MATERIAL SAFETY DATA SHEET

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Identification of the manufacturer, or other undertaking

Manufacturer's Name: KITAMURA LIMITED

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1. PRODUCT IDENTIFICATION

Product name: Polytetrafluoroethylene Solid Powder Lubricant
KTL-20N, KTL-10N, KTL-8N, KTL-8F, KTL-8, KTL-4N, KTL-2N

Chemical name: Polytetrafluoroethylene (P.T.F.E.) 100%

CAS No.: 9002-84-0

EINECS: Listed

TSCA: Listed

Molecular formula: (-CF2-CF2-)n

2. POSITION/INFORMATION ON INGREDIENTS

Hazardous ingredients: 0 %

3. HAZARDS IDENTIFICATION

3.1 Emergency overview

Not toxic. May be irritant if inhaled. Almost all decomposition products from P.T.F.E. are toxic.

3.2 Potential health hazards

Inhaled:

Inert powder but like any powder may irritant inhaled. UK Occupational Exposure Standards for dusts are 10 mg/M3 (8 hours TWA) total inhalable dust and 5 mg/M3 (8 hours TWA) as respirable dust. When thermally decomposed by heating above 280°C, or by smoking tobacco or cigarettes contaminated with polymer dust, may cause polymer fume fever. Symptoms are flu-like, with chills and fever, which may not occur until several hours after exposure and pass off within 36-48 hours, even in absence of treatment.

In contact with skin: Not toxic

In contact with eyes: May cause physical irritation.

Ingested: Not toxic

4. FIRST AID MEASURES

Inhalation (Inhalation of fumes):

Move to fresh air, rest and keep warm. Consult a physician if symptoms persist.

Skin contact: Wash skin with soap and water.

Eye contact: Wash with water.

Ingestion: Give water to drink.

5. FIRE-FIGHTING MEASURES

Suitable extinguishing media:

All extinguishing agents suitable. (Water, Carbon dioxide, Foam, Dry chemical)

Unusual fire and explosion hazards:

Highly toxic fumes may be emitted. (Hydrogen fluoride (HF), Carbonyl fluoride, Carbon monoxide, Low molecular weight Fluorocarbons)

Special fire fighting precaution/instructions:

All personnel engaged in fire fighting must have self-contained breathing apparatus not respirators.

6. ACCIDENTAL RELEASE MEASURES

In case of spill or other release: Sweep up or vacuum.

7. HANDLING AND STORAGE

7.1 Handling

General:

Contamination of smoking materials by P.T.F.E. must be avoided as this can lead to "Polymer Fume Fever.

Ventilation:

Because decomposition starts at temperatures above about 250°C all heated processing equipment must be vented to atmosphere outside the building.

7.2 Storage

No special precautions. Avoid contamination. Keep containers closed.

8. EXPOSURE CONTROL/PERSONAL PROTECTION

8.1 Engineering controls

Use general or local exhaust ventilation to meet the exposure requirement.

8.2 Personal protective equipment

Respiratory protection: Dust mask to avoid irritation in dusty situations

Skin protection: Wear rubber or polyethylene gloves.

Eye protection: Goggles if necessary because of dust.

Additional recommendations: Avoid contamination of cigarettes or tobacco with polymer dust.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance and Odor:	Powder Odorless or light acid odor
Boiling point:	N/A
Melting point:	310°C or more
Flash point(method):	Does not flash (Open cup)
Autoflammability:	N/A
Ignition temperature:	If heated in air in the absence of a flame, it will start to burn at about 575°C.
Oxidizing properties:	Non-oxidizing
Explosive limits:	N/A (lower) ---- (upper) ----
Vapor pressure(20°C)	N/A
Solubility(20°C)in water:	Does not soluble
pH value(20°C)	N/A
Viscosity(20°C)	N/A

10. STABILITY AND REACTIVITY

Stability: Stable at temperatures up to 250°C.

Incompatibility:

Extremely inert. Reacts with molten alkali metals and finely divided magnesium and aluminum at temperatures above 425°C.

Hazardous decomposition products:

Hydrogen fluoride (HF), Carbonyl fluoride, Carbon monoxide, and Low molecular weight Fluorocarbons.

11. TOXICOLOGICAL INFORMATION

Acute toxicity

Oral LD50:	N/D
Primary skin irritation:	not irritant
Primary eye irritation:	physical irritation
Genetic studies:	N/D
Repeated dose oral toxicity:	N/D
Carcinogenic classification:	IARC GROUP3

12. ECOLOGICAL INFORMATIO

Biodegradability:	N/D	
Bioaccumulation:	N/D	
Other information:	BOD: N/A	COD: N/A

13. DISPOSAL CONSIDERATION

Waste disposal:

Dump in accordance with local regulations.

With incineration, acidic gaseous product must be removed by alkaline scrubbing.

14. TRANSPORT INFORMATION

Specific hazards:

No foreseeable hazard in product transportation.

Packaging information:

Product usually shipped in fiber drum with polyethylene inside bags.

International Transport Classification

Danger Class:	none
UN No. :	not assigned
Packaging group:	not assigned
Road Transportation (ADR):	not classified
Rail Transportation (RID/RMP):	not classified
Sea Transportation (IMDG/IMO):	not classified
Air Transportation (ICAO/IATA):	not classified

15. REGULATORY INFORMATION

EEC Directive 67/548 and following amendments

Classification type: none

Labeling information

Trade name: Polytetrafluoroethylene Solid Powder Lubricant
KTL-20N, KTL-10N, KTL-8N, KTL-8, KTL-8F, KTL-4N, KTL-2N

Classification:	not required
Hazard symbol:	not required
Risk phrases:	not required
Safety phrases:	not required

European regulation for protection of man and environment DPR 303/56
(General regulation for safety and hygiene in work places) not cited.

16. OTHER INFORMATION

N/D:	no data
N/A:	not applicable
N/E:	not established

Safety Data Sheet according to EEC Directive 91/155

The information given in this safety data sheet is for safety purpose only. It is given in good faith and based on the best knowledge and experience of the company at the date of issuing. The company is not responsible for damages caused by the use of the product in applications for which it was not intended or for conditions of use of its control.