SAFETY DATA SHEET

Section 1: PRODUCT AND COMPANY IDENTIFICATION

<table>
<thead>
<tr>
<th>Product name</th>
<th>Sodium Chromate Tetrahydrate</th>
</tr>
</thead>
<tbody>
<tr>
<td>Product code</td>
<td>199-01742, 193-01745, 191-01741</td>
</tr>
<tr>
<td>CAS No</td>
<td>10034-82-9</td>
</tr>
<tr>
<td>Formula</td>
<td>Na2CrO4·4H2O</td>
</tr>
<tr>
<td>Manufacturer</td>
<td>FUJIFILM Wako Pure Chemical Corporation</td>
</tr>
<tr>
<td></td>
<td>1-2 Doshomachi 3-Chome, Chuo-ku, Osaka 540-8605, Japan</td>
</tr>
<tr>
<td></td>
<td>Phone: +81-6-6203-3741</td>
</tr>
<tr>
<td></td>
<td>Fax: +81-6-6203-5964</td>
</tr>
<tr>
<td>Supplier</td>
<td>FUJIFILM Wako Pure Chemical Corporation</td>
</tr>
<tr>
<td></td>
<td>1-2 Doshomachi 3-Chome, Chuo-ku, Osaka 540-8605, Japan</td>
</tr>
<tr>
<td></td>
<td>Phone: +81-6-6203-3741</td>
</tr>
<tr>
<td></td>
<td>Fax: +81-6-6203-2029</td>
</tr>
<tr>
<td>Emergency telephone number</td>
<td>+81-6-6203-3741 / +81-3-3270-8571</td>
</tr>
<tr>
<td>Recommended uses and restrictions on use</td>
<td>For research purposes</td>
</tr>
<tr>
<td>Announcement of company name change</td>
<td>Company name has changed since April 1, 2018. Former name was &quot;Wako Pure Chemical Industries, Ltd.&quot;</td>
</tr>
</tbody>
</table>

Section 2: HAZARDS IDENTIFICATION

GHS classification

<table>
<thead>
<tr>
<th>Classification of the substance or mixture</th>
<th>Category</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acute toxicity - Oral</td>
<td>3</td>
</tr>
<tr>
<td>Acute toxicity - Dermal</td>
<td>4</td>
</tr>
<tr>
<td>Acute toxicity - Inhalation (Dusts/Mists)</td>
<td>2</td>
</tr>
<tr>
<td>Skin corrosion/irritation</td>
<td>1</td>
</tr>
<tr>
<td>Serious eye damage/eye irritation</td>
<td>1</td>
</tr>
<tr>
<td>Respiratory sensitization</td>
<td>1</td>
</tr>
<tr>
<td>Skin sensitization</td>
<td>1</td>
</tr>
<tr>
<td>Germ cell mutagenicity</td>
<td>2</td>
</tr>
<tr>
<td>Carcinogenicity</td>
<td>1A</td>
</tr>
<tr>
<td>Specific target organ toxicity (single exposure)</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>Category 1 respiratory system, kidneys, liver</td>
</tr>
<tr>
<td>Specific target organ toxicity (repeated exposure)</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>Category 1 respiratory system, kidneys</td>
</tr>
<tr>
<td>Aquatic environment (acute hazard)</td>
<td>1</td>
</tr>
<tr>
<td>Aquatic environment (long-term hazard)</td>
<td>1</td>
</tr>
</tbody>
</table>

Pictograms
Signal word: Danger

Hazard statements:
H314 - Causes severe skin burns and eye damage
H318 - Causes serious eye damage
H301 - Toxic if swallowed
H312 - Harmful in contact with skin
H330 - Fatal if inhaled
H334 - May cause allergy or asthma symptoms or breathing difficulties if inhaled
H341 - Suspected of causing genetic defects
H350 - May cause cancer
H317 - May cause an allergic skin reaction
H400 - Very toxic to aquatic life
H410 - Very toxic to aquatic life with long lasting effects
H370 - Causes damage to the following organs: respiratory system, kidneys, liver
H372 - Causes damage to the following organs through prolonged or repeated exposure: respiratory system, kidneys

Precautionary statements-(Prevention):
• Obtain special instructions before use
• Do not handle until all safety precautions have been read and understood
• Use personal protective equipment as required.
• Wash face, hands and any exposed skin thoroughly after handling
• Do not eat, drink or smoke when using this product
• Do not breathe dust/fume/gas/mist/vapors/spray
• In case of inadequate ventilation wear respiratory protection
• Contaminated work clothing should not be allowed out of the workplace
• Protective gloves
• Avoid release to the environment

Precautionary statements-(Response):
• IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
• Immediately call a POISON CENTER or doctor/physician
• Call a POISON CENTER or doctor/physician if you feel unwell.
• Wash contaminated clothing before reuse.
• IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.
• If skin irritation or rash occurs: Get medical advice/attention
• IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
• IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician
• Rinse mouth.
• Do NOT induce vomiting.
• Collect spillage

Precautionary statements-(Storage):
• Store locked up.

Precautionary statements-(Disposal):
• Dispose of contents/container to an approved waste disposal plant

Others:
Other hazards: Not available

Section 3: COMPOSITION/INFORMATION ON INGREDIENTS

Single Substance or Mixture: Substance

W01W0119-0174 JGHEEN

Sodium Chromate Tetrahydrate
Formula

Na2CrO4·4H2O

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>Weight-%</th>
<th>Molecular weight</th>
<th>ENCS</th>
<th>ISHL No.</th>
<th>CAS No.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sodium chromate</td>
<td>99.0</td>
<td>234.03</td>
<td>1-282</td>
<td>N/A</td>
<td>10034-82-9</td>
</tr>
<tr>
<td>tetrahydrate</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Impurities and/or Additives: Not applicable

**Section 4: FIRST AID MEASURES**

**Inhalation**
Remove to fresh air. If symptoms persist, call a physician.

**Skin contact**
Wash off immediately with soap and plenty of water. If symptoms persist, call a physician.

**Eye contact**
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediate medical attention is required.

**Ingestion**
Rinse mouth. Never give anything by mouth to an unconscious person. Call a physician or poison control center immediately. Do not induce vomiting without medical advice.

**Protection of first-aiders**
Use personal protective equipment as required.

**Section 5: FIRE FIGHTING MEASURES**

**Suitable extinguishing media**
Use extinguishing measures that are appropriate to local circumstances and the surrounding environment

**Unsuitable extinguishing media**
No information available

**Special extinguishing method**
No information available

**Specific hazards arising from the chemical product**
Thermal decomposition can lead to release of irritating and toxic gases and vapors.

**Protection of fire-fighters**
Use personal protective equipment as required. Firefighters should wear self-contained breathing apparatus and full firefighting turnout gear.

**Section 6: ACCIDENTAL RELEASE MEASURES**

**Personal precautions, protective equipment and emergency procedures**
For indoor, provide adequate ventilation process until the end of working. Deny unnecessary entry other than the people involved by, for example, using a rope. While working, wear appropriate protective equipments to avoid adhering it on skin, or inhaling the gas. Work from windward, and retract the people downwind.

**Environmental precautions**
To be careful not discharged to the environment without being properly handled waste water contaminated.

**Methods and materials for contaminent and methods and materials for cleaning up**
Sweep up and gather scattered particles, and collect it in an empty airtight container.

**Recovery, neutralization**
No information available

**Secondary disaster prevention measures**
Clean contaminated objects and areas thoroughly observing environmental regulations.
Section 7: HANDLING AND STORAGE

Handling
Technical measures
Avoid contact with strong oxidizing agents. Use with local exhaust ventilation.

Precautions
Do not rough handling containers, such as upsetting, falling, giving a shock, and dragging. Prevent leakage, overflow, and scattering. Not to generate steam and dust in vain. Seal the container after use. After handling, wash hands and face, and then gargle. In places other than those specified, should not be smoking or eating and drinking. Should not be brought contaminated protective equipment and gloves to rest stops. Deny unnecessary entry of non-emergency personnel to the handling area.

Safety handling precautions
Avoid contact with skin, eyes or clothing. Use personal protective equipment as required.

Storage
Safe storage conditions
Storage conditions
Store away from sunlight in well-ventilated place at room temperature (preferably cool). Keep container tightly closed. Store locked up.

Safe packaging material
Polyethylene

Incompatible substances
Strong oxidizing agents

Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

Engineering controls
In case of indoor workplace, seal the source or use a local exhaust system. Provide the safety shower facility, and hand- and eye-wash facility. And display their position clearly.

Exposure limits

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>JSOH (Japan)</th>
<th>ISHL (Japan)</th>
<th>ACGIH</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sodium chromate tetrahydrate</td>
<td>TWA: 0.05 mg/m³ OEL</td>
<td>ISHL/ACL: 0.05 mg/m³</td>
<td>TWA: 0.05 mg/m³ Cr</td>
</tr>
<tr>
<td>10034-82-9</td>
<td>TWA: 0.01 mg/m³ OEL</td>
<td>ISHL/ACL: 0.05 mg/m³</td>
<td></td>
</tr>
</tbody>
</table>

Personal protective equipment
Respiratory protection
Dust mask

Hand protection
Protection gloves

Eye protection
Protective eyeglasses or chemical safety goggles

Skin and body protection
Long-sleeved work clothes

General hygiene considerations
Handle in accordance with good industrial hygiene and safety practice.

Section 9: PHYSICAL AND CHEMICAL PROPERTIES

Form
Color
yellow

Appearance
Crystals - crystalline powder

Odor
No data available

pH
8.0 - 10.0 (10g/l, 25°C)

Melting point/freezing point
792 °C

Boiling point, initial boiling point and boiling range
No data available

Flash point
No data available

Evaporation rate:
No data available

Flammability (solid, gas):
No data available

Upper/lower flammability or explosive limits
Upper: No data available
Lower: No data available

Vapour pressure
No data available
Vapour density: No data available
Specific Gravity / Relative density: No data available
n-Octanol/water partition coefficient (log Pow): No data available
Auto-ignition temperature: No data available
Decomposition temperature: No data available
Viscosity (coefficient of viscosity): No data available
Dynamic viscosity: No data available

**Section 10: STABILITY AND REACTIVITY**

**Stability**
- **Stability**: Stable under recommended storage conditions.
- **Reactivity**: No data available

**Hazardous reactions**: None under normal processing

**Conditions to avoid**: Extremes of temperature and direct sunlight

**Incompatible materials**: Strong oxidizing agents

**Hazardous decomposition products**: Carbon monoxide (CO), Carbon dioxide (CO2), Metal oxides

**Section 11: TOXICOLOGICAL INFORMATION**

It referred to the data as sodium chromate (CAS No. 7775-11-3).

**Acute toxicity**

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>Oral LD50 (mg/kg)</th>
<th>Dermal LD50 (mg/kg)</th>
<th>Inhalation LC50 (N/A)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sodium chromate tetrahydrate</td>
<td>80 (rat)</td>
<td>1,330 (rabbit)</td>
<td>N/A</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>Acute toxicity -oral- source information</th>
<th>Acute toxicity -dermal- source information</th>
<th>Acute toxicity -inhalation gas-source information</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sodium chromate tetrahydrate</td>
<td>LD50 (oral, rat): 87 mg/kg male, LD50 (oral, rat): 40 mg/kg female (as anhydride EU-RAR(2005))</td>
<td>LD50 (skin, rabbit): 1330 mg/kg (EU-RAR(2002))</td>
<td>Based on the NITE GHS classification results.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>Acute toxicity -inhalation vapor-source information</th>
<th>Acute toxicity -inhalation dust-source information</th>
<th>Acute toxicity -inhalation mist-source information</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sodium chromate tetrahydrate</td>
<td>Based on the NITE GHS classification results.</td>
<td>Based on the NITE GHS classification results.</td>
<td>Based on the NITE GHS classification results.</td>
</tr>
</tbody>
</table>

**Skin irritation/corrosion**

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>Skin corrosion irritation source information</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sodium chromate tetrahydrate</td>
<td>Based on the NITE GHS classification results.</td>
</tr>
</tbody>
</table>

**Serious eye damage / irritation**

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>Serious eye damage source information</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sodium chromate tetrahydrate</td>
<td>Based on the NITE GHS classification results.</td>
</tr>
</tbody>
</table>

**Respiratory or skin sensitization**

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>Respiratory, Skin sensitization source information</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sodium chromate tetrahydrate</td>
<td>Based on the NITE GHS classification results.</td>
</tr>
</tbody>
</table>

**Reproductive cell mutagenicity**

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>Mutagenic source information</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sodium chromate tetrahydrate</td>
<td>Based on the NITE GHS classification results.</td>
</tr>
</tbody>
</table>

**Carcinogenicity**
Section 12: ECOLOGICAL INFORMATION

It referred to the data as sodium chromate (CAS No. 7775-11-3).

Ecotoxicity

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>Algae/aquatic plants</th>
<th>Fish</th>
<th>Crustacea</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sodium chromate tetrahydrate</td>
<td>N/A</td>
<td>N/A</td>
<td>EC50 : Daphnia magna 0.05 mg/L 48h</td>
</tr>
</tbody>
</table>

Other data

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>Aquatic toxicity -Acute- source information</th>
<th>Aquatic toxicity -Chronic- source information</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sodium chromate tetrahydrate</td>
<td>Based on the NITE GHS classification results.</td>
<td>Acute toxicity is a Category 1, but since it is a metal compound, bioaccumulation and behavior in water is unknown.</td>
</tr>
</tbody>
</table>

Persistence and degradability No information available
Bioaccumulative potential No information available
Mobility in soil No information available
Hazard to the ozone layer No information available

Section 13: DISPOSAL CONSIDERATIONS

Waste from residues
Disposal should be in accordance with applicable regional, national and local laws and regulations.

Contaminated container and contaminated packaging
Disposal should be in accordance with applicable regional, national and local laws and regulations.

Section 14: TRANSPORT INFORMATION

ADR/RID

<table>
<thead>
<tr>
<th>UN number</th>
<th>Proper shipping name</th>
<th>UN classification</th>
</tr>
</thead>
<tbody>
<tr>
<td>UN3288</td>
<td>Toxic solid, inorganic, n.o.s. (Sodium chromate tetrahydrate)</td>
<td>6.1</td>
</tr>
</tbody>
</table>

Subsidiary hazard class
Packing group
Marine pollutant

IMDG

<table>
<thead>
<tr>
<th>UN number</th>
<th>Proper shipping name</th>
<th>UN classification</th>
</tr>
</thead>
<tbody>
<tr>
<td>UN3288</td>
<td>Toxic solid, inorganic, n.o.s. (Sodium chromate tetrahydrate)</td>
<td>6.1</td>
</tr>
</tbody>
</table>
Subsidiary hazard class
Packing group
Marine pollutant (Sea)
Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

IATA
UN number
Proper shipping name:
UN classification
Subsidiary hazard class
Packing group
Environmentally Hazardous Substance

Section 15: REGULATORY INFORMATION

International Inventories
EINECS/ELINCS
TSCA

Japanese regulations
Fire Service Act
Poisonous and Deleterious Substances Control Law
Industrial Safety and Health Act
Harmful Substances Whose Names Are to be Indicated on the Label (Law Art.57, Para.1, Enforcement Order Art.18)
Group 2 Specified Chemical Substance
Notifiable Substances (Law Art.57-2, Enforcement Oder Art.18-2 Attached Table No.9)No.142
Working Environment Evaluation Standards, Administrative Control Levels (Law Art.65-2, Para.1)

Regulations for the carriage and storage of dangerous goods in ship
Civil Aeronautics Law
Toxic and Infectious Substances (Ordinance Art.194, MITL Nortification for Air Transportation of Explosives etc., Attached Table 1)

Pollutant Release and Transfer Register Law
Specified Class 1-No.

Water Pollution Control Act
Harmful Substances (Law Art.2, Enforcement Order Art.2, Ordinance Designating Wastewater Standards Art.1)

Export Trade Control Order
Not applicable

Air Pollution Control Law
Priority Chemical Substances

Soil Contamination Control Law
Designated Hazardous Substances

Section 16: OTHER INFORMATION

Key literature references and sources for data etc.
NITE: National Institute of Technology and Evaluation (JAPAN)
http://www.safe.nite.go.jp/japan/db.html
IATA dangerous Goods Regulations
RTECS:Registry of Toxic Effects of Chemical Substances
Japan Industrial Safety and Health Association GHS Model SDS
Chemical Dictionary, Kyouritsu Publishing Co., Ltd.
etc

Disclaimer
The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

GHS Classification is according to JIS Z7252(2014). *JIS: Japanese Industrial Standards

**Product information**

You might get a product which indicates a former company name, during the period of transition.

End of Safety Data Sheet