

SAFETY DATA SHEET

OUR REF No. III-662

1. IDENTIFICATION OF THE PRODUCT AND OF THE SUPPLIER

【PRODUCT NAME】 HANARL FLX-2F
【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
【PHONE NUMBER】 TEL: 03(3218)7111 FAX: 03(3218)7100
【E-MAIL】 info@kanto-kasei.com

2. HAZARDS IDENTIFICATION

Not classified as hazardous according to OSHA Hazard Communication Standard, 29 CFR 1910.1200.

Label elements

Signal word : Not applicable.
 Symbols : Not applicable.
 Pictograms : Not applicable.

3. COMPOSITION/INFORMATION ON INGREDIENTS

DISTINCTION
 (SINGLE PRODUCT/MIXTURE) : Mixture
 CHEMICAL NAME : Dry film lubricant
 COMPOSITION : Fluorinated solvent 90~99wt%
 : Fluoric oil, solid lubricants and others 1~10wt%
 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.
 MOST IMPORTANT SYMPTOM
 PROTECTION OF PERSON : No data available
 GIVE FIRST-AID : No data available
 SPECIAL NOTE TO DOCTOR : No data available

5. FIRE-FIGHTING MESURES

EXTINGUISHING MEDIA : Material will not burn.
 PECULIAR HAZARD STATEMENT : Exposure to extreme heat can give rise to thermal decomposition.

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

: Evacuate area. 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.

METHODS FOR CONTAINMENT
AND CLEANING UP

: 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.
: Ventilate the area with fresh air.
: 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

: Store in a well-ventilated place.
: 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.
: If ventilation is not adequate, use respiratory protection equipment.

MANAGEMENT CONCENTRATION
ALLOWABLE CONCENTRATION
PROTECTION

: Not established
: TWA:100 ppm

RESPIRATORY PROTECTION

: Under normal use conditions, airborne exposures are not expected to be significant enough to require respiratory protection.

EYE PROTECTION	: Safety Glasses with side shields
SKIN PROTECTION	: No chemical protective gloves are required.
APPROPRIATE SANITARY REQUIREMENT	: Wear heat insulating gloves when handling hot material to prevent thermal burns.

9. PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE	: Liquid
COLOR	: Milky white
ODOR	: Slightly odor
p H	: Not applicable
MELTING POINT	: Approx. -38°C
BOILING POINT	: Approx. 98°C
FLASH POINT	: No flash point
UPPER/LOWER FLAMMABILITY OR EXPLOSIVE LIMITS	: Not applicable
VAPOR PRESSURE	: 0.81 psia (20°C)
VAPOR DENSITY	: 0.014
RELATIVE DENSITY (WATER=1)	: Approx. 1.6 (25°C)
SOLUBILITY	: Water : 0.295 ppm (20°C)
AUTO-IGNITION TEMPERATURE	: Approx. 408 °C
DECOMPOSITION TEMPERATURE	: > 200 °C
VISCOSITY	: < 5 centipoise (25°C)

* These data except for appearance are about a solvent.

10. STABILITY AND REACTIVITY

REACTIVITY	: This material is considered to be non-reactive under normal use conditions.
STABILITY	: Stable.
POSSIBILITY OF HAZARDOUS REACTIONS	: Hazardous polymerization will not occur.
CONDITIONS TO AVOID	: None known.
INCOMPATIBLE MATERIALS	: Strong acids, Strong bases, Strong oxidizing agents
HAZARDOUS DECOMPOSITION PRODUCTS	: CO, CO ₂ , HF, Toxic Vapor, Gas, Particulate
OTHER	: Extreme heat arising from situations such as misuse or equipment failure can generate hydrogen fluoride as a decomposition product.

11. TOXICOLOGICAL INFORMATION

ACUTE TOXICITY	: Oral : Rat : LD50 > 2,000 mg/kg Dermal : Rat : LD50 > 2,000 mg/kg Inhalation(vapor) : Rat : LC50 > 430 mg/l Inhalation(mist) : No data
SKIN CORROSION/IRRITATION	: Rabbit: No significant irritation
SERIOUS EYE DAMAGE/IRRITATION	: Rabbit: No significant irritation
RESPIRATORY OR SKIN SENSITIZATION	: Mouse: Not classified
GERM CELL MUTAGENICITY	: Not mutagenic
CARCINOGENICITY	: No data available
REPRODUCTIVE TOXICITY	: No data available
STOT-single exposure	: No data available
STOT-repeated exposure	: No data available
ASPIRATION HAZARD	: No data available

