400℃ HEAT RESISTANT

PTFE MICROPOWDER

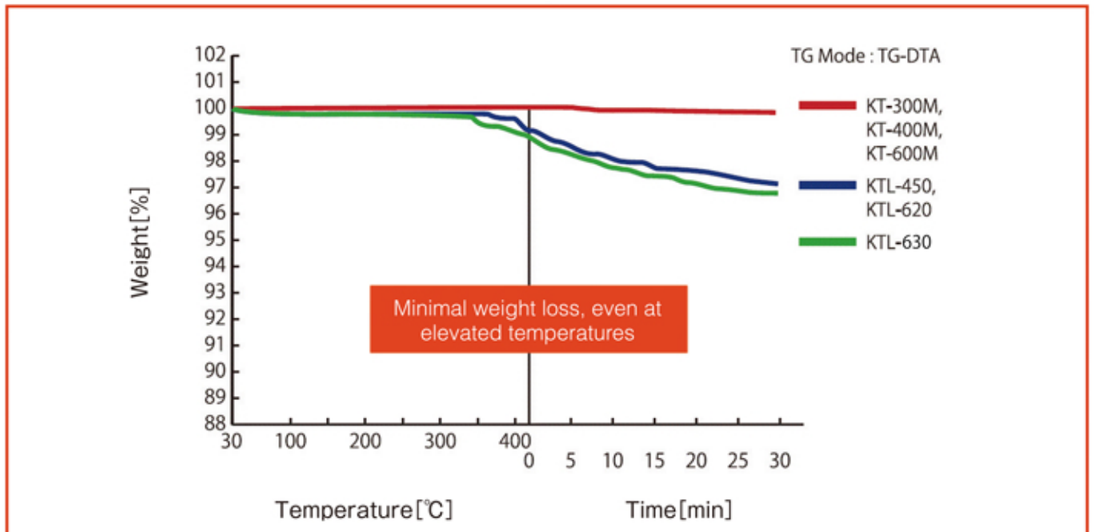
KT/KTL SERIES

400°C HEAT RESISTANT PTFE MICROPOWDER

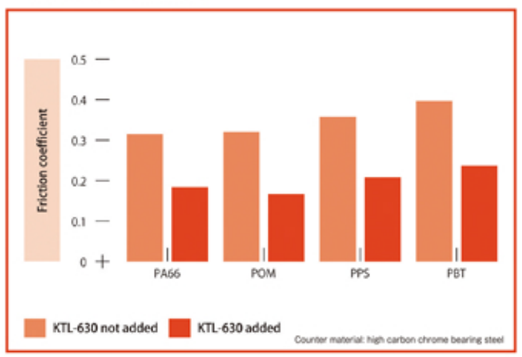
The KT/KTL series are PTFE（polytetrafluoroethylene）micropowders which provide low-friction and wear-resistance.

The KT/KTL series drastically reduce the friction coefficient and wear, and improve the PV value when added to thermoplastics and thermosetting plastics, rubbers, elastomers. Also the KT/KTL series can add performances such as stain-resistance, non-stick, water/oil repellency.
The KT/KTL series(especially, the high molecular weight grades of KT series) do not flow or thermally decompose at temperatures above the melting point. Therefore they can be added to every kinds of plastics molded over 400°C.

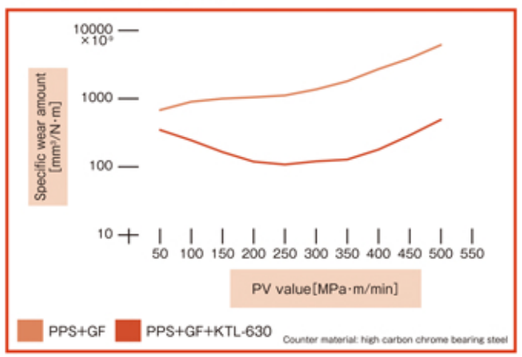
●TG-chart（increase by 10℃/min. up to 420℃, then hold at 30min)



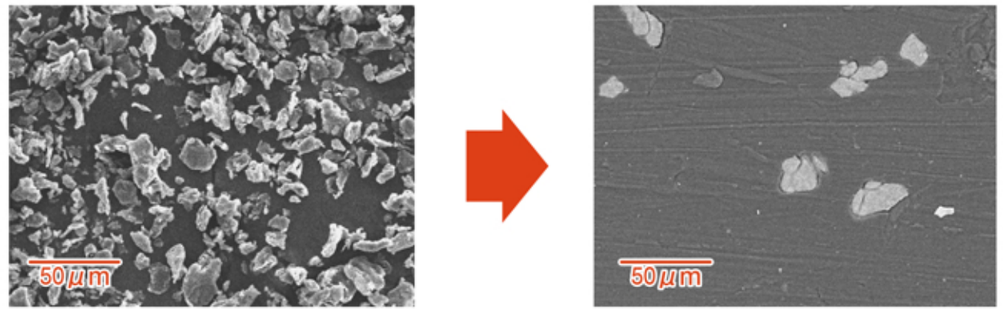
●Various plastics+KTL-630(10wt.%)
Friction coefficient



●PPS+KTL-630(10wt.%)
Specific wear amount



KT-600M in PEEK

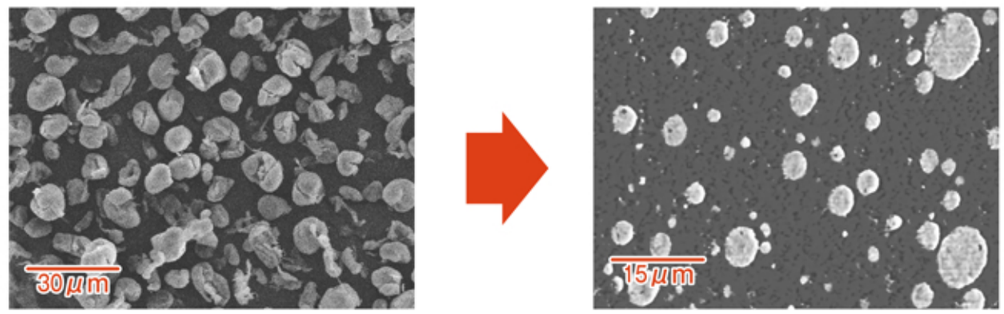


KT-600M　　KT-600M in PEEK

MAX. particle size 74.00μm or less
D50（median diameter） 14.00±2.00μm

Twin Screw Extruder		Injection Molding
Temperature	370°C	Nozzle 380°C, Front 370°C, Middle 370°C
Screw speed	100rpm	Rear 360°C, Mold 180°C

KTL-630 in PA6T

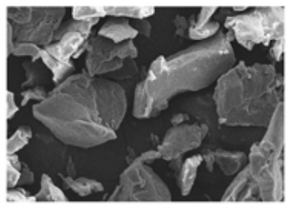
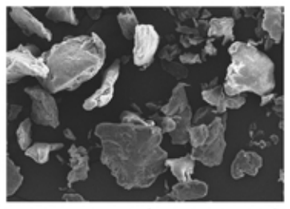
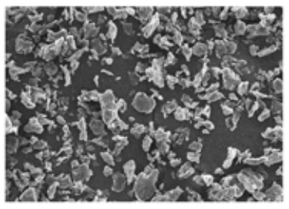
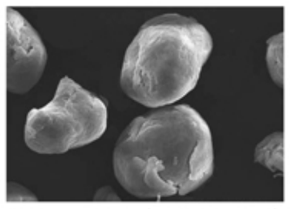
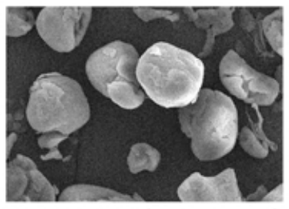
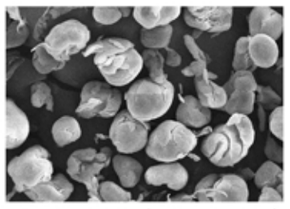
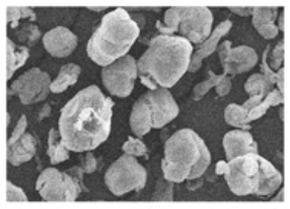


KTL-630　　KTL-630 in PA6T

MAX. particle size 62.23μm or less
D50（median diameter） 12.00±3.00μm

Twin Screw Extruder		Injection Molding
Temperature	330°C	Nozzle 320°C, Front 330°C, Middle 330°C
Screw speed	85rpm	Rear 320°C, Mold 150°C

KT / KTL Series for Plastic Compounding

	KT-300M	KT-400M	KT-600M	KTL-450A	KTL-450	KTL-620	KTL-630
MAX. particle size	148.00μm on 1% or less	104.65μm on 1% or less	74.00μm or less	88.00μm or less	88.00μm or less	62.23μm or less	62.23μm or less
D50(median diameter)	40.00±5.00μm	33.00±5.00μm	14.00±2.00μm	17.50±1.50μm	22.00±5.00μm	11.50±3.50μm	12.00±3.00μm
Melting point(DSC)	325～335℃	325～335℃	325～335℃	325～335℃	325～330℃	325～330℃	325～330℃
Max. processing temperature	450℃	450℃	450℃	430℃	410℃	410℃	370℃
Volatile loss(150°C/2h)	0.05wt.% or less	0.05wt.% or less	0.05wt.% or less	0.10wt.% or less	0. 05wt.% or less	0.05wt.% or less	0.10wt.% or less
Apparent density	0.65±0.10g/ml	0.65±0.10g/ml	0.40g/ml or more	0.73±0.18g/ml	0.75±0.20g/ml	0.68±0.13g/ml	0.68±0.18g/ml
Specific gravity	2.1～2.2	2.1～2.2	2.1～2.2	2.1～2.2	2.1～2.2	2.1～2.2	2.1～2.2
Appearance	White powder	White powder	White powder	White powder	White powder	White powder	White powder
Whiteness level	95.00 or more	95.00 or more	96.00 or more	96.00 or more	95.00 or more	97.00 or more	98.00 or more
Regulation(EU) 2019/1021	✓	✓	✓	✓	✓	✓	✓
SEM	 100μm	 100μm	 100μm	 30μm	 30μm	 30μm	 30μm

- Fine powder of completely sintered the highest-molecular-weight and the highest heat-resistant PTFE.
- No PFOA and other PFCAs as byproducts since no molecular weight adjustment by ionization irradiation.
- Not thermally decomposed at 420°C, also the best for POM which is not good at acidic gas.
- Does not flow at temperatures at and over the melting point, retaining uniform dispersion at high temperatures.

- Fine powder of completely sintered high-molecular-weight PTFE.
- All grades are compliment with PFOA regulations.
- Excellent flow and dispersion characteristics. Can be fed into kneaders directly by side feeding.
- Minute mass or shape change around the melting point, contributing to high stability in mold strength and size.

Applications

Recommended grades	Applications
KT series	Every kinds of thermoplastics and thermosetting plastics (including POM), Rubbers, Elastomers
KTL-450A, KTL-450, KTL-620	Plastics (processing temperature : over 350°C), Rubbers, Elastomers (PEEK, Aromatic PA, PES, Thermoplastic PI, PEI, PAI etc.)
KTL-630	Plastics (processing temperature : less 350°C), Rubbers, Elastomers (PPS, PA, PBT, PC, General plastics etc.)

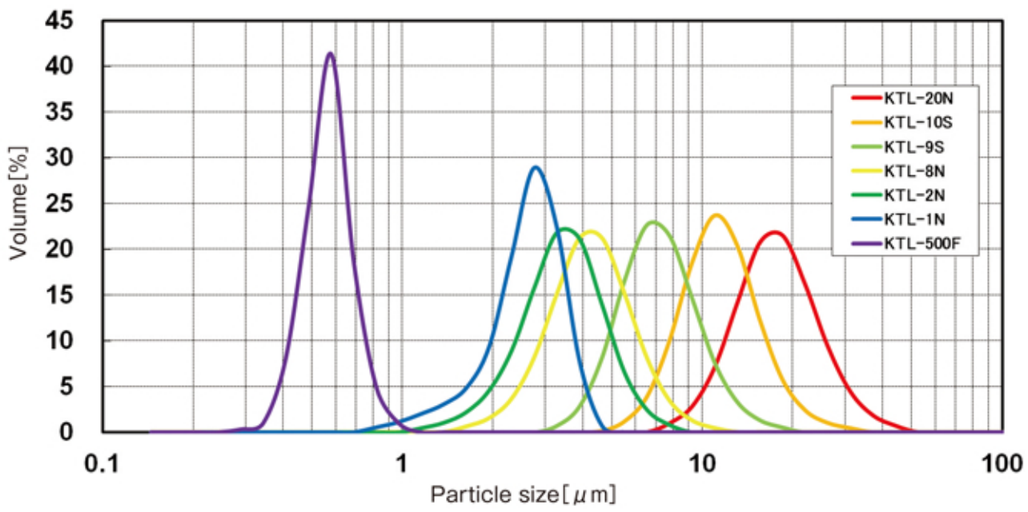
(Note) The data in this catalog are standard values and are not guaranteed.
Our products are for industrial use only.
We do not sell for medical and food contact applications.

THE BEST DIPERSIBILITY PTFE MICROPOWDER

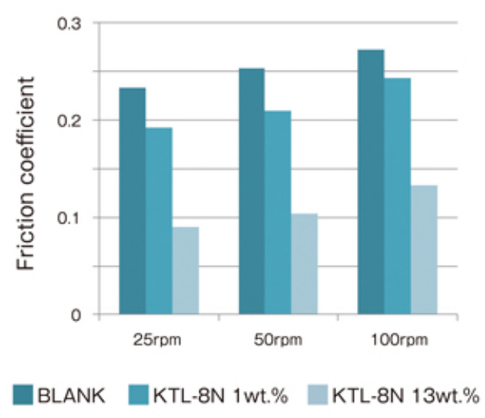
The KT/KTL series are PTFE（polytetrafluoroethylene）micropowders which provide low-friction and wear-resistance.

The KT/KTL series can be used widely, with a range of coating thickness(1～100μm), and coatings (glossy or mat), printing inks. Since particle size distributions of our products are narrow, they excel in dispersibility, and can also be used for the clear top coat.

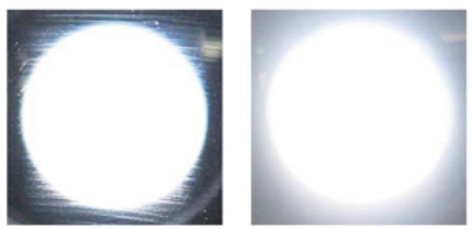
●Particle size distribution of KTL series



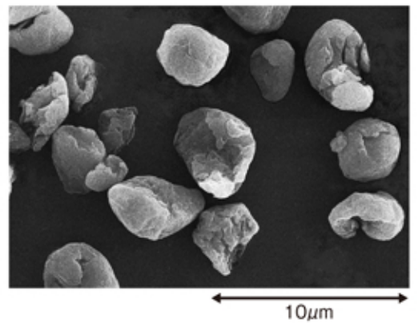
●Friction coefficient

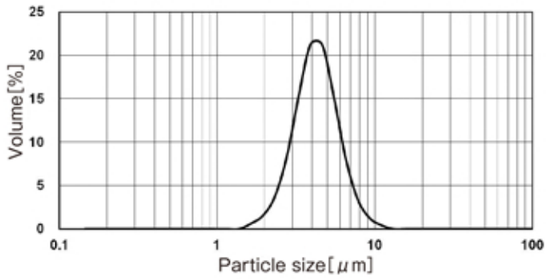


●Scratch resistance

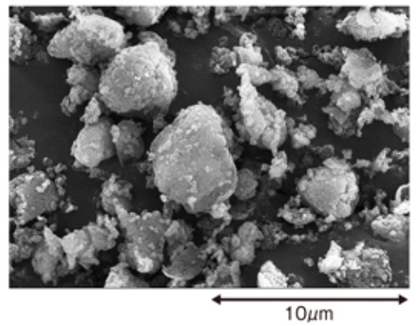


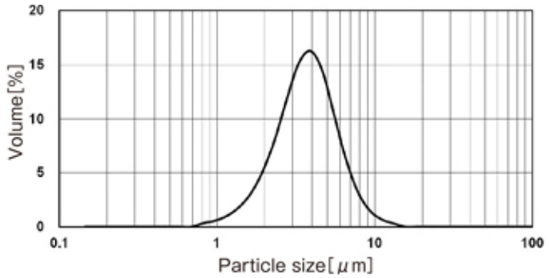
KTL-8N



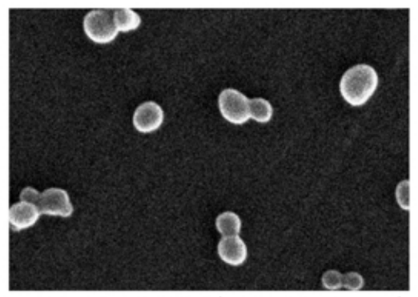


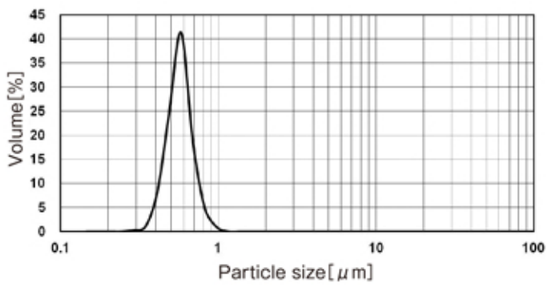
KTL-8F



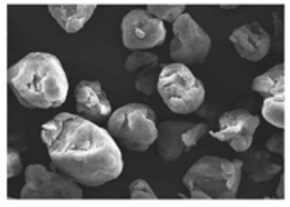
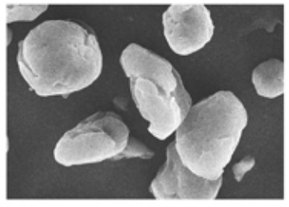
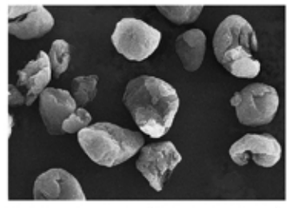
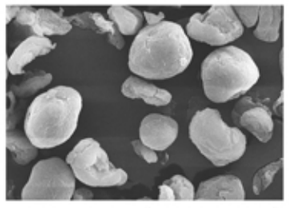
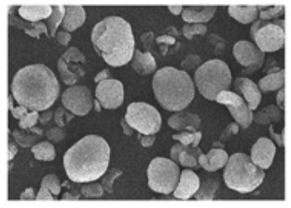
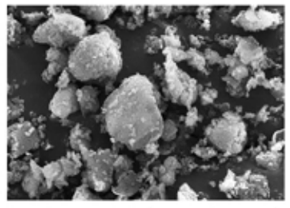
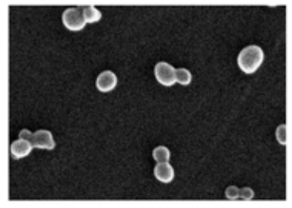


KTL-500F





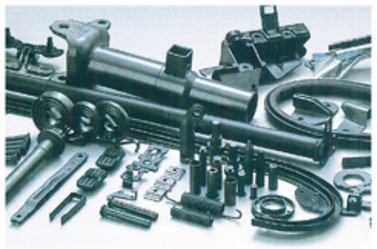
KTL series for Coatings, Printing inks

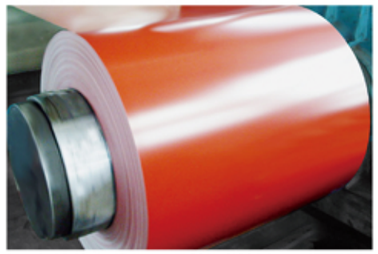
	KTL-10S	KTL-9S	KTL-8N	KTL-4N	KTL-2N	KTL-8F	KTL-500F
MAX. particle size	37.00μm or less	18.50μm or less	15.56μm or less	11.00μm or less	7.78μm or less	15.56μm or less	1.00μm or less
D50(median diameter)	10.00±2.00μm	6.20±1.00μm	4.00±1.00μm	3.00±1.00μm	3.00±1.00μm	3.50±1.00μm	–
Melting point(DSC)	315～325℃	315～325℃	310～320℃	310～320℃	310～320℃	310～320℃	315～325℃
Max. processing temperature	320℃	300℃	250℃	250℃	250℃	250℃	400℃
Volatile loss(150°C/2h)	0.10wt.% or less	0.10wt.% or less	0.10wt.% or less	0.30wt.% or less	0.20wt.% or less	0.10wt.% or less	0.10wt.% or less
Apparent density	0.50g/ml or more	0.55±0.10g/ml	0.55±0.10g/ml	0.55±0.10g/ml	0.50±0.10g/ml	0.40±0.10g/ml	0.20g/ml or more
Specific gravity	2.1～2.2	2.1～2.2	2.1～2.2	2.1～2.2	2.1～2.2	2.1～2.2	2.1～2.2
Appearance	White powder	White powder	White powder	White powder	White powder	White powder	White powder
Whiteness level	97.00 or more	97.00 or more	97.00 or more	95.00 or more	97.00 or more	97.00 or more	98.00 or more
Similar grades	KTL-10N、20N	KTL-9N、9A	–	–	KTL-1N	KTL-8FH	–
SEM	 30μm	 10μm	 10μm	 10μm	 10μm	 10μm	 1μm

- Fine powder of completely sintered PTFE.
- Nearly spherical with edges rounded off. Hard grain(hard to crush). The best for scratch-resistance.
- Easy dispersibility for solvents and varnishes with light stirring.
- High-density(50wt.%) blending is possible.

- Coagulated powder of unsintered PTFE. Can be made smaller with hard dispersion.
- Relatively large specific surface area and oil absorption, making it difficult to deposit when dispersed in liquids.
- Such unsintered PTFE features as viscosity and fibrillation are suppressed for easy handling.

Applications





Applications	Performance obtained
Paints,Coatings	Low-friction, Wear-resistance, Anti-scratch, Non-stick, Sound muffling, Water/oil repellency
Printing inks	Anti-scratch , Anti-blocking, Set-off prevention
Oils and Greases	Thickener, Solid lubricant
Others	Car wax(stain-resistance), Solid lubricant(low-friction)

DFT	Recommended grades
less 10μm	KTL-2N, KTL-1N, KTL-500F
10μm～30μm	KTL-10S, KTL-9S, KTL-8N, KTL-8F
over 30μm	KTL-20N, KTL-10S

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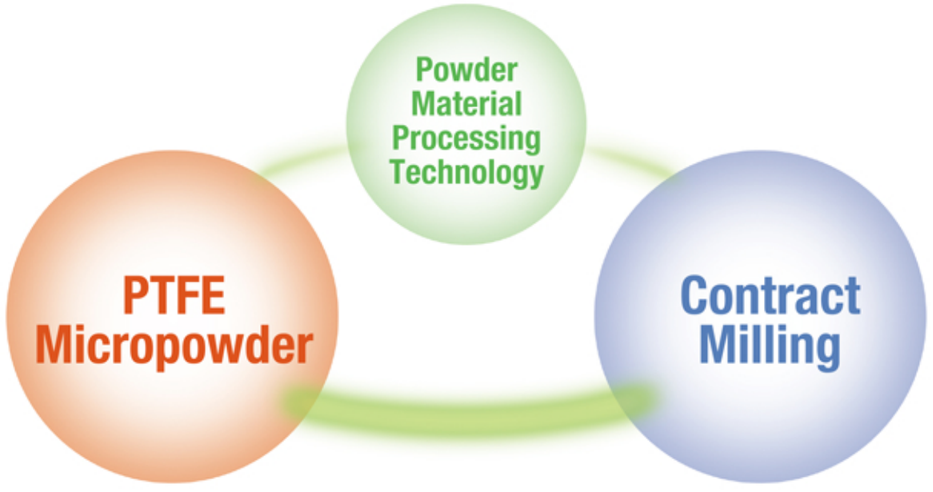
Striving to be a Trusted Company

KITAMURA LIMITED is a technology company with advanced powder processing capability. However, it is not just our technology that has enabled our company to grow over the last 46 years, it is also our strong customer focus and hard work.

At Kitamura, the course of action that is most important is that we try all possible means to meet our customers' needs. We do not accept "no" for an answer, and often work in cross-functional teams, even involving Senior Management, to provide a satisfactory solution for our customers. I always ask our people if they have used all efforts possible when faced with a challenge, and the answer must be "yes"…that is my expectation. It is this attitude that has resulted in satisfied customers and the growth of KITAMURA LIMITED.

Masayuki Kitamura
Managing Director

Business enterprise system



The core technology of KITAMURA LIMITED is the powder material processing technology. The skills developed by each business are used in order to provide better products and services.

Company Profile

Company Name	KITAMURA LIMITED
Main Office	1-242, Shiratsuchi, Haruki, Togo-cho, Aichi-gun, Aichi Pref. 470-0162, Japan
Managing Director	Masayuki Kitamura
Incorporated	May 1, 1972
Capital	10 million yen
Settlement term	Once per year on April 30
No. of employees	176
Certifications	Permission to manufacture food additives (Furukawa Plant) ISO9001 registered offices (main office, Furukawa Plant) ISO14001 registered offices (Furukawa Plant) OHSAS18001 registered offices (Furukawa Plant)

JQA-QM4392 Main Office Furukawa Plant
JQA-EM4662 Furukawa Plant
JQA-OH0084

Company History

1952 Kitamura Shoten founded

1968 PTFE processing technology developed
Contract milling processing begun

1972 KITAMURA LIMITED incorporated
Furukawa plant opened; contract milling segment expanded
The manufacturing and sale of PTFE micropowder begun

1980 Manufacturing and sale of supplementary feed containing natto begun

1985 Furukawa Plant #2 (currently the Raw Materials Department) opened

1987 Permission to manufacture food additives obtained

1991 Business cooperation with the Toho-Reinetsu Co., Ltd. Cryogenic Pulverization Center

1993 Start of manufacturing and sale of PTFE Dispersion (KD series)

2000 Acquisition of ISO9002 certification (for the entire company)

2002 Shifted to ISO9001 : 2000

2003 Suspension of manufacturing and sale of supplement feed

2005 Concurrent acquision of ISO14001, OHSAS18001 certification (Furukawa Plant)

2006 Masayuki Kitamura became the Managing Director
Completion of plant #2 including three clean rooms in the main office plant
Completion of a new warehouse equipped air-conditioning in the Furukawa plant

2011 Completion of a new warehouse near the Furukawa plant

2012 Solar power business started

2015 Acqisition of the Value Prize from the Association of Company Value

2016 The manufacturing building for food additives renovated

Location

●Furukawa Plant
280, Unehata, Furukawa-cho,
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400°C HEAT RESISTANT PTFE MICROPOWDER

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