Safety Data Sheet

Reference No. 1045

Issue: 9th January 2001
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1. Chemical product and company identification

Product name PACKTEST Chloride (Low Range) Model WAK-Cl(D)

Company name KYORITSU CHEMICAL-CHECK Lab., Corp.
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Dept. in charge Sales Department

Recommended uses and restrictions Reagent for water quality measurement

2. Hazards identification

[GHS Classification**]**

Physical hazards: Classification not possible (no data for GHS classification available)

Health hazards: Not classified or classification not possible (no data for GHS classification available)

Environmental hazards:
Hazardous to the aquatic environment, short-term (acute): Category 1 (applicable only K-2 reagent)
Hazardous to the aquatic environment, long-term (chronic): Category 1 (applicable only K-2 reagent)
Harmful effects on the ozone layer: Classification not possible (no data for GHS classification available)

[GHS labeling elements**]**

[Signal word**]**
Warning

[Hazard statements**]** （Statements are applicable only for K-2 reagent）
Very toxic to aquatic life.
Very toxic to aquatic life with long lasting effects.

[Precautionary statements**]**
Keep out of reach of children and store in the dry and dark place at room temperature.
Carefully read instructions before use and do not use for other purposes.
Wear personal protective equipment if necessary.
Do not inhale reagents.
Wash contaminated clothing.
Wash hands thoroughly before and after handling.
Avoid release to the environment.

3. Composition/ information on ingredients

Discrimination of single substance or mixture: Mixture

Reagent name	K-1 reagent		K-2 reagent		
Chemical name	Uranine (Sodium fluorescein)	Water	Silver nitrate	Other (not regulated)	Polyethylene
Content	0.1 - 0.49 %	99 - 99.9 %	0.5 - 0.9 %	5 - 9.9 %	90 - 99 %
Chemical formula	C20H10Na2O5	H2O	AgNO3	Na2SO4	(C2H4)n
METI No. (reference number under CSCL in Japan)	(5)-1416 (5)-673	–	(1)-8	(1)-501	(6)-1
CAS No.	518-47-8	7732-18-5	7761-88-8	7757-82-6	9002-88-4

4. First-aid measures

If reagents or developed sample;
Enter in eyes: Immediately rinse eyes with water thoroughly.
Contact with skin: Immediately wash out contaminated site with plenty of water.
Enter into mouth: Immediately rinse mouth with plenty of water.

If ingested or in case any symptoms appear after above measures, immediately get medical advice or treatment.

5. Fire-fighting measures

Extinguishing methods: Cut off ignition sources and extinct by a suitable media.
Suitable extinguishing media: Water (mist), powder, carbon dioxide, dry sand.

6. Accidental release measures

In case of outdoor use: Avoid spill of reagents or waste solutions.
In case of indoor use: If spilled on a table or floor, wipe off immediately spilled reagents and dispose of them.
Concentrated solutions should not be released into sewer or rivers.

7. Handling and storage

Handling: Avoid eyes contact, skin contact, ingestion and inhalation of reagents.
Especially for outdoor use, ensure to bring back reagents, liquid waste after the measurement and used containers.
Storage: Avoid direct sunlight and store in a well-ventilated, dry and dark place at room temperature.

8. Exposure controls and personal protection

Administrative control level
Working environment standard: Not established

Occupational exposure limits
Japan Society for Occupational health: 0.01 mg (Ag)/m^3
ACGIH (TLVs): TWA 0.01 mg (Ag)/m^3
OSHA (PEL): TWA 0.01 mg(Ag)/m^3 (only for Silver nitrate)

Protective equipment: Recommend to wear protective glasses and gloves

9. Physical and chemical properties

Physical state: K-1: Liquid reagent 2 mL x 1 plastic bottle in a plastic bag
K-2: Tube containing powder reagent
1.1 g x 40 tubes/kit (5 tubes per one aluminum laminated packaging)
Color: K-1: greenish yellow (liquid), K-2: white (powder), semi-transparent (polyethylene tube)
Odor: No odor
pH: 7 (when added K-1 reagent and developed sample)

Melting point, boiling point, flash point, ignition point, lower explosion limit, vapor pressure, density, relative density, solubility, Pow, kinetic viscosity: not available as a mixture

10. Stability and reactivity

Avoid leaving in a place where high temperature, humid or under direct sunlight. Stable under normal use conditions and no dangerous reactions under specific conditions are expected. No information on hazardous decomposition product is available.

11. Toxicological information

No data on mixture is available. Data on K-1and K-2 reagents are shown below.

K-1 reagent
Uranine (Sodium fluorescein):
Acute toxicity:
Oral: Rat LD_{50} = 6,721 mg/kg, mouse LD_{50} = 4,738 mg/kg
Intravenous: Rat LD_{50} = 1 mg/kg, mouse LD_{50} = 1 mg/kg (RTECS)
Other data: Not available

Water:
Acute toxicity:
Oral: Human-infant TDLo = 333 g/kg, cramping, attacks or fever.
Human-men TDLo = 42.86 g/kg, shaking, mussel pain.
Rat LD_{50} > 90 ml/kg
Intravenous: Mouse- LD_{50} = 25 g/kg
intraperitoneal: Mouse- LD_{50} = 190 g/kg
Other data: Not available.

K-2 reagent
Silver nitrate:
Acute toxicity: Classified as Category 4 based on data; Oral-rat LD_{50} = 1,173 mg/kg (CERI hazard data collection 2001-57 (2002)).
Skin corrosion/ irritation:
Classified as Category 1A-1C based on data; "corrosive" in a guinea pig skin irritation test (CERI hazard data collection 2001-57 (2002)). In case it is necessary to classify one of sub-categories, category 1A is recommended from a point of safety side.
Serious eye damage/ eye irritation:
Classified as Category 1 based on data; the substance causes severe irritation and therefore is corrosive to skin because it is reported that "moderate to severe irritation" in a rabbit eye irritation test (CERI hazard data collection 2001-57 (2002)).
Reproductive toxicity:
Classified as Category 2 because effects on testis (necrosis of seminiferous tubule) were observed (IUCLID, 2000).
Specific target organ toxicity (single exposure):
Classified as Category 1 (Blood) and Category 3 (Respiratory irritation) based on following data;
Causes acute respiratory irritation in humans (PATTY (4th, 2000)). Methemoglobinemia in an animal test (ICSC (J) (1998)). Cyanosis, diarrhea, increased self-movement and cramp in an animal test (CERI hazard data collection 2001-57 (2002)).
Taking into account the above findings, it is considered that blood system is a target organ and causes respiratory irritation.
Specific target organ toxicity (repeated exposure):
Classified as Category 1 (respiratory organ, kidneys and cardiovascular system) based on

following data; Effects on lungs and kidneys, hardening of the arteries in humans were reported (CERI hazard data collection 2001-57 (2002)), therefore respiratory organ, kidneys and cardiovascular system are considered as target organs.
Other data: Not available.

Polyethylene:
Acute toxicity:
Oral: Rat LD_{50} > 7,950 mg/kg (used 7,950 mg/kg for the calculation of ATEmix below)
Carcinogenicity: IARC Group 3 (not classifiable as to carcinogenicity to humans).
Other data: Not available

GHS classification results of K-1and K-2 reagents as mixtures are shown below.
[Acute toxicity (oral)], [Acute toxicity (dermal)], [Skin corrosion/ irritation], [Serious eye damage/ eye irritation], [Reproductive toxicity], [Respiratory or skin sensitization], [Germ cell mutagenicity], [Carcinogenicity], [Specific target organ toxicity (single exposure)], [Specific target organ toxicity (repeated exposure)], [Aspiration hazard]
Not classified or classifications are not possible because of data lack.

12. Ecological information

No data on mixture is available. Data on K-1and K-2 reagents are shown below.

K-1 reagent
Uranine (Sodium fluorescein): No eco-toxicological information is available.

K-2 reagent
Silver nitrate:
Hazardous to the aquatic environment, short-term (acute): Classified as Category 1 based on data; Crustacea (*Daphnia magna*) : 48-h EC_{50} = 0.0006 mg/L (CERI hazard data collection, 2002) (converted value as silver (I) nitrate: 0.0013 mg/L).
Hazardous to the aquatic environment, long-term (chronic): Classified as Category 1 because the substance is a metallic compounds and has unknown behavior in water and has bioaccumulation potential (BCF = 600) (Data on existing chemical substances).
Other data: Not available.
Polyethylene: No eco-toxicological information available.

GHS classification results of K-1and K-2 reagents as mixtures are shown below.
K-1 reagent
[Hazardous to the aquatic environment, short-term (acute)],
[Hazardous to the aquatic environment, long-term (chronic)]
Classifications are not possible because of data lack.
[Harmful effects on the ozone layer]:
Classification is not possible because each of the substances is not described in Annex to Montreal Protocol.
K-2 reagent
[Hazardous to the aquatic environment, short-term (acute)]
Classified as Category 1 (Warning, Very toxic to aquatic life.) based on data;
Contains less than 1% of Category 1 (EC_{50} = 0.0006 mg/L) and multiplying factor = 1,000.
0.1 – 1% x 1,000 = 100 – 1,000 % > 25%.
[Hazardous to the aquatic environment, short-term (acute)]
Classified as Category 1 (Warning, Very toxic to aquatic life with long lasting effects.) based on data;
Contains less than 1% of Category 1 (EC_{50} = 0.0006 mg/L) and multiplying factor = 1,000.
0.1– 1% x 1,000 = 100 – 1,000 % > 25%.
[Harmful effects on the ozone layer]:
Classification is not possible because each of the substances is not described in Annex to Montreal Protocol.

13. Disposal considerations

Liquid waste contains ca. 1 mg of Nitrate-nitrogen per measurement.
Always dispose according to local regulations.

14. Transport information

In addition to precautionary measures regarding handling and storage, avoid rough handling so as not to break containers. It is recommended to ship by air because under high temperature for long period may lead to deterioration.

UN classification and number: Not applicable
Civil Aeronautics Act: Not applicable
Fire service Act: Not applicable
Total weight of the product: ca.140 g/kit

15. Regulatory information

Poisonous and Deleterious Substances Control Act: Not applicable
PRTR Act: Not applicable
Industrial Safety and Health Act: Applicable
K-2 reagent contains more than 0.1% and less than 1% of Silver Nitrate, more than 0.1% and more than 1% of Sodium Sulfate.
"Cabinet order, article18, shall be indicated the Name of the substance, #2"
"Cabinet order, article 18-2, shall be indicated the Name of the substances, #2"
Water Pollution Control Act: Applicable
Waste solution after measurement contains nitrate compound.
"Cabinet Order set forth in Item (26) of Article 2".
Sewerage Act: Applicable.
Waste solution after measurement contains nitrate compound.
"Cabinet Order set forth in Item (1) of Article 9-5".

16. Other information

Reference literature

NITE, GHS Classification, GHS 3rd 060428, ID259 Silver nitrate (I) (2006.05.24, 2006.03.31)
Material Safety Data Sheet No.JW190083, Wako Pure Chemical Industries, Ltd. (2007.10.30)
Material Safety Data Sheet No.JW210009, Wako Pure Chemical Industries, Ltd. (2007.9.19)
Material Safety Data Sheet No.JW041678, Wako Pure Chemical Industries, Ltd. (2007.09.18)
Material Safety Data Sheet No.051110033, TOSOH CORPORATION (2004.07.09)
Koukuu Kikenbutsu Yusou Houreisyu, Ed. MLIT, HOUBUN SHORIN CO., LTD. (2019)
JIS Z 7252:2019 Classification of chemicals based on "Globally Harmonized System of Classification and Labelling of Chemicals (GHS)" (Japanese Industrial Standards Committee)
JIS Z 7253:2019 Hazard communication of chemicals based on GHS-Labelling and Safety Data Sheet (SDS) (Japanese Industrial Standards Committee)
UN GHS (tentative translation, forth revised version), GHS Kankei Syocho Renraku Kaigi (2011)
Ministry of Economy, Trade and Industry, GHS Classification Guidance for Enterprises 2013 Revised Edition (2013)

NOTE) This information is not always exhaustive and use with care.
This data sheet only provides information but any description cannot be warranted.
Descriptions may possibly be changed because of new findings or modification of the current knowledge.
Precautions only cover normal handling.
This English SDS is prepared in the cooperation with the Chemicals Evaluation and Research Institute (CERI), Japan.