BOLSTER UP CHEMICAL SOLUTION COMPANY

MATERIAL SAFETY DATA SHEET (MSDS)

CHROMIC ACID WASTE /EFFLUENT

SECTION 1: CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

- **Product Name:** Chromic Acid Waste / Chromium-bearing Effluent
- **Chemical Name:** Hexavalent Chromium Solution (CrO_3 in water)
- **CAS Number:** 1333-82-0 (For Chromic Acid)
- **Company Name:** [Bolster Up Chemical Solution Company]
- **Address:** [Varanasi (Uttar Pradesh)]
- **Email:** bolsterupcompany@gmail.com
- **Web:** www.bolsterupcompany.com
- **Emergency Contact:** [+91 9670386946 , +91 9451063233]

SECTION 2: HAZARDS IDENTIFICATION

- **Classification:** Corrosive, Toxic, Carcinogenic, Oxidizer.
- **Adverse Health Effects:**
  - Causes severe skin burns and eye damage.
  - May cause cancer if inhaled (Carcinogen Category 1).
  - May cause genetic defects.
  - Toxic if swallowed or inhaled.

- **Environmental Hazards:** Highly toxic to aquatic life with long-lasting effects.

SECTION 3: COMPOSITION / INFORMATION ON INGREDIENTS

- **Chromium Trioxide (CrO_3) / Chromic Acid:** Variable concentration (Waste)
- **Water (H_2O):** Remaining percentage
- **Heavy Metals / Impurities:** Depends on the industrial process (e.g., Electroplating bath waste).

SECTION 4: FIRST AID MEASURES

- **Skin Contact:** Immediately flush skin with plenty of water for at least 15 minutes. Remove contaminated clothing and shoes. Seek immediate medical attention from a specialist.
- **Eye Contact:** Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do. Continue rinsing. Get immediate medical help.
- **Inhalation:** Move victim to fresh air. If breathing is difficult, oxygen should be administered by qualified personnel. Seek medical advice immediately.
- **Ingestion:** Do NOT induce vomiting. Rinse mouth with water. Seek emergency medical attention immediately.

SECTION 5: FIRE FIGHTING MEASURES

- **Flammability:** Non-combustible, but as a strong oxidizer, it can increase the flammability of combustible materials.
- **Extinguishing Media:** Use media appropriate for the surrounding fire, such as water spray or alcohol-resistant foam.
- **Specific Hazards:** Heating can release toxic chromium oxides and oxygen, which may accelerate combustion.
- **Protective Equipment:** Firefighters must wear full protective clothing and self-contained breathing apparatus (SCBA).

SECTION 6: ACCIDENTAL RELEASE MEASURES

- **Personal Precautions:** Use full personal protective equipment (PPE). Avoid contact with spilled material and do not breathe vapors.
- **Environmental Precautions:** Prevent the product from entering drains, sewers, or watercourses.
- **Containment:** Large spills should be contained and handled according to local environmental regulations. Professional hazardous material cleanup services are recommended.

SECTION 7: HANDLING AND STORAGE

- **Handling:** Use only in well-ventilated areas. Wear appropriate PPE. Avoid contact with eyes, skin, and clothing.

- **Storage:** Store in a cool, dry, well-ventilated area in dedicated corrosion-resistant containers. Keep away from combustible materials and strong bases.

SECTION 8: EXPOSURE CONTROLS / PERSONAL PROTECTION

- **Engineering Controls:** Use local exhaust ventilation or other engineering controls to keep airborne levels below recommended exposure limits.
- **PPE:**
  - **Eyes:** Chemical safety goggles or full-face shield.
  - **Skin:** Impervious gloves and protective acid-resistant clothing.
  - **Respiratory:** Use NIOSH/MSHA approved respiratory protection when mist or vapor is present.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

- **Appearance:** Liquid solution, typically amber to reddish-brown.
- **pH:** Highly acidic.
- **Solubility:** Soluble in water.

SECTION 10: STABILITY AND REACTIVITY

- **Stability:** Stable under normal conditions.

- **Incompatibility:** Highly reactive with organic materials, reducing agents, and alkalis.

SECTION 11: TOXICOLOGICAL INFORMATION

- **Health Hazards:** Chronic exposure is linked to severe respiratory issues, skin ulcers, and is classified as a known human carcinogen.

SECTION 12: ECOLOGICAL INFORMATION

- **Impact:** This substance is extremely hazardous to aquatic environments and requires strict containment to prevent ecological damage.

SECTION 13: DISPOSAL CONSIDERATIONS

- **Waste Treatment:** Treatment of chromic acid effluent is a complex industrial process involving chemical reduction and precipitation. Due to the high toxicity of Hexavalent Chromium, Effluent Treatment Plants (ETP) must be designed by licensed environmental engineers.
- **Sludge:** Hazardous sludge must be disposed of through authorized Toxic Waste Disposal Facilities (TSDF) in accordance with national regulations.

SECTION 14: TRANSPORT INFORMATION

- **Hazard Class:** Class 8 (Corrosive).
- **Proper Shipping Name:** Corrosive liquid, acidic, inorganic, n.o.s. (Chromic Acid Solution).

SECTION 15: REGULATORY INFORMATION

- **Compliance:** Operations must strictly adhere to Pollution Control Board guidelines and Hazardous Waste Management Rules.