Safety Data Sheet

Reference No. 1025

Issue: 3rd March 1999
Revision: 1st April 2024

1. Chemical product and company identification

Product name PACKTEST Aluminum Model WAK-Al

Company name KYORITSU CHEMICA-CHECK Lab., Corp.
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Dept. in charge Sales Department

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 2 (applicable only K-1 reagent)
Respiratory or skin sensitization: Category 1 (respiratory organs) (applicable only K-1 reagent)
Specific target organ toxicity (single exposure):
Category 2 (blood, respiratory organs) (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: Not classified or 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 irritation. (applicable only K-1 reagent)
May cause allergy or asthma symptoms or breathing difficulties if inhaled.
(applicable only K-1 reagent)
May cause damage to blood and respiratory organs.
(applicable only K-1 reagent)

[Precautionary statements**]**
Keep out of reach of children and store in the cool and dark place at room temperature.
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 thoroughly 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	Ammonium acetate	Acetic acid	Water	Other (not regulated)	Polyethylene
Content	20 - 29 %	1 – 4.9 %	70 - 79 %	5 – 9.9%	90 – 99 %
Chemical formula	CH_3COONH_4	CH_3COOH	H_2O	-	$(C_2H_4)_n$
METI No. (reference number under CSCL in Japan)	(1)-391	(2)-688	-	-	(6)-1
CAS No.	631-61-8	64-19-7	7732-18-5	-	9002-88-4

4. First-aid measures

If reagents or developed sample;
Enter in eyes: Immediately rinse eyes with water thoroughly.
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, drink plenty of milk or water 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 and dry sand.

6. Accidental release measures

In case of outdoor use: Avoid spill of reagents or waste liquid.
In case of indoor use: If spilled on a table or floor, wipe off immediately spilled reagents and dispose of them.
Concentrated solutions should not be released into sewer or rivers.

7. Handling and storage

Handling: Avoid eyes contact, skin contact, ingestion and inhalation of reagents.
Especially for outdoor use, ensure to bring back reagents, liquid wastes 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: 10 ppm
ACGIH (TLVs): TWA 10 ppm, STEL 15 ppm
OSHA (PEL): TWA 10 ppm (only Acetic acid)

Protective equipment: Recommend to wear protective glasses and gloves

9. Physical and chemical properties

Physical state: K-1: Liquid reagent 10 mL x 1 plastic bottle in a plastic bag
K-2: Tube containing powder reagent
1.1 g x 40 tubes/kit (5 tubes per one aluminum laminated packaging)
Color: K-1: colorless (liquid), K-2: brownish-red (powder), semi-transparent (polyethylene tube)
Odor: K-1: acetic acid-like odor, K-2: no odor
pH: 6 (when added K-1 reagent and developed sample)

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 K-1and K-2 reagents are shown below.

K-1 reagent

Ammonium acetate:

Acute toxicity:

intraperitoneal: Rat-LD50 = 632 mg/kg (RTECS), Mouse-LD50 = 736 mg/kg (RTECS)
Intravenous: Mouse-LDLo = 386 mg/kg (RTECS)

Other data: Not available.

Acetic acid:

Acute toxicity:

Oral: Classified as Category 5 based on lower value of two rat LD_{50} data (3,310 and 3,530 mg/kg) (PATTY 5th (2001)).

Dermal: Classified as Category 4 based on data that Rabbit LD_{50} = 1,060 mg/kg (PATTY 5th (2001)).

Inhalation (dust-mist): Classification is not possible; no data obtained in mist is available because a saturated vapor pressure of acetic acid is 20,800 ppm and is supposed that an inhalation study has been conducted in as a vapor.

Skin corrosion/ irritation: Classified as Category 1 based the following data;
Skin necrosis and burns were observed at 50% and higher concentration of acetic acid in animal tests (PATTY 5th (2001)). Corrosive to skin (IUCLID (2004)) and EU-Annex 1 classifies as C; R35 and Category 1A – 1C.

Serious eye damage/ eye irritation: Classified as Category 1 based on the following data;
Liquid glacial acetic acid caused serious eye damage in rabbit (PATTY 5th (2001)), 16% acetic acid caused permanent corneal damage (IUCLID (2004)), irreversible corneal torpor and opacity in human accident case (PATTY 5th (2001)).

Respiratory or skin sensitization

Respiratory sensitization: Classified as Category 1 based on the following data;
Four epidemiological data were available that respiratory asthma and hyper-sensitivity in human inhalation exposure, and occupational asthma cases were also reported (PATTY 5th (2001)).

Skin sensitization: No data.

Germ cell mutagenicity: Classification is not possible because only negative data in vitro mutagenicity is available but nothing others and according to the technical guidance.

Specific target organ toxicity (single exposure): Classified as Category 2 (blood) based on following data: Effects on blood such as disseminated intravascular coagulopathy and severe hemolysis in humans were reported (PATTY 5th (2001)). Classified as Category1 (respiratory oragans) based on following data: Inhalation exposure caused irritation to nose, upper airways and lung in humans (PATTY 5th (2001)), and corrosion to respiratory organs and lung edema may be observed in humans if inhaled vapor (ICSC (J) (1997)).

Other data: Not available.

Water:

Acute toxicity:

Oral: Human-infant TDLo = 333 g/kg, cramping, attacks or fever.
Human-men TDLo = 42.86 g/kg, shaking, mussel pain.
Rat LD_{50} > 90 ml/kg
Intravenous: Mouse- LD_{50} = 25 g/kg
Intraperitoneal: Mouse- LD_{50} = 190 g/kg
Other data: Not available.

K-2 reagent

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 classification results of K-1 and K-2 reagents as mixtures are shown below.
[Skin corrosion/ irritation]
K-1 reagent contains 1 to 5% of category 1; Classified as Category 2 (Warning, Causes skin irritation.).
[Serious eye damage/ eye irritation]
K-1 reagent contains 1 to 3% of category 1; Classified as Category 2 (Warning, Causes serious eye irritation.).
[Respiratory or skin sensitization]
K-1 reagent contains more than 1% of category 1; Classified as Category 1 (Danger, May cause allergy or asthma symptoms or breathing difficulties if inhaled.).
[Specific target organ toxicity (single exposure)]
K-1 reagent contains 1 to 10% of category 1 (blood) and category 2 (respiratory organs) substances; Classified as Category 2 (warning, May cause damage to blood and May cause damage to respiratory organs).

K-1 and K-2 reagents: [Acute toxicity (oral)], [Acute toxicity (dermal)], [Germ cell mutagenicity], [Carcinogenicity], [Reproductive toxicity], [Specific target organ toxicity (repeated exposure)], [Aspiration hazard] and
K-2 reagent: [Skin corrosion/ irritation], [Serious eye damage/ eye irritation], [Respiratory or skin sensitization], [Specific target organ toxicity (single exposure)]
Not classified or classifications are not possible because of data lack.

12. Ecological information

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

K-1 reagent
Acetic acid:
Hazardous to the aquatic environment, short-term (acute: Category 3 based on data that Crustacea (*Daphnia magna*) 24-h EC_{50} = 47 mg/L (IUCLID, 2000).
Hazardous to the aquatic environment long-term (chronic): Not classified because rapidly degradable (Biodegradation by BOD = 74% (Data on existing chemicals)) and expected to have low bioaccumulation potential (log Kow = -0.17 (PHYSPROP Database, 2005)).
Other data: Not available.
Ammonium acetate: No eco-toxicological information is available.

K-2 reagent
Polyethylene: No eco-toxicological information is available.

GHS classification results of K-1and K-2 reagents as mixtures are shown below.
K-1 reagent
[Hazardous to the aquatic environment, short-term (acute)]:
K-1 reagent contains less than 25% of category 3; Not classified.
[Hazardous to the aquatic environment long-term (chronic)]:
K-1 reagent contains only not classified ingredients; Not classified.
[Hazardous to the ozone layer]:
Classification is not possible because each of the substances is not described in Annex to Montreal Protocol.

K-2 reagent
[Hazardous to the aquatic environment, short-term (acute)],
[Hazardous to the aquatic environment, long-term (chronic)]
Classifications are not possible because of data lack.
[Hazardous to the ozone layer]:

Classification is not possible because each of the substances is not described in Annex to Montreal Protocol.

13. Disposal considerations

Liquid Waste contains ca. 30 mg of Ammonium-nitrogen per measurement.
Always dispose according to 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 less than 10% of acetic acid)
Civil Aeronautics Act: Not applicable
Fire Service Act: Not applicable
Total weight of the product: ca. 150 g/kit

15. Regulatory information

Poisonous and Deleterious Substances Control Act: Not applicable
PRTR Act: Not applicable
Industrial Safety and Health Act: Applicable
K-1 reagent contains more than 1% of acetic acid.
: “Cabinet order, article 18, shall be notified the Name of the substances, #2”
: “Cabinet order, article 18-2, shall be indicated the Name of the substances, #2”
Water Pollution Control Act: Applicable
Waste solution after measurement contains ammonium compound.
: “Cabinet Order set forth in Item (26) of Article 2”.
Sewerage Act: Applicable.
Waste solution after measurement contains ammonium compound.
: “Cabinet Order set forth in Item (1) of Article 9-5”.

16. Other information

Reference literature

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Koukuu Kikenbutsu Yusou Houreisyu, Ed. MLIT, HOUBUN SHORIN CO., LTD. (2019)
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JIS Z 7253:2019 Hazard communication of chemicals based on GHS-Labelling and Safety Data Sheet (SDS) (Japanese Industrial Standards Committee)
UN GHS (tentative translation, second 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.