SAFETY DATA SHEET

OUR REF No. Ⅲ-451

1. IDENTIFICATION OF THE PRO	DUCT AND OF THE SUPPLIER
[PRODUCT NAME]	HANARL CSW-8K
[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]	<u>info@kanto-kasei.com</u>

2. HAZARDS IDENTIFICATION CLP REGULATION (EC) No 1272/2008 CLASSIFICATION: Hazardous to the Aquatic Environment (Chronic), Category 4 - Aquatic Chronic 4 Label elements CLP REGULATION (EC) No 1272/2008 HAZARD STATEMENTS: H413: May cause long lasting harmful effects to aquatic life. PRECAUTIONARY STATEMENTS Disposal:P501: Dispose of contents/container in accordance with applicable local/ regional/ national/ international regulations.

3. COMPOSITION/INFORMATION DISTINCTION	ON INGREDIENTS	
(SINGLE PRODUCT/MIXTURE)	:Mixture	
CHEMICAL NAME	: Dry film lubricant	
COMPOSITIION	•	0∼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 victim to fresh air.	
TE ON CRIN	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 med /attention.	lical advice
IF SWALLOWED	: Do not induce vomiting. Get medical advice/a	ttention.
	If a mouth is polluted, wash it with plenty	of water.
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 MESURES		
EXTINGUISHING MEDIA	:Use spray foam, foam, powder or CO ₂ gas	
FIRST FIRF	extinguishing media.	
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	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.
PROTECTION OF THE PERSON	: Prohibit to enter to the scene of a fire except staff.
EXTINGUISHIES FIRE	: Extinguish fire on the windward side of the fire and not fail to wear protector.

6. ACCIDENTAL RELEASE MEASURES	
PERSONAL PRECAUTIONS	: Always wear protective equipment when working.
ENVIRONMENTAL PRECAUTIONS	: 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	Demons of fine
AND CLEANING UP SMALL QUANTITY	: Remove source of a fire. : Remove with a spatula or shovel, or absorb with soil,
SMALL QUANTITI	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 transport orumanees.
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.
	meala.
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
NOTES OF SAFE HANDLING	take care with fire.
NOTES OF SAFE HANDLING	: Handling should be done at room temperature. Prevent
	conteminetion of weter and implusition
	contamination of water and impurities. Avoid contact with halogens, strong acids, alkaline
	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 CONCENTRAITON	: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 odor
рH	:No data
MELTING POINT/FREEZING POINT	: Approx138°C
INITIAL BOILING POINT	
AND BOILING	: 75~80°C
FLASH POINT	:Not applicable
	Does not flash
UPPER/LOWER FLAMMABILITY	
OR EXPLOSIVE LIMITS	:Not applicable
VAPOR PRESSURE	: Approx. 14, 532. 1 Pa (25℃)
VAPOR DENSITY	: Approx. 9.1 (0°C)
RELATIVE DENSITY(WATER=1)	: Approx. 1. 43 (25°C)
SOLUBILITY	:Water :Insoluble
	Other solvent : No data available
AUTO-IGNITION TEMPERATURE	: Approx. 375 °C
DECOMPOSITION TEMPERATURE	:No data
VISCOSITY	: Approx. 0.4 mm ² /sec
	* These data except for appearance are about a main solvent.

10. STABILITY AND REACTIVITY STABILITY POSSIBILITY OF HAZARDOUS REACTIONS CONDITIONS TO AVOID INCOMPATIBLE MATERIALS HAZARDOUS DECOMPOSITION PRODUCTS OTHER	: Stability at room temperature : Hazardous polymerisation will not occur. : No data available : Strong acids, Strong bases, Strong oxidising agents. : Hydrogen Fluoride, Perfluoroisobutylene (PFIB). : No data available
11. TOXICOLOGICAL INFORMATION ACUTE TOXICITY	: Oral:Rat > 2,000 mg/kg Dermal:LD50 estimated to be 2,000 - 5,000 mg/kg Inhalation(vapor):Rat LC50 > 989 mg/l
SKIN CORROSION/IRRITATION SERIOUS EYE DANAGE/ IRRITATION	Inhalation(mist) : No data : No data available : No data available
RESPIRATORY OR SKIN SENSITIZATION GERM CELL MUTAGENICITY CARCINOGENICITY	: No data : No data available : No data available
REPRODUCTIVE TOXICITY STOT-single exposure STOT-repeated exposure ASPIRATION HAZARD	: No data available : No data available : No data available : No data available
12. ECOLOGICAL INFORMATION ACUATIC TOXICITY ACUTE	: No toxicity
CHARONIC PERSISTENCE/DEGRADABILITY	:Category4 :May cause toxic to aquatic life with long lasting effects. :No data available
BIOACCUMULATIVE POTENTIAL MOBILITY IN SOIL OTHER ADVERSE EFFECTS	:No data available :No data available :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 sea and land.	all means of transport regulations, including air,

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.