# Safety Data Sheet

Reference No. 1015-2

Issue: 9th February 2016

## 1. Chemical product and company identification

Product name PACKTEST Free Cyanide [Standard Type] Model WAK-CN-2
PACKTEST Free Cyanide [Economy Package] KR-CN-2

Company name KYORITSU CHEMICAL-CHECK Lab., Corp.
Address 37-11, Den-enchofu 5-chome, Ota-ku, Tokyo 145-0071, Japan
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Person in charge Chisato HARA

Recommended uses and restrictions Reagent for water quality measurement

## 2. Hazards identification

**[**GHS Classification**]**

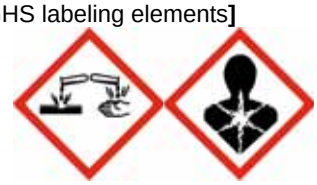
Physical hazards: Classification not possible (no data for GHS classification available)

Health hazards:
- Skin corrosion/irritation: Category 2 (applicable only K-1 reagent)
- Serious eye damage/eye irritation: Category 1 (applicable only K-1 reagent)
- Respiratory sensitization: Category 1 (applicable only K-1 reagent)

For those health hazards not listed above are not classified or classification not possible (no data for GHS classification available)

Environmental hazards:
- Hazardous to the aquatic environment (acute aquatic hazard): Category 3 (applicable only K-1 reagent)
- Hazardous to the aquatic environment (chronic aquatic hazard): Category 3 (applicable only K-1 reagent)
- Harmful effects on the ozone layer: Classification not possible (no data for GHS classification available)

**[**GHS labeling elements**]**



**[**Signal word**]**

Danger

**[**Hazard statements**]**

Causes skin irritation. (applicable only K-1 reagent)
Causes serious eye damage. (applicable only K-1 reagent)
May cause allergy or asthma symptoms or breathing difficulties if inhaled. (applicable only K-1 reagent)
Harmful to aquatic life. (applicable only K-1 reagent)
Harmful to aquatic life with long lasting effects. (applicable only K-1 reagent)

**[**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

Discrimination of single substance or mixture: Mixture

| Reagent name | K-1 reagent | | K-2 reagent | | |
|---|---|---|---|---|---|
| Chemical name | Chloramine T (p-Toluenesulfon-chloramide sodium salt) | Buffering agent | Sodium Isonicotinate(Sodium 4-Pyridine-carboxylate) | Other ingredient | Polyethylene |
| Content | < 5% | ＞95% | < 1% | <10% | >89% |
| Chemical formula | $CH_3C_6H_4SO_2NClNa \cdot 3H_2O$ | — | $C_6H_4NO_2 \cdot Na$ | — | $(C_2H_4)_n$ |
| METI No. (reference number under CSCL in Japan) | (3)-2178<br>(3)-3132 | — | — | — | (6)-1 |
| CAS No. | 7080-50-4 | — | 16887-79-9 | — | 9002-88-4 |

## 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, reagents, waste solutions after the measurement and contaminated containers should be brought back.
In case of indoor use: if spilled on a table or floor, wipe off immediately spilled reagents and dispose of them.

## 7. Handling and storage

Handling: Care should be made so that reagents will not contact with eyes or skin, and avoid ingestion.
Especially for outdoor use, ensure to bring back reagents, waste solutions after the measurement, and the 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: WAK-CN-2
K-1: Powder reagent 0.05 g x 40 tubes/kit poly-tube in a poly bag
K-2: Tube containing powder reagent
1.1gx120 tubes/kit (5tubes per aluminum laminated packaging)
KR-CN-2
K-1: Powder reagent 0.05 g x 120 tubes/kit poly-tube in a poly bag
K-2: Tube containing powder reagent
1.1gx120 tubes/kit (5tubes per aluminum laminated packaging)
Color: K-1: White (powder), K-2: White~Pale pink (powder), semi-transparent (polyethylene tube)
Odor: No odor
pH: 7 (when added K-1), 6 (final measurement solution)

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 each of K-1 and K-2 reagents are shown.

K-1 reagent
Chloramine T:
[Acute toxicity(Oral)]: Rat-$LD_{50}$=935mg/kg
[Acute toxicity(Inhalation)]: Rat-$LD_{50}$>4.2mg/l/4H
[Skin corrosion/irritation]: Since the substance has corrosivity of rabbit skin, it is set into category 1A
[Serious eye damage/ eye irritation]: Since the substance has sever corrosivity of rabbit eyes, it is set into category 1.
[Respiratory sensitization]: The substance is classifies as R42
[Germ cell mutagenicity]: Based on the negative results of Ames test and micronucleus test.
[Specific target organ toxicity (repeated exposure)]: Prolonged and repeated inhalation may cause asthma.
Other data: Not available

K-2 reagent
Sodium Isonicotinate:
[Serious eye damage/ eye irritation]: Category 2B
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 classifications of K-1 and K-2 reagents as an each of mixture are shown below.

[Acute toxicity (oral)]

K-1 reagent: Not classified based on application of the additive equation of $LD_{50}$ (rats) values of each ingredient.

K-2 reagent: Not classified based on application of the additive equation of $LD_{50}$ (rats) values of each ingredient.

[Skin corrosion/irritation]

K-1 reagent: Classified as Category 2 (Warning, Causes skin irritation.) because it contains 1 to 5% of Chloramine T.

K-2 reagent: Classification is not possible because of data lack.

[Serious eye damage/ eye irritation]:

K-1 reagent: Classified as Category 1 (Danger, Causes serious eye damage.) because it contains more than or equal to 3% of Chloramine T.

K-2 reagent: Not classified based on the application of additivity formula.

[Respiratory sensitization]:

K-1 reagent: Classified as Category 1 (Danger, May cause allergy or asthma symptoms or breathing difficulties if inhaled.) because it contains more than or equal to 1% of Chloramine T.

K-2 reagent: Classification is not possible because of data lack.

[Specific target organ toxicity (repeated exposure)]:

K-1 reagent: Not classified because concentrations of Chloramine T is less than 10%.

K-2 reagent: Classification is not possible because of data lack.

[Acute toxicity (Dermal)], [Acute toxicity(Inhalation)], [Skin sensitization], [Germ cell mutagenicity], [Carcinogenicity], [Reproductive toxicity], [Specific target organ toxicity (single exposure)], [Aspiration hazard]
Classification is not possible due to not enough data available.

## 12. Ecological information

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

K-1 reagent

Chloramine T:

[Hazardous to the aquatic environment acute and chronic]: *Daphnia magna* EC50=4.5mg/l/48H

K-2 reagent

Sodium Isonicotinate: No eco-toxicological information is available.

Polyethylene: No eco-toxicological information available.

GHS classifications of K-1 and K-2 reagents as an each of mixture are shown below.

[Hazardous to the aquatic environment acute]

K-1 reagent: Classified as Category 3 (Harmful to aquatic life.) based on the application of additivity formula.

K-2 reagent: Classification is not possible because of data lack.

[Hazardous to the aquatic environment chronic]

K-1 reagent: Classified as Category 3 (Harmful to aquatic life with long lasting effects.) based on the application of additivity formula.

K-2 reagent: Classification is 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

If high concentration of Free Cyanide is detected, pay special attention to the gas that may be generated after the neutralization.
Always dispose of in accordance with local regulations.

## 14. Transport information

In addition to precautionary measures regarding the handling and the storage, avoid rough handling that may cause damaging the containers. It is recommended to ship by air because of the storage under high temperature for long period of time may lead to deterioration.

UN classification and number: Not applicable
Civil Aeronautics Act: Not applicable
Poisonous and Deleterious Substances Control Act: Not applicable

Fire Service Act: Not applicable
Total weight of the product: ca.140 g/kit (WAK-CN-2)
ca.360 g/kit (KR-CN-2)

## 15. Regulatory information

PRTR Act: Not applicable
Industrial Safety and Health Act: Not applicable

## 16. Other information

Reference literature

15,911 no Kagaku Shouhin, The Chemical Diary Co., Ltd. (2011)
Safety Data Sheet No.07210,Kanto Chemical Co., Inc. (2010.12.21)
Safety Data Sheet No.W01W0119-1275, Wako Pure Chemical Industries, Ltd. (2013.11.01)
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.