

**SECTION 1 IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND OF THE COMPANY/UNDERTAKING****Product Name:** LOGENEST LAMBDA NFL-N164C**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	>75	None	None	Not established	Not established	Not established	Not established
Perfluorinated polyethers base oil	Confidential	Confidential	<15	None	None	Not established	Not established	Not established	Not established
Poly tetra fluoro ethylene thickener	Confidential	Confidential	<10	None	None	Not established	Not established	Not established	Not established
Additive	Confidential	Confidential	<1	None	None	Not established	Not established	Not established	Not established

**Carcinogen:**

**Chemical Name:** None                      **CAS#:**                      **Reference:**  
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:**  
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<sub>2</sub>, HF, COF<sub>2</sub>, 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/m<sup>3</sup> TLV/TWA(COF<sub>2</sub>):5.4 mg/m<sup>3</sup> 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

**Date of Issue:** August 2, 2010 **Revised Date:** Not applicable

**Evaporation Rate:** No data available

**Viscosity(m Pa s):** No data available

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**SECTION 10 STABILITY AND REACTIVITY**

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**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 H<sub>2</sub>O<sub>2</sub>, permanganates and perchlorates.  
Halogens and halogenated compounds.

**Hazardous Decomposition Products:** CO, CO<sub>2</sub>, HF, COF<sub>2</sub>, PFIB (Perfluoroisobutylene)

**Products:**

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

**Conditions to Avoid:** Temperature above 150°C.

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**SECTION 11 TOXICOLOGICAL INFORMATION**

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**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

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**SECTION 12 ECOLOGICAL INFORMATION**

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**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)

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**SECTION 13 DISPOSAL CONSIDERATION**

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**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.

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**SECTION 14 TRANSPORT INFORMATION**

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**UN#:** None

**UN Shipping Name:** None

**UN Classification:** None

**UN Packing Group:** None

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

**Special Precautions:** None

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**SECTION 15 REGULATORY INFORMATION**

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**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

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**USA Information:****Information on the Label:**

**Signal Word:** Not required

**Hazard warning:** Not required

**Safety Advice:** Not required

**Hazardous Component(s):** None

**SARA Title III, 313:**

**Chemical Name:** \_\_\_\_\_ **Wt%:** \_\_\_\_\_

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None

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

None

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**SECTION 16 OTHER INFORMATION**

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**Other Information:**

None

**Date of Issue:** August 2, 2010**Revised Date:** Not applicable**Literature Reference:**

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- 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.
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**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

**Date of Issue:** August 2, 2010    **Revised Date:** Not applicable