

Sumitomo Chemical's High-pressure Low-density Polyethylene (LDPE) "SUMIKATHENE™" <for Film Applications>

Item	Unit	Method	Film																
			F101-1	F102-0	F108-R	CE1567	CE1559	F218-0	F208-3	G201-F	F200-0	F200	F412-1	F213-P	F235-P	F238-1	CE3506	F723-P	
Basic Properties	MFR	g/10min	JIS K7210-1	0.3	0.35	0.42	0.47	0.6	1	1	2	2	2	5	1.5	2	2	5	7
	Density	kg/m ³	JIS K7112	922	922	922	923	923	919	924	919	924	924	921	923	924	928	931	919
Mechanical Properties	Tensile Stress at Break	MPa	Sumitomo-method *2)	20	20	20	20	20	16	17	16	16	16	15	16	16	15	12	14
	Tensile Elongation at Break	%	Sumitomo-method *2)	650	650	650	650	650	700	650	600	600	600	550	600	600	550	600	550
	Tensile Impact Strength	KJ/m ²	ASTM D1822-61T *3)	450	470	470	420	310	340	255	370	180	180	170	245	220	130	100	235
	Flexural Modulus	MPa	ASTM D747-70 *3)	225	225	225	235	235	195	235	185	235	235	195	215	235	275	320	165
	Durometer Hardness	D	JIS K7215 *3)	56	55	55	56	56	53	56	53	56	56	55	55	56	60	60	53
	ESCR ⁽¹⁾	Hr	ASTM D1693-00 *3)	300<	9	5	4	4	3.5	2	3.5	1.2	1.2	0.8	2	1.5	0.8	0.2	1.9
Thermal Properties	Vicat Softening Temperature	°C	JIS K7206 *3)	97	97	96	100	100	90	96	91	97	97	92	94	97	102	105	86
	Melting Point [DSC]	°C	Sumitomo-method	111	111	110	111	111	108	111	107	111	111	108	110	111	116	117	106
Advantages				Additive-free	Additive-free	High Transparency	Anti-static Agent	Additive-free	Additive-free	High Strength	Additive-free	Additive-free	High Transparency	Processing Stability	Low Gel	Low Gel	High Stiffness	High Transparency	Additive-free
				High Strength	High Strength				High Strength	High Gloss			High Gloss						High Stiffness
Major Applications				Heavy Duty Packaging	Heavy Duty Packaging	Shrink-wrapping	Heavy Duty Packaging	General Packaging	General Packaging	General Packaging	Specialty Film	General Packaging	General Packaging	Thin Film	Protection Film	Protection Film	Protection Film	Protection Film	Protection Film
				Shrink-wrapping															
JCII Self-restrictive Standards				Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes

* 1) ESCR: Environmental Stress Cracking Resistance. Test by strain method, reagent: IGEPAL CO630, 10% solution

* 2) Test specimen: 150°C, 5 min, compression molding at 2.7 MPa, preheating/cooling 5 min each

* 3) Test specimen: 150°C, 5 min, compression molding at 2 MPa, preheating/cooling 5 min each

The values shown are typical values on the product and are not to be considered as guaranteed specifications.

Our general polyethylene grades are not recommended for use in medical devices or pharmaceutical packaging materials

Essential Polymers Division
Sumitomo Chemical Co., Ltd.
Updated in Jul 2026

Sumitomo Chemical's High-pressure Low-density Polyethylene (LDPE) "SUMIKATHENE™" <for Extrusion Coating Applications>

Item	Unit	Method	Extrusion Coating															
			L211	L420	L421	L405	L405-H	L417	L705	CE3049	CE4009	L716-1	L716-H	CE4506	L718-H	CE4043	L5721	
Basic Properties	MFR	g/10min	JIS K7210-1	2	3.5	3.5	3.7	3.7	5	7	4.2	7	7	7	7	8	10	7.5
	Density	kg/m ³	JIS K7112	924	919	918	924	924	922	919	924	920	920	920	917	919	919	937
Mechanical Properties	Tensile Stress at Break	MPa	Sumitomo-method *2)	17	15	14	15	15	15	14	15	14	14	14	12	14	12	12
	Tensile Elongation at Break	%	Sumitomo-method *2)	550	600	650	550	550	550	550	550	550	550	550	500	550	500	120
	Tensile Impact Strength	KJ/m ²	ASTM D1822-61T *3)	200	240	240	185	185	195	235	160	240	240	240	190	250	230	85
	Flexural Modulus	MPa	ASTM D747-70 *3)	245	180	180	235	235	215	165	235	185	185	185	150	165	165	500
	Durometer Hardness	D	JIS K7215 *3)	56	53	53	56	56	55	53	56	53	53	53	51	53	53	62
	ESCR ⁽¹⁾	Hr	ASTM D1693-00 *3)	1.6	1.2	1.2	0.9	0.9	0.8	1.9	0.8	1.9	1.9	1.9	0.6	1.9	1.3	<0.1
Thermal Properties	Vicat Softning Temperature	°C	JIS K7206 *3)	98	90	90	95	95	94	86	95	86	86	86	82	86	86	104
	Melting Point [DSC]	°C	Sumitomo-method	112	106	106	111	111	109	106	111	106	106	106	106	106	106	128
Advantages	High Stiffness	High-speed Processability	High-speed Processability	High Stiffness	High Stiffness	High Stiffness	Small Neck-in	High Stiffness	High-speed Processability	High-speed Processability	High-speed Processability	High-speed Processability	High-speed Processability	High-speed Processability	High-speed Processability	Anti-static Agent	High Stiffness	
	Heat Resistant		Small Neck-in	Heat Resistant	Heat Resistant	Heat Resistant		Heat Resistant	Small Neck-in	Small Neck-in	Small Neck-in	Small Neck-in			Low Odor		Heat Resistant	
	High Hot Tack			Low Water Vapor Transmission	Low Odor	Low Water Vapor Transmission		Low Water Vapor Transmission		Slip Property	Low Odor						Low Water Vapor Transmission	
Major Applications	Converted Paper	General Packaging	General Packaging	Release Paper	Food Packaging	General Packaging	General Packaging	General Packaging	General Packaging	Release Paper	General Packaging	General Packaging	Food Packaging	Kraft Paper	Milk Carton	General Packaging	Release Paper	
	Vacuum Packaging			General Packaging	General Packaging								General Packaging					
JCII Self-restrictive Standards			Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	

* 1) ESCR: Environmental Stress Cracking Resistance. Test by strain method, reagent: IGEPAL CO630, 10% solution

* 2) Test specimen: 150°C, 5 min, compression molding at 2.7 MPa, preheating/cooling 5 min each

* 3) Test specimen: 150°C, 5 min, compression molding at 2 MPa, preheating/cooling 5 min each

The values shown are typical values on the product and are not to be considered as guaranteed specifications.

Our general polyethylene grades are not recommended for use in medical devices or pharmaceutical packaging materials

Sumitomo Chemical's High-pressure Low-density Polyethylene (LDPE) "SUMIKATHENE™" <for Molding Applications>

Item	Unit	Method	Extrusion					Injection						Other			
			C215	G201	G109	F236-0	F411-0	G202	G401	G701	G720	G801	G806	G803	G807	G808	
Basic Properties	MFR	g/10min	JIS K7210-1	1.4	2	0.3	1.7	4.2	1.5	4	7	7	20	50	20	75	200
	Density	kg/m ³	JIS K7112	920	919	924	922	923	919	926	919	922	919	917	917	919	919
Mechanical Properties	Tensile Stress at Break	MPa	Sumitomo-method *2)	16	16	24	18	14	17	16	14	13	13	10	11	9	8
	Tensile Elongation at Break	%	Sumitomo-method *2)	600	600	650	600	600	600	550	550	550	550	500	550	150	100
	Tensile Impact Strength	KJ/m ²	ASTM D1822-61T *3)	270	370	470	405	135	340	175	235	185	155	120	130	105	90
	Flexural Modulus	MPa	ASTM D747-70 *3)	195	185	235	215	215	185	265	165	200	155	125	125	145	140
	Durometer Hardness	D	JIS K7215 *3)	55	53	56	55	55	53	57	53	55	52	50	50	51	50
	ESCR *1)	Hr	ASTM D1693-00 *3)	2.5	3.5	50	2.5	0.8	4	1	1.9	2.1	0.5	0.3	0.2	0.3	0.1
Thermal Properties	Vicat Softening Temperature	°C	JIS K7206 *3)	91	91	100	95	94	91	100	86	92	83	79	80	80	76
	Melting Point [DSC]	°C	Sumitomo-method	109	107	112	110	111	107	112	106	111	105	104	105	106	104
Advantages			Excellent Crosslinking Property	Excellent Foamability	High Strength	Low Gel	Excellent Foamability	High ESCR	High Stiffness	Excellent Process Stability	High Gloss	High Flowability	High Flowability	High Flowability	High Flowability	High Flowability	
				High ESCR	High ESCR	High ESCR		High Strength				High Gloss	High Gloss				
					Excellent Foamability									Excellent Flexibility			
Major Applications			Electric Wire	Foam	Foam	Tube Container	Foam	Daily Necessities	Daily Necessities	Inner Cap	Cap	Cap	Cap	Granules	Granules	MB Base	
				Blow Bottles	Steel Pipe Coating				Industrial Parts				Industrial Parts	Industrial Parts	Industrial Parts	MB Base	
JCII Self-restrictive Standards			Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	

* 1) ESCR: Environmental Stress Cracking Resistance. Test by strain method, reagent: IGEPAL CO630, 10% solution

* 2) Test specimen: 150°C, 5 min, compression molding at 2.7 MPa, preheating/cooling 5 min each

* 3) Test specimen: 150°C, 5 min, compression molding at 2 MPa, preheating/cooling 5 min each

The values shown are typical values on the product and are not to be considered as guaranteed specifications.

Our general polyethylene grades are not recommended for use in medical devices or pharmaceutical packaging materials

Essential Polymers Division
Sumitomo Chemical Co., Ltd.
Updated in Jul 2026