ZEON

Nipol® LATEX

Latex Product Catalog
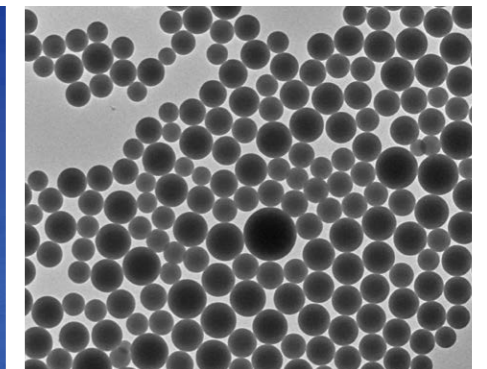
Contents

What is synthetic latex?

Synthetic latex is a white color liquid like milk, and in which fine particles of polymer (rubber or resin) are dispersed.
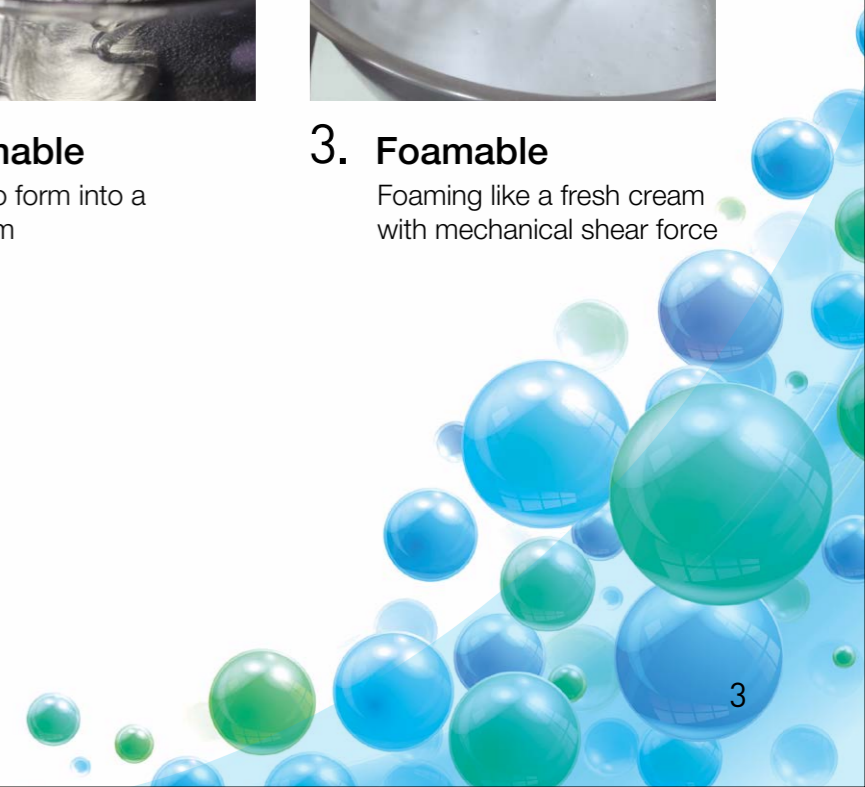

Advantages

1. **Mixable**
Easily mixing with other materials

2. **Formable**
Able to form into a thin film

3. **Foamable**
Foaming like a fresh cream with mechanical shear force

Applications

Synthetic latex is used for a wide assortment of applications, putting to use its various characteristics.
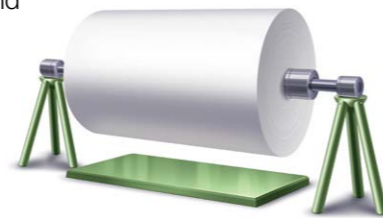
Rubber gloves
Single-use, household and industrial rubber gloves.

Latex

Organic pigments
As a pigment for glossy paper.

Aqueous binders (paper/fiber)
For binding component of non-woven fabrics or paper.

Foam rubber
Foam rubber can be produced by mechanical foaming process.

ABS impact resistant material
As a raw material of ABS resin.

Factors to consider when choosing synthetic latex

1. Composition

NBR
Oil resistance
Elasticity

SBR
Elasticity

Acrylate
Weather resistance
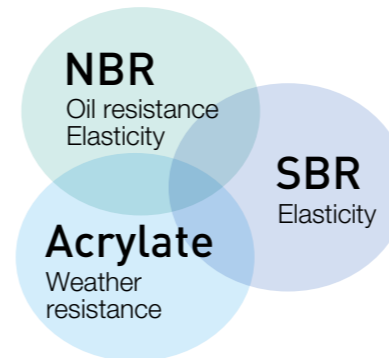
2. Hardness

Hardness is one of important factor and that is selected by glass transition temperature (Tg).

Resin (Hard)

High Tg

Room temperature

Low Tg

Rubber (Soft)
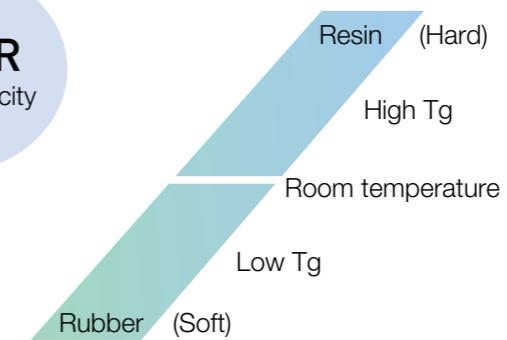
3. Other factors

Gel contents, surface tension, and pH can be selected to match usage needs.

Examples	Nipol LX550		Nipol LX551
	Medium nitrile Flexible type for oil-resistant gloves Elastic coating film with excellent strength	Characteristics	Medium-high nitrile for oil-resistant gloves High strength
Rubber gloves	−23	Tg (℃)	−15

Acrylonitrile butadiene copolymer (NBR) latex

Product name	Latex property							Latex type				Applications				
	Total solid (%)	pH	Viscosity (mPa·s)	Surface tension (mN/m)	Particle size (nm)	Tg (℃)	Gel contents (%)	Nitrile contents	Modification	Thermal crosslinking	Soap-free	Rubber gloves	Aqueous binders (non-woven fabrics)	Aqueous binders (impregnated)	Aqueous binders (internally added)	Foam rubber
LX511A	46.0	8.0	17	30.8	160	−22	−	Medium-high	○				○			
LX513	45.0	10.0	41	34.9	131	−35	−	Medium-high	−				○	○	○	
LX531B	66.0	11.3	235	33.3	612	−15	−	Medium-high						○		○
LX550	45.0	8.5	220	33.9	108	−23	−	Medium	○			○				
LX550L	45.0	8.2	39	31.1	128	−25	−	Medium	○			○				
LX550LA	45.0	8.4	68	−	−	−	−	Medium	○			○				
LX551	45.0	8.5	91	30.9	135	−15	−	Medium-high	○			○				
LX560	45.0	8.3	58	33.1	124	−23	−	Medium	○			○				
LX561	45.1	8.1	46	32.8	135	−16	−	Medium	○			○				
1551	51.0	10.0	43	36.4	179	−19	−	High						○		
1562	41.0	10.0	56	47.4	92	−26	−	Medium-high						○	○	
1571C2	45.0	8.5	27	37.2	155	−16	−	High	○				○	○	○	
1571CL	38.0	7.8	9	28.2	135	−16	−	High	○				○	○	○	
1571D2	40.0	8.3	10	28.0	132	−15	−	High	○				○	○	○	
1571G2	45.0	8.5	32	35.3	117	−19	85.8	Medium-high	○	○			○	○	○	
1571H	40.0	8.3	10	28.3	129	−14	70.7	High	○				○	○	○	
1577K	38.0	10.0	20	34.8	88	19	−	Medium-high						○		
SX1503A	42.0	7.5	71	41.4	120	−26	65.7	Medium-high	○		○					

Note: 1) Values of "Total solid" and "pH" are designed values, wheress other properties are shown with measured values.
2) The particle size is the median number measured with a particle size analyzer.
3) Thermal crosslinking type is meaned self-crosslinking by high temperature.
4) Soap-free type is stabilized by special system instead of using a general stabilizer.

Hydrogenated Acrylonitrile-Butadiene Polymer (HNBR) Latex

Grade	Bound ACN (%)	Iodine value (mg/100mg)	Total Solid (%)
Zetpol® 2230LX	33.2	36.00	40.5

Note: 1) Design value

Styrene-butadiene copolymer (SBR) latex

Product name	Latex property							Latex type			Applications				
	Total solid (%)	pH	Viscosity (mPa·s)	Surface tension (mN/m)	Particle size (nm)	Tg (℃)	Gel contents (%)	Modification (○/VP)	Thermal crosslinking	Soap-free	Coated paper	Paper processing	Aqueous binders	Tire cords	ABS impact resistant material
LX110	40.5	11.1	50	61.4	96	−52	−					○		○	
LX112	40.5	11.0	25	61.2	108	−49	−							○	
LX111A2	54.0	11.5	54	39.5	318	−82	72.2								○
LX111NF	55.0	11.5	23	38.7	312	−81	84.4								○
LX209	45.5	10.5	18	33.3	165	−30	−								
LX407F7	51.0	8.0	128	51.1	184	3	−	○			○				
LX407F43	48.5	9.0	201	53.8	196	−4	−	○			○				
LX407F46	50.5	8.0	336	49.4	104	−6	−	○			○				
LX407F47	50.5	8.0	210	46.4	106	−5	84.5	○			○				
LX407G51	48.5	7.0	99	46.4	111	27	−	○			○				
LX407N3	50.5	7.9	347	47.2	122	−	−	○			○				
LX407S1	48.5	7.0	122	47.2	121	−1	83.3	○			○				
LX407S2A	48.5	8.3	77	45.9	−	−3	−	○			○				
LX407S4	50.0	6.7	63	47.4	179	4	78.7	○			○				
LX407S6	48.5	7.0	106	45.1	118	−3	−	○			○				
LX407S10	50.0	7.5	287	45.7	124	24	−	○			○				
LX407S12	46.5	7.0	56	47.3	116	18	79.3	○			○				
LX410	41.0	8.0	31	30.4	136	24	−	○	○					○	
LX415M	43.0	8.0	44	54.0	141	26	−	○	○					○	
LX416	48.3	8.0	61	53.7	138	48	−	○					○	○	
LX418C	46.0	7.8	64	36.5	192	−	87.8	○	○						
LX421	41.0	7.8	16	41.1	102	−18	−	○	○				○	○	
LX426	50.0	8.5	89	43.6	133	−42	−	○						○	
LX430	49.0	7.0	122	53.0	159	8	−	○					○		
LX432M	41.0	8.0	34	53.2	153	−58	−	○	○			○			
LX433C	50.0	9.3	102	46.8	128	45	−	○						○	
LX435	50.0	8.5	94	42.5	127	−11	−	○						○	
LX453C	50.5	7.5	330	48.0	128	3	−	○						○	
LX459	48.7	8.5	144	45.4	−	−6	−	○						○	
LX479	50.0	11.0	108	45.0	167	−57	−							○	
2518FS	40.5	11.0	30	52.9	91	−50	−	VP						○	
2518FSH	40.5	11.0	36	51.9	89	−50	−	VP						○	
2518GLA	40.5	11.0	15	45.1	172	−48	−	VP						○	
2507H	52.0	10.0	20	34.8	96	56	−								
SX1105A	45.5	7.1	158	43.8	108	−4	83.2	○	○	○				○	

VP: Styrene butadiene vinyl pyridine copolymer

Note: 1) Values of "Total solid" and "pH" are designed values, wheress other properties are shown with measured values.
2) The particle size is the median number measured with a particle size analyzer.
3) Thermal crosslinking type is meaned self-crosslinking by high temperature.
4) Soap-free type is stabilized by special system instead of using a general stabilizer.

Acrylate latex

Product name	Latex property							Latex type			Applications		
	Total solid (%)	pH	Viscosity (mPa·s)	Surface tension (mN/m)	Particle size (nm)	Tg (℃)	Gel contents (%)	Modification	Thermal crosslinking	Soap-free	Aqueous binders (non-woven fabrics)	Paper processing	Paints
LX811H	50.0	6.3	134	35.4	177	−9	66.3	○	○		○		
LX814	46.0	6.0	33	34.9	223	18	−	○	○		○	○	
LX816A	42.0	2.0	21	39.3	152	−15	−		○			○	
LX851C	45.0	6.5	18	27.4	315	5	69.5	○	○		○		
LX851E	45.0	6.0	46	30.1	216	7	72.6	○	○		○		
LX851F2	45.0	7.0	64	30.9	316	6	94.4	○	○		○		
LX852	45.0	6.0	76	30.6	229	−15	−	○	○		○	○	
LX854E	45.0	6.5	21	27.4	366	−18	83.6	○	○		○		
LX855EX1	45.0	6.5	16	28.9	210	28	−	○	○		○		
LX857X2	45.0	6.5	20	28.0	217	39	−	○	○		○	○	
LX874	45.0	6.3	23	26.2	388	−36	90.1	○	○		○	○	
LX874B	50.0	8.5	53	−	290	−	68.9	○				○	
SX1706A	48.0	7.5	251	40.6	128	−3	83.9	○	○	○			○
SX1707A	45.0	9.0	796	42.8	109	6	81.0	○		○			○

Note: 1) Values of "Total solid" and "pH" are designed values, wheress other properties are shown with measured values.
2) The particle size is the median number measured with a particle size analyzer.
3) Thermal crosslinking type is meaned self-crosslinking by high temperature.
4) Soap-free type is stabilized by special system instead of using a general stabilizer.

Resin latex

Product name	Latex property							Latex type		Applications		
	Total solid (%)	pH	Viscosity (mPa·s)	Surface tension (mN/m)	Particle size (nm)	Tg (℃)	Gel contents (%)	Modification	Binding capability	Coated paper	Organic pigments	Paints
V1004	50.5	8.5	118	48.4	314	87	—	○	○	○	○	
V1008	50.5	8.5	130	52.1	212	58	—	○	○	○	○	
LX407BP	50.5	7.5	32	50.2	387	−1/101	—	○	○	○	○	
LX407BP6	50.5	7.3	36	54.6	208	73	—	○	○	○	○	
LX312B	45.5	3.3	16	—	106	—	—	○				○

Note: 1) Values of "Total solid" and "pH" are designed values, wheress other properties are shown with measured values.
2) The particle size is the median number measured with a particle size analyzer.
3) Binding capability is meaned that capability of binding with pigment, fiber and base materials.

Instructions for handling and storing latex

Handling

1. **Wear protection (goggles, gloves, safety shoes, and other protective clothing).**

   Contact with the skin or eyes may cause inflammation, irritation, and damage to the cornea.

2. **Provide ventilation systems, hand washers and eye washers.**

   (1) Latex is water soluble and not volatile at room temperature; however, if you experience nausea from latex odor, go to a room with fresh air.

   (2) If latex comes into contact with the skin or eyes, wash the affected area thoroughly.

   (3) If latex or latex compounds are ingested through the mouth, rinse your mouth thoroughly and consult a doctor.

3. **Do not drain or otherwise discard latex in waterbody.**

   Do not drain latex in a natural water body, as it diffuses and will cloud the water, even in a small amount. In the event of outflow, promptly contact the relevant authorities. In case of leakage near a water intake for a drinking water system, immediately notify the authorities and request that they shut down the water intake.

4. **Exercise caution when handling latex in unusual operations or conditions.**

   Instructions provided in this catalog are intended only for general use of latex. For special-purpose uses, the safety measures required for handling latex fall solely within the responsibility of the user.

Storing

1. **Store latex in a tightly sealed container.**

   Exposure to air may result in the formation of film or emulsion, or bacteria could cause the latex to decompose.

2. **Store latex within the temperature range of 5°C–40°C.**

   Exposure to direct sunlight may cause the formation of film or alter the viscosity of the latex due to high temperature. If frozen, latex is unusable.

3. **Stir and filter the latex stored for long periods before use.**

   Latex must be stirred or mixed before use as the composition can become uneven due to sedimentation or floatation. It must be filtered if coagulation or emulsion has occurred or if a film has formed during storage.

◆ These products are developed and manufactured for general industrial applications. In the case of applications such as food medical, and other special applications, you are urged to use them based on your own check of safety and harmless.

◆ The data on this brochure are for your reference and not guaranteed value. The information is subject to change when necessary.

Detailed instructions for handling latex can be found in the safety data sheet (SDS) issued by Zeon Corporation.