PSA & Release Coating

KCC SILICONE PSA/RLC CATALOG

KCC SILICONE

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KCC SILICONE

PSA & Release Coating

New world | New leader | New face

KCC SILICONE

We are reaching out to the world
with quality and technology

About KCC Silicone

A precision chemical corporation growing rapidly based on customer's confidence

With state-of-the-art technology and ultra-modern production facilities, KCC seeks the perfection in the quality of its products and customer services.
Each and every product that it introduces to its customers on the marketplace is always the result of creative and intensive R&D activities satisfying the diversified customer needs.
KCC always remains deeply committed to ever upgrading the living environment by leading the building and industrial materials industry through continuous research and development precisely reflecting the market trends and user-wishes.

KCC Silicone Corporation Service Network

We are reaching out to the world with quality and technology

We produce and distribute various silicone products including silicone rubber, sealants for construction and industrial use, silane, silicone oil, silicone emulsion, and silicone dispersion products.

We produce and distribute various silicone products including silicone rubber, sealants for construction and industrial use, silane, silicone oil, silicone emulsion, and silicone dispersion products.
Today's building materials are essential blends or composites of organic and inorganic chemical products. KCC takes pride in being a market leader in these particular chemical fields. In the past, the two divisions within KCC operated separately, but they are now merged together to provide enhanced synergy, cost efficiency, and service to our multitude of highly valued customers. Korea Chemical Co. Ltd., that specialized in organic chemical products (mainly paints and resins for paints) has merged with Kumgang Chemical Co. Ltd., into a single legal entity entitled Kumgang Korea Chemical Co. Ltd. The company is known as KCC for short. The technical integration of the organic and inorganic chemistry business under the same roof ensures better products, better technical service, and more competitive prices. KCC continues to be a worldwide industrial player in the 21st century and continues to invest in innovative R&D activities.

Introduction to KCC Silicone Business

KCC constructed the first silicone monomer production plant in Korea in 2003. KCC has made great R&D advances for the silicone industry with researchers specialized in the field of silicone monomer, polymer synthesis, and the development of applicable products. Thus, KCC has completed the development in the silicone-related field successfully. KCC is ready to produce and provide silicone products including silicone sealant for construction, industrial RTV, silane, fluids, emulsion and dispersion, as well as rubber.
Moreover, KCC makes contributions to promote the competitive power of our customers by supplying products corresponding to their needs and by concentrating our energies on R & D activities.

Pressure Sensitive Adhesives
Introduction

KCC Silicone Pressure Sensitive Adhesives

Silicone Pressure sensitive adhesives are highly functional adhesives that have the unique Features of silicone such as heat resistance, cold resistance, water resistance, electrical insulation, ozone resistance, low inflammability, chemical inertness, and anti-pollution. Silicone PSAs have good adhesive properties at high and low temperature and especially, perform outstanding adhesion to most of all substrates which other organic adhesives are difficult to adhere to, such as polyethylene, polypropylene, polyester, fluoric resin and silicone rubber.

Features of KCC Silicone

Develops various types of new applications that reflect customer's target specifications through joint development.
Provides technical support and runs joint projects in partnership with our customers.
Develops customized products for a specific group of customers.

Pressure Sensitive Adhesives
Peroxide Cure PSA

Peroxide Cure PSA

Product	Viscosity (25℃, cP)	Solid content (%)	Adhesion (gf/in.)	Ball Tack (Ball No.)	Heat Resistance (℃)	Features
SG6001Z	35,000	56	850	# 32	230	General Purpose
SG6020Z	100,000	62	1,100		250	High Adhesion
SG6040Z	50,000	56	850		280	Good Heat Resistance
SG6060Z	135,000	62	950		250	High Solid

* Packing: 180 kg (drum)

Applications

- General Masking Film & Splicing Tape, General Insulation Tape, PCB Process Masking Film

Pressure Sensitive Adhesives
Addition Cure PSA

Addition Cure PSA

Classification	Product	Viscosity (25℃, cP)	Solid Content (%)	Adhesion (gf/in.)	Features
Low adhesion PSA	SC3300L	70,000	100	< 1	Solventless
	SC6460A	70,000	100	< 1	Solventless
	SC6421A	7,000	100	< 1	Low Viscosity, Solventless
	SG6481A	40,000	50	< 1	Solvent Base & Good Wetting
	SG6801A	75,000	40	< 1	Solvent Base & Low Migration Type
Middle & High adhesion PSA	SG6320A	15,000	60	200	Middle Adhesion
	SG6500A	25,000	60	950	General Purpose
	SG6501A	25,000	60	950	Good Heat Resistance
	SG6510A	15,000	58	900	Hard Surface Type (Low Tack)
	SG6710A	30,000	60	900	Soft Surface Type (High Tack)
	SG6715A	8,000	58	1,500	High Adhesion
	SG6750A	30,000	60	900	Low Pt type for TPU
	SG6940A	30,000	60	950	For Silicone Rubber
	SG6950A	30,000	60	950	High Adhesion for Silicone Rubber

* Packing: 180 kg (drum)

Low Temperature Cure PSA

Product	Viscosity (25℃, cP)	Solid Contents (%)	Adhesion (gf/in.)	Features
SG6207A	30,000	60	< 1	Low adhesion
SG6237A	15,000	60	350	Middle adhesion
SG6277A	10,000	58	750	High adhesion

* Packing: 180 kg (drum)

Pressure Sensitive Adhesives
Additives

Primer

Product	Viscosity (25℃, cP)	Solid Contents (%)	Solvent	Packing
SG6733A	13,000	30	Toluene	18kg (can)

Adhesion Promoter additives

Product	Viscosity (25℃, cP)	Solid Contents (%)	Solvent	Features	Packing
SG3951C	10	50	Xylene	For improving adhesion	18kg (can)
SG3955C	10	50	Xylene	For improving adhesion	18kg (can)

Anchorage additives

Product	Viscosity (25℃, cP)	Features	Packing
SC0050S	30	For Urethane Primer Treated PET	1kg (can)
SC0052S	25	For Corona Treated PET	1kg (PE can), 0.5kg (Bottle)

Crosslinkers

Product	Viscosity (25℃, cP)	Features	Packing
SC0016B	23	General Purpose	1kg (PE can)
SC0025B	5	For High Tack Type	1kg (PE can)

Catalyst

Product	Viscosity (25℃, cP)	Solid Contents (%)	Features	Packing
SK0010C	200	100	Pt. 5,000ppm	180g (PE can) 3.6kg (PE can)

Pressure Sensitive Adhesives
Guide Formulation For Masking Film (1)

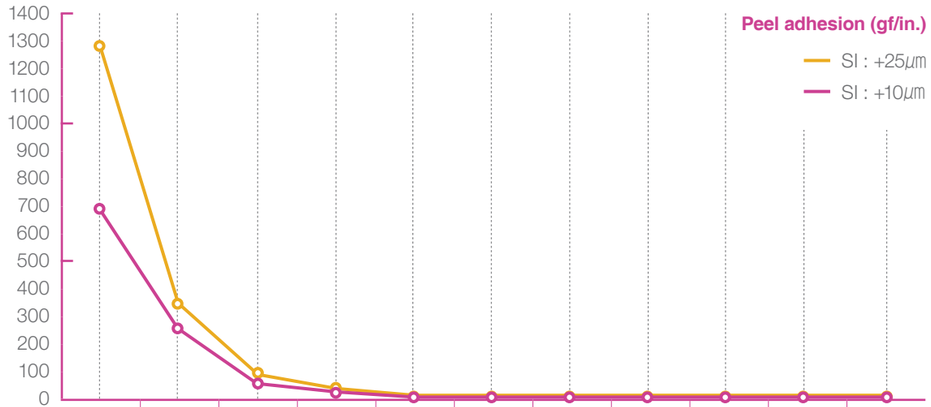
SC3300L & SG6500A

Test Condition

- Base Film : 50㎛ PET
- Substrate : SUS304
- Curing Condition : 140℃ x 2min
- Si Thickness : +25㎛ & 10㎛
- Formulation
  SC3300L (0~100) : SG6500A (100~0) : SC0016B (0.4~1.1) : SC0050S (0.7) : SK0010C (1.0)

Mixture ratio (wt%)	SC3300L	0	10	20	30	40	50	60	70	80	90	100
	SG6500A	100	90	80	70	60	50	40	30	20	10	0
	SC0016B	0.4	0.47	0.54	0.61	0.68	0.75	0.82	0.89	0.96	1.03	1.1
Peel adhesion (gf/in.)	SI : +25㎛	1270	348	92	25	12	4.9	2.7	2.1	1.5	1.1	0.8
	SI : +10㎛	696	255	56	19	8.9	4.5	1.8	1.5	1.1	0.7	0.5

SC3300L : SG6500A Mixture Ratio Peel adhesion



0:100	10:90	20:80	30:70	40:60	50:50	60:40	70:30	80:20	90:10	100:0
1270	348	92	25	12	4.9	2.7	2.1	1.5	1.1	0.8
696	255	56	19	8.9	4.5	1.8	1.5	1.1	0.7	0.5

* The above data is measured in the laboratory of KCC Silicone Corporation

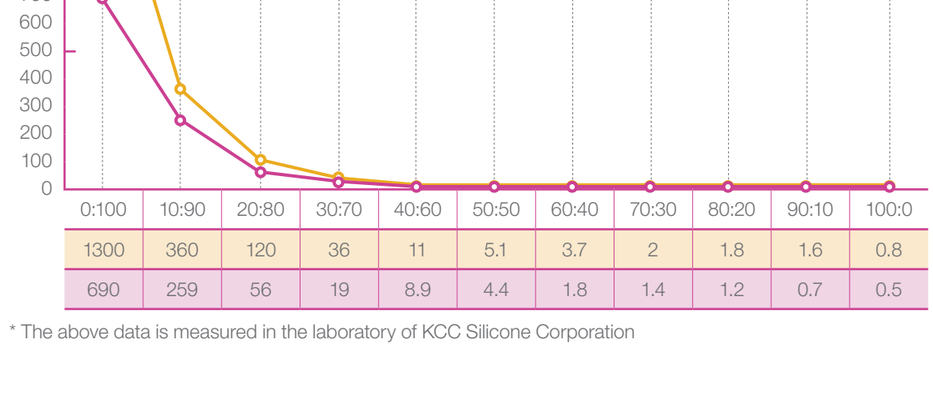
Pressure Sensitive Adhesives
Guide Formulation For Masking Film (2)

SC3300L & SG6501A

Test Condition

- Base Film : 50㎛ PET
- Substrate : SUS304
- Curing Condition : 140℃ x 2min
- Si Thickness : +25㎛ & 10㎛
- Formulation
  SC3300L (0~100) : SG6501A (100~0) : SC0016B (0.4~1.1) : SC0050S (0.7) : SK0010C (1.0)

SC3300L : SG6501A Mixture Ratio Peel adhesion



0:100	10:90	20:80	30:70	40:60	50:50	60:40	70:30	80:20	90:10	100:0
1300	360	120	36	11	5.1	3.7	2	1.8	1.6	0.8
690	259	56	19	8.9	4.4	1.8	1.4	1.2	0.7	0.5

* The above data is measured in the laboratory of KCC Silicone Corporation

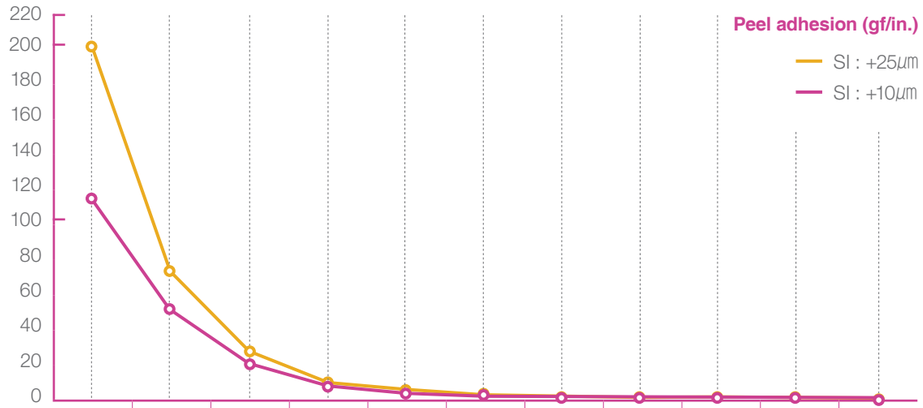
Pressure Sensitive Adhesives
Guide Formulation For Masking Film (3)

SC3300L & SG6320A

Test Condition

- Base Film : 50㎛ PET
- Substrate : SUS304
- Curing Condition : 140℃ x 2min
- Si Thickness : +25㎛ & 10㎛
- Formulation
  SC3300L (0~100) : SG6320A (100~0) : SC0016B (0.4~1.1) : SC0050S (0.7) : SK0010C (1.0)

SC3300L : SG6320A Mixture Ratio Peel adhesion



0:100	10:90	20:80	30:70	40:60	50:50	60:40	70:30	80:20	90:10	100:0
200	70.3	30	11	6.8	3.7	2.7	2	2.7	2	0.8
115	51.2	21	8.9	5.1	2.9	1.6	1.1	0.8	0.6	0.5

* The above data is measured in the laboratory of KCC Silicone Corporation

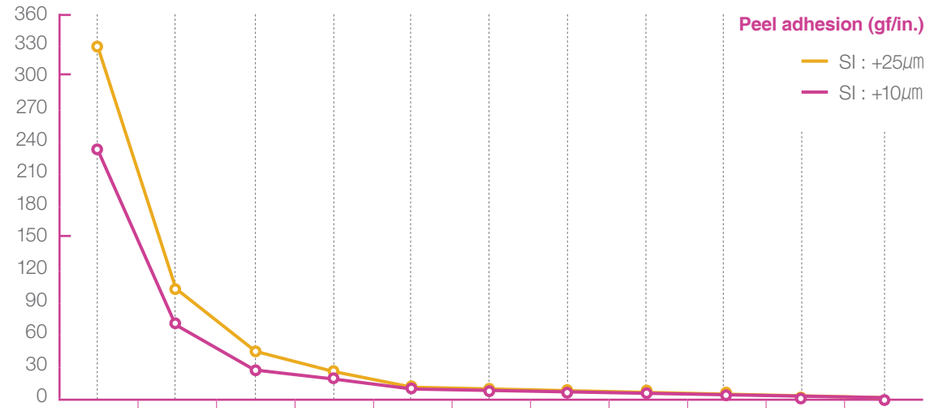
Pressure Sensitive Adhesives
Guide Formulation For Low Temp. Cure (1)

SG6207A & SG6237A

Test Condition

- Base Film : 50㎛ PET
- Substrate : SUS304
- Curing Condition : 80℃ x 2min
- Si Thickness : +25㎛ & 10㎛
- Formulation
  SG6207A (0~100) : SG6237A (100~0) : SK0010C (1.0)

SG6207A : SG6237A Mixture Ratio Peel adhesion



0:100	10:90	20:80	30:70	40:60	50:50	60:40	70:30	80:20	90:10	100:0
331	102	43	26	12	7.5	5.2	3.5	2.5	1.5	1
234	69	29	18	10	6.8	4.4	2.9	2	1.3	1

* The above data is measured in the laboratory of KCC Silicone Corporation

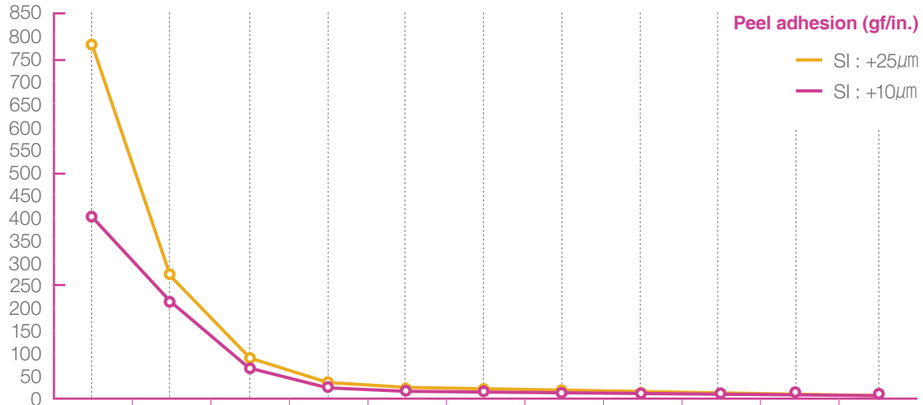
Pressure Sensitive Adhesives
Guide Formulation For Low Temp. Cure (2)

SG6207A & SG6277A

Test Condition

- Base Film : 50㎛ PET
- Substrate : SUS304
- Curing Condition : 80℃ x 2min
- Si Thickness : +25㎛ & 10㎛
- Formulation
  SG6207A (0~100) : SG6277A (100~0) : SK0010C (1.0)

SG6207A : SG6277A Mixture Ratio Peel adhesion



0:100	10:90	20:80	30:70	40:60	50:50	60:40	70:30	80:20	90:10	100:0
785	268	87	36	20	8.1	5.9	4.3	2.6	1.1	0.8
409	214	59	30	16	9.7	4.9	3.1	1.9	0.9	0.5

* The above data is measured in the laboratory of KCC Silicone Corporation

Pressure Sensitive Adhesives
High Adhesion PSA Selection Guide

Product	Viscosity (cP)	Solid contents (%)	Peel adhesion (gf/in.)	Probe Tack (g)	Release force for fluorine film (gf/in.)	Features
SG6500A	25,000	60	950	350	5.5	General Purpose
SG6501A	25,000	60	950	350	2.7	Good Heat Resistance
SG6510A	15,000	58	900	200	2.2	Hard Surface Type (Low Tack)
SG6710A	30,000	60	900	500	6.8	High tack
SG6715A	8,000	58	1,500	200	< 1.0	High Adhesion
SG6750A	30,000	60	900	400	3.8	Low Pt type for TPU

Release Coatings
Introduction

KCC Silicone Release Coating

Silicone Release Coating Provide excellent release, water repellency, heat resistance, cold resistance, water resistance, chemical resistance, subsequent adhesion, and lubrication properties. Silicone Release Coating are widely used for release paper like tapes and labels, release films and synthetic rubbers.

KCC solventless & solvent-based silicone release coating materials, which includes a choice of solventless polymer, solvent dispersion, controlled release additive, catalyst components.

Release Coatings
Addition-Cure Release Coating

Addition-Cure Solventless/Solvent-based

Classification	Product	Viscosity (25℃, cP)	Solid Content (%)	Catalyst Type	Release Force	Features
Solventelss Type	SC1011A	200	100	Pt	Medium	Low Viscosity Label & Tape wCoating Easy Release
	SC1032A	350	100	Pt	Medium	Label & Tape Coating Easy Release
	SC1035A	350	100	Pt	Medium	PET Film Coating Easy Release
Solvent Type	SG1100A	1,100	30	Pt	Medium	Low Viscosity Easy Release
	SG1130A	13,000	30	Pt	Medium	-
	SG1160A	50,000	60	Pt	Medium	High Solid Easy Release
	SG1210A	1,100	30	Pt	Low	Slip Type & Easy Release
	SG1250A	15,000	30	Pt	Ultra Low	Slip Type & Ultra Low Release
	SG1310T	17,500	30	Pt	Medium	Easy Release
	SG1410A	15,000	30	Pt	Medium	Easy Release
	SG1910A	550	13	Pt	-	Writing on release coating surface

Release Coatings
Additives

Additives

Classification	Product	Viscosity (25℃, cP)	Solid Content (%)	Features
Controlled Release Additive	SG1500A	55	51	High efficiency for high release force range of modification
	SC0062A	510	100	High efficiency for low release force range of modification
Crosslinker	SC0016B	23	100	Standard Crosslinker
	SC0021B	98	100	Fast Cure Type Crosslinker
Anchorage Additive	SC0050S	30	100	For Urethane Primer Treated PET
	SC0052S	25	100	For Corona Treated PET
Slip Additive (Anti-Blocking Agent)	SC0073A	25,000	100	Provide the same slip properties as standard slip type SG1210A
	SC0075A	25,000	100	Provide the same slip properties as slip type SG1250A
Pt Catalyst	SK0011C	200	100	Pt. 5,000ppm

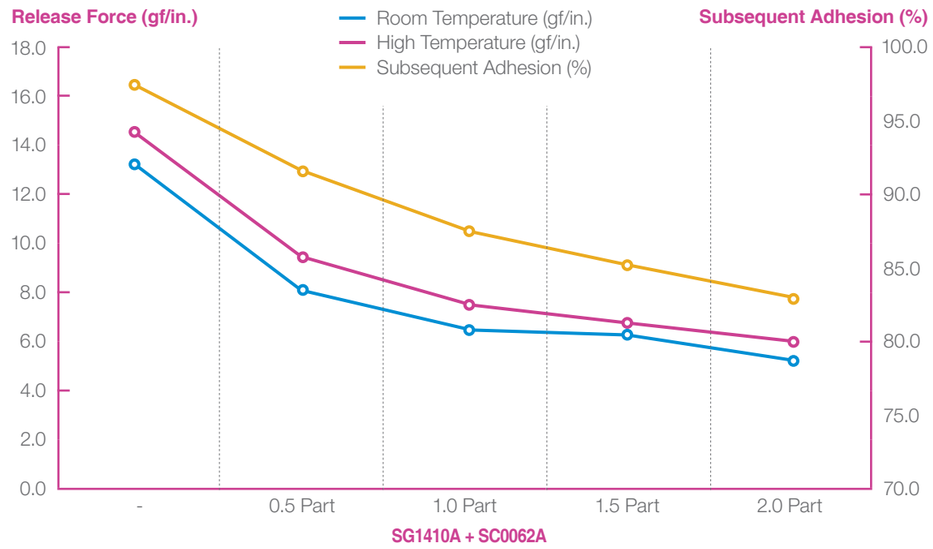
Release Coatings
Guide Formulation for Low Release Additive

Test Condition

- Substrate : 50㎛ Corona PET
- Coat Weight : 0.2 ± 0.02g/㎡
- Curing : 140℃ x 2sec [Automatic Laboratory oven]
- Test Tape : Release Force [Tesa 7475], Subsequent Adhesion [Nitto 31B]

SG1410A	SC0062A	Release Force (gf/in.)		Subsequent Adhesion (%) (25℃*24hr)
		Room Temperature (25℃*24hr)	High Temperature (50℃*24hr)	
100	0	13	14	97
100	0.5	8.2	9.6	91
100	1.0	7.3	8.5	87
100	1.5	6.4	6.8	85
100	2.0	5.3	6.1	83

Low Release Performance



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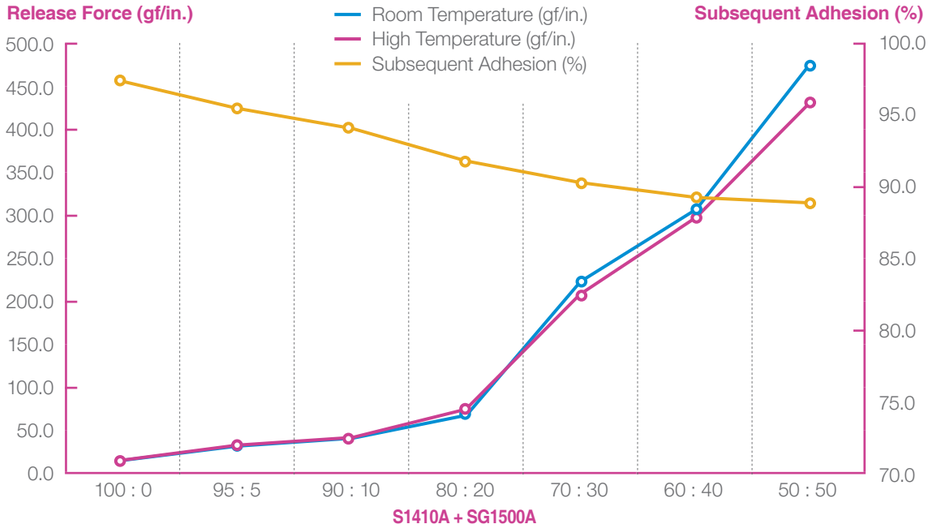
Release Coatings
Guide Formulation for High Release Additive

Test Condition

- Substrate : 50㎛ Corona PET
- Coat Weight : 0.2 ± 0.02g/㎡
- Curing : 140℃ x 2sec [Automatic Laboratory oven]
- Test Tape : Release Force [Tesa 7475], Subsequent Adhesion [Nitto 31B]

SG1410A	SG1500A	Release Force (gf/in.)		Subsequent Adhesion (%) (25℃*24hr)
		Room Temperature (25℃*24hr)	High Temperature (50℃*24hr)	
100	0	13	14	97
95	5	30	32	95
90	10	39	40	94
80	20	68	72	92
70	30	221	206	90
60	40	303	296	89
50	50	475	430	88

High Release Performance



* The above data is measured in the laboratory of KCC Silicone Corporation

Release Coatings
Guide Formulation for Slip Release Coating

Slip Type Release Coating

Slip type additive is used with a silicone polymer, allowing coating with a high coating weight without blocking.
This feature enables low release force and high subsequent adhesion.

Product	Type	Appearance	Viscosity (25℃, cP)	Solid Content (%)	Coating Weight (g/㎡)	Comments
SC0073A	Additive	Hazy	25,000	100	0.6 - 1.2	With Polymer (SG1410A etc.)
SC0075A	Additive	Hazy	25,000	100	1.5 - 2.0	With Polymer (SG1410A etc.)

Test Condition

- Substrate : 50㎛ Corona PET
- Coat Weight : 0.9 ± 0.02g/㎡, 1.8 ± 0.02g/㎡
- Curing : 140℃ x 10sec [Automatic Laboratory oven]
- Test Tape : Release Force [Tesa 7475], Subsequent Adhesion [Nitto 31B]

SC0073A & SC0075A

Base Product	Slip Additive	Coating Weight (g/㎡)	Release Force (gf/in.)			Subsequent Adhesion (%) (25℃*24Hr)
			Room Temperature (gf/in.)		High Temperature (gf/in.) (50℃*24Hr)	
			Immediately	25℃*24Hr		
SG1410A	SC0073A	0.9	3.2	5.3	7.2	96
SG1410A	SC0075A	1.8	1.8	2.8	4.5	96

Memo