MSDS – Sodium Dichromate

MATERIAL SAFETY DATA SHEET (MSDS) / SAFETY DATA SHEET (SDS)

1. Identification

Product Name: Sodium Dichromate

Synonyms: Sodium dichromate(VI), Disodium dichromate

Chemical Formula: $Na_2Cr_2O_7$

CAS Number: 10588-01-9 (anhydrous) / 7789-12-0 (dihydrate)

Recommended Use: Laboratory reagent, industrial oxidizing agent, corrosion inhibitor, pigment manufacture

Restrictions on Use: Not for consumer use

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2. Hazard(s) Identification

GHS Classification:

Oxidizing Solid – Category 2

Acute Toxicity (Oral) – Category 3

Acute Toxicity (Dermal) – Category 3

Acute Toxicity (Inhalation) – Category 3

Skin Corrosion – Category 1B

Serious Eye Damage – Category 1

Respiratory Sensitization – Category 1

Skin Sensitization – Category 1

Germ Cell Mutagenicity – Category 1B

Carcinogenicity – Category 1A

Reproductive Toxicity – Category 1B

Specific Target Organ Toxicity (Repeated Exposure) – Category 1

Hazardous to Aquatic Environment – Acute & Chronic Category 1

Signal Word: DANGER

Hazard Statements:

May intensify fire; oxidizer

Toxic if swallowed, inhaled, or in contact with skin

Causes severe skin burns and eye damage

May cause allergy or asthma symptoms or breathing difficulties

May cause genetic defects

May cause cancer

May damage fertility or the unborn child

Causes damage to organs through prolonged or repeated exposure

Very toxic to aquatic life with long-lasting effects

Precautionary Statements:

Avoid breathing dust/mist. Use only with adequate ventilation. Wear protective gloves, clothing, eye and face protection. Do not release to the environment.

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3. Composition / Information on Ingredients

Component	Concentration
Sodium Dichromate	≥ 99%

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4. First-Aid Measures

Inhalation:

Move person to fresh air immediately. Seek medical attention. Administer oxygen if needed.

Skin Contact:
Remove contaminated clothing immediately. Rinse skin with water for at least 15 minutes. Get medical attention.
Eye Contact:
Rinse cautiously with water for at least 15 minutes. Remove contact lenses if present. Seek immediate medical care.
Ingestion:
Do NOT induce vomiting. Rinse mouth. Give water if conscious. Seek immediate medical attention.
Most Important Symptoms:
Burning sensation, respiratory distress, ulceration, allergic reactions, kidney and liver damage.

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5. Fire-Fighting Measures

Suitable Extinguishing Media:
Water spray (for cooling), dry chemical, foam
Specific Hazards:
Strong oxidizer; may intensify fire. Decomposes to toxic chromium fumes.
Protective Equipment:
Self-contained breathing apparatus (SCBA), full protective gear

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6. Accidental Release Measures

Personal Precautions:
Evacuate area. Wear full PPE including respirator.
Environmental Precautions:
Prevent entry into waterways and soil.
Clean up Methods:
Carefully collect solid material using non-combustible tools. Place in labelled hazardous waste container.

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7. Handling and Storage

Handling:
Avoid dust generation. Do not mix with organic or combustible materials.
Storage:
Store in tightly closed container in a cool, dry, well-ventilated area away from reducing agents and combustibles.

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8. Exposure Controls / Personal Protection

Exposure Limits (OSHA / ACGIH):
Chromium (VI):
OSHA PEL: 5 µg/m³
ACGIH TLV: 10 µg/m³
Engineering Controls:
Local exhaust ventilation
PPE:
Respirator (P100 or supplied-air)
Chemical-resistant gloves (nitrile, neoprene)
Safety goggles and face shield
Protective clothing

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9. Physical and Chemical Properties

Property	Value
Appearance	Orange-red crystalline solid

Property	Value
Odour	Odourless
Melting Point	~356 °C
Solubility	Very soluble in water
pH (solution)	Acidic
Oxidizing Properties	Strong oxidizer

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10. Stability and Reactivity
Stability: Stable under normal conditions
Reactivity: Strong oxidizing agent
Incompatible Materials: Organic materials, reducing agents, acids, metals
Hazardous Decomposition Products: Chromium oxides

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11. Toxicological Information
Highly toxic by ingestion, inhalation, and skin contact
Known human carcinogen (lung cancer)
Causes severe burns and allergic reactions
Chronic exposure damages kidneys, liver, respiratory system

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12. Ecological Information
Extremely toxic to aquatic organisms
Persistent and bio accumulative
Long-term environmental hazard

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13. Disposal Considerations
Dispose of contents and container as hazardous waste in accordance with local, national, and international regulations.

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14. Transport Information
UN Number: UN 3086
Proper Shipping Name: Sodium dichromate
Hazard Class: 5.1 (Oxidizer), 6.1 (Toxic)
Packing Group: II
Environmental Hazard: Yes (Marine Pollutant)

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15. Regulatory Information
OSHA: Hazardous
IARC: Group 1 Carcinogen
EPA: Listed hazardous substance
REACH: Substance of Very High Concern (SVHC)

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16. Other Information
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