SAFETY DATA SHEET

OUR REF No. Ⅲ-149

1. IDENTIFICATION OF THE PRODUCT AND OF THE MANUFACTURER

[PRODUCT NAME]HANARL UD-4420[USE OF THE CHEMICAL]Lubricant[MANUFACTURER NAME]Kanto Kasei Ltd.

[MANUFACTURER ADDRESS] 1-8-1, Marunouchi, Chiyoda-ku, Tokyo JAPAN, 100-0005

[DIVISION] Environmental quality assurance

[PHONE NUMBER] TEL: 03 (3218) 7111 FAX: 03 (3218) 7100

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2. HAZARDS IDENTIFICATION

GHS CLASSIFICATION (JIS Z7253:2012)

ENVIRONMENTAL HAZARDS : Hazardous to the acute

aquatic environment Category 3

Hazard identification that there is no description in the above-mentioned is

Not applicable or Not possible to classify.

LABEL ELEMENTS

SYMBOLS : No pictogram

SIGNAL WORD : None

HAZARD STATEMENT : H402 : Harmful to aquatic life

PRECAUTIONARY STATEMENTS [Prevention]

: P273: Avoid release to the environment.

【Response】
: Not applicable
【Storage】
: Not applicable
【Disposal】

: P501: Dispose of contents/container in accordance with local/regional/national/international regulation.

Even if there is not a mention of the notice by the GHS classification, the information in later, making a sufficient consideration relates to prevention/response/storage/disposal.

3. COMPOSITION/INFORMATION ON INGREDIENTS

DISTINCTION

(SINGLE PRODUCT/MIXTURE) : Mixture

CHEMICAL NAME : Dry film lubricant COMPOSITIION : Fluorinated solvent

: Fluorinated solvent 85∼95wt% : Fluoric oil, solid lubricants and others 5∼15wt%

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 victim to fresh air. Get medical advice/attention.

IF ON SKIN : Wash the affected area with soap and water. IF IN EYES

: Flush eyes with plenty of water, and get medical advice

/attention.

: No data available

IF SWALLOWED : Do not induce vomiting. Get medical advice/attention.

If a mouth is polluted, wash it with plenty of water.

MOST IMPORTANT SYMPTOM

PROTECTION OF PERSON

: No data available GIVE FIRST-AID SPECIAL NOTE TO DOCTOR : No data available

5. FIRE-FIGHTING MESURES

EXTINGUISHING MEDIA :Use spray foam, foam, powder or CO_2 gas

extinguishing media.

FIRST FIRE : Use powder or CO_2 gas extinguishing media.

LARGE-SCALE FIRE : Use foam extinguishing media.

UNSUITABLE EXTINGUISHING MEDIA : Prohibit rod-shaped water injection.

PECULIAR HAZARD STATEMENT : May be harmful if inhaled vapor/mist produced

at 260°C or more.

PECULIAR EXTINCTION METHOD : Cut off combustion source of fire.

: Sprinkle water to equipment to cool.

: Prohibit to enter to the scene of a fire except staff.

PROTECTION OF THE PERSON

EXTINGUISHIES FIRE : Extinguish fire on the windward side of the fire and

not fail to wear protector.

6. ACCIDENTAL RELEASE MEASURES

PERSONAL PRECAUTIONS

ENVIRONMENTAL PRECAUTIONS

: Always wear protective equipment when working.

: Take care not to be drained into river and drain.

: If the medicine is used for the sea, it should be what suits the standard in the technology that provides by the transportation ministerial ordinance.

METHODS FOR CONTAINMENT

AND CLEANING UP SMALL QUANTITY

: Remove source of a fire.

: Remove with a spatula or shovel, or absorb with soil, sand or a cloth. Wipe off remainder with a cloth.

LARGE QUANTITY : Prevent access by roping off the perimeter around

the leak.

AT SEA : Prevent dispersion by creating an oil fence.

> Scoop up or use adsorption mats to soak up. When chemicals are used, these must comply with technological standards as set down in ministry

of transport ordinances.

PREVENTION MESURE OF SECOND DISASTER

: Inform promptly a related organization to

attempt prevention and the expansion prevention

of the accident when leaking.

: Remove source of a fire and prepare extinguishing

media.

7. HANDLING AND STORAGE

HANDLING

TECHNICAL MESURES : Avoid contact with flame, sparks and heated objects.

Do not allow unnecessary dispersion of vapor. : Take steps to prevent static electricity, and use

conductive work clothes and shoes.

: Remove completely it in the safety area, if the mechanical equipment are repaired and are processed.

: Wear protector, if there is possibility of skin

contact or eye contact.

: Avoid inhalation of vapor or mist.

: Containers must be sealed.

NOTES : The vapor from petroleum products builds up easily

as it is heavier than air. It is therefore necessary to ensure adequate ventilation and

take care with fire.

NOTES OF SAFE HANDLING : Handling should be done at room temperature. Prevent

contamination of water and impurities.

: Avoid contact with halogens, strong acids, alkaline

substances and oxidants.

STORAGE : Protect from sunlight. Store in a well-ventilated

place.

: Avoid heat, sparks, flames and any build-up of

static electricity.

: Avoid contact and storing with halogens, strong acids, alkaline substances and oxidants.

: Do not apply pressure to empty containers.

: Don't cut, weld, heat, or make the hole the container.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

EQUIPMENT MESURES : If the vapor arises, ventilation equipment or

closing of vapor source is needed.

: The equipment for washing and the body washing of

eyes is set up near the handling area.

MANAGEMENT CONCENTRATION : Not established ALLOWABLE CONCENTRATION : Not established

: ACGIH Not established

PROTECTION

RESPIRATORY PROTECTION : If necessary, wear hazard mask.

HAND PROTECTION : Wear the resistance to oil if coming in contact

repeating for a long term.

EYE PROTECTION : Wear safety glasses with side shields.

SKIN PROTECTION : When contacting for a long time or repeatedly, wear

oil resistant ones.

APPROPRIATE SANITARY

REQUIREMENT : Remove dirty clothes, wash completely and reuse.

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 : $60\sim65^{\circ}\text{C}$

FLASH POINT : Not applicable

Does not flash

UPPER/LOWER FLAMMABILITY

OR EXPLOSIVE LIMITS : Not applicable

VAPOR PRESSURE : Approx. 26, 931 Pa (25℃)

VAPOR DENSITY : Approx. 8. 6

RELATIVE DENSITY

(WATER=1) : Approx. 1. 5

SOLUBILITY : Water : < 12 ppm

Other solvent : Insoluble

AUTO-IGNITION TEMPERATURE : Approx. 405 $^{\circ}$ C

DECOMPOSITION TEMPERATURE : No data

VISCOSITY : Approx. 0.001 Pa-s(23°C)

* These data except for appearance are about a solvent.

10. STABILITY AND REACTIVITY

STABILITY : Stability at room temperature

POSSIBILITY OF HAZARDOUS

REACTIONS : No reaction with water

CONDITIONS TO AVOID : Heating, high temperature, and contact hazardous

material

INCOMPATIBLE MATERIALS : Avoid contact with halogens, strong acids, alkaline

substances and oxidants.

HAZARDOUS DECOMPOSITION

PRODUCTS : Harmful thermal decomposition products may be

produced such as gaseous hydrogen fluoride when

heated at extremely high temperature.

OTHER : No data available

11. TOXICOLOGICAL INFORMATION

ACUTE TOXICITY : Oral : No data

Dermal: No data

Inhalation(vapor) : No data
Inhalation(mist) : No data

SKIN CORROSION/IRRITATION : No data available

SERIOUS EYE DANAGE/

IRRITATION : No data available

RESPIRATORY OR SKIN

SENSITIZATION : No data

GERM CELL MUTAGENICITY : No data available 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 : 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.

INTERNATIANAL 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

Ensure this material in compliance with nation's requirements, and ensure conformity to local regulation.

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.