

SAFETY DATA SHEET

OUR REF No. III-718

1. IDENTIFICATION OF THE PRODUCT AND OF THE SUPPLIER

【PRODUCT NAME】 HANARL FLX-2G
【USE OF THE CHEMICAL】 Lubricant
【MANUFACTURER NAME】 Kanto Kasei Ltd.
【MANUFACTURER ADDRESS】 1-8-1, Marunouchi, Chiyoda-ku, Tokyo JAPAN, 100-0005
【DIVISION】 Chemical Safety Division
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2. HAZARDS IDENTIFICATION

CLP REGULATION (EC) No 1272/2008

CLASSIFICATION:

This material is not classified as hazardous according to Regulation (EC) No. 1272/2008, as amended, on classification, labelling, and packaging of substances and mixtures.

LABEL ELEMENTS

CLP REGULATION (EC) No 1272/2008 : Not applicable

3. COMPOSITION/INFORMATION ON INGREDIENTS

DISTINCTION

(SINGLE PRODUCT/MIXTURE) : Mixture

CHEMICAL NAME : Dry film lubricant

COMPOSITION : Fluorinated solvent Min. 97wt%

: Fluoric oil, Solid lubricants and others Max. 3wt%

CHEMICAL FORMULAE : Not disclose, because of trade secrets

CAS NO : Not disclose, because of trade secrets

UN CLASS/UN NUMBER : Not applicable

4. FIRST-AID MEASURES

IF INHALED : Remove person to fresh air.
: If you feel unwell, get medical attention.

IF ON SKIN : Wash with soap and water.

IF IN EYES : Flush with large amounts of water.

: Remove contact lenses if easy to do. Continue rinsing.

IF SWALLOWED : Rinse mouth.

: If you feel unwell, get medical attention.

MOST IMPORTANT SYMPTOM : No data available

PROTECTION OF PERSON

GIVE FIRST-AID : No data available

SPECIAL NOTE TO DOCTOR : No data available

5. FIRE-FIGHTING MEASURES

EXTINGUISHING MEDIA : Non-combustible.

: Use a fire fighting agent suitable for surrounding fire.

PECULIAR HAZARD STATEMENT : Exposure to extreme heat can give rise to thermal decomposition.

HAZARDOUS DECOMPOSITION : Carbon monoxide, Carbon dioxide, Hydrogen Fluoride

PROTECTION OF THE PERSON
EXTINGUISHES FIRE

: When firefighting conditions are severe and total thermal decomposition of the product is possible, wear full protective clothing, including helmet, self-contained, positive pressure or pressure demand breathing apparatus, bunker coat and pants, bands around arms, waist and legs, face mask, and protective covering for exposed areas of the head.

6. ACCIDENTAL RELEASE MEASURES

PERSONAL PRECAUTIONS

: Ventilate the area with fresh air.
: For large spill, or spills in confined spaces, provide mechanical ventilation to disperse or exhaust vapors, in accordance with good industrial hygiene practice.
: Observe precautions from other sections.

ENVIRONMENTAL PRECAUTIONS

: Avoid release to the environment.
: For larger spills, cover drains and build dikes to prevent entry into sewer systems or bodies of water.

CONTAINMENT AND

PURIFICATION METHODS

: Contain spill. Working from around the edges of the spill inward, cover with bentonite, vermiculite, or commercially available inorganic absorbent material.
: Mix in sufficient absorbent until it appears dry.
: Collect as much of the spilled material as possible.
: Place in a closed container approved for transportation by appropriate authorities. Clean up residue with an appropriate solvent selected by a qualified and authorized person.
: Seal the container. Dispose of collected material as soon as possible in accordance with applicable local/regional / national/ international regulations.

7. HANDLING AND STORAGE

HANDLING

: Do not breathe thermal decomposition products.
: Avoid skin contact with hot material.
: For industrial or professional use only.
: Do not eat, drink or smoke when using this product.
: Wash thoroughly after handling.
: Avoid release to the environment.
: Avoid contact with oxidizing agents (ex. chlorine, chromic acid etc.)

STORAGE

: Keep container tightly closed.
: Store away from heat, acids, strong bases, oxidizing agents.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

EQUIPMENT MEASURES

: Provide appropriate local exhaust when product is heated.
: Use general dilution ventilation and/or local exhaust.
: If ventilation is not adequate, use respiratory protection equipment.

MANAGEMENT CONCENTRATION
ALLOWABLE CONCENTRATION
PROTECTION

: Not established
: TWA:750 ppm

RESPIRATORY PROTECTION

: If necessary, wear hazard mask.

EYE PROTECTION

: Safety Glasses with side shields

SKIN PROTECTION

: No chemical protective gloves are required.

THERMAL HAZARDS

: Wear heat insulating gloves when handling hot material to prevent thermal burns.

9. PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE	: Liquid
COLOR	: Milky White
ODOR	: Slightly ether odor
p H	: No data
MELTING POINT/FREEZING POINT	: Approx. -135°C
INITIAL BOILING POINT AND BOILING	: 60~65°C
FLASH POINT	: Not applicable Does not flash
UPPER/LOWER FLAMMABILITY OR EXPLOSIVE LIMITS	: Not applicable
VAPOR PRESSURE	: Approx. 26,931 Pa (25°C)
VAPOR DENSITY	: Approx. 8.6
RELATIVE DENSITY (WATER=1)	: Approx. 1.5
SOLUBILITY	: Water : < 12 ppm Other solvent : Not applicable
AUTO-IGNITION TEMPERATURE	: Approx. 405 °C
DECOMPOSITION TEMPERATURE	: No data
VISCOSITY	: Approx. 0.6 mPa-s(23°C) * These data except for appearance are about a solvent.

10. STABILITY AND REACTIVITY

STABILITY	: Stable.
POSSIBILITY OF HAZARDOUS REACTIONS	: Hazardous polymerization will not occur.
CONDITIONS TO AVOID	: No data available
INCOMPATIBLE MATERIALS	: Strong acids, Strong bases, Strong oxidizing agents
HAZARDOUS DECOMPOSITION PRODUCTS	: PFIB, HF
OTHER	: If the product is exposed to extreme condition of heat from misuse or equipment failure, toxic decomposition products that include hydrogen fluoride and perfluoroisobutylene can occur.

11. TOXICOLOGICAL INFORMATION

ACUTE TOXICITY	: Oral : Rat: LD50 > 5,000 mg/kg Inhalation(vapor) : Rat: LC50 4hr > 1,000 mg/l Ingestion : Rat: LD50 > 5,000 mg/kg
SKIN CORROSION/IRRITATION	: Rabbit: No significant irritation
SERIOUS EYE DAMAGE/ IRRITATION	: Rabbit: No significant irritation
RESPIRATORY OR SKIN SENSITIZATION	: Guinea Pig :Not classified
GERM CELL MUTAGENICITY	: In Vitro :Not mutagenic In vivo :Not mutagenic
CARCINOGENICITY	: No data available
REPRODUCTIVE TOXICITY	: Not classified for development
STOT-single exposure	: cardiac sensitization :Not classified
STOT-repeated exposure	: Not classified
ASPIRATION HAZARD	: No data available

12. ECOLOGICAL INFORMATION

ACUATIC TOXICITY ACUTE : Category 3 : Harmful to aquatic life
 CHARONIC : No toxicity
 PERSISTENCE/DEGRADABILITY : No data available
 BIOACCUMULATIVE POTENTIAL : No data available
 MOBILITY IN SOIL : No data available
 OTHER ADVERSE EFFECTS : No data available

13. DISPOSAL CONSIDERATIONS

WASTE DISPOSAL METHOD : Consider disposal via licensed waste disposal company.
 Scrap may be incinerated under properly controlled condition. Follow all regulations in your country.

14. TRANSPORT INFORMATION

Not classified as dangerous in all means of transport regulations, including air, sea and land.

INTERNATIONAL REGULATIONS

FOR TRANSPORT : Not regulated (Not dangerous)
 UN CLASS : Not applicable
 UN NUMBER : Not applicable
 PRODUCT NAME : Not applicable
 CONTAINER GRADE : Not applicable
 SEAWATER POLLUTION MATERIAL : None

SPECIFIC SECURITY PRECAUTION
 AND CONDITION OF TRANSPORTATION : The container is avoided direct sunlight, and it loads so as not to be damaged, corroded and leak.
 The collapse of cargo piles is prevented surely.
 : Don' t pile the heavy load.

15. REGULATORY INFORMATION

Chemical Safety Assessment

A chemical safety assessment has been carried out for this substance/mixture in accordance with Regulation (EC) No1907/2006, as amended.

16. OTHER INFORMATION

Please read the SDS well before use.

SAFETY DATE SHEETS ARE ISSUED BASED ON THE LATEST INFORMATION WE HAVE KNOWN.
 HOWEVER, THESE ARE NOT THE ONE TO INSURE SAFETY.

THESE ARE PROVIDED TO COMPANIES HANDLING THE MATERIALS AS REFERENCE INFORMATION REGARDING HAZARDOUS AND HARMFUL CHEMICALS TO ENSURE SAFE HANDLING.

WE ASK THAT THESE SHEETS BE USED BY COMPANIES AS REFERENCE AND WITH THE UNDERSTANDING THAT IT IS NECESSARY FOR MESURES APPROPRIATE TO THE SPECIFIC CIRCUMSTANCES RELATED TO HANDLING THE MATERIALS TO BE TAKEN UNDER THEIR OWN RESPONSIBILITY. ACCORDINGLY, THIS DATA SHEET IN NO WAY CONSTITUTES A GUARANTEE OF SAFETY.