



Team spirit



Dynasol
Group
dynasolgroup.com

Experience

Expertise in a particular sport
can be acquired through
different combinations
skills, attributes and capabilities





SOLUTION | EMULSION | CHEMICAL

In 1999 Repsol and KUO group joined forces in a global business project focused on the production of synthetic rubber based on solution and the development of new products. The team consists of seven different nationalities and has three production centers located in Spain, Mexico and China.

Sales offices serve more than 500 clients in 70 different countries. In 2015 during this international expansion strategy Repsol and Kuo Group strengthen their partnership with the incorporation of the Spanish company General Química one of the leading producers of catalysts, specialty chemicals and organic dyes.

As part of the new agreement KUO Group brings to the new JV it's emulsion business unit, Industrias Negromex who has more than 40 years of experience producing Emulsion Synthetic Rubber and has plants located in Altamira, Mexico, and China; the company's wide range of products serve the tire, industrial, friction, adhesive, footwear, chewing gum, and retread segments.

All these businesses have now join forces as Dynasol Group becoming one of the world leaders in the Synthetic Rubber and Rubber Chemical markets with revenues estimated at up to more than 700 million dollars and a production of 500,000 tons per year.



Performance

Preparation, research and knowledge of the environment, are essential to achieve the maximum performance





Dynasol
Group

Solution

The production sites are located in **Altamira, Tamaulipas, Mexico and Santander, Spain**. The total production capacity is **110,000 TPY of SSBR and SBS in Altamira** and **120,000 TPY of SBS and SEBS in Santander**.

Dynasol Group has a JV in **China** located in **Panjin Liaoning** province with a production capacity of **110,000 TPY of SBS and SSBR**.

The main markets we serve are **asphalt modification, adhesives, seals, polymer modification, thermoplastic compounds, shoes soles, industrial vulcanized articles**.

SOLUTION

SOLUTION

SSBR Solprene

Solution Partial Block SBR

Styrene-butadiene copolymers with tapered block monomer configuration, linear structure and very narrow molecular weight distribution. They are highly appreciated for their high purity, clear color and very low gel content. Due to the total styrene can be designed in a partial block content combined with a random domain of styrene and butadiene, these copolymers have excellent processability for mixing operations. Their structural characteristics permit also the applications in asphalt modification for road paving and polymer modified asphalt emulsion, formulation of adhesives, vulcanized rubber goods, footwear and impact modification for HIPS and ABS plastics.

The Solprene SBR product portfolio consists also of a range of rubber grades developed for the high performance tire segment. Composition variations and levels of functionalization are applied to meet and/or exceed the new tire labeling requirements. The polymer compositions include oil-extended SSBR, dry high vinyl SSBR and polar functionalized SSBR grades with commercial availability. Specific emphasis is given in performance criteria and maximizing the key “magic-triangle” properties of Rolling-Resistance, Wetgrip and Wear. Select grades are effectively used in other non-tire applications such as extruded and molded goods.



SEBS Calprene

Solution Styrene-Butadiene Hydrogenated Block Copolymers

Styrene-butadiene hydrogenated block copolymers are polymerized in solution and present a fully saturated structure. They are very suitable for high demanding applications such as technical compounding for automotive, medical, toys or food contact applications. They are also used in weather resistance sealants and are very suitable for low temperature applications. Due to their saturated structure they show an excellent thermal resistance as well as superior weatherability (UV light and ozone resistance).

They are FDA and EU regulation food approved materials. These copolymers have a very good oilability, excellent mechanical performance, improved resistance to ageing tests. They can be used for high transparency compounds and are steam sterilisable. They can be available in a wide range of viscosities and in several physical presentations as fluffy crumbs, undusted or dusted with silica and powder form dusted with silica.



SBS Calprene / SBS Solprene

Solution Styrene-Butadiene Block Copolymers

Styrene-butadiene block copolymers are polymerized in solution and present different structures, linear, radial and multiarm. They are free flowing materials that show different viscosities to adapt their properties to the multiple applications where they can be used in. Lower linear molecular weight grades offer very good flowability, are appreciated for their transparency and easy processability. Radial grades show higher melt strength, and offer higher mechanical properties with a high modification performance. Multiarm grades show a combination of low viscosity with temperature

resistance. This performance make them suitable for a wide range of applications such as technical compounding, adhesives and sealants, bitumen modification for road pavements and waterproofing membranes. They are also used in shoe sole applications and polymer modification. They comply with different food contact applications. Typical physical aspects can go from fluffy crumbs to powder versions.

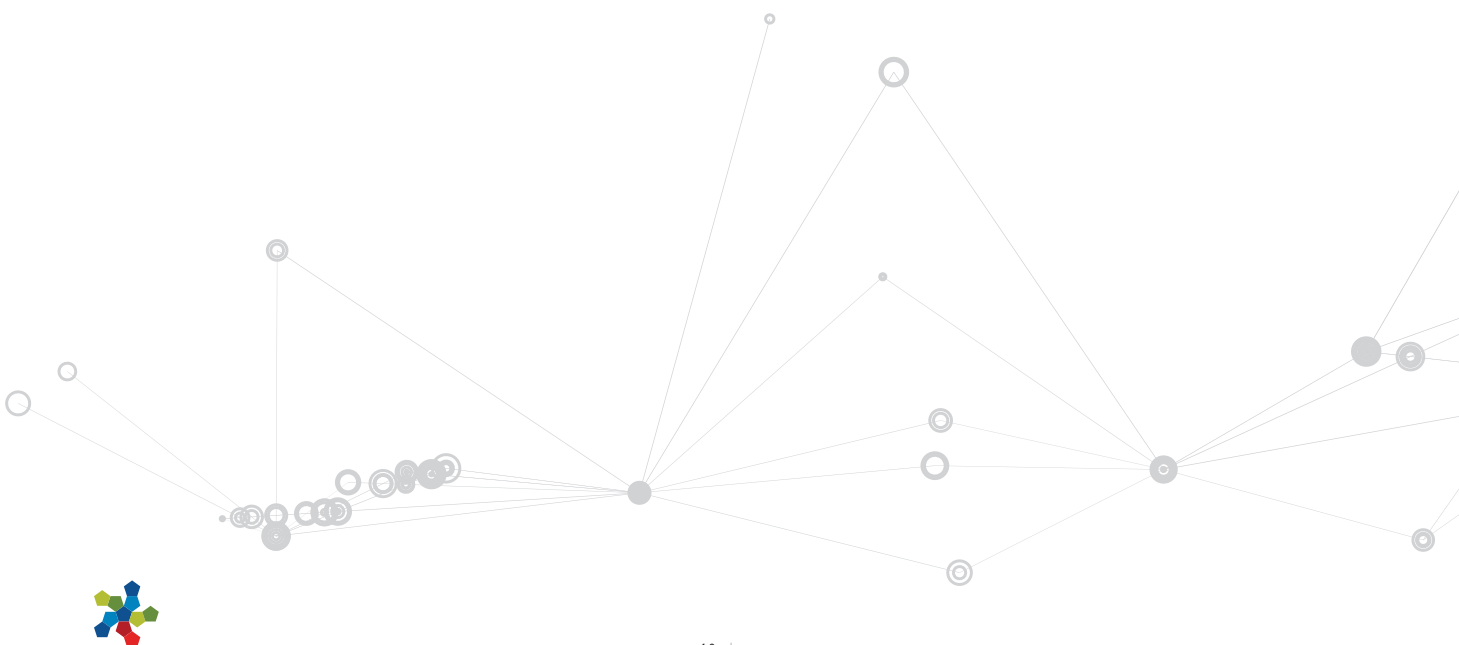


SOLUTION

APPLICATION GUIDE

PRODUCT

Type	Brand	Grade	Styrene	Polystyrene	Structure	ML	Brookfield viscosity 20% wt, 25 C. cP	Brookfield viscosity 10% wt, 25 C. cP	Brookfield viscosity 25% solid content toluene	cPs,	TSV Viscosity cSt, 5,23% solid content toluene, 25 C	Melt flow index 190 C, 5 Kg (g/10 min)
SSBR	Solprene	303	46	11		48						
SSBR	Solprene	1106	10	6		65						
SSBR	Solprene	1110	15	10		147						
SSBR	Solprene	1205	25	17,5		47						
SSBR	Solprene	1217	25	17,5		47						
SSBR	Solprene	1322	30	22		130						
SSBR	Solprene	1430	40	30		176						
SSBR	Solprene	1433	45	33		61						
SSBR	Solprene	7101	25			55						
SSBR	Solprene	7201	40			67						
SSBR	Solprene	7301	21			55						
SSBR	Solprene	7302	21			65						
SEBS	Calprene	H6110	30		Linear		470					
SEBS	Calprene	H6120	32		Linear		1900					
SEBS	Calprene	H6140	31		Linear			400				
SEBS	Calprene	H6144	30		Linear			400				
SEBS	Calprene	H6170	33		Linear			2300				
SEBS	Calprene	H6174	33		Linear			2300				
SBS	Calprene	401	20		Radial				9,700		20	
SBS	Calprene	405	33		Radial				3,700		13,5	
SBS	Calprene	411	30		Radial				18,500		26	
SBS	Calprene	412	31,5		Radial				23,100		28	
SBS	Calprene	419	30		Radial				11,100		20	
SBS	Calprene	500	30		Linear				1,100			5
SBS	Calprene	501	31		Linear				5,000		13	
SBS	Calprene	540	40		Linear				600			5
SBS	Calprene	700	30		Linear				1,100			5
SBS	Calprene	701	31		Linear				5,000		13	
SBS	Calprene	710	30		Linear				1,700		8	
SBS	Calprene	711	30		Radial				18,500		26	
SBS	Calprene	718	25		Linear				1500			6
SBS	Calprene	719	30		Radial				11,100		20	
SBS	Calprene	7318	32		Linear				700			5
SBS	Solprene	411	30		Radial				20,000		28	
SBS	Solprene	416	30		Radial				2,200		11	
SBS	Solprene	490	30		Radial				3,100		12	
SBS	Solprene	4301	33		Linear				3,000		11	
SBS	Solprene	4302	31		Linear				890		7	
SBS	Solprene	4318	32		Linear				700			5
SBS	Solprene	9618	31		Multi-Arm				600			13



SSBR | SOLPRENE

Brand Grade	Description	Uses	Styrene (%)	ML 1+4 100°C
Solprene 303	Solprene 303 is a linear random-block styrene-butadiene copolymer with 46% styrene content, 11% present as a polystyrene block.	It is used in vulcanized microcellular shoe soles; it provides hardness and translucent properties, and can be combined with inorganic fillers using high concentration of them with good dispersion in compounding. It can be blended with other rubbers to reduce die swell and increase processability in extruded and molded goods by compression.	46	48
Solprene 1106	Solprene 1106 is a high molecular weight linear random -block styrene/butadiene copolymer with a total content of 10% of styrene, 6% present as a polystyrene block.	FDA approved for use in food contact applications. It is essentially gel free with a clear color. It is mainly used as an impact modifier in polystyrene products.	10	65
Solprene 1110	Solprene 1110 is a linear high molecular weight random-block styrene/butadiene copolymer with 15% styrene, 10% present as a polystyrene block.	FDA approved for use in food contact applications and it is essentially gel free with a clear color. It is mainly used as elastomeric modifier for asphalt and as an impact modifier in polystyrene products.	15	147
Solprene 1205	Solprene 1205 is a linear random-block styrene-butadiene copolymer with a total content of 25% of styrene, 17.5% is present as a polystyrene block.	FDA approved for use in food contact applications. Is an excellent modifier for asphalt, formulations of caulks and sealants; it is also an excellent processing aid for most polymers, giving a good resistance to low temperature. Used in extruded goods, soles and heels. It can also be used as modifier for thermoplastic resins and in adhesive formulations.	25	47
Solprene 1217	Solprene 1217 is a linear random-block styrene-butadiene copolymer with a total content of 25% of styrene, 17.5% is present as a polystyrene block.	FDA approved for use in food contact applications. It is used as compounding ingredient for adhesives, as modifier for thermoplastic resins. It is an excellent modifier for asphalt, formulations of caulks and sealants; it is also an excellent processing aid for most polymers, giving resistance to temperature. Used in extruded goods, soles, and heels.	25	47
Solprene 1322	Solprene 1322 is a high molecular weight linear random -block styrene-butadiene copolymer with a total content of 30% of styrene, 22% present as a polystyrene block.	FDA approved for use in food contact applications. It is a high purity polymer, essentially gel free with a clear color. It is used as an elastomeric impact modifier for plastics, especially in high gloss HIPS and ABS throw "in situ" polymerization process.	30	130
Solprene 1430	Solprene 1430 is a high molecular weight linear random -block styrene/butadiene copolymer with a total content of 40% of styrene, 30% present as a polystyrene block.	FDA approved for use in food contact applications. It is a high purity polymer, essentially gel free with a clear color. is used as an elastomeric impact modifier for plastics, specially in high gloss HIPS by "in situ" polymerization process. It is also used in vulcanized shoe soles giving high hardness, flexibility and abrasion resistance with good processability.	40	176
Solprene 1433	Solprene 1433 is a linear random-block styrene/butadiene copolymer having 45% of styrene content, 33% present as a polystyrene block.	It is a SSBR copolymer that provides low shrinkage and dimensional uniformity at the final product in vulcanized compounds. It also maintains an excellent balance of high hardness and oil absorption; therefore it is possible to increase the extender oil in formulation to reduce costs without losing in quality and properties.	45	61
Solprene 7101	Solprene 7101 is a Solution Styrene Rubber (SSBR) manufactured by anionic batch polymerization. The polymer is extended with TDAE oil and is protected with a non-staining antioxidant.	It is used in Tyre tread applications such as all-season, summer, winter and Technical rubber articles	25	55
Solprene 7201	Solprene 7201 is a Solution Styrene Rubber (SSBR) manufactured by anionic batch polymerization. The polymer is extended with TDAE oil and is protected with a non-staining antioxidant.	It is used in High performance tyre treads and technical rubber articles.	40	67
Solprene 7301	Solprene 7301 is a Solution Styrene Rubber (SSBR) manufactured by anionic batch polymerization. The polymer is protected with a non-staining antioxidant.	It is used in Tyre tread applications such as all-season, summer, winter and Technical rubber articles	21	55
Solprene 7302	Solprene 7302 is a Solution Styrene Rubber (SSBR) manufactured by anionic batch polymerization. The polymer is protected with a non-staining antioxidant.	Used in High performance tyre treads and technical rubber articles.	21	65



SEBS | CALPRENE

Brand Grade	Description	Uses	Styrene (%)	Structure
Calprene H6110	Calprene H6110 is a 70/30 ethylene-butylene/styrene thermoplastic copolymer, polymerized in solution and having a linear structure with excellent ozone resistance. Calprene H6110 meets the requirements of the USP class VI plastic classification.	It is used in applications like Adhesives/sealants, Oil gels, Plastic modification and asphalt modification	30	Linear
Calprene H6120	Calprene H6120 is a 68/32 ethylene-butylene/styrene thermoplastic copolymer, polymerized in solution and having a linear structure with excellent ozone resistance. Calprene H6120 meets the requirements of the USP class VI plastic classification.	It is used in applications like Compounding, Asphalt modification, Plastic modification and Adhesives/-sealants.	32	Linear
Calprene H6140	Calprene H6140 is a 69/31 ethylene-butylene/styrene thermoplastic copolymer, polymerized in solution and having a linear structure with excellent ozone resistance.	It is used in applications like Compounding, Plastic modification and sealants.	31	Linear
Calprene H6144	Calprene H6144 is a 69/31 ethylene-butylene/styrene thermoplastic copolymer, polymerized in solution and having a linear structure with excellent ozone resistance.	It is used in applications like Compounding, Plastic modification and sealants.	30	Linear
Calprene H6170	Calprene H6170 is a 67/33 ethylene-butylene/styrene thermoplastic copolymer, polymerized in solution and having a linear structure with excellent ozone resistance.	It is used in applications like Compounding and Plastic modification.	33	Linear
Calprene H6174	Calprene H6174 is a 67/33 linear structure ethylene-butylene/styrene thermoplastic copolymer, polymerized in solution, with a high molecular weight and excellent ozone resistance. This product gives an excellent surface appearance to the injected or extruded compounds and meets the requirements of the USP class VI plastic classification.	Technical Compounding: especially indicated for high quality surface appearance compounds transformed by injection or by extrusion. It can be used in Plastic modification.	33	Linear



SBS | CALPRENE

Brand Grade	Description	Uses	Styrene (%)	Structure
Calprene 401	Calprene 401 is an 80/20 butadiene/styrene thermoplastic copolymer, polymerized in solution and having a radial structure.	It is used in applications like asphalt modification, Footwear, Mechanical rubber goods, Plastic modification and solvent based adhesives.	20	Radial
Calprene 405	Calprene 405 is a 67/33 butadiene/styrene thermoplastic copolymer, polymerized in solution. It has a radial structure.	It is used in applications like Footwear, Sportswear, Mechanical rubber goods, asphalt modification and solvent based adhesives.	33	Radial
Calprene 411	Calprene 411 is a 70/30 Butadiene/Styrene thermoplastic copolymer, polymerized in solution and has a radial structure.	Used in applications to asphalts modification, Footwear, Mechanical rubber goods, Plastic modification and solvent based adhesives.	30	Radial
Calprene 412	Calprene 412 is a 69/31 butadiene/styrene thermoplastic copolymer, polymerized in solution and has a radial structure.	It is used in asphalt modification.	31.5	Radial
Calprene 419	Calprene 419 is a 70/30 Butadiene/Styrene thermoplastic copolymer, polymerized in solution and has a radial structure.	It Is used in applications like Asphalts modification, Footwear, Mechanical rubber goods, Plastic modification and solvent based adhesives.	30	Radial
Calprene 500	Calprene 500 is a 70/30 butadiene/styrene thermoplastic copolymer, polymerized in solution and having a linear structure.	FDA approved for use in food contact applications. It is used in adhesive and sealants formulation, in thermoplastic injected shoe sole formulations, and transparent compounds.	30	Linear
Calprene 501	Calprene 501 is a 69/31 butadiene/styrene thermoplastic copolymer, polymerized in solution and having a linear structure.	It is used in applications like Asphalts modification, Footwear, Mechanical rubber goods, Plastic modification and Adhesives.	31	Linear
Calprene 540	Calprene 540 is a 60/40 butadiene/styrene thermoplastic copolymer, polymerized in solution and having a linear structure.	FDA approved for use in food contact applications. It is used in adhesive formulation, thermoplastic injected shoe sole formulations, and transparent compounds.	40	Linear
Calprene 700	Calprene 700 is a new 70/30 butadiene/styrene Thermoplastic copolymer, polymerized in solution and having a linear structure. This product is a BHT* free SBS, especially suitable for food contact and textile contact applications.	New Dynasol product specially designed for FDA food contact applications. It is mainly used in adhesive and sealants formulation, and offering excellent transparency and clarity in thermoplastic injected shoe sole formulations	30	Linear
Calprene 701	Calprene 701 is a new 69/31 butadiene/styrene Thermoplastic copolymer, polymerized in solution and having a linear structure.	New Dynasol product specially designed for FDA food contact applications. It is Used in applications like Technical compounding, Plastic modification, and solvent based Adhesives.	31	Linear
Calprene 710	Calprene 710 is a 70/30 linear structure butadiene/styrene thermoplastic copolymer, polymerized in solution.	It is used in applications like Plastic modification Adhesives, sealing gaskets and coatings, Transparent compound and Asphalt modification.	30	Linear
Calprene 711	Calprene 711 is a new 70/30 butadiene/styrene Thermoplastic copolymer, polymerized in solution and having a radial structure.	New Dynasol product specially designed for FDA food contact applications and technical compounds. It develops an outstanding oil absorption.	30	Linear
Calprene 718	Calprene 718 is a new 75/25 butadiene/styrene Thermoplastic copolymer, polymerized in solution and having a radial structure.	New Dynasol product specially designed for flexography applications and adhesives with excellent flowability.	25	Radial
Calprene 719	Calprene 719 is a new 70/30 butadiene/styrene Thermoplastic copolymer, polymerized in solution and having a radial structure.	New Dynasol product specially designed for FDA food contact applications and technical compounds. It develops an outstanding oil absorption.	30	Linear
Calprene 7318	Calprene 7318 is a new 68/32 butadiene/styrene thermoplastic copolymers polymerized in solution and having linear structure.	New Dynasol product specially designed for FDA food contact adhesive applications.	32	Radial



SBS | SOLPRENE

Brand Grade	Description	Uses	Styrene (%)	Structure
Solprene 411	Solprene 411 is a 70/30 butadiene/styrene thermoplastic copolymer, polymerized in solution and has a radial structure.	It is used in applications like solventbased Adhesives, modified asphalt (paving and roofing) and thermoplastics compounding.	30	Radial
Solprene 416	Solprene 416 is a radial styrene/butadiene block copolymer having 30% of styrene content, most of it forming a polystyrenes block which gives the polymer a thermoplastic behavior.	It is FDA approved, suitable for food contact applications. It is used mainly for paving asphalts modifications, plastic modifier, thermoplastic compounding and adhesives.	30	Radial
Solprene 490	Solprene 490 is a 70/30 butadiene/styrene SBS thermoplastic copolymer polymerized in solution. It has a radial structure and is extended with 32% naphthenic oil.	Get high softening point and modulus properties as well as easy polymer time dispersion on polymer modified asphalt. This product was designed to give adequate rheological and heat flow resistance on asphalt shingles. Also, can be used in footwear compounding to give high mechanical properties.	30	Radial
Solprene 4301	Solprene 4301 is a linear block copolymer of styrene and butadiene, having 33% of styrene content, most of it forming a polystyrene block, which gives the polymer a thermoplastic behavior.	It is FDA approved for use in food contact applications . It is used as compounding ingredient for adhesives formulations , as impact modifier for plastics and as elastomeric modifier for asphalt mixtures used in paving and roofing.	33	Linear
Solprene 4302	Solprene 4302 is a linear block copolymer of styrene and butadiene, having 31% of styrene content, most of it forming a polystyrene block, which gives the polymer a thermoplastic behavior.	It is FDA approved for use in food contact applications . It is used t for adhesives formulation, as an impact modifier for plastics and as elastomeric modifier for asphalt mixtures used in paving and roofing.	31	Linear
Solprene 4318	Solprene 4318 is a linear block copolymer of styrene and butadiene, having 32% styrene content, most of it forming a polystyrene block, which gives the polymer a thermoplastic behavior.	It is FDA approved for use in food contact applications . It is used in adhesive formulations . The product is an excellent modifier for asphalt applications including self-adhesive roofing membrane and sealant. Also it is used in thermoplastic injected shoe soles formuations.	32	Linear
Solprene 9618	Solprene 9618 is a 69/31 Butadiene-Styrene Dynasol exclusive multi arm copolymer, polymerized in solution process.	It is specially designed for high performance hot melt adhesive formulations. It develops an excellent balance between adhesive properties and low viscosity.	31	Multi-Arm





Resilience

The art of adapting
to the environment
in speed and endurance



EMULSION



Dynasol
Group

EMULSION

The production site is located in **Altamira, Tamaulipas, Mexico** with a capacity of **130,000 TPY SBR and NBR**.

Dynasol Group has a JV in **China** located in **Nanjing Jiangsu** province with a production capacity of 30,000 TPY of NBR.

The main markets we serve are tire, tire retread, automotive, seals, under carpet, FDA seals, conveyor belts, chewing gum, hose, rolls, insulate, plastic, friction, technical articles, adhesives, shoes, molded parts, mats, O-ring, paper and textile coating.

EMULSION SBR

Cold SBR Emulprene

Emulprene cold is a styrene-butadiene copolymer produced by a cold (5 to 10 °C) polymerization using fatty and rosin acid as emulsifier, coagulated by salt-acid system and stabilized with a non-staining antioxidant. These polymers offers good mechanical properties, abrasion and tear resistance and are widely used in tires, retread, footwear soles, hoses, tubes, conveyor belts and a great variety of molded and extruded mechanical goods.

Oil Extended SBR Emulprene

Emulprene Oil Extended product portfolio offers different types which fulfill the actual requirements for the tire industry in regard of environment friendly oils. Different stabilization systems allows to use the products in color sensitive applications. They are used in the manufacture of tires, retreading, conveyor belts, hoses, mechanical goods for its excellent processing properties.



HSR Emulprene

The High Styrene Masterbatch is excellent for improving hardness and stiffness in floor tiles, shoe soles, rolls sporting goods, extrusion and hard rubber compounds. They provide reinforcement to BR, CR, EPDM, NBR, SBR, IR, and natural rubber, increasing hardness, rigidity, abrasion, and tear resistance.

Latex SBR Arlatex

Arlatex is a water dispersion of copolymer of styrene-butadiene made by emulsion polymerization it could be carboxylic or not. It is used in applications such as carpets, textile and paper coating.

CBMB Emulblack Carbon black masterbatch

Offers excellent physical properties and outstanding processing characteristics due to the complete dispersion of the carbon black and processing oil in the polymer. Is recommended for use in tires, tread rubber and molded and extruded mechanical goods.

SMB Emulsil Silica masterbatch

This product line is a unique family of patented products designed to serve a wide range of silica-rubber applications, including Passenger tires, Truck & Bus tires, Off-Road tires, Conveyor belts & rollers, Footwear soles and other industrial rubber goods.

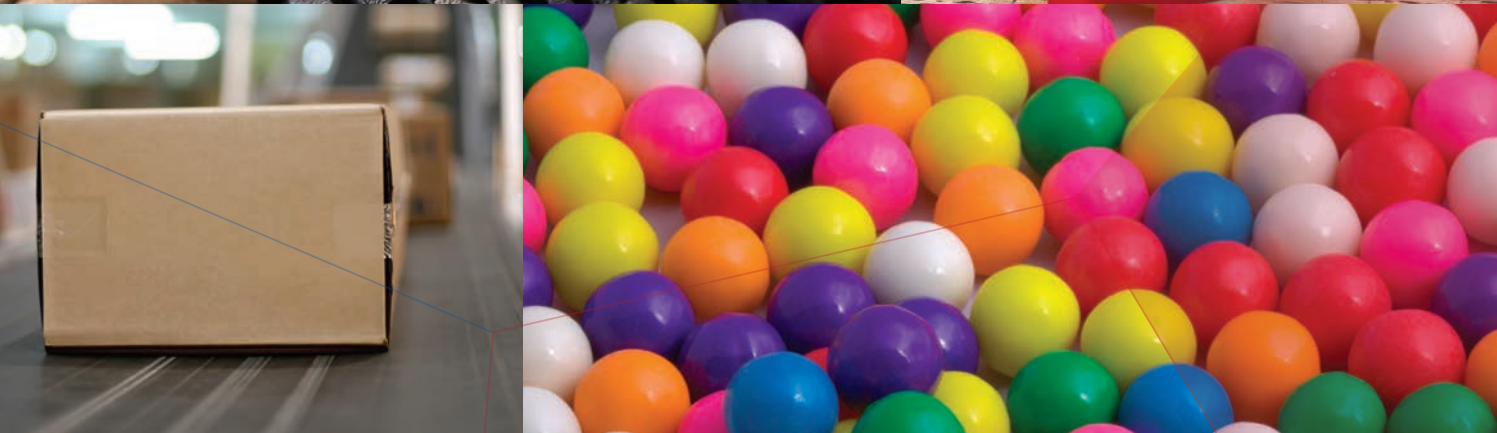


HSBR Emulprene Non-Crosslinked

Are used in the manufacture of a variety of adhesives and sealants. These linear, non-crosslinked polymers produce an excellent tack for bonding, coating and sealing applications. Product is available in several grades, providing a wide range of solubility and viscosity, cohesive strength and holding power can be achieved.

HSBR Emulprene Crosslinked

Produce adhesive and sealants with a non-stringy, buttery consistency. They are particularly useful for caulking compounds, mastics and sprayable adhesives. Besides the conventional bale form, several of these polymers are available in crumb form. These fast dissolving, low solution viscosity crumb polymers can help to reduce mixing time, use less solvent and coat faster.



EMULSION SBR

APPLICATION GUIDE

SBR PRODUCT

Type	Brand	Grade	Bound styrene (%)	PH	Black type	Oil	ML	UMS	ASH (%)	Brookfield viscosity (cps)	Black PHR	Silica PHR	Solids content (%)
Cold SBR	Emulprene	1500	23.5				52						
Cold SBR	Emulprene	1500A	23.5				52						
Cold SBR	Emulprene	1502	23.5				50						
Cold SBR	Emulprene	1502A	23.5				36						
Cold SBR	Emulprene	1502CR	23.5				50						
Cold SBR	Emulprene	1509	23.5				36						
Cold SBR	Emulprene	1509A	23.5				35						
Cold SBR	Emulprene	10140	21				24.5						
Oil Extended SBR	Emulprene	1712	23.5			HAO	46						
Oil Extended SBR	Emulprene	1723	23.5			TDAE	48						
Oil Extended SBR	Emulprene	1732	32.0			NAPH	46						
Oil Extended SBR	Emulprene	1778	23.5			NAPH	48						
Oil Extended SBR	Emulprene	1778R	27.3			NAPH	48						
Oil Extended SBR	Emulprene	1783	23.5			RAE	48						
HSBR	Emulprene	1006	23.5				50						
HSBR	Emulprene	1006CR	23.5				49						
HSBR	Emulprene	1009L	23.5				85						
HSBR	Emulprene	1009LCR	23.5				85						
HSBR	Emulprene	10101A	43.5				115						
HSBR	Emulprene	1011	23.5				54						
HSBR	Emulprene	1011AH	23.5				55						
HSBR	Emulprene	1011AL	23.5				48						
HSBR	Emulprene	1011CR	23.5				54						
HSBR	Emulprene	1012	23.5				120						
HSBR	Emulprene	1012CR	23.5				120						
HSBR	Emulprene	1013A	43				45						
HSBR	Emulprene	1013ACR	43				45						
HSBR	Emulprene	1028A	47.5				57						
HSBR	Insagum	1027	22 - 26				47 - 57						
HSBR	Insagum	1028	45 - 50				52 - 64						
HSR	Emulprene	260	64						1.0 MAX				
HSR	Emulprene	261	66						1.0 MAX				
Latex SBR	Arlatex	1185E		7.2 - 8.0						300 max			49 - 51
Latex SBR	Arlatex	1215E		8.1 - 8.9						300 max			43 - 45
Latex SBR	Arlatex	1372R		9.0 - 9.4						500 max			52 - 53
Latex SBR	Arlatex	1490E		9.5 - 12.0						200 max			38 min
Latex SBR	Arlatex	1919NC		8.0 - 9.0						100 max			45 - 49
Latex SBR	Arlatex	1928E		5.0 - 5.6						1000 max			50 - 52
CBMB	Emulblack	1606R	23.5		N330			65+/-10			52		
CBMB	Emulblack	1608	23.5		N220			70+/-10			52		
CBMB	Emulblack	1847K	23.5		N339			55+/-10			75		
CBMB	Emulblack	1848	23.5		N339			55+/-10			82.5		
CBMB	Emulblack	3651	23.5		N234			60+/-10			52		
SMB	Emulsil	4773R	36.5			RAE	95					70	
SMB	Emulsil	4773T	36.5			TDAE	95					70	
SMB	Emulsil	1671R	23.5			RAE	140					60	
SMB	Emulsil	1671N	23.5			NAPH	TBD					60	
SMB	Emulsil	1671	23.5			HAO	150					60	
SMB	Emulsil	4793T	36.5			TDAE	110					70	



COLD SBR | EMULPRENE

Brand Grade	Description	Uses	Styrene (%)	ML 1+4 100°C
Emulprene 1500	Emulprene 1500 is a styrene-butadiene copolymer, cold polymerized using a rosin acid soap. Previously to the salt acid coagulation, a non-staining stabilizer is added in the manufacturing process. The product does not contain nitrosamine promoters.	Is widely used as raw material in tire, suitable for molded and extruded mechanical goods.	23.5	52
Emulprene 1500A	Emulprene 1500A is a styrene-butadiene copolymer, cold polymerized using a rosin acid soap. Previously to the alum-acid coagulation, a non-staining stabilizer is added in the manufacturing process. The product does not contain nitrosamine promoters.	Suitable for molded and extruded mechanical goods and sealants applications.	23.5	52
Emulprene 1502	Emulprene 1502 is a styrene-butadiene copolymer, cold emulsion polymerized with fatty acid and rosin acid as emulsifier, coagulated by salt-acid system and stabilized with a non-staining antioxidant.	Widely used as raw material in tire, shoe sole and in various industrial products.	23.5	50
Emulprene 1502A	Emulprene 1502A is a styrene-butadiene copolymer, cold polymerized using a rosin acid soap. Previously to the alum-acid coagulation, a non-staining stabilizer is added in the manufacturing process. The product does not contain nitrosamine promoters.	Suitable for natural rubber in wide range of compounds, offering advantages of light colour, uniformity and low levels of impurities. It's good flow characteristics produce improvements in mixing and moulding behavior, it is used for food and pharmaceutical packaging and seals, baby bottle teats and health care, adhesives, chemical derivatives of rubbers.	23.5	36
Emulprene 1502CR	Emulprene 1502CR is a particulated styrene-butadiene copolymer, cold polymerized using fatty acid as emulsifier, coagulated with salt-acid and stabilized with a non-staining antioxidant. This rubber is produced as free flowing dusted crumb which eliminates the need for size reduction equipment. Between 4 and 12 % of calcium carbonate is used as dusting agent.	Is widely used like raw material in neumatics, heels, Shoe soles and for the production of transparent goods, and light colors, in particulated form is used for the manufacturing of adhesives.	23.5	50
Emulprene 1509	Emulprene 1509 is a styrene-butadiene copolymer, cold emulsion polymerized with fatty acid as emulsifier, coagulated by salt-acid system and stabilized with a non-staining antioxidant.	Widely used in tire, heel and shoe sole formulations as well as in a vast array of industrial products.	23.5	36
Emulprene 1509A	Emulprene 1509A is a copolymer styrene-butadiene, cold emulsion polymerized used fatty acid as emulsifier, coagulated by alum-acid system and stabilized with a non-staining antioxidant.	Is recommended for mechanical goods and sealing applications.	23.5	35
Emulprene 10140	Emulprene 10140 is a product manufactured by mixing a cold styrene-butadiene copolymer containing 5.5% bound styrene (80%) with high styrene resin latex (20%), coagulated by salt-acid system and stabilized with a non-staining antioxidant.	The masterbatch provides the user with an advantage through ease of processing and improved product quality, and it provides the stiffening effect to the final product. Uses: tires, footwear, sponges, other mechanical goods, etc.	21	24.5

OIL EXTENDED SBR | EMULPRENE

Brand Grade	Description	Uses	Styrene (%)	ML 1+4 100°C
Emulprene 1712	Emulprene 1712 is a copolymer styrene-butadiene cold emulsion polymerized used fatty acid as emulsifier, coagulated by salt-acid system and it is extended utilizing aromatic oil.	Used in tire formulations and in a variety of industrial products due to its excellent adhesion and processing properties.	23.5	46
Emulprene 1723	Emulprene 1723 is a copolymer styrene-butadiene cold emulsion polymerized used fatty and rosin acid as emulsifier, coagulated by salt-acid system and it is extended utilizing TDAE (Treated Distillate Aromatic Extract) an environmental friendly oil which comply with the EU directives.	Is used in the manufacture of tires and industrial products for its excellent processing properties.	23.5	48
Emulprene 1732	Emulprene 1732 is a copolymer styrene-butadiene, cold emulsion polymerized used fatty acid as emulsifier, coagulated by salt-acid system and it is extended utilizing naphthenic oil.	Is used in the manufacture of tires and industrial products for its excellent processing properties.	32	46



Brand Grade	Description	Uses	Styrene (%)	ML 1+4 100°C
Emulprene 1778	Emulprene 1778 is a copolymer styrene-butadiene, cold emulsion polymerized used fatty acid as emulsifier, coagulated by salt-acid system and it is extended utilizing naphthenic oil.	Used in the manufacture of tires and industrial products for its excellent processing properties.	23.5	48
Emulprene 1778R	Emulprene 1778R is a cold emulsion styrene-butadiene copolymer, polymerized using fatty acid and rosin acid as emulsifier, coagulated by salt-acid system and it is extended utilizing naphthenic oil and meets the European directive 2005/69/EC.	Is used in the manufacture of tires and industrial products for its excellent processing properties.	27.3	48
Emulprene 1783	Emulprene 1783 is a copolymer styrene-butadiene cold emulsion polymerized used fatty and rosin acid as emulsifier, coagulated by salt-acid system and it is extended utilizing RAE (Residual Aromatic Extract) an environmental friendly oil which comply with the EU directives.	Is used in the manufacture of tires, retreading, conveyor belts, hoses, mechanical goods for its excellent processing properties.	23.5	48

HSBR | EMULPRENE

Brand Grade	Description	Uses	Styrene (%)	ML 1+4 100°C
Emulprene 1006	Emulprene 1006 is a hot emulsion styrene-butadiene copolymer, polymerized using a fatty acid emulsifier and coagulated with salt-acid. It is a very light color product stabilized with a non-staining antioxidant.	Recommended for light colored; for adhesives, tire white sidewalls, transport and transmission belts, sponge materials, sporting goods, flooring, colored shoe soles and heels.	23.5	50
Emulprene 1006CR	Emulprene 1006CR is a crumb hot emulsion styrene-butadiene copolymer, polymerized using a fatty acid emulsifier and coagulated with salt-acid. It is a very light color product stabilized with a non-staining antioxidant, and presented as free flowing dusted crumb which eliminates the need for size reduction equipment. Between 7% and 12% of Calcium Carbonate is used as dusting agent.	Is recommended for light colored applications; for adhesives, tire white sidewalls, transport and transmission belts, sponge materials, sporting goods, flooring, colored shoe soles and heels.	23.5	49
Emulprene 1009L	Emulprene 1009L is a hot emulsion styrene-butadiene copolymer, slightly cross-linked with divinylbenzene. It is polymerized using fatty acid as emulsifier, coagulated with salt acid and stabilized with a non-staining, antioxidant.	Is a lower gel version of the E1009H it also reduces mill shrinkage and swelling in molding improving dimensional stability and outstanding surface texture of finished products. It is also widely used in sealants and adhesives giving good balance between adhesive and cohesive properties.	23.5	85
Emulprene 1009LCR	Emulprene 1009LCR is a crumb hot emulsion styrene-butadiene copolymer, slightly cross-linked with divinylbenzene. It is polymerized using fatty acid as emulsifier, coagulated with salt acid and stabilized with a non-staining, antioxidant. This rubber is produced as free flowing dusted crumb which eliminates the need for size reduction equipment. Between 7-12 % of Calcium carbonate is used as dusting agent.	Dissolves easily in solvents, being widely used as main ingredient for solvent based general purpose pressure-sensitive, aerosol, spray and laminating adhesives. It can also be used in caulks and sealants. Storage.	23.5	85
Emulprene 10101A	Emulprene 10101A is a cross-linked emulsion styrene-butadiene copolymer with divinyl-benzene, using a mix of rosin and fatty acid as emulsifier. It is coagulated with Aluminum-acid and stabilized with a non-staining antioxidant. It is produced in accordance with good manufacturing practices and complies with FDA 21 CFR §175.300, §177.1210 and §178.3910 for use in food contact applications.	Gives excellent dimensional stability to compounds, reduces die swell and shrinkage in extruded products. It is also recommended for improving cohesive strength in adhesives and sealants which will be in contact with food or beverages.	43.5	115
Emulprene 1011	Emulprene 1011 is a hot emulsion styrene-butadiene copolymer using rosin acid as emulsifier and coagulated with salt-acid. It is very light color product stabilized with a non-staining antioxidant.	Gives excellent green tack and adhesive properties with good balance of mechanical strength. Is recommended for molded and extruded mechanical goods, adhesives, caulks and sealants.	23.5	54
Emulprene 1011AH	Emulprene 1011AH is a hot emulsion styrene-butadiene copolymer using rosin acid as emulsifier and coagulated with salt-acid. It is very light color product stabilized with a non-staining antioxidant.	Gives excellent green tack and adhesive properties with good balance of mechanical strength. Is recommended for molded and extruded mechanical goods, adhesives and sealants.	23.5	55



Brand Grade	Description	Uses	Styrene (%)	ML 1+4 100°C
Emulprene E1011AL	Emulprene 1011AL is a hot emulsion styrene-butadiene copolymer using rosin acid as emulsifier and coagulated with salt-acid. It is very light color product stabilized with a non-staining antioxidant.	Gives excellent green tack and adhesive properties with good balance of mechanical strength. Is recommended for molded and extruded mechanical goods, adhesives and sealants.	23.5	48
Emulprene 1011CR	Emulprene 1011CR is a crumb of hot emulsion styrene-butadiene copolymer using rosin acid as emulsifier and coagulated with salt-acid. It is very light color product stabilized with a non-staining antioxidant. This rubber is produced as free flowing dusted crumb which eliminates the need for size reduction equipment. Between 4% and 12% of Calcium Carbonate is used as dusting agent.	E1012CR is the high molecular weight version of E1006CR, it dissolves readily in solvents and particularly useful as binder for fibrous materials and adhesives where increased cohesive strength is desired.	23.5	54
Emulprene 1012	Emulprene 1012 is a high viscosity hot emulsion styrene-butadiene copolymer, polymerized using a fatty acid emulsifier and coagulated with salt-acid. It is a very light color product stabilized with a non-staining antioxidant.	Particularly useful as a binder for fibrous materials and adhesives where increased cohesive strength is desired.	23.5	120
Emulprene 1012CR	Emulprene 1012CR is a crumb version of a high viscosity hot emulsion styrene-butadiene copolymer, polymerized using fatty acid emulsifier and coagulated with salt-acid. It is very light color product stabilized with a non-staining antioxidant, and presented as free flowing dusted crumb which eliminates the need for size reduction equipment. Between 4% and 12% of Calcium Carbonate is used as dusting agent.	E1012CR is the high molecular weight version of E1006CR, it dissolves readily in solvents and particularly useful as binder for fibrous materials and adhesives where increased cohesive strength is desired.	23.5	120
Emulprene 1013A	Emulprene 1013A is a styrene-butadiene copolymer, hot polymerized using a fatty acid soap. Previously to the alum-acid coagulation, a non-staining stabilizer is added in the manufacturing process.	Suitable for adhesive applications it is particularly used for can-sealing compounds, tire liners, mechanical goods, including auto mounts, and household products.	43	45
Emulprene 1013ACR	Emulprene 1013ACR is a styrene-butadiene copolymer, hot polymerized using a fatty acid soap. Previously to the alum-acid coagulation, a non-staining stabilizer is added in the manufacturing process. This rubber is produced in free flowing crumb form which eliminates the need for milling, cutting, or grinding equipment. Between 7-12% of Calcium Carbonate is used as dusting agent.	E1013ACR is suitable for adhesive applications. It is particularly used for can-sealing compounds. Useful in blends with other elastomers to increase cohesive strength, and to provide higher green strength.	43	45
Emulprene 1028A	Emulprene 1028A is a high styrene, hot emulsion styrene-butadiene copolymer using fatty acid as emulsifier and coagulated with salt-acid. It is stabilized with a non-staining antioxidant. The product does not contain nitrosamine promoters.	This grade is exceptionally light colored. It features high green strength, low air permeability and excellent flow properties, it is recommended for use in adhesive, sealants, tire liners, mechanical goods and household products.	47.5	57

HSBR | INSAGUM

Brand Grade	Description	Uses	Styrene (%)	ML 1+4 100°C
Insagum 1027	Insagum IG1027 is a hot emulsion styrene-butadiene copolymer using vegetal fatty acid as emulsifier and coagulated with salt-acid. It is stabilized with BHT antioxidant. The product complies with U. S. FDA regulation 21 CFR §172.615 referenced to SBR used for Chewing Gum, 21 CFR 177.2600 Indirect food additives: Polymers. It meets the requirements in the Food Chemical Codex for 75/25 type SBR.	IG1027 is specially designed for chewing gum applications, giving softer chew.	22 - 25	47 - 57
Insagum 1028	Insagum IG1028 is a high styrene, hot emulsion styrene-butadiene copolymer using vegetal fatty acid as emulsifier and coagulated with salt-acid. It is stabilized with BHT antioxidant. The product complies with U. S. FDA regulation 21 CFR §172.615 referenced to SBR used for Chewing Gum, 21 CFR 177.2600 Indirect food additives: Polymers. It meets the requirements in the Food Chemical Codex for 50/50 type SBR.	IG1028 is specially designed for bubble gum applications, giving firmer chew and larger bubbles.	45 - 50	52 - 64



LATEX SBR | ARLATEX

Brand Grade	Description	Uses	Solids content (%)	PH
Artalex 1185E	Arlatex 1185E is an aqueous dispersion of a carboxylated styrene-butadiene copolymer manufactured by polymerization in emulsion.	Used in tire formulations and in a variety of industrial products due to its excellent adhesion and processing properties.	49.0 - 51.0	7.2 - 8.0
Artalex 1215E	Arlatex 1215E is an aqueous dispersion of carboxylated styrene butadiene copolymer manufactured by emulsion polymerization.	Used in those applications that require high rigidity and tenacity, as well as reliable resistance to water. It can be blended with resins in where it provides certain flexibility in the final finished one without affect in its resistance. The monomer ratio in the latex produces a rigid hand.	43.0 - 45.0	8.1 - 8.9
Artalex 1372R	Arlatex 1372R is an aqueous dispersion of carboxylated styrene butadiene copolymer manufactured by emulsion polymerization.	Especially designed for the manufacturing of carpet and rug backings and as binder for fibers and fabrics. It can be used in single or double pan systems, in frothed or non-frothed process. Medium hand.	52.0 - 53.0	9.0 - 9.4
Artalex 1490E	Arlatex 1490E is an aqueous dispersion of a no-carboxylated styrene-butadiene copolymer manufactured by polymerization in emulsion.	Is a product designed to be used as coating to improve rigidity and tensile strenght in textile and cellulose products.	38 MIN	9.5 - 12.0
Artalex 1919NC	Arlatex 1919NC is an aqueous dispersion of carboxylated styrene butadiene copolymer manufactured by emulsion polymerization.	Especially designed for the manufacturing of carpet and rug backings and as binder for fibers and fabrics. It can be used in single or double pan systems, in frothed or non-frothed process. Soft hand.	45.0 - 49.0	8.0 - 9.0
Artalex 1928E	Arlatex 1928E is an aqueous dispersion of a cationic styrene-butadiene copolymer manufactured by polymerization in a hot emulsion.	Especially designed for the modified asphalt solutions.	50.0 - 52.0	5.0 - 5.6

CBMB | EMULBLACK

Brand Grade	Description	Uses	Black type	UMS 1+ 4100°C
Emulblack 1606R	Emulblack 1606R is a black masterbatch based on cold sbr, aromatic oil and carbon black. polymerized polymer. SBR _____ 100 PTS HAO _____ 10 PTS Carbon Black N330 _____ 52 PTS	Offers excellent physical properties and outstanding processing characteristics due to the complete dispersion of the carbon black and processing oil in the polymer. Is recommended for use in tires, tread rubber and molded and extruded mechanical goods.	N330	65 +/- 10
Emulblack 1608	Emulblack 1608 is a general purpose SBR oil/black masterbatch based on a cold polymerized polymer SBR _____ 100 PTS HAO _____ 12.5 PTS Carbon Black N220 _____ 52 PTS	Offers excellent physical properties for high quality tire treads, cold retreading, conveyor belts and molded and extruded mechanical goods.	N220	70 +/- 10
Emulblack 1847K	Emulblack 1847K is a black masterbatch based on cold SBR, aromatic oil and carbon black. SBR _____ 100 PTS HAO _____ 50 PTS Carbon Black N339 _____ 75 PTS	Is designed especially for operations where fast, smooth extrusions are necessary, this masterbatch gives compounds with excellent extrusion characteristics and tread wear.	N339	55+/-10
Emulblack 1848	Emulblack 1848 is an general purpose SBR oil/black masterbatch based on 1712 latex and N339 carbon black. SBR _____ 100 PTS HAO _____ 62.5 PTS Carbon Black N339 _____ 82.5 PTS	Designed especially for tread rubber and extruded goods this masterbatch produces compounds with excellent extrusion characteristics, abrasion resistance and tread wear.	N339	55+/-10
Emulblack 3651	Emulblack 3651 is black masterbatch based on cold SBR and N234 carbon black. SBR _____ 100 PTS HAO _____ 10 PTS Carbon Black N234 _____ 55 PTS	Offers excellent physical properties high quality tire treads, cold retreading, conveyor belts and molded and extruded mechanical goods.	N234	60+/-10



SMB | EMULSIL

Brand Grade	Description	Uses	Styrene (%)	ML 1+4 100°C
Emulsil 4773R	Emulsil 4773R is a silica master batch based on SBR and a 175 surface area silica fully silanized using RAE oil and a staining stabilizer. SBR _____ 100 PTS RAE Oil _____ 30 PTS Silica 175 SA _____ 70 PTS Use 203.6 Parts for compounding calculations.	Offers improved wet traction while maintaining good rolling resistance for tire applications.	36.5	95
Emulsil 4773T	Emulsil 4773T is a silica masterbatch based on SBR and a 175 surface area silica fully silanized using TDAE oil and a staining stabilizer. SBR _____ 100 PTS TDAE Oil _____ 30 PTS Silica 175 SA _____ 70 PTS Use 203.6 Parts for compounding calculations.	Offers improved wet traction while maintaining good rolling resistance for tire applications.	36.5	95
Emulsil 1671R	Emulsil 1671R is a silica masterbatch based on cold SBR and 175 surface area silica fully silanized using a staining stabilizer. SBR _____ 100 PTS RAE Oil _____ 12 PTS Silica 175 SA _____ 60 PTS Use 175.6 Parts for compounding calculations.	Offers excellent physical properties for high quality tire treads, cold retreading, conveyor belts, molded parts and extruded mechanical goods.	23.5	140
Emulsil 1671N	Emulsil 1671N is a silica masterbatch based on cold SBR and 175 surface area silica fully silanized using a non staining stabilizer. SBR _____ 100 PTS Naphthenic oil _____ 12 PTS Silica 175 SA _____ 60 PTS Use 175.4 Parts for compounding calculations.	Offers excellent physical properties and light color for high quality footwear, conveyor belts, molded parts and extruded mechanical goods.	23.5	TBD
Emulsil 1671	Emulsil 1671 is a silica masterbatch based on cold SBR and 175 surface area silica fully silanized using a staining stabilizer and aromatic oil. SBR _____ 100 PTS Aromatic Oil _____ 12 PTS Silica 175 SA _____ 60 PTS Use 175.6 Parts for compounding calculations.	Offers excellent physical properties for high quality tire treads, cold retreading, conveyor belts, molded parts and extruded mechanical goods.	23.5	150
Emulsil 4793T	Emulsil 4793T is a silica masterbatch based on SBR and a 230 or greater surface area silica fully silanized using TDAE oil and a staining stabilizer. SBR _____ 100 PTS TDAE Oil _____ 35 PTS Silica >230 SA _____ 70 PTS Use 212.36 Parts for compounding calculations.	Offers improved wet traction and excellent abrasion resistance while maintaining good rolling resistance for tire applications.	36.5	110

HSR | EMULPRENE

Brand Grade	Description	Uses	Styrene (%)	ASH (%)
Emulprene 260	Emulprene 260 is a self-reinforcing emulsion rubber due to its high styrene content. The design of the elastomer allows for excellent processability during mixing and the special antioxidant used in its manufacture make it non-staining.	E260 is used as a reinforcing agent that does not alter the final products specific gravity while increasing the hardness, rigidity, abrasive and tear resistance as well as improving the flexibility of vulcanized shoe-soles. This product can also be used as raw material in the manufacture of tires.	64	1.0 max
Emulprene 261	Emulprene 261 is a self-reinforcing emulsion rubber due to its high styrene content. The design of the elastomer allows for excellent processability during mixing and the special antioxidant used in its manufacture make it non-staining.	E261 is used as a reinforcing agent that does not alter the final products specific gravity while increasing the hardness, rigidity, abrasive and tear resistance as well as improving the flexibility of vulcanized shoe-soles. This product can also be used as raw material in the manufacture of tires.	66	1.0 max



EMULSION NBR

NBR 2.0 Paracril / NBR Paracril

Paracril NBR grades are produced by cold and hot polymerization process. The cold process yields linear polymers with good processing characteristics and solubility in polar solvents. The hot polymerization process leads to more branching. Branching in the hot Paracril grades is more developed in the higher viscosity grades. The hot polymers offer improved green strength. Crosslinked Paracril NBR grades are unique in processing and function.

They are produced by chemical crosslinking or conversion branched. The crosslinked grades have varying degrees of reduced mill shrink to as low as 5% versus linear grades of over 35% mill shrink. These grades offer benefits in thermoplastic modification for lower compression set and green strength improvement in thermoset recipes.

Paracril 34PE40, a plasticizer extended grade, contains 50 parts of DOP in a high molecular weight NBR used in the production of low durometer products such as roll covers.



NBR Powder Paracril

NBR Powder is used in friction products such as brake pads and clutch discs. The NBR for these applications is typically higher acrylonitrile content and viscosity.

NBR Crumb Paracril

Paracril NBR Crumb is a Ground nitrile powder used as a plastic modifier such as PVC, thermoset and adhesive applications. The NBR for these applications is typically medium and high acrylonitrile content and viscosity.

NBR Spray Dried Paracril

The NBR SD acts as a secondary binder that provides a higher coefficient of friction, antifading performance, and fuel oil resistance with reduced noise.



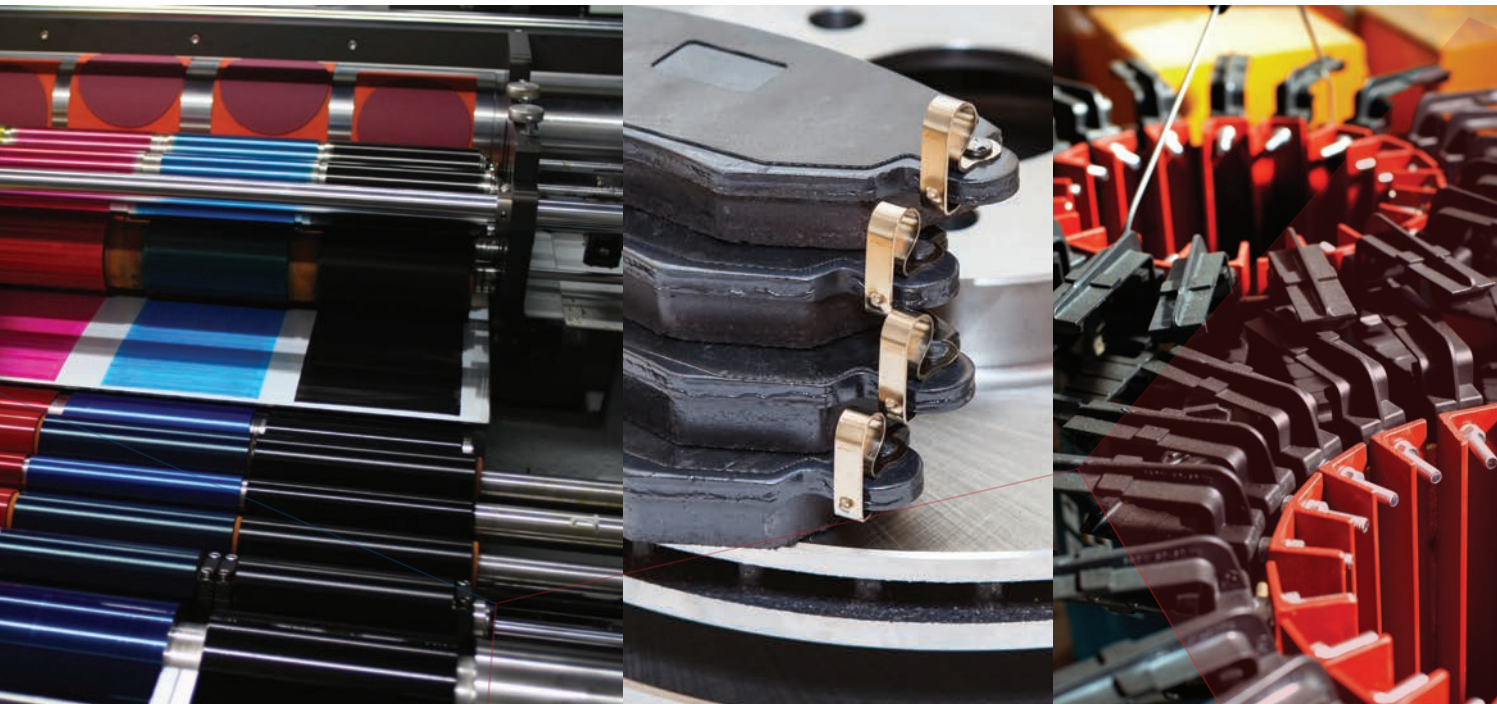
NBR Paraclean

Paraclean NBR has been developed to provide a low residue, fast curing grade of NBR. Paraclean grades are cold polymerized for best processing characteristics.

NBR/PVC Paracril

Paracril OZO is a fluxed blend of NBR and PVC. The most common ratio of NBR to PVC is 70/30. A higher PVC content of 40% is used in applications such as sponge where very low densities can be achieved through the uniform expansion of the chemical foaming agent. Paracril OZO offers inherent resistance to OZONE, good colorability, smooth surface appearance, abrasion resistance, processing ease, and flame resistance.

Plasticizer extended grades are also available that contain as high as 70 parts of phthalalate for low durometer rolls.



EMULSION NBR

APPLICATION GUIDE

NBR PRODUCT

Type	Brand	Grade	BAN (%)	PVC (%)	Base polymer	ML	Pre-crosslinked	DINP extended	Crumb rubber	Flux blends 70 NBR/30 PVC	Fluxed blends 60 NBR/40 PVC	Preflused blends 40 NBR/60 PVC 60 DOP
NBR 2.0	Paracril	1945	19			45						
NBR 2.0	Paracril	2840	28			40						
NBR 2.0	Paracril	2860	28			60						
NBR 2.0	Paracril	3335	33			35						
NBR 2.0	Paracril	3350	33			50						
NBR 2.0	Paracril	3380	33			80						
NBR	Paracril	1880LM	21			58						
NBR	Paracril	X3675	38			52						
NBR	Paracril	33110	33			110						
NBR	Paracril	45110	45			110						
NBR	Paracril	AJ	23.5			48						
NBR	Paracril	ALT	26			73						
NBR	Paracril	AJLT	27.5			40						
NBR	Paracril	AJLT M50	27.5			50						
NBR	Paracril	N41	29			77						
NBR	Paracril	B	29.5			85						
NBR	Paracril	BJ	29.5			50						
NBR	Paracril	BPLT	31			38						
NBR	Paracril	BJLT-M30	32.5			30						
NBR	Paracril	BJLT-M40	32.5			40						
NBR	Paracril	BJLT-M50	32.5			50						
NBR	Paracril	BLT-M75	32.5			75						
NBR	Paracril	BLT-M80	32.5			80						
NBR	Paracril	C	35			80						
NBR	Paracril	CLM	35			68						
NBR	Paracril	CLT	40			65						
NBR	Paracril	CJLT	40			50						
NBR	Paracril	34PE40N	34			40		◆				
NBR	Paracril	BJLT-HX	32			55	◆					
NBR	Paracril	P30.55XL	30			40	◆					
NBR	Paracril	P32.50XL	33			50	◆					
NBR	Paracril	P32.55XL	32.5			55	◆					
NBR	Paracril	P32.60XL	32			50	◆					
NBR	Paracril	P33.55XL	33			55	◆					
NBR	Paracril	P33.80XL	33			80	◆					
NBR	Paraclean	28L35	28			35						
NBR	Paraclean	28L45	28			45						
NBR	Paraclean	28L80	28			80						
NBR	Paraclean	31L35	31			35						
NBR	Paraclean	33L35	33			35						
NBR	Paraclean	33L50	33			50						
NBR	Paraclean	36L45	36			45						
NBR/PVC	Paracril	OZOM50		30		50				◆		
NBR/PVC	Paracril	OZOM58		30		58				◆		
NBR/PVC	Paracril	OZOM65		30		65				◆		
NBR/PVC	Paracril	OZ03341		30		55				◆		
NBR/PVC	Paracril	OZ0728M60		30		60				◆		
NBR/PVC	Paracril	OZOP7510N		21.4		20				◆		
NBR/PVC	Paracril	OZ03996		40		52					◆	
NBR/PVC	Paracril	OZOSP80N		36.5		29						◆
NBR/PVC	Paracril	OZOSP90N		23.5		21						
NBR Powder	Paracril	FP3380XC	33		◆ P33.80XL	80	◆ High		◆			
NBR Powder	Paracril	P33110C1	33		◆ P33.110	110						
NBR Powder	Paracril	P3250XP	32		◆ P32.50XL	50	◆ Partial					
NBR Powder	Paracril	P3350CC	33		◆ BJLT M50	48.5						
NBR Powder	Paracril	P3350CC2	33		◆ P33L50	50						
NBR Powder	Paracril	P3380CC1	32.5		◆ BLT M80	80						
NBR Powder	Paracril	P3380XP	33		◆ P33.80XL	81.5	◆ High					
NBR Powder	Paracril	P7072P	33		◆ P33.55XL	55	◆ High					
NBR Powder	Paracril	P7083P	32.5		◆ P32.55XL	55	◆ Partial					
NBR Powder	Paracril	P7083XC	32		◆ P32.60XL	55	◆ Partial					
NBR Powder	Paracril	P7092P	33		◆ P33.55XL	55	◆ High					
NBR Powder	Paracril	P45110C1	45		◆ P45.110	110						
NBR Crumb	Paracril	CV	32.5		◆ CLM	67.5						
NBR Crumb	Paracril	CV80	32.5		◆ C	80						
NBR Crumb	Paracril	C3380CC	32.6		◆ BLT - M80	80						
NBR Crumb	Paracril	P3370CMC	33		◆ P33.70	70						
NBR Crumb	Paracril	P7083CR	32.5		◆ P32.55XL	55	◆ Partial					
NBR Crumb	Paracril	P7087CR	32.5		◆ BJLT - M50	50						
NBR Spray Dried	Paracril	SD3811	38			115						
NBR Spray Dried	Paracril	SD3811C	38			115						



NBR 2.0 | PARACRIL

Brand Grade	Description	Uses	BAN (%)	ML 1+4 100°C
Paracril 1945	Paracril 1945 is a copolymer of butadiene and acrylonitrile, cold polymerized with a non-staining stabilizer.	Offers excellent low temperature flexibility with moderate oil resistance. It is recommended to meet military specifications and aircraft applications including O-rings, seals, gaskets, grommets, diaphragms, and blends with other PARACRIL® polymers to give intermediate low temperature properties.	19	45
Paracril 2840	Paracril 2840 is a copolymer of butadiene and acrylonitrile, cold polymerized with a nonstaining stabilizer.	Offers excellent balance of low temperature flexibility with oil resistance, easy processing, fast curing, light color and good performance in peroxide cure systems. It is recommended for automotive products, seals, hoses, O-rings, packings, footwear, rolls and thermoplastic blends.	28	40
Paracril 2860	Paracril 2860 is a copolymer of butadiene and acrylonitrile, cold polymerized with a non-staining stabilizer.	Offers excellent balance of low temperature flexibility with oil resistance, easy processing, and good performance in peroxide cure systems, fast curing and light color. It is recommended for automotive products, seals, hoses, O-rings, packings, footwear, rolls and thermoplastic blends.	28	60
Paracril 3335	Paracril 3335 is a copolymer of butadiene and acrylonitrile, cold polymerized with a nonstaining stabilizer.	Offers excellent balance of low temperature flexibility with oil resistance, easy processing, fast curing, light color and a good performance in peroxide cure systems. It is recommended for automotive products, seals, hoses, O-rings, packings, footwear, rolls and thermoplastic blends.	33	35
Paracril 3350	Paracril 3350 is a copolymer of butadiene and acrylonitrile, cold polymerized with a non-staining stabilizer.	Offers excellent balance of low temperature flexibility with oil resistance, easy processing, fast curing, light color and a good performance in peroxide cure systems. It is recommended for automotive products, seals, hoses, O-rings, packings, adhesives, footwear, rolls and thermoplastic blends.	33	50
Paracril 3380	Paracril 3380 is a copolymer of butadiene and acrylonitrile, cold polymerized with a non-staining stabilizer.	Offers excellent balance of low temperature flexibility with oil resistance, easy processing, fast curing, light color and a good performance in peroxide cure systems. It is recommended for automotive products, seals, hoses, O-rings, packings, adhesives, footwear, rolls and thermoplastic blends.	33	80

NBR | PARACRIL

Brand Grade	Description	Uses	BAN (%)	ML 1+4 100°C
Paracril 1880LM	Paracril 1880LM is a copolymer of butadiene and acrylonitrile, hot polymerized and non-staining stabilized.	Offers excellent low temperature flexibility with moderate oil resistance. It is recommended for military specifications and aircraft applications including O-rings, seals, gaskets, grommets, and diaphragms, blends with other PARACRIL® polymers can be made to give intermediate low temperature properties.	21	58
Paracril X3675	Paracril X3675 is a copolymer of butadiene and acrylonitrile, hot polymerized with a non-discoloring staining stabilizer.	Offers an excellent processability and highly cross-linked. It is recommended for PVC modification, blends with other Paracril polymers to improve extrusion or calendaring performance.	38	52
Paracril 33110	Paracril 33110 is a copolymer of butadiene and acrylonitrile, cold polymerized and non-staining stabilized.	Offers excellent balance of low temperature flexibility with oil resistance, high viscosity for improved green strength and increased oil content recipes, fast curing and light color. It is recommended for use in roll covers, automotive products, seals, hoses, Orings and packings.	33	110
Paracril 45110	Paracril 45110 is a copolymer of butadiene and acrylonitrile, cold polymerized and non-staining stabilized.	Is designed with high BAN content for best fuel and oil resistance, high viscosity for improved green strength and increased oil content recipes, fast curing and light color. It is recommended for use in seals, O-Rings, packing, grommets, printing blankets and rolls.	45	110



Brand Grade	Description	Uses	BAN (%)	ML 1+4 100°C
Paracril AJ	Paracril AJ is a copolymer of butadiene and acrylonitrile, hot polymerized with a non-staining stabilizer.	Offers an excellent low temperature flexibility with moderate oil resistance and a good processing. It is recommended for seals, O-Rings, and grommets, for hose and tubes requiring low temperature flexibility and blends with other Paracril grades.	23.5	48
Paracril ALT	Paracril ALT is a copolymer of butadiene and acrylonitrile, cold polymerized with a nonstaining stabilizer.	Offers excellent balance of low temperature flexibility with moderate oil resistance, good extrusion characteristics, low corrosion and low water absorption. It is recommended for hose and tubes requiring low temperature flexibility, Orings, seals, gaskets, grommet, diaphragms, coated fabrics and roll covers.	26	73
Paracril AJLT	Paracril AJLT is a copolymer of butadiene and acrylonitrile, cold polymerized with a non-staining stabilizer.	Offers an excellent balance of low temperature flexibility with moderate oil resistance, good extrusion characteristics, low corrosion and low water absorption. It is recommended for seals, O-Rings, gaskets, grommets, diaphragms, coated fabrics and roll covers.	27.5	40
Paracril AJLTM50	Paracril AJLTM50 is a copolymer of butadiene and acrylonitrile, cold polymerized with a non-staining stabilizer.	Offers excellent balance of low temperature flexibility with moderate oil resistance, good extrusion characteristics, low corrosion and low water absorption. It is recommended for hose and tubes requiring low temperature flexibility, O-rings, seals, gaskets, grommets, diaphragms, coated fabrics and roll covers.	27.5	50
Paracril N41	Paracril N41 is a copolymer of butadiene and acrylonitrile, cold polymerized with a semi staining stabilizer. Good low temperature flexibility and oil resistance.	Offers an excellent green strength, fast curing and low water absorption. It is recommended for extruded products, hoses, O-rings, seals, gaskets, grommets, diaphragms and blends with PVC.	29	77
Paracril B BJ	Paracril B and BJ are copolymers of butadiene, hot polymerized and acrylonitrile with a non-staining stabilizer, good low temperature flexibility and oil resistance.	Offers excellent balance of low temperature flexibility with oil resistance and a high green strength. It is recommended for automotive products, seals, hoses, O-rings, packing's, adhesives, sponge, coated fabrics and roll covers.	29.5 29.5	85 50
Paracril BPLT	Paracril BPLT is a copolymer of butadiene and acrylonitrile, cold polymerized with a non-staining stabilizer. Fast mixing and lower heat buildup with minimum power consumption.	Offers an excellent balance of low temperature flexibility with oil resistance, fast mixing, low water absorption and low corrosion. It is recommended for automotive products, seals, hoses, O-rings, packings, and thermoplastic blends.	31	38
Paracril BLT-M30 BLT-M40 BJLT-M50 BJLT-M75 BJLT-M80	This Paracrils are copolymers of butadiene and acrylonitrile, cold polymerized with a non-staining stabilizer. Fast mixing and lower heat buildup with minimum power consumption.	Offers excellent balance of low temperature flexibility with oil resistance, fast mixing, low water absorption and low corrosion. It is recommended for automotive products, seals, hoses, O-rings and packing's, adhesives, oil field specialties, wire and cable, footwear, rolls and thermoplastic blends.	32.5 32.5 32.5 32.5 32.5	30 40 50 75 80
Paracril C	Paracril C is a copolymer of butadiene and acrylonitrile, hot polymerized with a non-staining stabilizer. Good resistance to fuels and mineral oils. Very good abrasion resistance.	Offers an excellent balance of low temperature flexibility with oil resistance, fast mixing, low water absorption and low corrosion. It is recommended for automotive products, seals, hoses, O-rings, packings, and thermoplastic blends.	35	80
Paracril CLM	Paracril CLM is a copolymer of butadiene and acrylonitrile, hot polymerized with a non-staining stabilizer. Similar to Paracril C but has lower viscosity.	Offers an excellent oil resistance with moderate low temperature flexibility, good green strength, and low gel content. It is recommended for seals, hoses, O-rings, packings, adhesives, and printing blankets.	35	68
Paracril CLT	Paracril CLT is a copolymer of butadiene and acrylonitrile, cold polymerized with a non-staining stabilizer. Superior oil resistance. Low corrosion and mold fouling.	Offers superior oil resistance, good processing properties and low water absorption. It is recommended for seals, O-rings, packings and grommets, printing blankets, rolls, oil field specialties, fuel hoses and mechanical goods.	40	65



Brand Grade	Description	Uses	BAN (%)	ML 1+4 100°C
Paracril CJLT	Paracril CJLT is a copolymer of butadiene and acrylonitrile, cold polymerized with a non-staining stabilizer. Superior oil resistance. Low corrosion and mold fouling.	Offers a superior oil resistance, good processing properties and low water absorption. It is recommended for seals, O-rings, packings and grommets, printing blankets, rolls, oil field specialties, fuel hoses and mechanical goods.	40	50
Paracril 34PE40N	Paracril 34PE40 is a copolymer of butadiene and acrylonitrile, Plasticized with 50 parts of DINP, cold polymerized with non-staining stabilizer.	Is recommended for use in low durometer roll covers, footwear, in highly plasticized recipes and blends to improve abrasion resistance in NBR recipes.	34	40
Paracril BJLTHX	Paracril BJLTHX is a copolymer of butadiene and acrylonitrile, cold polymerized with staining and discoloring stabilizer.	Offers good heat resistance after oil aging, partially cross-linked, excellent green strength, smooth extrusion and low die swell. It is recommended for hose, seals, and O-rings, lathe cut gaskets, belting, calendared products and pan seals.	32	55
Paracril P30.55XL	Paracril 30.55XL is a copolymer of butadiene and acrylonitrile, highly cross linked. It is stabilized with a non-staining and non-discoloring stabilizer.	Offers excellent green strength, smooth extrusion, low die swell, low fogging and an excellent thermal stability, It is recommended for use in extrusions, calendared goods and PVC modifications.	30	40
Paracril P32.50XL	Paracril 32.50XL is a copolymer of butadiene and acrylonitrile, with medium-high crosslinking level. It is stabilized with a non-staining and non-discoloring stabilizer.	Offers excellent green strength, smooth extrusion, low die swell and a good stability. It is recommended for use in PVC modification, in thermoset rubber compounds, extrusions, lathe-cut gaskets and for calendared products.	33	50
Paracril P32.55XL	Paracril 32.55XL is a copolymer of butadiene and acrylonitrile, partially cross linked. It is stabilized with a non-staining and non-discoloring stabilizer.	Offers excellent green strength, smooth extrusion, and low die swell. It is recommended for use in extrusions, calendared products and PVC modifications.	32.5	55
Paracril P32.60XL	Paracril 32.60XL is a copolymer of butadiene and acrylonitrile, with medium-high crosslinking level. It is stabilized with a non-staining and non-discoloring stabilizer.	Offers excellent green strength, smooth extrusion and low die swell. It is recommended for use in extrusions and lathe-cut gaskets, calendared products and PVC modifications.	32	50
Paracril P33.55XL	Paracril 33.55XL is a copolymer of butadiene and acrylonitrile, highly cross linked. It is stabilized with a non-staining and non-discoloring stabilizer.	Offers excellent green strength, smooth extrusion and low die swell. It is recommended for use in PVC modification, blends with clear NBR to improve green strength, extruded and calendared products.	33	55
Paracril P33.80XL	Paracril 33.80XL is a copolymer of butadiene and acrylonitrile, highly cross linked. It is stabilized with a non-staining and non-discoloring stabilizer.	Offers excellent green strength, smooth extrusion and low die swell. It is recommended for use in PVC modification, blends with clear NBR to improve green strength, extruded and calendared products.	33	80



NBR | PARACLEAN

Brand Grade	Description	Uses	BAN (%)	ML 1+4 100°C
Paraclean 28L35	Paraclean 28L35 is a state-of-the-art copolymer of butadiene and acrylonitrile, cold polymerized with a non-staining stabilizer. Unique features include "clean" low-fouling performance, low volatility at elevated temperatures, and fast cure rates.	Offers "clean" low-volatility NBR fast curing, excellent low temperature flexibility with moderate oil resistance, low water absorption and resistant to corrosion. It is recommended for injection molded products, O-rings, seals, gaskets, grommets, diaphragms, hoses and tubes requiring low temperature flexibility.	28	35
Paraclean 28L45	Paraclean 28L45 is a state-of-the-art copolymer of butadiene and acrylonitrile, cold polymerized with a non-staining stabilizer. Unique features include "clean" low-fouling performance, low volatility at elevated temperatures, and fast cure rates.	Offers "clean" low-volatility NBR, fast curing, excellent low temperature flexibility with moderate oil resistance, low water absorption and resistant to corrosion. It is recommended for injection molded products, O-rings, seals, gaskets, grommets, diaphragms, hoses and tubes requiring low temperature flexibility.	28	45
Paraclean 28L80	Paraclean 28L80 is a state-of-the-art copolymer of butadiene and acrylonitrile, cold polymerized with a non-staining stabilizer. Unique features include "clean" low-fouling performance, low volatility at elevated temperatures, and fast cure rates.	Offers "clean" low-volatility NBR, fast curing, excellent low temperature flexibility with moderate oil resistance, low water absorption and resistant to corrosion. It is recommended for sponge, extrusions, O-rings, seals, gaskets, grommets, diaphragms, hose and tubes requiring low temperature flexibility.	28	80
Paraclean 31L35	Paraclean 31L35 is a state-of-the-art copolymer of butadiene and acrylonitrile, cold polymerized with a non-staining stabilizer. Unique features include "clean" low-fouling performance, low volatility at elevated temperatures, and fast cure rates.	Offers "clean" low-volatility NBR for injection molding, fast curing, excellent low temperature flexibility with moderate oil resistance, low water absorption and resistant to corrosion. It is recommended for injection molded products, O-rings, seals, gaskets, grommets, diaphragms, and blends with PVC.	31	35
Paraclean 33L35	Paraclean 33L35 is a state-of-the-art copolymer of butadiene and acrylonitrile, cold polymerized with a non-staining stabilizer. Unique features include "clean" low-fouling performance, low volatility at elevated temperatures, and fast cure rates.	Offers "clean" low-volatility NBR for injection molding, fast curing, low water absorption and low corrosion. It is recommended for injection molded products, O-rings, seals, gaskets, grommets, diaphragms, sponge and for blends with PVC.	33	35
Paraclean 33L50	Paraclean 33L50 is a state-of-the-art copolymer of butadiene and acrylonitrile, cold polymerized with a non-staining stabilizer. Unique features include "clean" low-fouling performance, low volatility at elevated temperatures, and fast cure rates.	Offers "clean" low-volatility NBR for injection molding, fast curing, low water absorption and low corrosion. It is recommended for injection molded products, O-rings, seals, gaskets, grommets, diaphragms, footwear, sponge and for blends with PVC.	33	50
Paraclean 36L45	Paraclean 36L45 is a state-of-the-art copolymer of butadiene and acrylonitrile, cold polymerized with a non-staining stabilizer. Unique features include "clean" low-fouling performance, low volatility at elevated temperatures, and fast cure rates.	Offers "clean" low-volatility NBR injection molding, fast curing, low water absorption and a low corrosion. It is recommended for injection molded products, O-rings, seals, gaskets, grommets, diaphragms, hoses and footwear.	36	45



NBR/PVC | PARACRIL OZO

Brand Grade	Description	Uses	PVC (%)	ML 1+4 100°C
Paracril OZOM50	Paracril OZOM50 is a pre-fluxed blend of NBR/PVC containing 30% PVC.	Offers easy processing, excellent abrasion resistance, good flame resistance and an excellent ozone resistance. It is recommended for shoes soles, wire, cable, hoses, tubing, coated fabrics, belting, closed cell sponge and molded mechanical goods.	30	50
Paracril OZOM58	Paracril OZOM58 is a pre-fluxed blend of NBR/PVC containing 30% PVC.	Offers easy processing, good abrasion resistance, good flame resistance and an excellent ozone resistance. It is recommended for wire, cable, shoe soles, hoses, tubing, coated fabrics, belting, and closed cell sponge and for molded mechanical goods.	30	58
Paracril OZOM65	Paracril OZOM65 is a pre-fluxed blend of NBR/PVC containing 30% PVC.	Offers higher tensile properties, improved green strength, improved abrasion resistance, good flame resistance and an excellent ozone resistance. It is recommended for wire, cable, footwear, coated fabrics and belting.	30	65
Paracril OZO3341	Paracril OZO3341 is a pre-fluxed blend of NBR/PVC containing 30% PVC and 28% BAN NBR base polymer.	Offers good tensile properties, good green strength, good abrasion resistance, good flame resistance and an excellent ozone resistance. It is recommended for hoses, tubing, wire, cable, footwear, coated fabrics, belting and molded mechanical goods.	30	55
Paracril OZO728M60	Paracril OZOM60 is a pre-fluxed blend of NBR/PVC containing 30% PVC and 28% BAN NBR base polymer.	Offers good tensile properties, good green strength, good abrasion resistance, good flame resistance and an excellent ozone resistance. It is recommended for wire, cable, footwear, extrusions, coated fabrics and belting.	30	60
Paracril OZOP7510N	Paracril OZOP7510N is a pre-fluxed blend of 100 NBR / 60 PVC / 120 DINP.	Offers easy processing, excellent abrasion resistant, good flame and ozone resistance. It is recommended for low durometer roll covers.	21.4	20
Paracril OZO3996	Paracril OZO3996 is a pre-fluxed blend of NBR/PVC containing 40% PVC.	Offers easy processing, excellent abrasion resistance, good flame resistance and an excellent ozone resistance. It is recommended for closed cell sponge, hoses, tubing, coated fabrics, belting and blends with SBR.	40	52
Paracril OZOSP80N	Paracril OZOSP80N is a pre-fluxed blend of 100 NBR/ 150 PVC / 150 DINP.	Offers easy processing, excellent abrasion resistant, good flame and ozone resistance. It is recommended for low durometer roll covers.	36.5	29
Paracril OZOSP90N	Paracril OZOSP90N is a pre-fluxed blend of 60 NBR / 40 PVC / 70 DINP.	Offers easy processing, excellent abrasion resistant and a good ozone resistance. It is recommended for low durometer roll covers.	23.5	21



NBR POWDER | PARACRIL

Brand Grade	Description	Uses	BAN (%)	ML 1+4 100°C
Paracril FP3380XC	Paracril FP3380XC is a copolymer of butadiene and acrylonitrile (Particulated Paracril 33.80XL) in powder form using Calcium carbonate as a partitioning agent. Hot polymerized with non-staining stabilizer.	Offers medium mooney viscosity and a highly cross-linked. It is recommended for PVC, ABS, SAN modification and friction products.	33	80
Paracril P33110C1	Paracril 33110C1 is a copolymer of butadiene and acrylonitrile in powder form using calcium carbonate with 1% calcium stearate as partitioning agent.	Offers excellent balance of low temperature flexibility with oil resistance, high viscosity for improved green strength and increased oil content recipes, fast curing and light color. It is recommended for use in roll covers, automotive products and mechanical goods.	33	110
Paracril P3250XP	Paracril 3250XP is the powder version of the Paracril 32.50XL using PVC with 1% of calcium stearate as a partitioning agent.	Offers improved UV stability. It is recommended for use in PVC modification.	32	50
Paracril P3350CC	Paracril 3350CC is a particulate version of Paracril BJLTM50 using calcium carbonate with 1% of calcium stearate as a partitioning agent.	Is recommended for adhesives and PVC modification.	33	48.5
Paracril P3350CC2	Paracril 3350CC2 is a particulate version of Paraclean 33L50 using calcium carbonate with 2% of calcium stearate as a partitioning agent.	Is recommended for adhesives and PVC modification.	33	50
Paracril P3380CC1	Paracril 3380CC1 is a particulate version of Paracril BLTM80 using calcium carbonate with 1% of calcium stearate as a partitioning agent.	Is recommended for use in PVC modification and adhesives.	32.5	80
Paracril P3380XP	Paracril 3380XP is the powder version of the Paracril 33.80XL using PVC as a partitioning agent.	Is recommended for use in PVC modification.	33	81.5
Paracril P7072P	Paracril 7072P is a particulate version of Paracril 33.55XL using PVC as a partitioning agent.	Offers medium mooney viscosity and highly cross-linked. It is recommended for PVC modification.	33	55
Paracril P7083P	Paracril P7083P is the particulate version of the Paracril 32.55XL using PVC and 1% calcium stearate as a partitioning agent.	offers partial cross-linking and it is recommended for use in PVC modification.	32.5	55
Paracril P7083XC	Paracril 7083XC is the particulate version of the Paracril 32.60XL using calcium carbonate and 2% calcium stearate as a partitioning agent.	Offers improved UV stability. It is recommended for use in PVC modification.	32	55
Paracril P7092P	Paracril 7092P is the particulate version of the Paracril 33.55XL with PVC as a partitioning agent with 2% calcium stearate.	Offers high cross-linking and it is recommended for use in PVC modification.	33	55
Paracril P45110C1	Paracril P45110C1 is a copolymer of butadiene and acrylonitrile in powder form using calcium carbonate with 1% calcium stearate as a partitioning agent.	Offers high acrylonitrile level with high viscosity. It is recommended for use in roll covers and industrial mechanical goods.	45	110



NBR CRUMB | PARACRIL

Brand Grade	Description	Uses	BAN (%)	ML 1+4 100°C
Paracril CV	Paracril CV is a particulate version of Paracril CLM using soluble PVC resin as a partitioning agent.	Offers good green strength and readily solvates in MEK. It is recommended for use adhesives, solvent cast seals and grommets.	35.2	67.5
Paracril CV80	Paracril CV80 is a particulate version of Paracril C using soluble PVC resin as a partitioning agent.	Offers good green strength and readily solvates in MEK. It has higher viscosity than Paracril CV. It is recommended for use adhesives, solvent cast seals and grommets.	35.2	80
Paracril C3380CC	Paracril C3380CC is a particulate version of Paracril BLTM 80 using calcium carbonate as a partitioning agent.	Is recommended for use in PVC modification and adhesives.	32.6	80
Paracril P3370CMC	Paracril 3370CMC is a particulate version of Paracril 33.70 using calcium carbonate as a partitioning agent.	Offers excellent balance of low temperature flexibility with oil resistance, easy processing, fast curing and light color. It is recommended for use in adhesives and PVC Modification.	33	70
Paracril P7083CR	Paracril 7083CR is a particulate version of Paracril 32.55XL with PVC as a partitioning agent with 1% calcium stearate.	Offers partially cross-linked. It is recommended for use in PVC modification.	32.5	55
Paracril P7087CR	Paracril 7087CR is the particulate version of Paracril BJLTM50 with PVC as a partitioning agent with 1% calcium stearate.	Offers partially cross-linked. It is recommended for use in PVC modification.	32.5	50

NBR SPRAY DRIED | PARACRIL

Brand Grade	Description	Uses	BAN (%)	ML 1+4 100°C
Paracril SD3811	Paracril SD3811 is a copolymer of butadiene and acrylonitrile in powder form using talc as the partitioning agent.	It is recommended for use in friction products.	38	115
Paracril SD3811C	Paracril SD3811C is a copolymer of butadiene and acrylonitrile in powder form using calcium carbonate as the partitioning agent.	It is recommended for use in friction products.	38	115







Precision

We don't have the power
to create or destroy matter,
but we know the secret
to transform it.



CHEMICALS



Dynasol
Group

Chemicals

The chemical complex counts with an extension of 50 Ha on the banks of the Ebro River in the town of **Zubillaga, Lantarón**, in the province of **Alava, Spain**.

The plant capacity is **30 TPY of various types of fine rubber chemicals** such as accelerators, antioxidants among others **industrial materials**

The main markets we serve are **tire, tube, hoses, cables technical rubber parts, coatings latex, footwear, agrochemicals and dyes**.

CHEMICALS

CHEMICALS

Rubber chemicals

Under the trade names Rubenamid and Rubator, our Rubber Chemical business produces a wide range of primary and secondary vulcanization accelerators covering all needs of rubber manufacturing goods sector referring scorch safety (from “very long” to “very short”), cure rate (from “very fast” to “slow”) and modulus development (from “very high” to “low”).

Our products are useful with all kind of rubbers, natural and synthetic, and specially recommended for NR, SBR, NBR, BR, IIR and lattices for production of articles of high mechanical performance such as tires, conveyor belts, shoes, cables, bumpers...; other General Rubber Goods like toys, insulation, cables and wiring fabric, water-proofing, tubes and pipes and

products manufactured by molding or extrusion and for production of rubber goods from lattices as carpets, sponges, coatings, gloves, wires and prophylactics.

Under the trade name Rubatan, We supply paraphenylenediamine derivatives with powerful antioxidant and antiozonant properties and TMQ as antidegradant. They provide to rubber articles protection against atmospheric action and against cracking and fatigue degradation as result of static and dynamic operating conditions even at high temperatures. They are recommended for protection of natural and all kind of synthetic rubber vulcanizates.



Liquid dyes Incopel

Anaranjado Incopel GT is a liquid presentation of Direct Orange 39 with application as dye for paper industry. Product can be prepared at different concentrations and with a broad range of color shades according customer requirements.

Sodium sulfides

Sodium sulfide and sodium hydrogen sulfide are supplied either as solid in flakes form or as solution at different concentrations according customer requirements. They are extensively used as dehairing agents for leather industry, intermediates for chemical synthesis, in mining for flotation of sulfidic ores, as reagents for Kraft process in paper mills, in wastewater treatment for precipitation of heavy metals and as general purpose reducing agents.

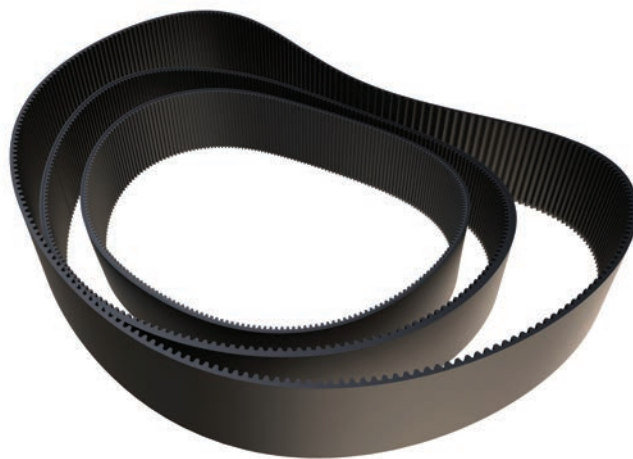


Wastewater treatment /preservative

Incoflor Bio B is a sodium dithiocarbamate solution with biocide properties used as preservative of wet-blue phase in the leather industry. It is also used as antifouling agent in cooling towers and paper industry. Additionally Incoflor Bio B can be used as process regulator in polymer production and in wastewater treatment for precipitation of heavy metals.

Agrochemicals

Organophosphorus active ingredients for formulation of broad action insecticides. Formulations manufactured with our active ingredients are of common use to protect crops and fruit trees against pests. Phosmet technical has also veterinary applications in products for deworming of domestic animals, including pets.



CHEMICALS

APPLICATION GUIDE

PRODUCT

Type	Brand	Grade	Chemical name	Purity (%)	Sieve rejection 63 mm (%)	Melting point (°C)
Antioxidants	Rubatan	184 (TMQ)	TMQ	NA		80-100 °C (SP)
Antioxidants	Rubatan	IF (IPPD)	IPPD	96.0 % min		76 °C min
Antioxidants	Rubatan	BF (6PPD)	6PPD	97.0 % min		44 °C min
Dithiocarbamates	Rubator	ETZ (ZDEC)	ZDEC	96.0 % min	0.5 % max	174 °C min
Dithiocarbamates	Rubator	DBZ	ZBZC	96.0 % min	0.5 % max	103 °C min
Dithiocarbamates	Rubator	ZBEC	ZBEC	96.0 % min	0.5 % max	178 °C min
Guanidines	Rubator	DPG	DPG	97 % min		
Accelerator Blends	Rubator	Activador R	MIX		0.5 % max	
Accelerator Blends	Rubator	H7	HMT		0.5 % max	
Accelerator Blends	Rubator	MA/T	MIX		0.5 % max	
Accelerator Blends	Rubator	FQ	MIX		0.5 % max	
Accelerator Blends	Rubator	TAX	MIX		0.5 % max	
Retardants	Rubatan	PVI	PVI	97.0 % min		
Sulphenamides	Rubenamid	C (CBS)	CBS	95 % min		
Sulphenamides	Rubenamid	T (TBBS)	TBBS	95 % min		
Sulphenamides	Rubenamid	DS (DCBS)	DCBS	96 % min		
Thiazoles	Rubator	MBT	MBT	95 % min	0.5 % max	175 °C min
Thiazoles	Rubator	MBTS	MBTS	95 % min	0.5 % max	170 °C min
Thiazoles	Rubator	ZMBT	ZMBT	****	0.5 % max	
Thiurams	Rubator	DTMT	TMTD	96 % min	0.5 % max	145 °C min
Non Rubber Specialties	IO	Inconpel Orange	Direct Orange 39			
Non Rubber Specialties	IBB	Incoflor Bio B	Sodium Dimethyl Dithiocarbamate in Solution (40 %)			
Non Rubber Specialties	SHF	Sodium Hydrogen Sulphide (Flakes)	Hydrated Sodium Hydrogen Sulphide (70 - 75 %)			
Non Rubber Specialties	SHS	Sodium Hydrogen Sulphide (Solution)	Sodium Hydrogen Sulphide (45 - 64 %)			
Non Rubber Specialties	SSF	Sodium Sulphide (Flakes)	Hydrated Sodium Sulphide (58 - 62 %)			
Non Rubber Specialties	BT	Benzothiazole	Benzothiazole High Purity (98 % min)			

APPLICATION

Zinc (%)	Ash (%)	Vulcanized compounds	Tires	Water treatment	Textile	Leather	Paper	Mining	Chemical reagent
	0.5 % max	🔺	🔺						
	0.1 % max	🔺	🔺						
	0.1 % max	🔺	🔺						
16.5 - 18.5 %		🔻							
13 - 16 %		🔻							
10.2 - 11.3 %		🔻							
	0.3 % max	🔻	🔻						
	40 - 50 %	🔻							
	2 - 4 %	🔻	🔻						
	NA	🔻							
	NA	🔻							
	NA	🔻							
	0.2 % max	🔻	🔻						
	0.5 % max	🔻	🔻						
	0.5 % max	🔻	🔻						
	0.5 % max	🔻	🔻						
	0.5 % max	🔻	🔻						
	0.5 % max	🔻	🔻						
	20 - 24 %	🔻	🔻						
	0.5 % max	🔻	🔻						
				🔻	🔻	🔻	🔻	🔻	🔻
				🔻		🔻	🔻	🔻	🔻
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				🔻		🔻	🔻	🔻	🔻



ANTIOXIDANTS | RUBATAN

Brand Grade	Description	Uses	Purity (%)	Ash (%)
Rubatan 184 (TMQ)	Rubatan 184 (TMQ) is a radical scavenger in a wide range of elastomers to protect against aging.	It is recommended for protection of Natural rubber vulcanizates and Synthetic rubbers (SBR, BR, IR, CR, NBR) and for lattices, crosslinked Polyethylenes, crosslinked Ethylene-Propylene copolymers and peroxide crosslinkable copolymers.	*****	0.5 max
Rubatan IF (IPPD)	Rubatan IF (IPPD) is a powerful antioxidant and antiozonant. Provides protection against atmospheric action and against the cracking and fatigue degradation as result of static and dynamic operating conditions.	Applications include the use in pneumatic tire components, hoses, belts, cables, automotive spare parts, bushings and general mechanical products exposed to strong static and dynamic operating conditions providing a highly efficient protection from ozonation.	96.0 min	0.1 max
Rubatan BF (6PPD)	Rubatan BF (6PPD) is a powerful antioxidant and antiozonant. Provides protection against atmospheric action and against the cracking and fatigue degradation as result of static and dynamic operating conditions.	Is recommended for use in NR, BR, SBR, NBR, Polyisoprene, Acrylonitrile-butadiene rubber and Polychloroprene. Provides powerful antiozonant and antioxidant properties with excellent high temperature, fatigue and flex resistance to rubber compounds. To improve protection efficiency in static conditions, the use together with a microcrystalline wax is recommended.	97.0 min	0.1 max

DITHIOCARBAMATES | RUBATOR

Brand Grade	Description	Uses	Zinc (%)	Melting point (°C) min
Rubator ETZ (ZDEC)	Rubator ETZ is an ultra-accelerator.	The main use is for Natural and Synthetic lattices. Its accelerating effect is similar to that of Rubator MTZ but with less scorching, is a very good activator of Thiazoles, Sulfenamides and Guanidines.	16.5 - 18.5	174 °C min
Rubator DBZ	Rubator DBZ is a very active accelerator.	Gives resistance against heat and UV light effect to vulcanizates acting also as a powerful antioxidant on the rubber.	13 - 16	103 °C min
Rubator ZBEC	Rubator ZBEC is an ultra-accelerator.	Is used in the manufacture of foamed articles and wires, transparent, white, translucent or coloured goods, sealants, cable insulation, gloves and dipped and molded products. Also suitable for textile water-proofing, ebonites, toys, prophylactics and sealants for use in contact with foods.	10.2 - 11.3	178 °C min

GUANIDINES | RUBATOR

Brand Grade	Description	Uses	Purity (%)	Ash (%)
Rubator DPG	Rubator DPG is used as secondary accelerator in combination with thiazoles and sulfenamides in most of the sulfur cured elastomers.	Is generally used as secondary accelerator in products with high mechanical demands. It is particularly preferred when using NR, SBR and Polychloroprene rubbers.	97.0 min	0.3 max



ACCELERATOR BLENDS | RUBATOR

Brand Grade	Description	Uses	Purity (%)	Ash (%)
Activador R	Activador R is an additive for use in natural rubber and SBR rubbers	Is Used for compounds with NR and SBR rubbers.	****	40 - 50
Rubator H7	Rubator H7 is a mild accelerator usually combined with other thiazole and thiuram series accelerators for slow vulcanization. As aminic accelerator has not retardant effect and starts vulcanisation immediately.	Can be used for press and steam curing systems. When combined with other accelerators, compounds can be cured by hot air. Is recommended for using in NR, IR, BR, SBR and NBR. It is mainly used for transparent, white or light coloured products.	****	2 - 4
Rubator MA/T	Rubator MA/T is a general purpose blend of accelerators.	Is used for rubber vulcanization.	****	****
Rubator FQ	Rubator FQ is accelerator of delayed action with little susceptible to pre-vulcanizing even in the worst conditions of temperature.	Can be used in the manufacture of all types of rubber.	****	****
Rubator TAX	Rubator TAX is a general purpose blend of accelerators.	Is used for rubber vulcanization.	****	****

RETARDANTS | RUBATAN

Brand Grade	Description	Uses	Purity (%)	Ash (%)
Rubatan PVI	Rubatan PVI is a pre-vulcanization inhibitor for sulfur cureable compounds giving controllable processing safety.	Can be used with most of polymers. The activity is dependent upon polymer used in the following decreasing order: NR>NBR>SBR>EPDM>IIR>CR.	97.0 min	0.2 max

SULPHENAMIDES | RUBENAMID

Brand Grade	Description	Uses	Purity (%)	Ash (%)
Rubenamid C (CBS)	Rubenamid C (CBS) is a delayed action accelerator. When used at temperatures above 135 °C Rubenamid C vulcanises in a short space of time giving vulcanizates with very good mechanical properties.	Is suitable of use in NR, IR, BR, SBR, NBR vulcanization and in partially saturated elastomers by press, injection and transfer moulding. Can be used with different continuous vulcanization methods (steam, salt baths and microwaves) using another secondary accelerator.	95 min	0.5 max
Rubenamid T (TBBS)	Rubenamid T (TBBS) is an accelerator with more delayed action than Rubenamid C. This is the reason why it is recommended when high temperatures during processing or long periods of fluidity are required.	Is suitable of use in NR, IR, BR, SBR, NBR vulcanization and in partially saturated elastomers by press, injection and transfer moulding. RUBENAMID T can be used with different continuous vulcanization methods (steam, salt baths and microwaves) using another secondary accelerator.	95 min	0.5 max
Rubenamid DS (DCBS)	Rubenamid DS (DCBS) is a slow curing delayed action accelerator that provides longer cure time and lower modulus.	Is suitable of use in NR, IR, BR, SBR, NBR vulcanization and provides the best scorch resistance and lower modulus of the whole range of sulfenamides. Strongly recommended in the production of thick rubber articles.	96 min	0.5 max



THIAZOLES | RUBATOR

Brand Grade	Description	Uses	Purity (%)	Ash (%)
Rubator MBT	Rubator MBT is a fast curing primary accelerator.	Is a moderately fast curing primary accelerator. With wide range of application, is recommended for use at temperatures above 120°C for natural and synthetic rubbers.	95 min	0.5 max
Rubator MBTS	Rubator MBTS is a medium fast curing primary accelerator and with excellent curing safety.	Is used in the manufacture of products that require heat resistance, footwear, insulation, cables and wiring fabric, water-proofing, tubes and pipes, films and products manufactured by calendering, metal bonded articles and ebonites.	95 min	0.5 max
Rubator ZMBT	Rubator ZMBT is a fast curing primary accelerator.	Main use are the production of rubber goods from lattices as carpets, sponges, coatings, gloves, wires and prophylactics.	****	20 – 24

THIURAMS | RUBATOR

Brand Grade	Description	Uses	Purity (%)	Ash (%)
Rubator DTMT	Rubator DTMT is an ultra-accelerator recommended for Natural rubber, SBR, NBR, Polychloroprene, Butyl rubber and EPDM.	Is used in the manufacture of transparent, white, translucent or coloured goods, surgical and medical items, toys, footwear, products that require heat resistance, insulation, cables and wiring fabric, water-proofing, tubes and pipes, profiles, hard rubber products or rapid vulcanization belts, sporting goods, inner tubes, dipped products and other technical goods.	96 min	0.5 max

NON RUBBER SPECIALTIES

Initials	Chemical name	Description	Uses
IO	Direct Orange 39	Incopel Orange is a aqueous solution of the dye Direct Orange 39.	Dyeing of cellulosic fibers (paper).
IBB	Sodium Dimethyl Dithiocarbamate in Solution (40%)	INCOFLOR BIO B is chemical substantiated.	Is used as Biocide, vulcanization accelerator and water treatment.
SHF	Hydrated Sodium Hydrogen Sulphide (70 - 75%)	Sodium Hydrogen Sulphide (Flakes), is chemical compound derived from hydrogen, sulfur and caustic soda.	Is used as an additive in water treatment in mining and paper industry.
SHS	Hydrated Sodium Hydrogen Sulphide (45 - 64%)	Sodium Hydrogen Sulphide (Solution), is chemical compound derived from hydrogen, sulfur and caustic soda.	Is used as an additive in water treatment in mining and paper industry.
SSF	Hydrated Sodium Sulphide (58 - 62%)	Sodium Sulphide (Flakes), is chemical compound derived from Hydrogen Sulphide and caustic soda.	Is used as an additive in water treatment in mining and paper industry.
B	Benzthiazole High Purity (98 % min)	Benzothiazole is a liquid pure substance.	Used as Intermediate for synthesis of other products in the rubber and pharma fields.





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