

OCS**materials**

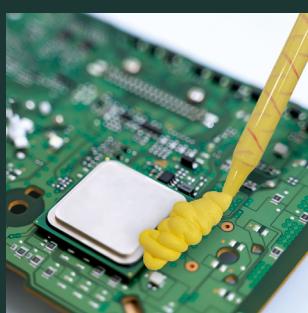
OCSmaterials uses its own synthesis and formulation technologies to research and produce the highest quality thermal interface materials and flame retardant products.



Grease



Encapsulants



Gap Filler



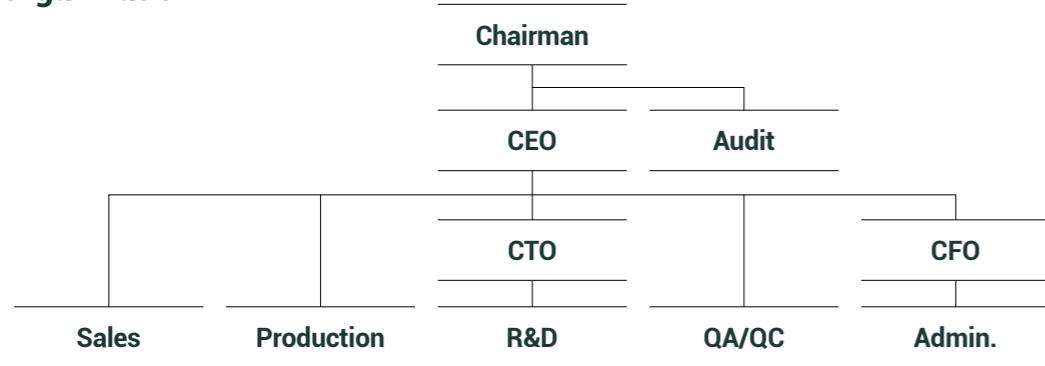
Gap Pad

Company Overview

Company	OCSmaterials Co.,Ltd.
Management	Sangwon, Han (Chairman), Woora, Jung (CEO)
Establishment	Oct. 2020
Capital	US\$1.1M
Employee	15 (R&D 6, Ph.D 2·Master's 2)
Location	109, Anaji-ro, Gyeonggi-do, 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 Encapsulants

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

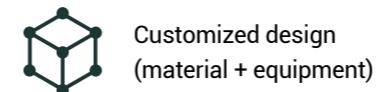
2024 · Signing a long-term supply contract with company "L" about Encapsulants
· Qualification approval from company "L", "S"
· Development of localization business especially in the domestic market such as automobiles, displays, LED lighting, communication equipment, and military industry
· Designated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

Customized developed-products

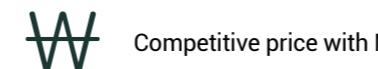
Supplier oriented Line-up [Global Maker] Vs Customer Oriented Line-up [OCSmaterials]

OCS materials

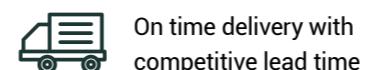
Beyond the boundary



Customized design
(material + equipment)



Competitive price with MOQ



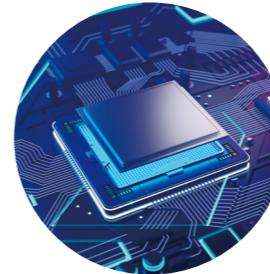
On time delivery with
competitive lead time



SAMSUNG SDI



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.

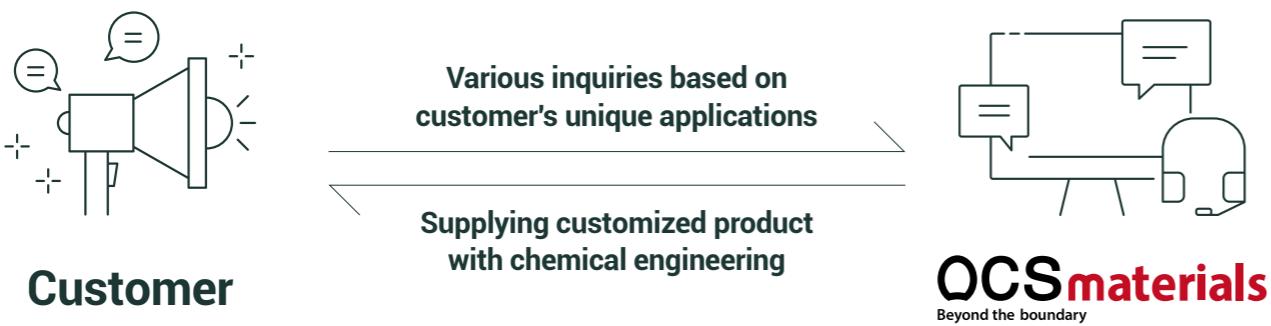


Achievement

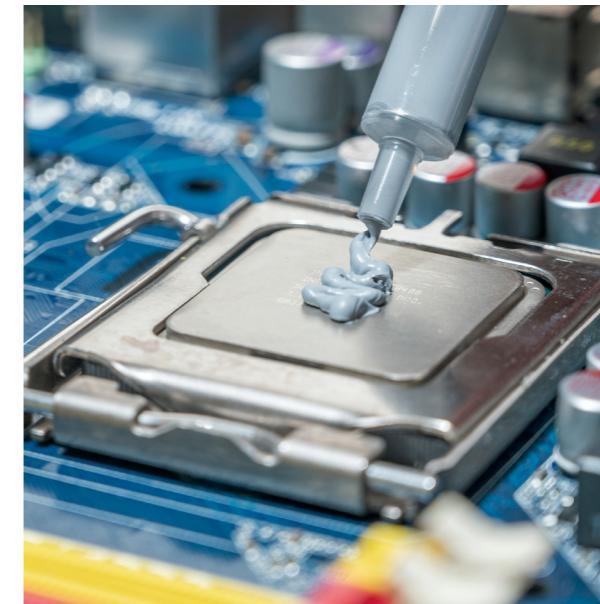
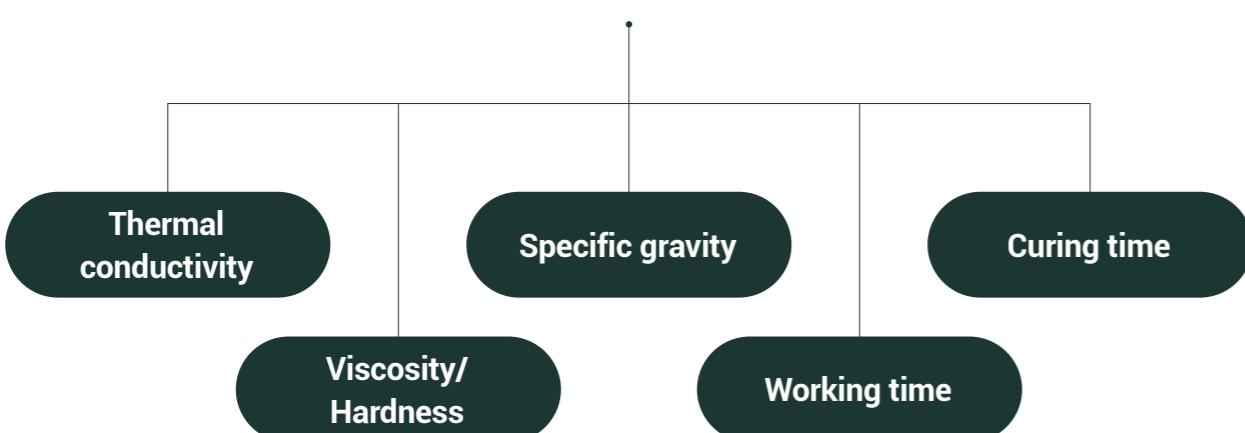
Signing long-term supplying contract of
Encapsulants with company "L".
Running pipe line over 70 projects.

Product Description

OCSMaterials is designing and producing the customized products upon customer's requirement (ex. Thermal conductivity, Viscosity, Hardness, Curing time, Working time, Bond Line Thickness, etc). We are recognized as a suitable company to replace global products dominating the domestic market through continuous development of high-efficiency heat dissipation materials and customer-oriented customized products.



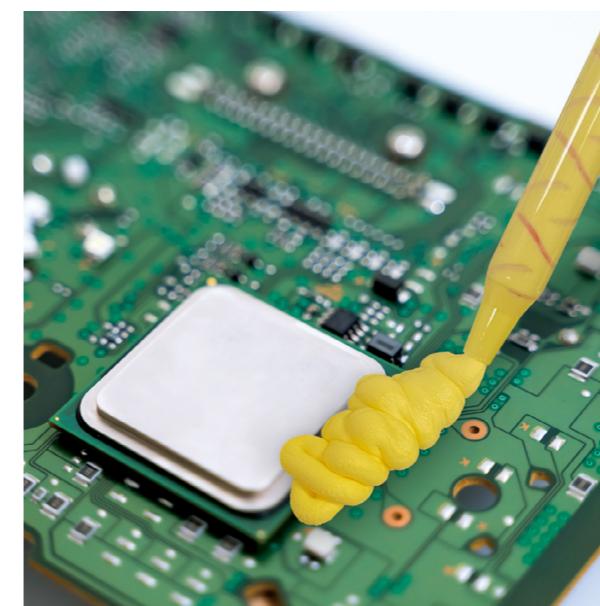
Customizing Properties



Grease



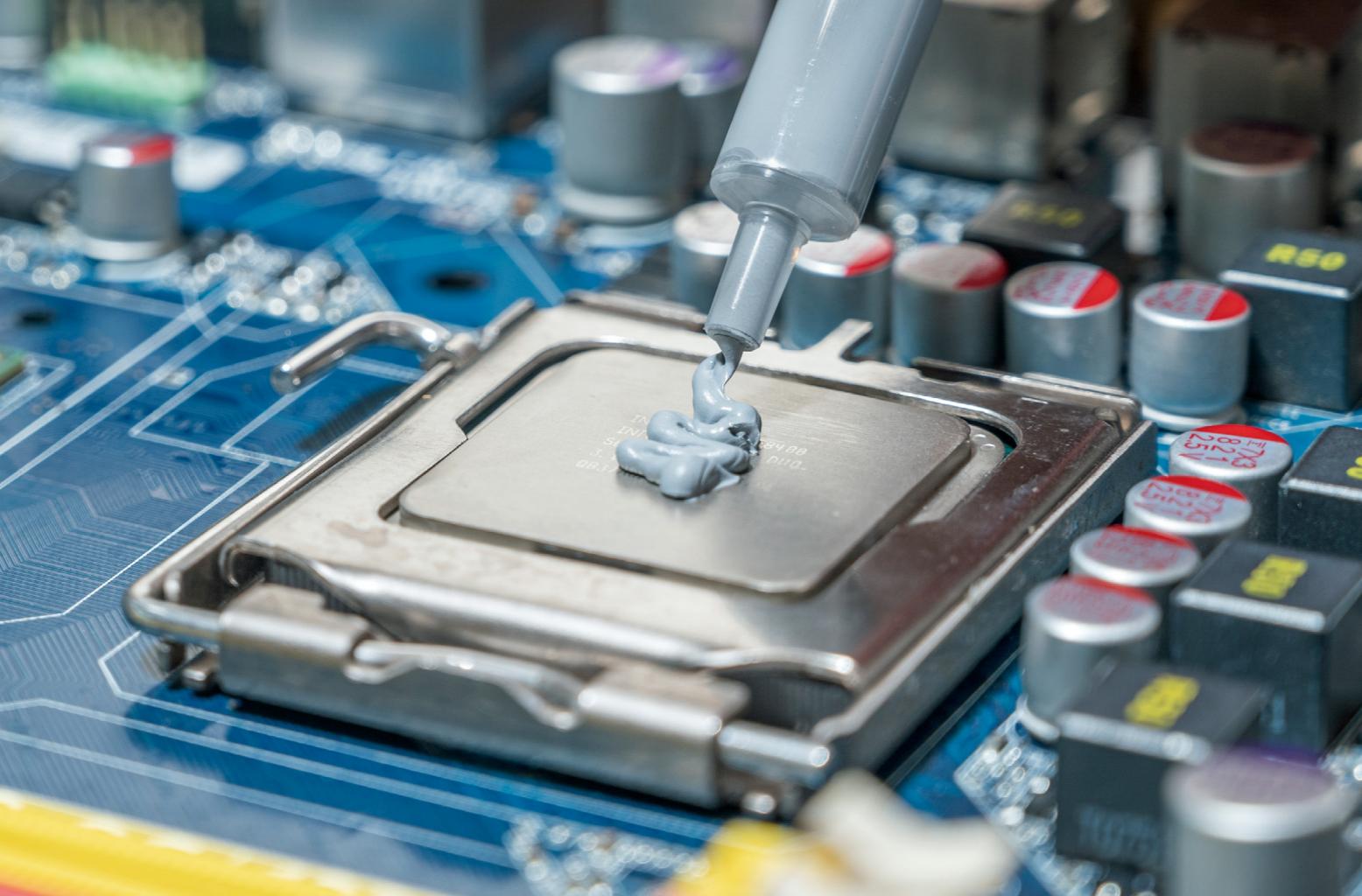
Encapsulants



Gap Filler



Gap Pad



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

NO	Thermal Conductivity (W/mK) - ASTM D7984	Density(g/ml) - ASTM D1475	Shelf Life	Operating Temp (°C)	Viscosity (cps) - 1rpm	BLT (μm)	Evaporation Loss - 120 °C, 24h	Oil Separation - 120 °C, 24h
1	1.0	1.7	1 years	-40 ~ 150	270,000	20	< 0.1%	< 0.5%
2	3.3	2.9	1 years	-40 ~ 200	130,000	20	< 0.1%	< 0.5%
3	4.6	3.2	1 years	-40 ~ 200	320,000	20	< 0.1%	< 0.5%
4	5.2	3.2	1 years	-40 ~ 200	200,000	60	< 0.1%	< 0.5%
5	8.0	3.4	1 years	-40 ~ 200	450,000	90	< 0.1%	< 0.5%

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



Encapsulants

Features

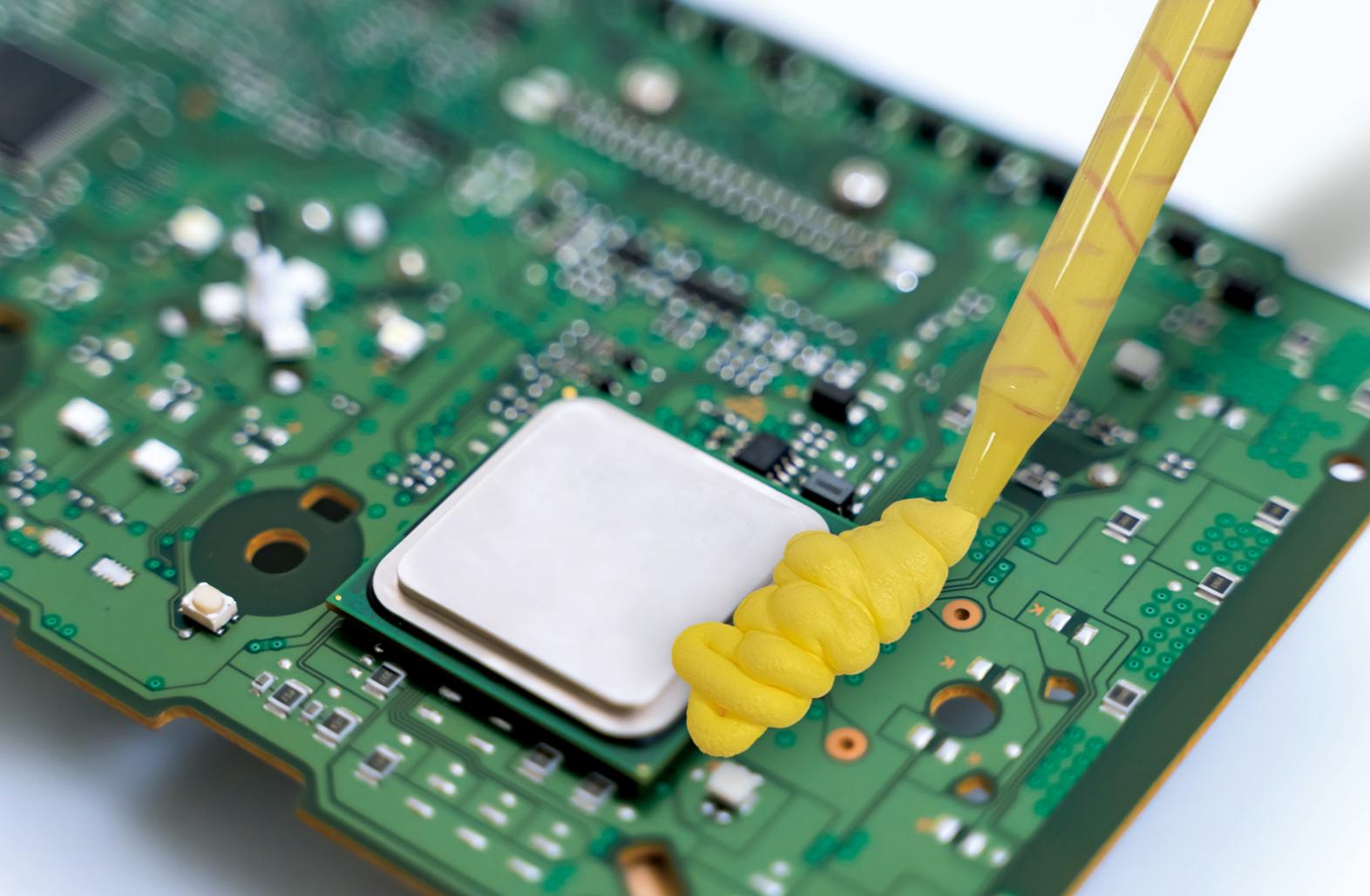
- Easy to use as a flowable product
- High permeability for narrow-gap operations
- Low viscosity applicable to a wide range of heating sites
- Heat dissipation through dust protection, moisture protection and fixation

OM Series

NO	Thermal Conductivity (W/mK) - ASTM D7984	Hardness - Shore A	Density(g/ml) - ASTM D792	Flame Rating - UL94	Operating Temp (°C)	Viscosity (cps) - 100rpm	Cure Condition (hours) - 25°C	Type
1	0.6	60	1.6	V-0	-40 ~ 200	1,000	4	Two-part
2	0.7	30	1.7	V-0	-40 ~ 200	1,500	1.5	Two-part
3	1.2	30	1.7	V-0	-40 ~ 150	3,000	3	Two-part
4	2.0	60	2.6	V-0	-40 ~ 200	3,000	1	Two-part
5	3.0	45	2.75	V-0	-40 ~ 200	6,500	1	Two-part

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





Gap Filler

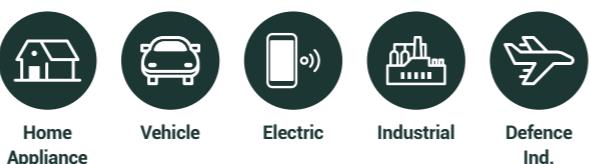
Features

- When applied to the structure and surface of various devices in liquid form, it is more advantageous than 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 pad, so it has impact mitigation effect

OF Series

NO	Thermal Conductivity (W/mK) - ASTM D7984	Hardness - Shore 00	Density(g/ml) - ASTM D792	Flame Rating	Operating Temp (°C)	Viscosity (cps) - 1rpm	Cure Condition (hours) - 25°C	Type
1	2.6	40	1.9	V-0	-40 ~ 150	310,000	1	Two-part
2	3.1	40	1.96	V-0	-40 ~ 150	220,000	3	Two-part
3	4.5	95	3.1	V-0	-40 ~ 200	150,000	0.5	Two-part
4	8	85	3.2	V-0	-40 ~ 200	270,000	2	Two-part
5	10	85	3.3	V-0	-40 ~ 200	500,000	2	Two-part
6	1.8	80	2.31	V-0	-40 ~ 200	950,000	6	One-part
7	2.9	85	2.86	V-0	-40 ~ 200	220,000	4	One-part

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



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

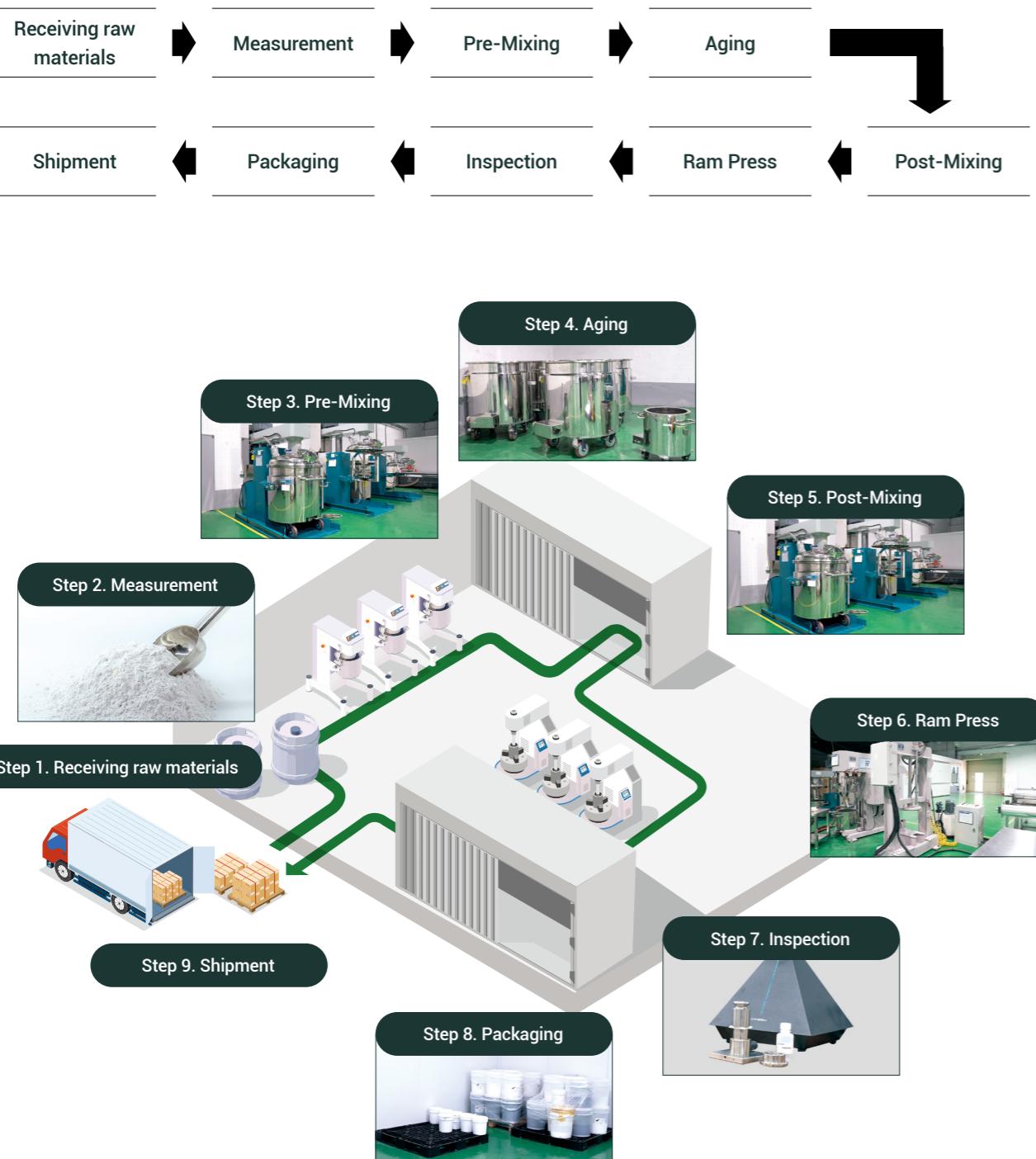
OP Series

NO	Thermal Conductivity (W/mk) - ASTM D7984	Hardness - Shore 00	Density(g/ml) - ASTM D792	Flame Rating - UL94	Operating Temp (°C)
1	1.8	(shore A)60	2.8	V-0	-40 ~ 200
2	2.2	30	1.9	V-0	-40 ~ 150
3	3.5	80	2.2	V-0	-40 ~ 150
4	4.0	70	3.0	V-0	-40 ~ 200
5	7.0	70	3.1	V-0	-40 ~ 200

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



Production Process

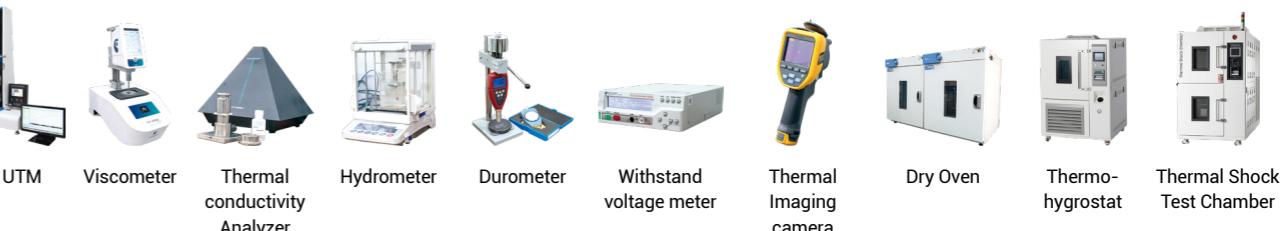


Production facilities and inspection equipment

Production facilities



Inspection equipment



Patent and Certification status



OCS**materials**