

SECTION 1 IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND OF THE COMPANY/UNDERTAKING

Product Name: LOGENEST LAMBDA NFL-551
Product Code: None
Company Name: NIPPON KOYU LTD.
Address: No.385-14 SHIINOMORI SODEGAURA CHIBA 299-0247 JAPAN
Telephone Number: +81-0438-60-2180
Use of the product: Lubricating solution.

SECTION 2 HAZARDS IDENTIFICATION

EU Classification: Not classified as dangerous.

Emergency Overview: Light milky-white, liquid, bland odor. Thermal decomposition may produce toxic products including perfluoroisobutylene and hydrogen fluoride.

Potential Health Effects and Symptoms:

Inhalation: If thermal decomposition occurs : May be harmful if inhaled.
Ingestion: Emesis(Vomit),or diarrhea.
Eye: Irritation
Skin: Not identified
Chronic Effects: Not known

Medical Conditions Generally known to be Aggravated by Exposure: Not known

SECTION 3 COMPOSITION/INFORMATION ON INGREDIENTS**Ingredient(s):**

Chemical Name /Generic Name	CAS#	EC#	Wt%	EU symbol	EU R-Phrase	USA OSHA PEL	ACGIH TLV	EU ILV	DFG MAK
Solvent (Hydro Fluoro Ether)	Confidential	Confidential	>90	None	None	Not established	Not established	Not established	Not established
Perfluorinated polyethers base oil	Confidential	Confidential	<5	None	None	Not established	Not established	Not established	Not established
Poly tetra fluoro ethylene thickener	Confidential	Confidential	<1	None	None	Not established	Not established	Not established	Not established
Additive	Confidential	Confidential	<0.1	None	None	Not established	Not established	Not established	Not established

Carcinogen:

Chemical Name: None	CAS#:	Reference:
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No human carcinogen or potential carcinogen according to IARC Monographs, U.S. NTP, U.S. OSHA Regulation, and Annex I of Directive 67/548/EEC.

PBT substance and vPvB substance:

Chemical Name: None	CAS#:	Category:
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No component of this product is a PBT or vPvB substance under Regulation (EC)1907/2006.

SECTION 4 FIRST AID MEASURES**First Aid Measures:**

Inhalation:	Remove exposed person to fresh air if adverse effects are observed. If irritation persists, get medical attention.
Ingestion:	If signs/symptoms persist, get medical attention.
Eye:	Flash thoroughly with water. Get immediate medical attention.
Skin:	Wash with soap and water. If irritation persists, get medical attention.
Note to Physicians:	Exposures resulting from intentional misuse and abuse may cause an increase in myocardial irritability. Do not administer sympathomimetic drugs unless absolutely necessary.

SECTION 5 FIRE FIGHTING MEASURES**Fire Fighting Measures:**

Extinguishing Media:	Material will not burn.
Unsuitable Extinguishing Media:	Not applicable.
Special Fire Fighting Procedures:	Exposure to extreme heat can give rise to thermal decomposition. Self-contained breathing apparatus and protective clothing if involved in a fire of other materials.
Unusual Fire and Explosion Hazards:	No unusual fire or explosion hazards are anticipated. No unusual effects are anticipated during fire extinguishing operations. Avoid breathing the products and substances that may result from the thermal decomposition of the product or the other substances in the fire zone. Keep containers cool with water spray when exposed to fire to avoid rupture.

Fire and Explosive Properties (See also Section 9):

Hazardous Combustion Products:	CO, CO ₂ , HF, COF ₂ , PFIB (Perfluoroisobutylene)
Other Properties:	None

SECTION 6 ACCIDENTAL RELEASE MEASURES

Personal Precautions:	Stop the source of the leak or release. Eliminate all ignition sources.
Environmental Precautions:	Do not wash away into sewer, and do not let this chemical enter the environment.
Method for Cleaning Up:	Sweep material and place in a disposal container.

SECTION 7 HANDLING AND STORAGE

Handling: Do not handle or store near open flame. Avoid heating above 150°C. Keep container closed.

Storage: Store in a cool and dry place. Keep container in a well-ventilated area. Storage away from bases.

Specific Lubricating grease

Uses:

SECTION 8 EXPOSURE CONTROLS / PERSONAL PROTECTION

Exposure Guidelines: Only threshold limits (ACGIH 2005) of by-products from thermal decomposition are applicable.

TLV/TWA(HF):2.6 mg/m³ TLV/TWA(COF₂):5.4 mg/m³ TLV/STEL(Ceiling) 0.01ppm (PFIB)

Engineering Controls: Not required

Personal Protection Equipment(s):

Respiratory Protection: Required Not Required Not required under normal conditions of use.

Eye/Face Protection: Required Not Required Wear safety glasses.

Skin Protection: Required Not Required To prevent any contact, wear impervious clothing such as gloves, apron.

SECTION 9 PHYSICAL AND CHEMICAL PROPERTIES

Appearance: Light milky-white, liquid

Odor: Bland odor

pH: Not applicable

Boiling Point/Range(°C): 61 (Solvent)

Melting Point/Range(°C): -135 (Solvent)

Decomposition Temperature(°C): Not applicable

Flash Point(°C): Not applicable

Flammable (Explosive) Limits: No data available

Autoignition Temperature(°C): No data available

Flammability: No data available

Explosive Properties: No data available

Oxidizing Properties: Not applicable

Vapor Pressure: 0.028 MPa [25°C] (Solvent)

Vapor Density: c.a. 8.6 [Ref Std. AIR=1] (Solvent)

Density/Specific Gravity: c.a. 1.52 (25°C)

Water Solubility: Negligible

Fat Solubility: No data available

Partition Coefficient (n-Octanol/Water): No data available

Percent Volatile(%): No data available

Evaporation Rate: No data available

Viscosity(m Pa s): No data available

SECTION 10 STABILITY AND REACTIVITY

Stability: **Stable** **Unstable**

Conditions to Avoid: Avoid heating the product above 150°C. Avoid contact with flames.

Materials to Avoid: Acids. Bases. Oxidizing agents such as H₂O₂, permanganates and perchlorates.
Halogens and halogenated compounds.

Hazardous Decomposition Products: CO, CO₂, HF, COF₂, PFIB (Perfluoroisobutylene)

Products: _____

Hazardous Polymerization: **May Occur** **Will Not Occur**

Conditions to Avoid: Temperature above 150°C.

SECTION 11 TOXICOLOGICAL INFORMATION

Acute Toxicity:

Inhalation: No data available

Ingestion: No data available

Eye: No data available

Skin: No data available

Sensitization: No data available

Mutagenicity: No data available

Reproductive Toxicity: No data available

Carcinogenicity: No data available

Others: None

SECTION 12 ECOLOGICAL INFORMATION

Mobility: No data available

Persistence/Degradability: No data available

Bioaccumulation: No data available

Ecotoxicity: No data available

Other Adverse Effects: Data of solvent: Zero Ozone Depletion Potential. Global Warming Potential.(GWP): 320 (100-yr ITH, IPCC2001 method)

SECTION 13 DISPOSAL CONSIDERATION

Date of Issue: December 26, 2001 **Revised Date:** July 27, 2010

Method of Disposal: Place contaminated materials in disposable containers and dispose of in a manner consistent with applicable regulations. Contact local environmental or health authorities for approved disposal of this material.

SECTION 14 TRANSPORT INFORMATION

UN#: None

UN Shipping Name: None

UN Classification: None

UN Packing Group: None

Marine Pollutant: Yes **Chemical name (wt%)** _____
 No

Special Precautions: None

SECTION 15 REGULATORY INFORMATION

EU Information:

Information on the Label:

Symbol & Indication: Not required

R-Phrase: Not required

S-Phrase: Not required

Dangerous Component(s): None

Special Precautions under

67/548/EEC Article 8 and 13

or 1999/45/EC Annex V: Not required

Specific Provisions in Relation to Protection of Man or the Environment:

76/769/EEC: Not regulated

(EC)2037/2000: Not regulated

(EC)304/2003: Not regulated

Others: None

USA Information:

Information on the Label:

Signal Word: Not required

Hazard warning: Not required

Safety Advice: Not required

Hazardous Component(s): None

SARA TitleIII, 313:

Chemical Name: _____ **Wt%:** _____
None

California Proposition 65:**Chemical Name:****Wt%:**

None

SECTION 16 OTHER INFORMATION**Other Information:**

None

Date of Issue: December 26, 2001**Revised Date:** July 27, 2010**Literature Reference:**

- U.S. Department of Labor, 29CFR Part 1910
- U.S. Environmental Protection Agency, 40CFR Part 372
- U.S. Consumer Product Safety Commission, 16CFR Part 1500
- Safe Drinking Water and Toxic Enforcement Act of 1986
- Title III of the Superfund Amendments and Reauthorization Act of 1986
- ACGIH, Threshold Limit Values for Chemical Substances and Physical Agents and Biological Exposure Indices
- U.S. Department of Health and Human Services National Toxicology Program, Annual Report on Carcinogens
- World Health Organization International Agency for Research on Cancer, IARC Monographs on the Evaluation on the Carcinogenic Risk of Chemicals to Humans
- DFG, List of MAK and BAT Values
- EU Directive 76/769/EEC, 67/548/EEC, 88/379/EEC, 1999/45/EC and their amendments.
- EU Regulation (EC)3093/94, (EEC)2455/92 and their amendments.

Abbreviations:**EU:** European Union**OSHA PEL:** PEL (Permissible Exposure Limit) under Occupational Safety and Health Administration**ACGIH TLV:** TLV (Threshold Limit Value) under American Conference of Governmental Industrial Hygienists**EU ILV:** Indicative Limit Values for Occupational Exposure under EU Directive 91/322/EEC, 2000/39/EC and 2006/15/EC**DFG MAK:** MAK (Maximale Arbeitsplatz-Konzentration) under Deutsche Forschungsgemeinschaft**PBT:** Persistent, Bioaccumulative and Toxic**vPvB:** very Persistent and very Bioaccumulative