

## Materials Safety Data Sheet

Reference No. 1020

Issue: 3<sup>rd</sup> March 1999  
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### 1. Chemical product and company identification

|                  |  |             |
|------------------|--|-------------|
| Product name     | PACKTEST Fluoride (Free) [Standard Type]                   | Model WAK-F |
| Company name     | KYORITSU CHEMICAL-CHECK Lab., Corp.                        |             |
| Address          | 37-11, Den-enchofu 5-chome, Ohta-ku, Tokyo 145-0071, Japan |             |
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| Person in charge | Seiji ISHII  |             |

Recommended uses and restrictions      Reagent for water quality measurement

### 2. Hazards identification

Most important hazards information: Irritation

Other effects: Harmful if inhaled or ingested. Contact with eyes, skin and mucous causes irritation.  
Long-term exposure may cause discomfort feeling, nausea or headache.

#### [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: | Classification not possible (No data for GHS classification available)                   |

#### [GHS labeling elements]

None

#### [Signal word]

None

#### [Hazard statements]

None

#### [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                                     |                                   |   |   |                 |   |
|---|---|-----------------------------------|---|---|-----------------|---|
| Chemical name                                   | Alizarin complexone                             | Lanthanum nitrate                 | Hexamethylene-tetramine                       | Potassium hydrogen phthalate                  | Buffering agent | Polyethylene                                  |
| Content   | < 0.1%  | < 0.1%                            | < 0.4%  | < 0.4%  | < 10%           | > 89%   |
| Chemical formula                                | C <sub>19</sub> H <sub>15</sub> NO <sub>8</sub> | La(NO <sub>3</sub> ) <sub>3</sub> | C <sub>6</sub> H <sub>12</sub> N <sub>4</sub> | C <sub>8</sub> H <sub>5</sub> KO <sub>4</sub> | -               | (C <sub>2</sub> H <sub>4</sub> ) <sub>n</sub> |
| METI No. (reference number under CSCL in Japan) | -   | (1)-756                           | (5)-1155                                      | (3)-1342                                      | -               | (6)-1   |
| CAS No.   | 3952-78-1                                       | 10277-43-7                        | 100-97-0                                      | 877-24-7                                      | -               | 9002-88-4                                     |

**4. First-aid measures**

If reagents or test solutions;

Enter in eyes: Immediately rinse with water.

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 and waste solutions.

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 and test solutions will not contact with eyes and skin and to avoid ingestion.

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: Pale purple (powder), semi-transparent (polyethylene tube)  
Odor: Slightly pungent odor  
pH: 5

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 substance are shown below.

Alizarin complexone:

Acute toxicity: Intravenous-mouse LD<sub>50</sub> = 170 mg/kg

Other data: Not available

Hexamethylenetetramine:

Acute toxicity: Not classified based on the following data; Rat-oral LD<sub>50</sub> = 9,200 mg/kg (DFGOT vpl.5 (1993)).

Skin corrosion/ irritation: Category 3 based on the following data. Although no irritation was observed in a 4-h rabbit patch test (DFGOT vol.5 (1993)), it was reported that "this substance is slightly irritating to human skin" in the hazard data collection 96-38 (CERI (1997)), Risk Assessment vol.4 (MOE (2004)) and DEGOT vol.5 (1993).

Serious eye damage/ eye irritation: Category 2B based on the following data. Although no irritation was observed in a rabbit eye irritation test (DFGOT vol.5 (1993)), it was reported that "this substance is slightly irritating to human eyes" in Risk Assessment vol.4 (MOE (2004)) and DEGOT vol.5 (1993).

Respiratory sensitization: Category 1 because the substance is considered to be a respiratory sensitizer based on the following data. It is reported that "Symptom of asthma" is observed in an epidemiological study in risk assessment vol.4 (MOE (2004)) and DFGOT vol.5 (1993). Risk assessment vol.4 (MOE (2004)) reports "Causes asthma".

Skin sensitization: Category 1 based on the following data. "Positive" in a guinea pig maximization test (DFGOT vol.5 (1993)). The hazard data collection 96-38 (CERI (1997)), risk assessment vol.4 (MOE (2004)) and DEGOT vol.5 (1993) report that skin sensitization was observed in an epidemiological study.

Germ cell mutagenicity: Not classified because; Negative in a heritable mutagenicity test (dominant lethal test), no data on germ cell *in vivo* mutagenicity test and Negative in a somatic cell *in vivo* mutagenicity test (chromosome aberration test) in PATTY (4th, 2000) and DEGOT vol.5 (1993).

Carcinogenicity: Classification not possible by an expert judgment because; Although toxicological data are reported in hazard data collection 96-38 (CERI (1997)), PATTY (4th, 2000) and DEGOT vol.5 (1993), no exiting classification is available.

Reproductive toxicity: Category 2 based on the following data. It was a limited case but some reproductive effects such as decreased survival rate and increased dead birth were observed in a dog teratogenicity test where no effects on maternal body weight reported (no description regarding other general toxicological findings) in risk assessment vol.3 (MOE (2004)), PATTY (4th, 2000) and DEGOT vol.5 (1993).

Specific target organ toxicity (repeated exposure): Category 1 (respiratory organs, kidneys). Respiratory organs and kidneys are considered to be the target organs because of the following data; "acute effects such as breathing difficulty and feeling of chest oppression" MOE risk assessment vol.2 (2003), "inflammation of the bladder, albuminuria and hematuria", "inflammation of kidney convoluted tubule and renal pelvis" (CERI hazard data collection 96-38 (1997)).

Other data: Not available

Lanthanum nitrate:

Acute toxicity: Intraperitoneal-mouse LD<sub>50</sub> = 410 mg/kg (RTECS)

Other data: Not available

## Potassium hydrogen phthalate:

Acute toxicity: Oral-rat LD<sub>50</sub> > 3,200 mg/kg, Dermal-hamster LD<sub>50</sub> > 1 mg/kg (both from RTECS)

Other data: Not available

## Polyethylene:

Acute toxicity: Oral: Rat-LD<sub>50</sub> > 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 as a mixture are shown below.

[Acute toxicity (oral)]

Not classified based on application of the additive equation.

[Skin corrosion/ irritation]

Contains less than 10% of category 3: Not classified.

[Serious eye damage/ eye irritation]

Contains less than 3% of category 2B: Not classified.

[Respiratory or skin sensitization]

Contains less than 1% of category 1 in each: Not classified.

[Reproductive toxicity]

Contains less than 3% of category 2: Not classified.

[Specific target organ toxicity (single exposure)], [Specific target organ toxicity (repeated exposure)], [Germ cell mutagenicity], [Carcinogenicity], [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.

## Hexamethylenetetramine:

Aquatic hazard Acute: Not classified based on data; Crustacea (*Daphnia magna*): 48-h EC<sub>50</sub> > 100 mg/L (MOE Eco-toxicity tests, 2002).Aquatic toxicity Chronic: Not classified based on data; Not poorly soluble substance (water solubility = 4.49×10<sup>5</sup> mg/L (PHYSPROP Database, 2005)) and having low acute toxicity.

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.

**13. Disposal considerations**

pH of waste solution is 5, 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 classification and number: Not applicable (This product contains each of less than 1% of Lanthanum nitrate and Hexamethylenetetramine)

Civil Aeronautics Act: Not applicable

Poisonous and Deleterious Substances Control Act:

Not applicable

Fire Service Act: Not applicable

Total weight of the product: 140 g/kit

## 15. Regulatory information

PRTR Act: Not applicable (Content of Hexamethylenetetramine in this product is less than 1% and not applicable as a Class 1 Designated Substance).  
Industrial Safety and Health Act: Not applicable

## 16. Other information

### Reference literature

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UN GHS (tentative translation, second revised version), GHS Kankei Syocho Renraku Kaigi (2007)  
Training text of GHS classification of mixture (chemical substance) (revised version) Japan Industrial Safety & Health Association (2006)  
Hiroshi JONAI, GHS No Chosen, International Standard of hazardous information on chemicals, The Chemical Diary Co., Ltd. (2006)

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 MSDS is prepared in the cooperation with the Chemicals Evaluation and Research Institute (CERI), Japan.