Safety Data Sheet

Reference No. 1006 Issue: 12th October 1995 Revision: 1st September 2015 1. Chemical product and company identification WA-Cr⁶⁺ Product name WATER it Test Kit Chromium (Hexavalent) Model OPTEX CO.,LTD. Company name Address 5-8-12, Ogoto Otsu Shiga 520-0101, Japan Tel +81-77-579-8100 Fax +81-77-579-8136 Quality Control Dept. Section Reagent for water quality measurement Recommended uses and restrictions 2. Hazards identification [GHS Classification] Physical hazards: Classification not possible (no data for GHS classification available) Health hazards: Skin corrosion/ irritation: Category 1 Serious eye damage/ eye irritation: Category 1 For those health hazards not listed above are not classified or classification not possible (no data for GHS classification available) Environmental hazards: Classification not possible (no data for GHS classification available)) [GHS labeling elements]

[Signal word] Danger

[Hazard statements] Causes severe skin burns and eye damage. Causes serious eye damage.

[Precautionary statements]

Keep out of reach of children and store in the cool, dry, and dark place. 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 well before and after handling.

Avoid release to the environment.

3. Composition/ information on ingredients

Reagent name	K-1 reagent			
Chemical name	Diphenylcarbazide	Buffering agent	Extender	Polyethylene
Content	< 1%	< 3%	< 10%	> 86%
Chemical formula	$C_{13}H_{14}N_4O$	_	—	(C ₂ H ₄) _n
METI No. (reference number under CSCL in Japan)	(3)-2202	_	_	(6)-1
CAS No.	140-22-7	_	—	9002-88-4

Discrimination of single substance or mixture: Mixture

4. First-aid measures

If reagents or test solutions;

Enter in eyes: Immediately rinse with water for more than 15 minutes followed by the treatment by an ophthalmologist.

Contact with skin: Immediately wash out contaminated site with plenty of water.

Enter into mouth: Immediately rinse mouth with plenty of water.

If any symptoms appear after above measures, immediately get medical advice or treatment. Especially in case ingested reagents or test solutions, immediately drink plenty of water or milk and 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 and waste solutions.

In case of indoor use: if spilled on a table or floor, wipe off immediately spilled reagents and dispose of them. Do not contact with eyes and skin.

Concentrated waste solution should not be released into sewer or rivers.

7. Handling and storage

Handling: Due to the pH level of test solution is below 2 (acid), care should be made so that reagents will not contact with eyes or skin and to avoid ingestion.

Do not inhale the reagent.

Especially for outdoor use, ensure to bring back reagents, waste solutions after the measurement and used containers.

Storage: Avoid direct sunlight and store in a well-ventilated, cool, dry, and dark place.

8. Exposure controls and personal protection

Administrative control level	
Working environment standard:	Not established

Occupational exposure limits Japan Society for Occupational health: Not established ACGIH (TLVs): Not established OSHA (PEL): Not established

Protective equipment: Recommended to wear protective glasses and gloves

9. Physical and chemical properties

Physical state: Tube containing powder reagent 1.1 g x 50 tubes/kit, (5 tubes per one aluminum laminated packaging)

Color:White-slight showy pink (powder), semi-transparent (polyethylene tube)Odor:No odorpH:<2</td>

Melting point, boiling point, flash point, ignition point, lower explosion limit, vapor pressure, density, specific gravity, 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 each substance are shown below.

Diphenylcarbazide: Acute toxicity: Oral: rats LD₅₀ > 500 mg/kg (RTECS) Other data: Not available

Polyethylene:

Acute toxicity: Oral: Rat LD₅₀ > 7,950 mg/kg Carcinogenicity: IARC Group 3 (not classifiable as to carcinogenicity to humans). Other data: Not available

GHS classifications as a mixture are shown below.

[Acute toxicity (oral)]

Not classified based on application of the additivity formula of LD₅₀ values of each ingredient. [Skin corrosion/ irritation],

pH of mixture \leq 2; Classified as Category 1 (Danger, Causes severe skin burns and eye damage.) [Serious eye damage/ eye irritation]

pH of mixture < 2; Classified as Category 1 (Danger, Causes serious eye damage.)

[Respiratory or skin sensitization], [Germ cell mutagenicity], [Carcinogenicity], [Reproductive toxicity], [Specific target organ toxicity (single exposure)], [Specific target organ toxicity (repeated exposure)], [Aspiration hazard] Classifications are not possible because of data lack.

12. Ecological information

No data on mixture is available. Data on each substance are shown below. Diphenylcarbazide, Polyethylene: No eco-toxicological information available.

GHS classifications as a mixture are shown below.

[Hazardous to the aquatic environment acute], [Hazardous to the aquatic environment 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.

13. Disposal considerations

pH of waste solution in tube is $\leq 2(acid)$. Always dispose of in accordance with 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 number: 3316 Proper shipping name: Chemical Kit (Chemical measurement kit) UN classification: Class 9 (miscellaneous dangerous substances and articles) Packing group: III Civil Aeronautics Act: Same as above. Applicable as Limited Quantities of Dangerous Goods. Poisonous and Deleterious Substances Control Act: Not applicable Fire Service Act: Not applicable Total weight of the product: ca.140 g/kit

15. Regulatory information

PRTR Act: Not applicable Industrial Safety and Health Act: Not applicable Waste Disposal and Cleaning Act: pH of waste solutions after the measurement is less than or equal to 2 and is applicable as Special Controlled Industrial Waste under the Act.

16. Other information

Reference literature

15,911 no Kagaku Shouhin, The Chemical Diary Co., Ltd. (2011)

Material Safety Data Sheet No.JW040392, Wako Pure Chemical Industries, Ltd. (2010.03.26)

Material Safety Data Sheet No.051110033, TOSOH CORPORATION (2004.07.09)

Koukuu Kikenbutsu Yusou Houreisyu, Ed. MLIT, HOUBUN SHORIN CO., LTD. (2015)

JIS Z 7252:2014 Classification of chemicals based on "Globally Harmonized System of Classification and Labelling of Chemicals (GHS)" (Japanese Industrial Standards Committee)

JIS Z 7253:2012 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.