

MATERIAL SAFETY DATA SHEET

Revision #1

Section 1 - Product Identification & Use

Product Name: **Advance Clean Plus**
 WHMIS Classification: Class D1B, Class E
 TDG Classification: Corrosive liquids n.o.s. (potassium hydroxide)
 Class 8, UN 1760, II
 Manufacturer: Advance Chemicals Ltd.
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Section 2 - Hazardous Ingredients

Hazardous Components	%(w/w)	C.A.S. No.	LD ₅₀ & LC ₅₀
Potassium hydroxide	10-20	1310-58-3	(oral, rat) 365mg/kg
Sodium hydroxide	3-7	1310-73-2	(oral, rabbit) 500 mg/kg
Tetrapotassium pyrophosphate	1-5	7320-34-5	(oral, rat) 2980mg/kg
Sodium tripolyphosphate	3-7	7758-29-4	(oral, rat) 6500 mg/kg
Sodium Silicate	1-5	1344-09-8	(oral, rabbit) 3.3-8.4g/kg

Section 3 - Physical Data

Physical state: liquid Boiling point: no data found
 Liquid density: 1.20g/mL Freezing point: no data found
 pH: 14.5 @ 20°C Solubility in water: 100%
 Vapour pressure: no data Evaporation rate: no data found

Odour & Appearance: The product is clear, deep red liquid solution. There may be a slight caustic like odour above the open liquid. Vapour may be very irritating to the respiratory tract. Extremely corrosive when contact with exposed skin and eyes.

Section 4 - Fire or Explosion Hazard

Flammability: The product is not considered to be flammable.
Extinguishing media: Wear full chemical protective clothing. Use an extinguishing media for surrounding the fire, or all-purpose foam by manufacturer's recommended techniques for large fires. Use water to cool fire exposed containers to prevent vapour build-up and rupture. Water may also be used to flush spills away from dangerous exposures.
Hazardous Combustion Products: Product contact with soft metals such as aluminum, tin and zinc, may generate hydrogen gas.

Section 5 - Reactivity Data

Stability: Stable.
Incompatible substances: Sulphides, cyanides, fluorides, carbides, silicates and strong oxidizing agents.
Polymerization: Will not occur.
Conditions to Avoid: Contact with soft metals. Product may absorb carbon dioxide gas from the atmosphere or other sources, and form sodium carbonate. May spatter upon contact with water.
Hazardous Combustion Products: Wear self-contained breathing apparatus.
Materials to Avoid: Contact with water, acids, flammable liquids and organic compounds, especially trichloroethylene, may cause fire and explosion. Contact with soft metals like aluminum, tin and zinc, may produce flammable hydrogen gas. Contact with nitro-methane and other nitro compounds, may cause formation of shock sensitive salts.

Section 6 - Toxicological Properties

Acute Toxicity: No information available.
Carcinogenicity: Potassium and sodium hydroxide have been implicated as a cause of cancer of the esophagus in individuals who have ingested it. The cancer may develop 12-42 years after the ingestion incident. Similar cancers have been observed at the site of severe thermal burns. These cancers may be due to the tissue destruction and scar formation rather than the hydroxide itself. (This information has been reproduced from the Material Safety Data Sheet for Concentrated 50% NaOH, Stanchem, 1991)
Inhalation: Severe irritation of the throat and nasal passages may result from inhaling dust or mists of this product.
Skin contact: contact with this product solution may cause severe and deep burns of the skin. Painful tissue destruction may result and the sensation of pain may be delayed.
Eye contact: Extremely corrosive. Causes corneal scarring and clouding. Glaucoma, cataracts and permanent blindness may occur. Damage may be delayed and not immediately apparent.
Ingestion: Extremely corrosive. May cause pain and severe vomiting, burns of the throat and esophagus, and perforation of the esophagus. May be fatal.
Other health effects: CORROSIVE EFFECTS ON THE SKIN AND EYES MAY BE DELAYED, AND DAMAGE MAY RESULT WITHOUT THE SENSATION OR ONSET OF

ANY PAIN. STRICT ADHERENCE TO SAFETY AND IMMEDIATE FIRST AID FOLLOWING ANY EXPOSURE IS ESSENTIAL.

Section 7 - Preventative Measures

Personal Protective Equipment: Avoid contact with skin and eyes. Wear chemical protective gloves, goggles and face shield, rubber apron and boots. Eye wash fountains and safety shower facilities should be provided nearby for emergency use.

Respiratory protection: Not needed under normal circumstances.

Ventilation Requirements: Use in a well ventilated area.

Action to take for spills & leaks: Wear chemical protective clothing, rubber gloves and suitable respiratory protection. Small spills should be wiped up with absorbent material and disposed of in government approved waste containers. The spill area may then be flushed with large quantities of water. Larger spills should be contained by diking with sand, soil or other absorbent, non-combustible material, then transferred into approved waste containers for proper disposal. Do not allow spilled, or waste product to flow into waterways. Keep product out of sewers, storm drains, surface run-off water and soil. Restrict access to non-protected personnel. Comply with all government regulations on spill reporting, and handling and disposal of waste.

Disposal methods: Dispose of contaminated product and materials used in cleaning up spills or leaks in a manner approved for this material. Consult appropriate federal, provincial and local regulatory agencies to ascertain proper disposal procedures.

Note: Empty containers can have residues, gasses and mists, and are subject to proper waste disposal as mentioned above.

Storage & Handling Precautions: Warning, harmful or fatal if swallowed. Causes eye, skin and respiratory irritation. Avoid contact with eyes and repeated contact with skin and clothing. Do not ingest. Keep container tightly closed when not in use. Store upright in a cool, dry, well-ventilated place away from incompatible materials. Do not use pressure to empty container. Wash thoroughly after handling. Use with adequate ventilation.

Repair and Maintenance Precautions: Do not cut, grind, weld or drill in, on or near this container.

Section 8 - First Aid Measures

If inhaled: Remove victim to fresh air. Give artificial respiration if not breathing. Get immediate emergency medical attention. Keep patient warm and at rest.

In case of eye contact: Immediately flush eyes with clean water for at least twenty (20) minutes, lifting the upper and lower eyelids to ensure complete flushing action of the eyeball. GET IMMEDIATE EMERGENCY MEDICAL ATTENTION. Continue flushing the eyes during transport if necessary.

In case of skin contact: Immediately flush skin with plenty of clean running water for at least twenty (20) minutes. Remove all contaminated clothing and shoes. Wash thoroughly with soap and water. If irritation persists, seek immediate medical attention. Launder clothes before re-use.

In case of ingestion or swallowing: If victim is conscious, dilute stomach contents by giving large amounts of water or milk. DO NOT INDUCE VOMITING. Never give anything by mouth to an unconscious victim. GET IMMEDIATE EMERGENCY MEDICAL ATTENTION.

Section 9 - Preparation Information

Advance Chemicals Limited expressly disclaims all expressed or implied warranties of merchantability and fitness for a particular purpose with respect to the product provided. The information contained herein is offered only as a guide to the handling of this specific product, and has been prepared in good faith by technically knowledgeable personnel. This M.S.D.S. is not intended to be all-inclusive, and the manner and conditions of use may involve other and additional considerations.

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