

3. Composition/ information on ingredients

Discrimination of single substance or mixture: Mixture

Reagent name	K-1 reagent		
Chemical name	3',3'',5',5''-Tetrabromo- <i>m</i> -cresolsulfonphthalein (Bromocresol Green)	Other (not regulated)	Polyethylene
Content	< 0.1%	< 15.1%	> 84.8%
Chemical formula	C ₂₁ H ₁₄ Br ₄ O ₅ S	-	(C ₂ H ₄) _n
METI No. (reference number under CSCL in Japan)	-	-	6-1
CAS No.	76-60-8	-	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 reagent 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: Avoid contact of reagents with your skin or eyes, and inhalation of those especially powder in tube.
 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, 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 Not established
 ACGIH (TLVs) Not established
 OSHA (PEL) Not established

Protective equipment: Recommend to wear protective glasses and gloves.

9. Physical and chemical properties

Physical state: K-1: Tube containing powder reagent 1.2 g x 50 tubes/kit (5 tubes per one aluminum laminated packaging)
Color: K-1: Orange (powder), transparent (polyethylene tube)
Odor: K-1: No odor
pH: 3 (sample solution after addition of K-1 reagent, in case the sample is pure water)

Melting point, boiling point, flash point, ignition point, lower explosion limit, vapor pressure, density, relative density, solubility, P_{ow}, 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.

3',3'',5',5''-Tetrabromo-*m*-cresolsulfonphthalein (Bromocresol Green):
Skin corrosion/irritation: Category 2
Serious eye damage/eye irritation: Category 2A
Other data: Not available

Polyethylene:

Acute toxicity: Oral-Rat LD₅₀ > 7,950 mg/kg (used 7,950 mg/kg for the calculation of ATE_{mix} below)
Carcinogenicity: IARC Group 3 (not classifiable as to carcinogenicity to humans)
Other data: Not available

GHS classifications as a mixture are shown below.

[Serious eye damage/eye irritation]:

The content of Category 2A substance is <10%. The content of Category 2B substance in "Others" is >10%.
Classified as Category 2B (Warning, Causes eye irritation).

[Acute toxicity (oral)], [Acute toxicity (dermal)], [Acute toxicity (inhalation)], [Skin corrosion/ irritation],
[Respiratory or skin sensitization], [Germ cell mutagenicity], [Carcinogenicity], [Reproductive toxicity],
[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 each substance are shown.

3',3'',5',5''-Tetrabromo-*m*-cresolsulfonphthalein (Bromocresol Green), Polyethylene:
No eco-toxicological information available.

GHS classifications as a mixture are shown below.

[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.

13. Disposal considerations

Remaining K-1 reagent and sample solution after addition of K-1 reagent indicate ca. pH 3. (in case the sample is pure water)

Always dispose of remaining waste and used containers 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. Air transportation is recommended for long-distance haul, 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:	Not applicable

16. Other information

Reference literature

15,911 no Kagaku Shouhin, The Chemical Diary Co., Ltd. (2011)
Safety Data Sheet, No. W01W0102-0268 JGHEJP, Wako Pure Chemical Industries, Ltd. (2014.01.16)
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-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.