OCSmaterials

OCSmaterials uses its own synthesis and formulation technologies to research and produce the highest quality thermal interface materials and flame retardant products.

Thermal Grease

Thermal Encapsulant

Thermal Gap Filler

Thermal Gap Pad

TCA (PU / SILICONE)

PUTTY

OCS
Beyond the boundary

OCSmaterials

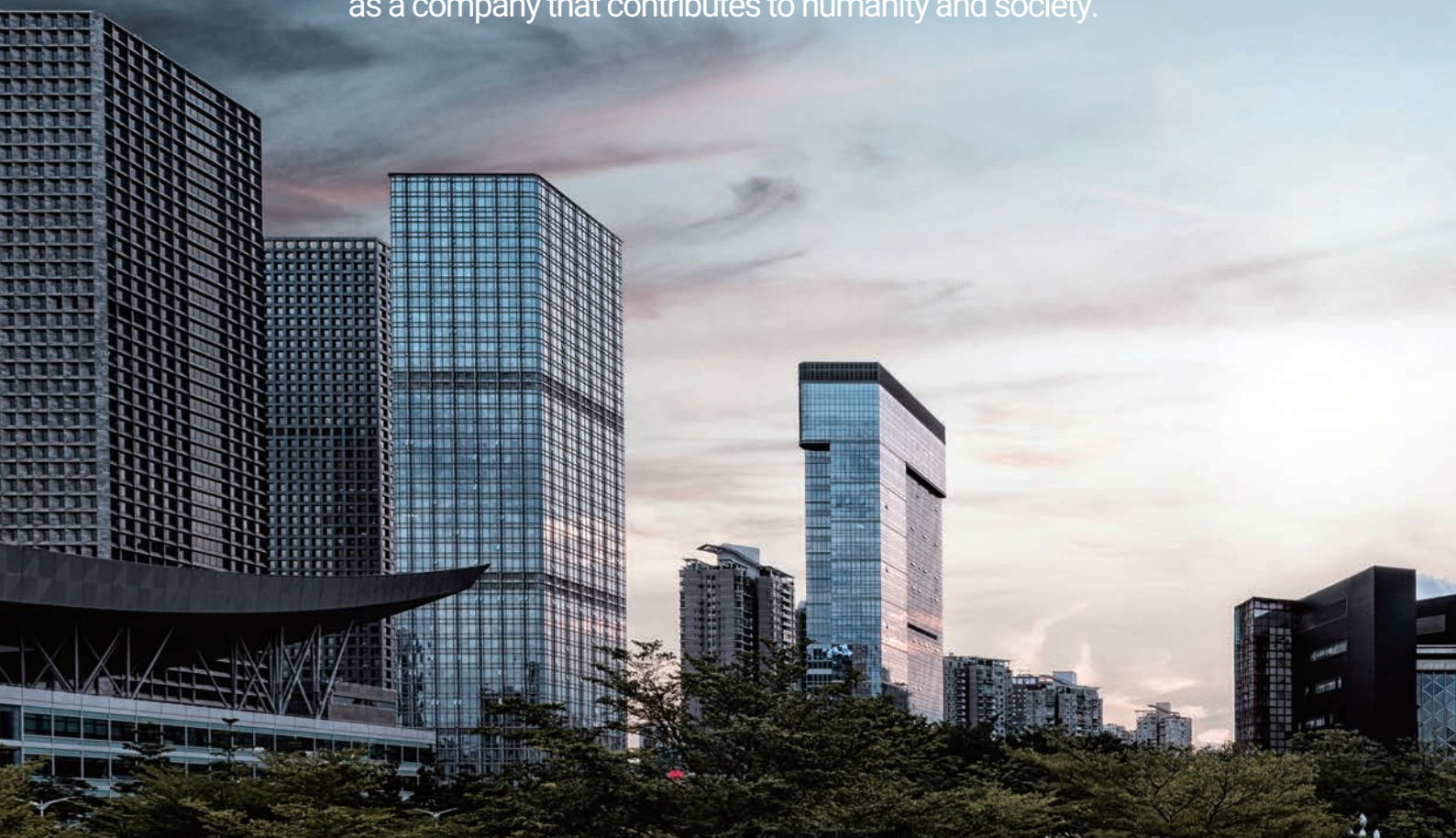
OCSmaterials Co., Ltd. is a specialized company in high-efficiency thermal management solutions.

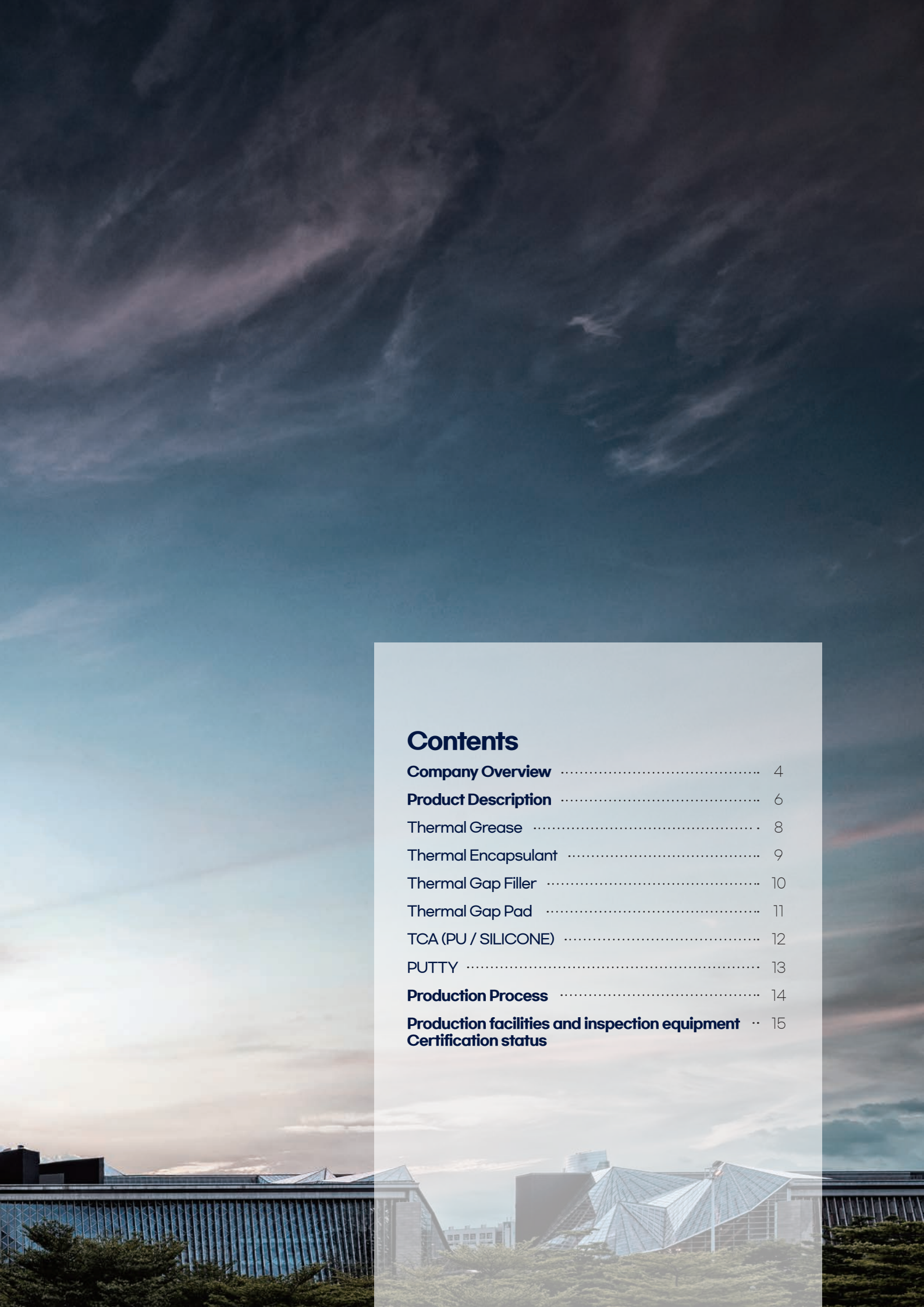
As the electric and electronic industries continue to evolve rapidly, thermal management challenges arising from lightweight, ultra-thin, and multi-functional components have become a critical issue for modern society.

As a professional provider of high-efficiency thermal management solutions, OCSmaterials addresses these challenges through next-generation thermal technologies, while continuously strengthening its technological competitiveness through sustained research, development, and investment.

In addition, to grow together with our customers, shareholders, local communities, and employees, we are further embedding ESG (Environmental, Social, and Governance) management principles throughout our organization and advancing sustainability as a core business strategy.

OCSmaterials will continue to take on challenges for a sustainable future and grow as a company that contributes to humanity and society.



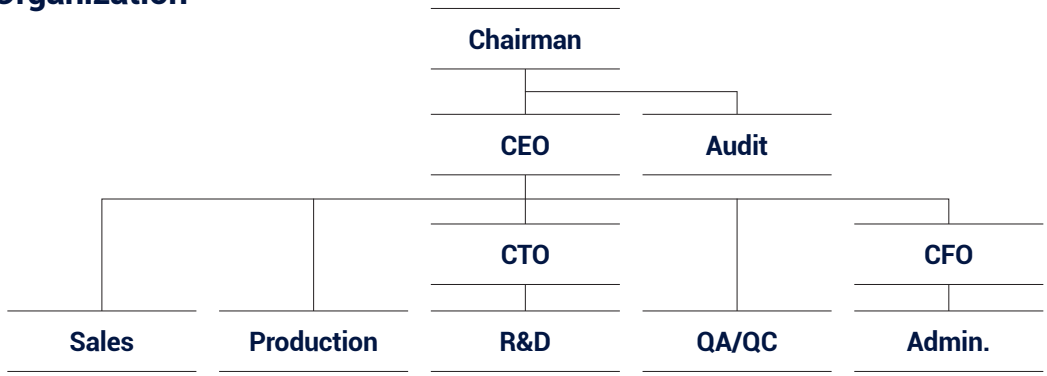


Contents

Company Overview

Company	OCSmaterials Co.,Ltd.
Management	Sangwon Han (CEO) / Woora Jung (CEO)
Establishment	Oct. 2020
Employee	28 (R&D 13, Ph.D 4·Master's 3)
Location	109, Anaji-ro,Gyeyang-gu,Incheon, 21104,Republic of Korea
Main Biz.	Thermal Interface Materials / Flame Retardant Products

Organization



History

2020
· Company establishment
· Concentration of research on Thermal Interface Materials
· Source technology acquisition of Gap Filler, Gap Pad

2021
· Acquisition of source and processing technology for Thermal Grease and Encpasulants

2022
· The first sample released to company "L" for localization against global makers

2023
· Organization expansion of the Production/Research/Quality/Sales staffs
· Achievement ISO and required certifications
· Establishing an Affiliated Research Institute

2024
· Signing a long-term supply contract with company "L" about Encapsulants
· Qualification approvement from company "L", "S"
· Development of localization business especially in the domestic market such as automobiles, displays, LED lighting, communication equipment, and military industry
· Designated "Legend 50+" by government as one of e-mobility leading company

2025
· Global ESG Rating EcoVadis "Gold" Medal Award
· Incheon Future Vehicle Parts Industry Development Merit Award "Incheon Mayor's Award"
· Incheon Legend 50+ Mobility Industry Development Excellence Award "ITP Director's Award"
· Investment Attraction (SGI Frontier Investment Fund, 2 billion KRW)
· Designated as a Member of Incheon Semiconductor Forum
· Designated as an Incheon Aviation Leading Enterprise
· Designated for the Ministry of SMEs and Startups "Startup Leap Package"
· UL Certification (5 items)
· Participation in InterBattery Europe 2025
· Smart Factory Establishment
· Information Security System set up

2026
· Designated as a parther company of the Incheon Defense Venture Center

Customized developed-products

Supplier oriented Line-up [Global Maker] Vs Customer Oriented Line-up [OCSmaterials]

OCSmaterials
Beyond the boundary

- Customized design (material + equipment)
- Competitive price with MOQ
- On time delivery with competitive lead time

SAMSUNG · LG Electronics · GMB
SAMSUNG SDI · CSE cs enertech · NOROO
LS Daewon Living Solution · LS Automotive · HYUNDAI MOBIS · Hanwha Aerospace
HYUNDAI SUNGWOO SOLITE · HYUNDAI · Chang Sung Corporation CSC

Who We Are

Business Area
All electrical and electronic industries
such as electric vehicles, IT, robots, etc.

Strategy
Localization of materials.
Supplying customized products.

Technology
Top-edge technologies such as dispersion,
reduction of low-molecular siloxane and etc.

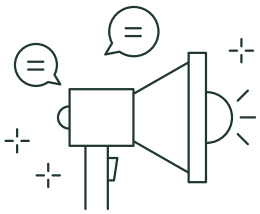
Achievement
Signing long-term supplying contract of
Encapsulants with company ”L”.
Running pipe line over 70 projects.

Product Description

OCSmaterials Co., Ltd. is capable of customized design and production of Thermal Interface Materials (TIMs) based on customer-required properties such as thermal conductivity, viscosity, hardness, and curing time, supported by an outstanding R&D team including four Ph.D.-level researchers.

As a competitive domestic alternative to global thermal material manufacturers, OCSmaterials develops and manufactures highly reliable thermal management products, supplying them in mass production to customers both in Korea and overseas.

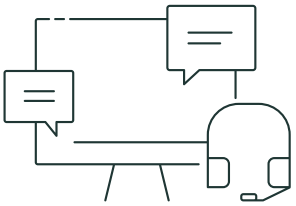
Our main product portfolio includes Thermal Grease, Encapsulants, Gap Fillers, Gap Pads, Thermally Conductive Adhesives (TCA), and Putty-type TIMs.



Customer

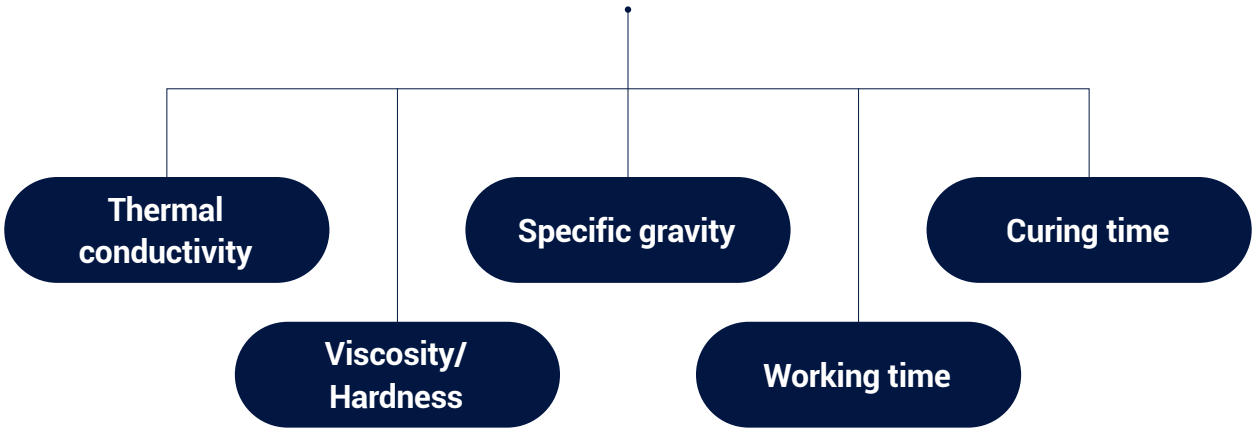
Various inquiries based on customer's unique applications

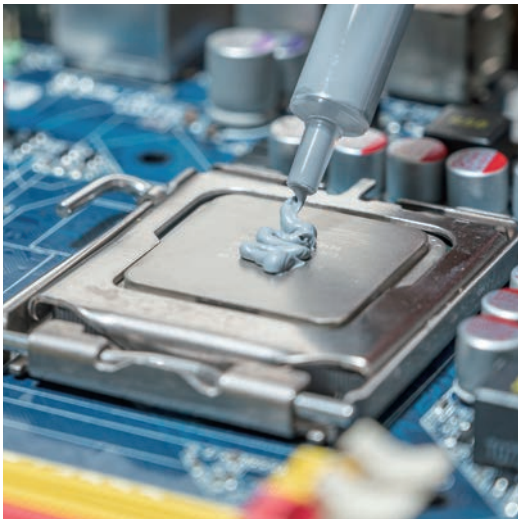
Supplying customized product with chemical engineering



OCSmaterials
Beyond the boundary

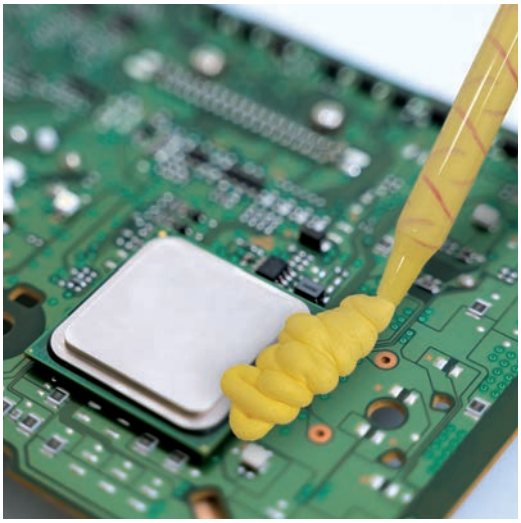
Customizing Properties





Thermal Grease

Thermal Encapsulant

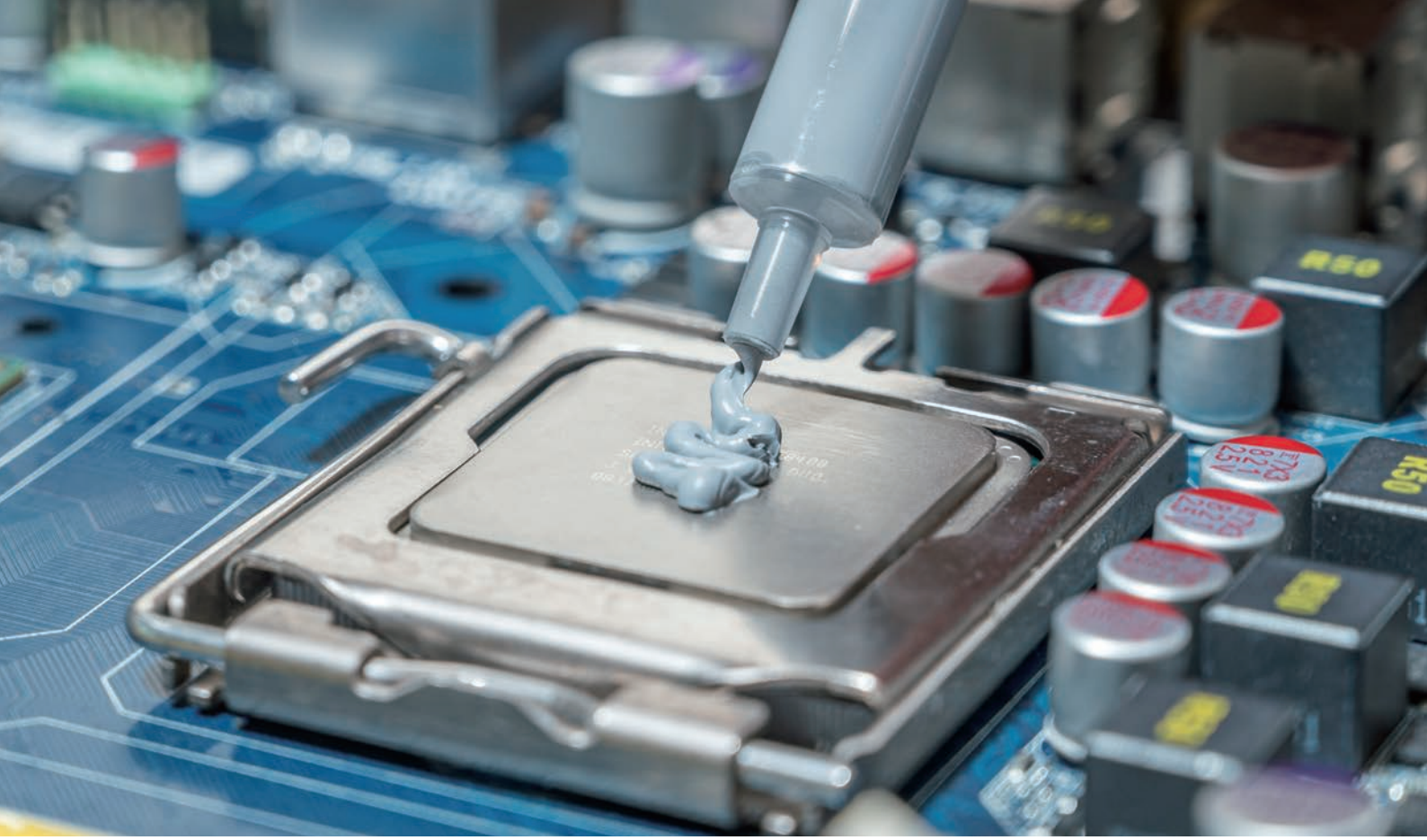


Thermal Gap Filler

Thermal Gap Pad

TCA (PU / SILICONE)

PUTTY



Thermal Grease

Features

· Low application difficulty due to semi-solid state
· No reaction and phase change, which is advantageous for reworking
· Excellent heat resistance, cold resistance
· Filling between the heating element and the heat sink

OG Series

Properties	Thermal Conductivity	Density	Shelf Life	Operating Temp	Viscosity	BLT	Evaporation Loss	Oil Separation
Test Method (Unit)	ASTM D7984 (W/mK)	ASTM D1475 (g/ml)	Years	(℃)	ASTM D2555 (cps)	(㎛)	ASTM D972 120℃, 24h	KS M 2050 (%)
1	1.0	1.7	1	-40 ~ 150	270,000	30	< 0.1%	<0.5%
2	2.0	2.5	1	-40 ~ 150	120,000	30	< 0.1%	<0.5%
3	3.3	2.9	1	-40 ~ 200	120,000	30	< 0.1%	<0.5%
4	4.0	3.2	1	-40 ~ 200	203,000	15	< 0.1%	<0.5%
5	4.6	3.2	1	-40 ~ 200	240,000	30	< 0.1%	<0.5%
6	7.4	3.2	1	-40 ~ 200	340,000	50	< 0.1%	<0.5%

· E-Mobility (EV/HE) - Power Conversion System
· Autonomous Driving - Control Unit (PCU, ADCU)
· Display, Home Appliance, LED Lighting

Home Appliance | Vehicle | Electric | Industrial | Defence Ind.

Thermal Encapsulant

Features

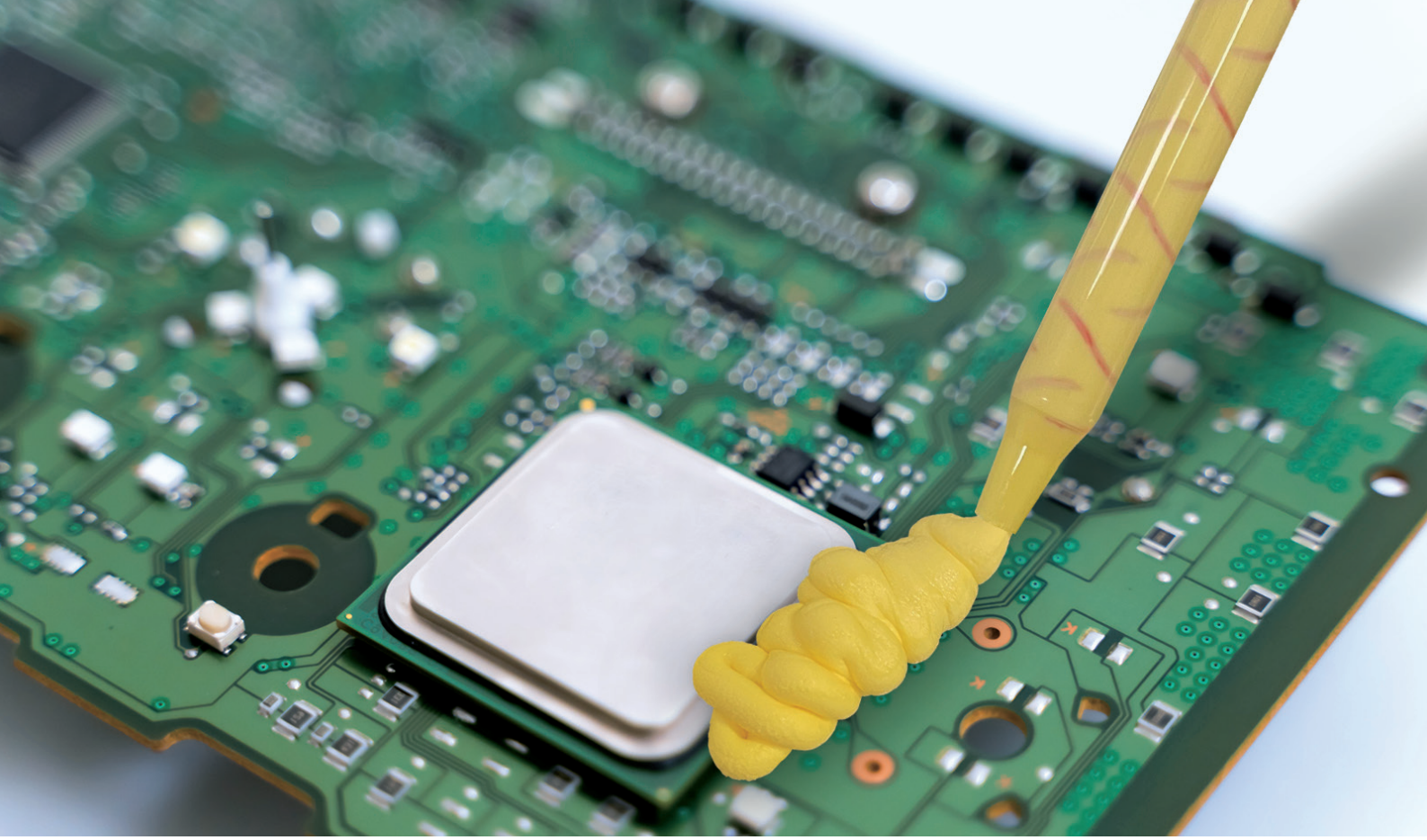
· Easy to use as a flowable product
· High permeability for narrow-gap operations
· Low viscosity applicable to a wide range of heating sites
· Heat dissipation through dust protection, moisture protection and fixation

OM Series

Properties	Thermal Conductivity	Hardness	Density	Flame Rating	Operating Temp	Viscosity	Cure Condition	Type
Test Method (Unit)	ASTM D7984 (W/mK)	ASTM D2240 (Shore A)	ASTM D792 (g/ml)	UL94	(℃)	ASTM D2555 (cps)	25℃ (hours)	1-part or 2-part
1	0.8	50	1.6	V-0	-40 ~ 150	2,900	8	2-Part
2	1.2	37	1.67	V-0	-40 ~ 150	1,500	24	2-Part
3	2.0	60	2.6	V-0	-40 ~ 200	3,000	1	2-Part
4	3.0	50	2.65	V-0	-40 ~ 150	6,000	1	2-Part
5	3.2	35	2.75	V-0	-40 ~ 150	5,000	24	2-Part

· E-Mobility (EV/HE) - Power Conversion System (OBC/ICCU/V2LC)
· Display/Industrial – Power Supply (SMPS)
· LED Lighting

Home Appliance | Vehicle | Electric | Industrial | Defence Ind.



Thermal Gap Filler

Features

- When applied to the structure and surface of various devices in liquid form, it is more advantageous than Gap Pad
- The application can be freely adjusted according to the purpose and conditions of the product
- Production efficiency is higher and elastic than when using the Gap Pad, so it has impact mitigation effect

OF Series

Properties	Thermal Conductivity	Hardness	Density	Flame Rating	Operating Temp	Viscosity	Cure Condition	Type
Test Method (Unit)	ASTM D7984 (W/mK)	ASTM D2240 Shore 00	ASTM D792 (g/ml)	UL94	(℃)	ASTM D2555 (cps)	25℃ (hours)	1-Part or 2-Part
1	2.2	75	2.4	V-0	-40 ~ 150	350,000	5	2-Part
2	2.7	55	1.85	V-0	-40 ~ 150	110,000	6	2-Part
3	3.2	65	2.0	V-0	-40 ~ 150	150,000	3	2-Part
4	4.4	80	2.9	V-0	-40 ~ 150	135,000	7	2-Part
5	5.2	60	3.1	V-0	-40 ~ 150	150,000	5.5	2-Part
6	7.5	60	3.1	V-0	-40 ~ 200	140,000	5	2-Part

- E-Mobility (EV/HE) – Inverter, Converter, ECU, TCU
- Repeater, LED Lighting

Home Appliance · Vehicle · Electric · Industrial · Defence Ind.

Thermal Gap Pad

Features

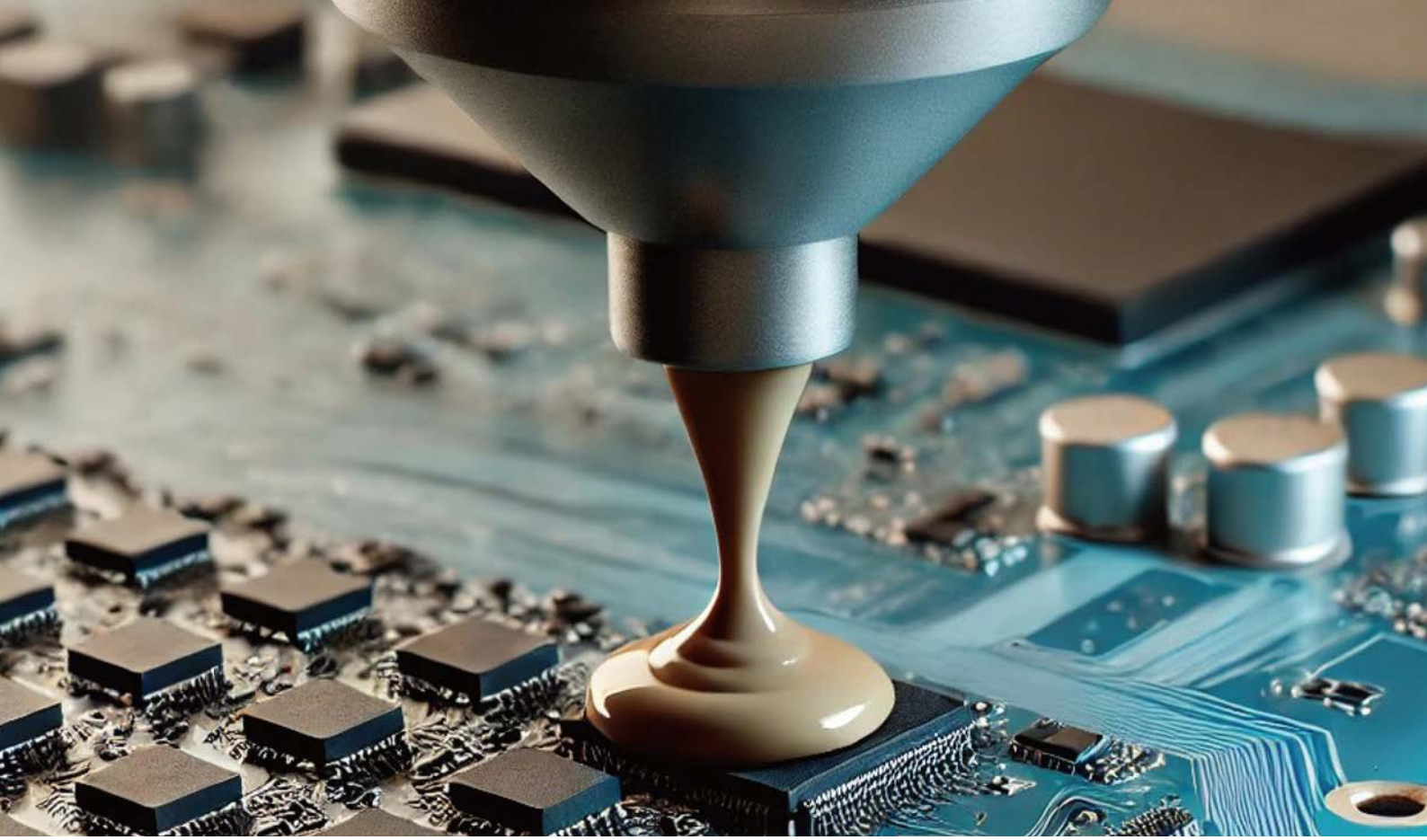
- It can be supplied in the form of a finished product and applied immediately
- No additional equipment is required when applied to the production process
- Mainly used for a wide temperature range and low hardness

OP Series

Properties	Thermal Conductivity	Color	Density	Hardness	Flame Rating	Breakdown Voltage	Thickness	Use Temperature
Test Method (Unit)	ASTM D5470 (W/mK)	Visual	ASTM D792 (g/ml)	ASTM D2240 (Shore 00)	UL94 (Grade)	ASTM D149 (KV/mm)	ASTM D374 (mm)	℃
1	2.0	Gray	2.5±0.1	>20	V-0	>6	0.5 ~ 13mm ±10%	-50 ~ 180
2	2.0	Gray	2.8±0.1	>40	V-0	>6	0.5 ~ 13mm ±10%	-50 ~ 180
3	3.0	Blue/Gray	2.9±0.1	>40	V-0	>6	0.5 ~ 13mm ±10%	-50 ~ 180
4	4.5	Pink	3.1±0.1	>60	V-0	>6	0.5 ~ 8mm ±10%	-50 ~ 180
5	6.5	P.Blue	3.3±0.1	>60	V-0	>10	0.5 ~ 8mm ±10%	-50 ~ 180

- E-Mobility (EV/HE) - Power Conversion System (OBC/ICCU/V2L C)
- Display/Industrial, LED Lighting, Heat Sink/IC Chip, IGB Module

Home Appliance | Vehicle | Electric | Industrial | Defence Ind.



TCA(Polyurethane)

Features

· Two-component material curable at room temperature or under heat
· High thermal conductivity
· Excellent adhesive strength and electrical insulation

OUA Series

Properties	Thermal Conductivity	Hardness	Density	Adhesion	Viscosity	Mix Ratio	Type
Test Method (Unit)	ASTM D7984 (W/mK)	KS M ISO 868 (Shore D)	ASTM D792 (g/ml)	ASTM D1002 (MPa)	ASTM D2555 (cps)	(by volume)	1part or 2part
1	> 2	> 70	> 2.2	> 7	< 200,000	1 : 1	2-part
2	> 3	> 30	> 2.6	> 1	< 150,000	1 : 1	2-part
3	> 3	> 50	> 2.6	> 3	< 200,000	1 : 1	2-part

· EV Battery Pack ·E-Mobility (Battery Module, BSA)

TCA (Silicone)

Features

· One-part silicone-based thermally conductive adhesive
· Excellent thermal conductivity, heat dissipation, and electrical insulation performance
· Excellent workability with high reliability

OSA Series

Properties	Thermal Conductivity	Hardness	Adhesion	Density	Viscosity	Cure Condition	Type
Test Method (Unit)	ASTM D7984 (W/mK)	Shore A (Shore 00)	ASTM D1002 (MPa)	ASTM D792 (g/ml)	(cps)	-	1-Part or 2-Part
1	4.7	90	2.5	3.1	150,000	125°C,30min + 150°C,60min	1-Part
2	4.7	75	0.8	3.0	150,000	125°C,30min + 150°C,60min	1-Part

· E-Mobility (Component Securing)
· Home Appliance , Industrial
· LED · EV Battery Pack · ESS

Home Appliance | Vehicle | Electric | Industrial | Defence Ind.

PUTTY

Features

· Non-curing structure enables flexible gap adaptability and easy reworkability
· One-part dispensable system optimized for automated dispensing processes
· Low-flow formulation maintains gap geometry and interface reliability over time

OPF Series

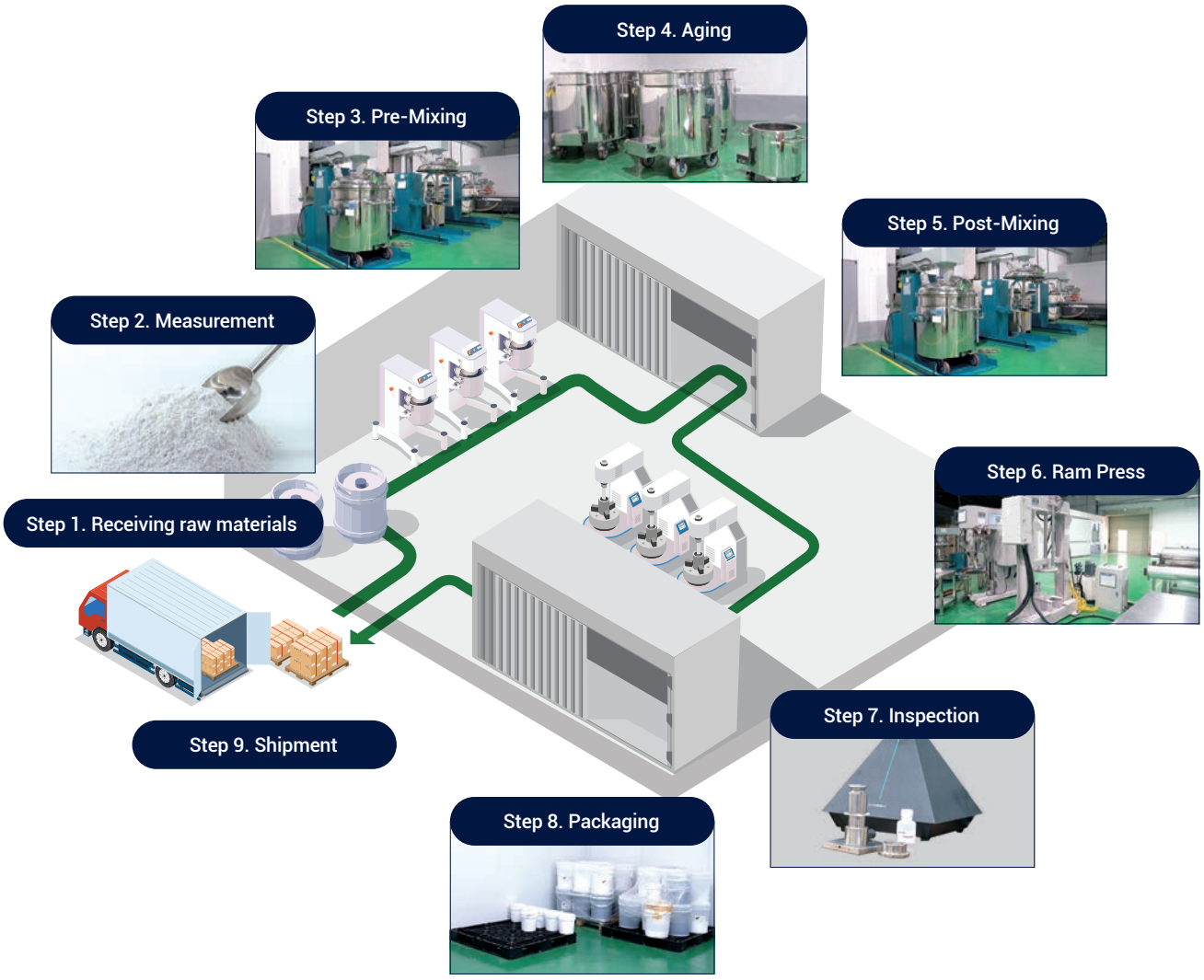
Properties	Thermal Conductivity	Density	Operating Temp	Viscosity	Cure Condition	Type
Test Method (Unit)	ASTM D7984 (W/mK)	ASTM D792 (g/ml)	(℃)	ASTM D2555 (cps)	25℃ (hours)	1-Part or 2-Part
1	6.7	3.2	-40 ~ 200	1,500,000	Non cure	1-Part
2	7.7	3.4	-40 ~ 200	2,300,000	Non cure	1-Part

· Semiconductor (Module Heat-Sink, Vapor Chamber)
· E-Mobility (IC CHIP, ADAS)

Home Appliance | Vehicle | Electric | Industrial | Defence Ind.

Production Process

Receiving raw materials → Measurement → Pre-Mixing → Aging → Post-Mixing → Ram Press → Inspection → Packaging → Shipment



Production facilities and inspection equipment

Production facilities

Planetary Mixer

Dissolver Mixer

RAM press

Inspection equipment

UTM

Viscometer

Thermal conductivity Analyzer

Hydrometer

Durometer

Withstand voltage meter

Thermal Imaging camera

Dry Oven

Thermo-hygrostat

Thermal Shock Test Chamber

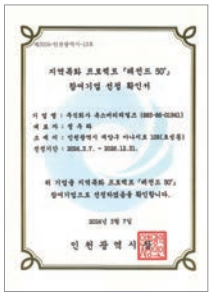
Certification status

ISO9001

ISO14001

ISO45001

An Affiliated Research Institute



Legend 50+
[Designation by government]

Certificate of Root Enterprise

Certificate of excellent materials, parts, and equipment manufacturers

Certificate of Origin for Solid type [EU/ASEAN/ INDIA/RECEP]

Venture company confirmation (R&D)

ECOVADIS

UL94

RoHS

OCS materials

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