical goods with high mechanical properties
<b>Bales</b>	-	-	Technical goods with high mechanical properties, very good compression set and oil resistance
<b>Bales</b>	-	-	Wide range of technical articles requiring good processability and a very high oil and fuel resistance
<b>Bales</b>	-	-	Applications requiring very high oil and fuel resistance and excellent mechanical properties
<b>Bales</b>	-	-	Technical goods with good mechanical properties and excellent oil and fuel resistance

Physical form	Antisticking agent	Max particle size mm	Main applications
<b>Bales</b>	-	-	Technical goods requiring oil resistance and very good low temperature flexibility Food contact applications
<b>Bales</b>	-	-	Grades with faster cure rate compared to normal types Suitable for injection applications (low-mould fouling)
<b>Bales</b>	-	-	

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



# Europrene Lattice®

**SB**

**XSB**

**NB**

SYNTHETIC LATICES

## EUROPRENE LATICES® SB - XSB - NB

Styrene-butadiene latex	Total solids % wt	pH	Brook field viscosity 20 rpm 25°C mPa.s	Emulsifier <sup>(1)</sup>
<b>Europrene Latice® 5570</b>	66	10.5	800	FA
<b>Europrene Latice® 5577</b>	66	10.5	800	FA
<b>Europrene Latice® 2430</b>	67	10.5	1100	FA
<b>Europrene Latice® 084</b>	41	11	50	FA

Carboxylated styrene -butadiene latex	Total solids % wt	pH	Brook field viscosity 20 rpm 25°C mPa.s	Emulsifier <sup>(1)</sup>
<b>Europrene Latice® 405</b>	50	8	300	SA
<b>Europrene Latice® 406</b>	50	8	300	SA
<b>Europrene Latice® 440</b>	50	8	300	SA
<b>Europrene Latice® 455</b>	50	8	300	SA
<b>Europrene Latice® 5583</b>	50	8	300	SA
<b>Europrene Latice® 5584</b>	50	8	400	SA
<b>Europrene Latice® 5585</b>	50	8	300	SA
<b>Europrene Latice® 5587</b>	50	7.5	600	SA
<b>Europrene Latice® 5588</b>	51	7.8	350	SA
<b>Europrene Latice® 5589</b>	51	7.8	250	SA
<b>Europrene Latice® 8435</b>	50	7.5	600	SA
<b>Europrene Latice® 8487</b>	50	7.5	500	SA
<b>Europrene Latice® 1152</b>	50	6.2	220	SA

Acrylonitrile-butadiene latex	Total solids % wt	pH	Brook field viscosity 20 rpm 25°C mPa.s	Emulsifier <sup>(1)</sup>
<b>Europrene Latice® 2620</b>	34	10.5	30	RA

**Note**

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

	Bound styrene % wt	Antioxidant	Main applications
	26	-	Soft moulded foams applications, adhesives, bitumen modification
	30	-	Medium stiffness moulded foams, footwear in-soles, gel and no-gel carpet foams
	35	-	High stiffness moulded foams, footwear in-soles, gel and no-gel carpet foams
	24	-	Fabric impregnation in blend with vpl or natural latex

	Bound styrene % wt	Antioxidant	Main applications
	40	<b>Non staining</b>	Paper saturation, adhesives
	40	<b>Non staining</b>	Paper saturation
	60	<b>Non staining</b>	Low odour water based adhesives
	47	<b>Non staining</b>	Paper saturation
	40	<b>Non staining</b>	Soft handle textile impregnation
	60	<b>Non staining</b>	Medium-firm handle carpet backsizing and textile impregnation
	47	<b>Non staining</b>	Soft handle primary and secondary backings
	75	<b>Non staining</b>	Very firm handle textile applications
	50	<b>Non staining</b>	Soft handle primary backings, anchor coatings and secondary backings
	50	<b>Non staining</b>	Soft handle primary backings, anchor coatings and secondary backings. Recommended for very high filler loading
	69	<b>Non staining</b>	Very firm handle carpet backsizing and needlefelt impregnation
	67	<b>Non staining</b>	Firm handle carpet backsizing and needlefelt impregnation
	-	-	Offset, web offset and board coating

	Bound ACN % wt	Antioxidant	Main applications
	38	<b>Non staining</b>	Solvent resistant articles. specifically designed for beater addition process

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

## Elastomers sites

San Donato Milanese, Italy - Headquarter

Ferrara, Italy - R&D and Plant

Ravenna, Italy - R&D and Plant

Porto Torres, Italy - R&D and Plant

Yeosu, South Korea - LVE in joint venture with Lotte Chemical

### 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](http://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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