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

Product Name: LOGENEST LAMBDA RAN-12

Product Code: None

Company Name: NIPPON KOYU LTD.

Address: No385-14 SHIINOMORI SODEGAURA CHIBA 299-0247 JAPAN

Telephone Number: +81-438-60-2180

Use of the product: Lubricating grease

SECTION 2 HAZARDS IDENTIFICATION

EU Classification: Not classified as dangerous.

Emergency Overview: Smooth, white, semi-solid, odorless

Potential Health Effects and Symptoms:

Inhalation: Not identified

Ingestion: Accidental ingestion of the material may be damaging to the health of the individual.

Emesis (Vomit), or diarrhea.

Eye: Not identified

Skin: The material may cause mild inflammation of the skin either following direct contact or after a delay of

some time.

Chronic Effects: Not known

Medical Conditions Generally known to be Aggravated by Exposure:

Oil mist or vapors from material at high temperatures may irritate respiratory passages. Inhalation of decomposition products of PTFE(above 260°C) may cause polymer fume fever, a temporary flu-like illness accompanied by fever, chills, and sometimes cough of approximately 24 hours duration.

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
Perfluorinated	Confidential	Confidential	65-75	None	None	Not established	Not established	Not	Not
polyethers bace oil								established	established
Poly tetra fluoro	Confidential	Confidential	25-35	None	None	Not established	Not established	Not	Not
ethylene thickener								established	established
Additive	Confidential	Confidential	<5	None	None	Not established	Not established	Not	Not
								established	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 to

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, obtain medical attention.

Ingestion: If irritation persists, obtain medical attention.

Eye: Flush immediately with water for at least 15minutes. Obtain medical attention.

Skin: Wash with soap and water. If irritation persists, obtain medical attention.

Note to Physicians: None

SECTION 5 FIRE FIGHTING MEASURES

Fire Fighting Measures:

Extinguishing Media: Dry chemical carbon dioxide, Foam, Water fog

Unsuitable DO NOT use forcible water.

Extinguishing Media:

Special Fire Self-contained breathing apparatus and protective clothing if involved in a fire of other materials.

Fighting Procedures:

Unusual Fire and Product will emit toxic fumes at high temperatures.

Explosion Hazards:

Fire and Explosive Properties (See also Section 9):

Hazardous

Combustion Products: CO,CO₂,HF,COF₂

Other Properties: None

SECTION 6 ACCIDENTAL RELEASE MEASURES

Personal Precautions: Eliminate all ignition sources.

Environmental Precautions: Should be prevented from contaminating soil or from entering sewage and drainage systems and

bodies of water.

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 in high temperature (above 260°C). Keep container closed.

Storage: Store in a cool and dry place with adequate ventilation. Keep away from open flames and high temperatures.

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Page 3 of 6

Specific Lubricating	grease					
Uses:						
SECTION 8 EXPOSUR	E CONTROLS /	PERSONAL PROTE	CTION			
Exposure Guidelines: None						
Engineering Controls:	Not required					
Personal Protection Equip						
Respiratory Protection	: Required	☑ Not Required				
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	I AND CHEMIC	'AI PROPERTIES				
SECTION 7 THI SICAL	LAND CHEVIIC	ALTROLEKTIES				
Appearance:	Sm	ooth, white, semi-solid				
Odor:		Odorless				
pH:		Not applicable				
Boiling Point/Range(°C):		No data available				
Melting Point/Range(°C)	: No	No data available				
Decomposition Temperat	ture(°C): No	No data available				
Flash Point(°C):	No	Not applicable				
Flammable (Explosive) Limits:		No data available				
Auto ignition Temperatu	re(°C): No	Not applicable				
Flammability:	No	applicable				
Explosive Properties:		Not applicable				
Oxidizing Properties:		Not applicable				
Vapor Pressure:		No data available				
Vapor Density:	No	data available				
Density/Specific Gravity: Ca. 1.9 (25°C)						
Water Solubility:	Ne	gligible				
Fat Solubility:	No	data available				
Partition Coefficient (n-Octanol/Water):	No	No data available				
Percent Volatile(%):	No	Not applicable				
Evaporation Rate:	No	applicable				
Viscosity(m Pa s):		applicable				

MATERIAL SAFETY DATA SHEET No.M-3071 Page 4 of 6 SECTION 10 STABILITY AND REACTIVITY **Stability: ☑Stable ☐** Unstable Avoid heating the product above 260°C. Avoid contact with flames. **Conditions to Avoid:** Acids. Strong alkaline non aqueous compounds. Oxidizing agents such as H₂O₂, permanganates **Materials to Avoid:** and perchlorates. Halogens and halogenated compounds. **Hazardous Decomposition** CO,CO₂,HF,COF₂ **Products: Hazardous Polymerization:** ☐May Occur ☐ Will Not Occur **Conditions to Avoid:** None SECTION 11 TOXICOLOGICAL INFORMATION **Acute Toxicity: Inhalation:** Inhalation LD50 (vapor): No data available Inhalation LD50 (mist): No data available Oral LD50: >2000mg/kg (rats) **Ingestion:** Accidental ingestion of the material may be damaging to the health of the individual. Eye: No data available Skin: Dermal LD50: >2000mg/kg (rats). The material may cause mild inflammation of the skin. **Sensitization:** No data available No data available **Mutagenicity: Reproductive Toxicity:** No data available Carcinogenicity: No data available Others: None SECTION 12 ECOLOGICAL INFORMATION No data available **Mobility:** Persistence/Degradability: No data available

Persistence/Degradability: No data available
Bioaccumulation: No data available
Ecotoxicity: No data available
Other Adverse Effects: No data available

SECTION 13 DISPOSAL CONSIDERATION

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 TRANS	SPORT IN	IFORMATION			
UN#:	None				
UN Shipping Name:	None				
UN Classification:	None				
UN Packing Group:	None				
Marine Pollutant:	☐ Yes Chemical name (wt%)				
	Ø	No			
Special Precautions:	None				
SECTION 15 REGUI	ATODV	INEODMATION			
EU Information:	LATORI	INFORMATION			
Information on the I	Label:				
Symbol & Indication	on:	Not required			
R-Phrase:		Not required			
S-Phrase:		Not required			
Dangerous Compo	nent(s):	None			
Special Precautions	s under	Not required			
67/548/EEC Arti	cle 8 and 1	3			
or 1999/45/EC A	nnex V:				
Specific Provisions in	n Relation	to Protection of Man or the Environment:			
76/769/EEC:	Not regulated				
(EC)2037/2000:	Not regu	Not regulated			
(EC)304/2003:	Not regu	ılated			
Others:	None				
USA Information:					
Information on the I	Label:				
Signal Word:		Not required			
Hazard warning:		Not required			
		Not required			
Hazardous Component(s):		None			
SARA TitleIII, 313:					
Chemical Name: None		Wt%:			
California Propositio	on 65•				
Chemical Name: N		Wt%:			
Chemical Family 1	.0110	111/0.			

SECTION 16 OTHER INFORMATION

Other	Information:	None

Date of Issue: June 14, 2010

Revised Date: Not applicable

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