

SAFETY DATA SHEET

OUR REF No. III-669

1. IDENTIFICATION OF THE PRODUCT AND OF THE SUPPLIER

【PRODUCT NAME】 HANARL RX-405F
 【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

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%
 : 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 MEASURES

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

12. ECOLOGICAL INFORMATION

ACUATIC TOXICITY ACUTE : No toxicity
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

Disposal methods

Dispose of contents/ container in accordance with the local/regional/national/
international regulations.

- : Dispose of waste product in a permitted industrial waste facility. Combustion products will include HF. Facility must be capable of handling halogenated materials.
- : Empty drums/barrels/containers used for transporting and handling hazardous chemicals (chemical substances/mixtures/preparations classified as Hazardous as per applicable regulations) shall be considered, stored, treated & disposed of as hazardous wastes unless otherwise defined by applicable waste regulations.
- : Consult with the respective regulating authorities to determine the available treatment and disposal facilities.

EPA Hazardous Waste Number (RCRA): Not regulated

14. TRANSPORT INFORMATION

Not regulated per U. S. DOT, IATA or IMO.

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

EPCRA 311/312 Hazard Classifications : Physical Hazards : Not applicable
Health Hazards : Not applicable

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.