

Safety Data Sheet

Reference No. 1038

Issue: 15th April 1999
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1. Chemical product and company identification

Product name	WATER it Test Kit Calcium	Model	WA-Ca
Company name	OPTEX CO.,LTD.		
Address	5-8-12, Ogoto Otsu Shiga 520-0101, Japan		
Tel	+81-77-579-8100		
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Section	Quality Control Dept.		

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:

Serious eye damage/eye irritation:	Category 2
Reproductive toxicity:	Category 2
Specific target organ toxicity (single exposure):	Category 2 (kidneys, nervous system, respiratory organs)
Specific target organ toxicity (repeated exposure):	Category 2 (kidneys, nervous system, respiratory organs)

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

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

[GHS labeling elements]



[Signal word]

Warning

[Hazard statements]

Causes serious eye irritation.
Suspected of damaging fertility or the unborn child.
May cause damage to kidneys, nervous system and respiratory organs.
May cause damage to kidneys, nervous system and respiratory organs through prolonged or repeated exposure.

[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 reagent.
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	Phthalein complexone	Sodium tetraborate decahydrate	Other ingredient	Polyethylene
Content	<0.1%	< 5%	<0.5%	>94.4%
Chemical formula	C ₃₂ H ₃₂ N ₂ O ₁₂	Na ₂ B ₄ O ₇ · 10H ₂ O	—	(C ₂ H ₄) _n
METI No. (reference number under CSCL in Japan)	—	(1)-69	—	(6)-1
CAS No.	2411-89-4	1303-96-4	—	9002-88-4

4. First-aid measures

If reagents or test solutions;

- Enter in eyes: Immediately rinse 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 solution.
 In case of indoor use: if spilled on a table or floor, wipe off immediately spilled reagent 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): TWA 5 mg/m³ (only for Sodium tetraborate decahydrate)
 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, aluminum laminate packaging each of 5 tubes
Color: Yellow (powder), semi-transparent (polyethylene tube)
Odor: No odor
pH: 9

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.

Phthalein complexone:

No data regarding health hazard is available.

Sodium tetraborate decahydrate:

Acute toxicity:

Oral-mouse: LD₅₀ = 2,000 mg/kg, Subcutaneous-rabbit: LDLo = 150 mg/kg

Oral-Rat: LD₅₀ = 3,493, 4,500, 4,980, 5,660, 6,080 mg/kg (EHC 204 (1998)), 6,000 mg/kg (ECETOC TR63 (1995))

Skin corrosion/ irritation:

Animal Mild to moderate skin irritation (ACGIH (7th, 2001)).

Serious eye damage/ eye irritation:

Rabbit, rat "white turbidity, thickness of fat and bladder of conjunctiva", "cornea irritation recovered 8-21 days", "eye inflammation" (ECETOC TR63 (1995))

Human Eye irritation (ECETOC TR63 (1995))

Reproductive toxicity:

Effects on spermatogenesis (ATSDR (1992))

Specific target organ toxicity (single exposure):

Human Effects on kidneys, depression of central nervous system, collapse of blood vessels, disease of respiratory organs and lungs, abnormality of chest X-ray image, and respiratory irritation (ACGIH (7th, 2001)).

Specific target organ toxicity (repeated exposure):

Human Focal and total motor seizure, over sensitivity, cloudy swelling and granular degeneration of renal tubule. (EHC 204 (1998)).

Disease of respiratory organs and lungs, abnormality of chest X-ray image, chronic bronchitis (ACGIH 7th, 2001).

Animal Atrophia of whole testis (ATSDR (1992)).

Other data: Not available

Polyethylene:

Acute toxicity:

Oral: Rat LD₅₀ > 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 of LD₅₀ (rat) values of each ingredient.

[Skin corrosion/ irritation]

Not classified because the product contents less than 10% of category 2.

[Serious eye damage/ eye irritation]

Classified as Category 2 (Warning, Causes serious eye irritation.) because the product contains more than or equal to 3% of category 2A.

[Reproductive toxicity]

Classified as Category 2 (Warning, Suspected of damaging fertility or the unborn child.) because the product contains more than 3% of category 2.

[Specific target organ toxicity (single exposure)]

Classified as Category 2 (Warning, May cause damage to kidneys, nervous system and respiratory organs.) because the product contains more than or equal to 1% but less than 10% of category 1 (kidneys, nervous system and respiratory organs).

[Specific target organ toxicity (repeated exposure)]

Classified as Category 2 (Warning, May cause damage to kidneys, nervous system and respiratory organs.) because the product contains more than or equal to 1% but less than 10% of category 1 (kidneys, nervous system and respiratory organs) and category 2 (testis).

[Respiratory or skin sensitization], [Germ cell mutagenicity], [Carcinogenicity], [Aspiration hazard]
Above classifications are not possible because of lack of data.

12. Ecological information

No data on mixture is available. Data on each substance are shown.

Sodium tetraborate decahydrate:

Hazardous to the aquatic environment-Acute: Not classified based on data; Fish (zebra fish) 96-h LC₅₀ = 14.2 mg-boron/L (EHC 204, 1998) (converted to 501.0 mg/L as the concentration of sodium tetraborate decahydrate)

Hazardous to the aquatic environment Chronic: Not classified based on data; Not poorly water soluble (water solubility = 5,930 mg/L (HSDB, 2004)) and low acute toxicity.

Other hazards: No data available.

Phthalein complexone, 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]

Not classified because all ingredients are not classified.

[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

Since pH of waste solution in tube is alkali, pH = 9. Waste solution contains 6mg-boric acid/time.
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
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

15. Regulatory information

- PRTR Act: Only sodium tetraborate decahydrate is applicable as "Class I Designated Chemical Substance #405, Boron compounds".
- Industrial Safety and Health Act: Applicable
This product contains more than 0.1% of sodium tetraborate decahydrate and applicable as "Cabinet order table 9, shall be indicated the Name of the substance (article18-2) #634".
- Water Pollution Control Act: Applicable
This product contains sodium tetraborate decahydrate and is applicable as "#24 Boron compounds" of article 2 of the Cabinet order.
- Sewerage Act: Applicable
This product contains sodium tetraborate decahydrate and is applicable as "#25 Boron compounds" of article 9-4 of the cabinet order.

16. Other information

Reference literature

- 15,911 Kagaku Shouhin, The Chemical Diary Co., Ltd. (2011)
- NITE, GHS Classification, ID198 Sodium tetraborate decahydrate (2006.07.24, 2006.03.31)
- Material Safety Data Sheet No.P004, Dojindo Laboratories (2002.10.23)
- Material Safety Data Sheet No.JW190141, Wako Pure Chemical Industries, Ltd. (2009.01.13)
- 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-Labeling 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.