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

Product Name: HARMONIC GREASE SK-1A

Product Code: None

Company Name: NIPPON KOYU LTD.

Address: No22-5, 3 CHOME, NISHIROKUGO, OTA-KU, TOKYO, JAPAN

Telephone Number: +81-3-3736-2554

Use of the product: Lubricating grease

SECTION 2 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
Refined mineral base oil	Confidential	Confidential	80-90	None	None	5mg/m^3 (TWA)	5mg/m^3 (TWA)	Not established	None
Lithium soap thickener	Confidential	Confidential	5-15	None	None	Not established	Not established	Not established	None
Additives			<10	None	None	Not established	Not established	Not established	None
(Organic molybdenum.)	68412-26-0	270-180-5	<5	None	None	15 mg/m^{3}TWA (Total dust as Mo)	10 mg/m^{3}TWA		None

Carcinogen:

Chemical Name:	CAS#:	Reference:
None		

No component of this product is listed as a human carcinogen or a potential carcinogen in IARC Monographs, U.S. NTP, OSHA regulation, and Annex I to Directive 67/548/EEC.

Refined mineral base oil, by definition, is considered hazardous according to OSHA. Because it carries Threshold limit value(TLV) for mineral oil mist. Refined mineral base oil contain <3.0% DMSO extractable material.

SECTION 3 HAZARDS IDENTIFICATION

EU Classification: Not classified as dangerous.

Emergency Overview: Smooth, Yellow, Grease,Slghtly odor

Potential Health Effects and Symptoms:

Inhalation: In application where vapors (caused by high temperature) or mists (caused by mixing or spraying) are created, breathing may cause irritation of the nose and throat, headache, nausea and drowsiness.

Ingestion: May cause abdominal discomfort,nausea,or diarrhea.

Eye: May cause irritation.

Skin: May cause minimal skin irritation.

Chronic Effects: Not known

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

SECTION 4 FIRST AID MEASURES

First Aid Measures:

Inhalation: Remove exposed person to fresh air if adverse effects are observed.

Ingestion: Do not make person vomit unless directed to do so by medical personnel

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

Skin: Wash with soap and water. Get medical attention if irritation develops.

Note to Physicians: Treat symptomatically.

SECTION 5 FIRE FIGHTING MEASURES

Fire Fighting Measures:

Extinguishing Media: Use water fog ,foam, dry chemical or carbon dioxide to extinguish flames.

Unsuitable Extinguishing Media: DO NOT use forcible water.

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

Unusual Fire and Explosion Hazards: None

Fire and Explosive Properties (See also Section 9):

Hazardous Combustion Products: CO, CO_2, Oxides of sulfur

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. Contain spilled liquid with sand or earth. Vacuum or sweep up material and place in a disposal container.

SECTION 7 HANDLING AND STORAGE

Handling: Do not weld, heat or drill container. Replace cap or bung. Emptied container still contains hazardous material which may ignite with explosive violence if heated sufficiently. Minimum feasible handling temperatures should be

maintained. Periods of exposure to high temperatures should be minimized. Water contamination should be avoided.

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

Specific Uses: Lubricating grease

SECTION 8 EXPOSURE CONTROLS / PERSONAL PROTECTION

Exposure Guidelines: None

Engineering Controls: When mist is generated, the limited part is ventilated.

Personal Protection Equipment(s):

Respiratory Protection:	☑ **Required**	☐ **Not Required**	Wear a breathing mask.
Eye/Face Protection:	☑ **Required**	☐ **Not Required**	Wear safety glasses.
Skin Protection:	☑ **Required**	☐ **Not Required**	To prevent contact, wear impervious clothing such as gloves,apron.

SECTION 9 PHYSICAL AND CHEMICAL PROPERTIES

Appearance:	Smooth, Yellow, Semi-Solid
Odor:	Slightly odor
pH:	No data available
Boiling Point/Range(°C):	Not applicable
Melting Point/Range(°C):	Not applicable
Decomposition Temperature(°C):	Not applicable
Flash Point(°C):	<200 (SETA)
Flammable (Explosive) Limits:	No data available
Autoignition Temperature(°C):	No data available
Flammability:	No data available
Explosive Properties:	Not applicable
Oxidizing Properties:	Not applicable
Vapor Pressure:	No data available
Vapor Density:	No data available
Density/Specific Gravity:	Ca. 0.92
Water Solubility:	No data available
Fat Solubility:	No data available
Partition Coefficient (n-Octanol/Water):	No data available
Percent Volatile(%):	No data available
Evaporation Rate:	Not applicable

Viscosity(m Pa s): Not applicable

SECTION 10 STABILITY AND REACTIVITY

Stability: ☑ Stable ☐ Unstable

Conditions to Avoid: See SECTION 7 HANDLING AND STORAGE

Materials to Avoid: Acids. Oxidizing agents such as H_2O_2, permanganates and perrchlorates. Halogens and halogenated compounds.

Hazardous Decomposition Products: CO, CO_2 Hydrogen sulfide and sulfides may also be released.

Hazardous Polymerization: ☐ May Occur ☑ Will Not Occur

Conditions to Avoid:

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: None

SECTION 13 DISPOSAL CONSIDERATIONS

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 under OSHA HCS:

Signal Word: Not required

Hazard warning: Not required

Safety Advice: Not required

Hazardous Component(s): Not required

SARA TitleIII, 313:

Chemical Name: **Wt%:**

None

California Proposition 65:

Chemical Name: **Wt%:**

None

SECTION 16 OTHER INFORMATION

Other Information: None

Date of Issue: June 10, 1996

Revised Date: November 30, 2006

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
- Taitle 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 and 2000/39/EC

DFG MAK: MAK (Maximale Arbeitsplatz-Konzentration) under Deutsche Forschungsgemeinschaft