



Inland ATK-Titrant Solution

Material Safety Data Sheet

Revision Date January 2004

For Chemical Emergency Call Chemtrec 800-424-9300

1. Substance/Company Identification

PRODUCT NAME: **Inland Acidity Test Kit-Titrant Solution**
CAS NUMBER: 2-propanol 67-63-0
Toluene 108-88-3
MANUFACTURER: Inland Vacuum Industries
Churchville NY 14428
(585) 293-3330

2. Composition/ Ingredients

CHEMICAL NAME: Toluene, 2-propanol
PRODUCT CLASSIFICATION: petroleum solvents
CHEMICAL FORMULA: C_3H_8O , C_7H_8
REGULATED INGREDIENTS: 47% 2-propanol, 53% toluene

3. Hazards Identification

POSSIBLE ENTRY ROUTES: Inhalation, ingestion, skin, eye
TARGET ORGANS: Isopropanol-poisoning may affect the kidneys
Toluene: poisoning may affect the heart, liver kidneys.

ACUTE EFFECTS:

Toluene-

Inhalation- The level required to produce narcosis can exist without associated respiratory tract irritation. Odor detection is insufficient for warning due to olfactory fatigue.

Skin Contact: Contact with the liquid may cause irritation, scaling, cracking, and dermatitis. Skin absorption does occur, but it is generally too slow to produce signs of acute systemic toxicity. Paresthesias of the skin may occur from vapor exposure.

Eye Contact: May cause corneal burn if not promptly removed. Vapors may cause noticeable irritation and lacrimation at 300-800ppm.

Ingestion: May cause nausea, vomiting, colic, diarrhea, burning sensation in the epigostion, headache, dizziness, weakness, drowsiness, and in coordination.

Isopropanol

Inhalation: Human subjects exposed to 400ppm had mild irritation of the nose and throat.

Skin Contact: May cause slight irritation. Slight erythema occurred after single application to rabbit skin. The substance may be absorbed.

Eye Contact: In rabbit eyes, a drop caused mild transitory injury. A 50% aqueous solution after 3 minutes caused moderate irritation.

Ingestion: May cause abdominal pain, nausea, vomiting, and hemorrhage. Central nervous system depression may occur with headache, dizziness, flushing, incoordination, confusion, hypertension, and depressed respiration.

CHRONIC EFFECTS:

Toluene

Inhalation: Repeated or prolonged exposure may cause mucous membrane irritation, vomiting, insomnia, nosebleeds, chest pains, nausea, anorexia, bad taste, and momentary loss of memory.

Skin Contact: Repeated or prolonged contact may cause defatting of the skin, resulting in a dry, fissured dermatitis. Ten to twenty applications to rabbit skin produced slight to moderate irritation and slight necrosis.

Eye Contact: Repeated or prolonged contact may cause conjunctivitis, rarely but such as reddening of the vision have occurred.

Ingestion: No effects were reported in rats fed up to 65mg/kg per day for 193 days.

Isopropanol

Inhalation: Mice subjected to 10900ppm isopropyl alcohol for about hours/day until they accumulated 123 hrs. of exposure were narcotized but survived. Reversible fatty changes were observed in the liver

Skin Contact: Repeated or prolonged exposure may cause dermatitis due to the defatting action on the skin. Repeated an prolonged exposure to the skin of rabbits caused slight erythema, drying and superficial desquamation.

Eye Contact: Prolonged or repeated exposure to vapors may cause conjunctivitis, iritis, and corneal opacity.

Ingestion: No adverse effects resulted in human following daily ingestion of 2.6 and 6.4mg/kg for 6 weeks.

4. First Aid Measures

INHALATION: remove to fresh air. If breathing has stopped, perform artificial respiration. Keep person warm and at rest. Get medical attention immediately.

SKIN CONTACT: Remove contaminated clothing and shoes immediately. Wash affected area with soap and large amounts of water until no evidence of chemical remains(approximately 15-20 minutes). et medical attention immediately.

EYES: Flush with water for at least 15 min. Contact a physician immediately.

INGESTION: Do not induce vomiting. Contact a physician. No specific antidote. Treat symptomatically and supportively.

5. Fire Fighting Measures

FLASH POINT: 4°C

METHOD USED: Pensky-Martin Closed Cup

EXPLOSIVE LIMITS LOWER: 1.2% **UPPER:** 12.7%

EXTINGUISHING MEDIA: Water fog, halon, carbon dioxide, alcohol foam, or dry chemical **NFPA Class I B Material.**

SPECIAL FIREFIGHTING PROCEDURES: Wear breathing gear when fighting fires in enclosed spaces.

UNUSUAL FIRE AND/OR EXPLOSION HAZARDS: Move containers from fire area if possible. Cool fire exposed containers from side until well after is out. Avoid breathing vapors.

6. Accidental Release Measures

PROCEDURE TO BE FOLLOWED IN EVENT OF RELEASE: Shut off all ignition sources. Small spills may be wiped up with a cloth. Large spills should be picked up immediately with an absorbent.

7. Handling and Storage

HANDLING: Keep container closed and store in a cool place away from heat and flame Never wear contact lenses when handling this product. Keep out of reach of children.

STORAGE: Do not allow the material to dry out.

8. Exposure Controls/Personal Protection

ENGINEERING CONTROL MEASURES: None required

RESPIRATORY PROTECTION: Self-contained breathing gear should be worn when handling large quantities.

PROTECTIVE GLOVES: Yes - made of rubber or plastic.

SAFETY GLASSES/GOGGLES: Yes - glasses should have side shields

OTHER PROTECTIVE EQUIPMENT: Impervious clothing and equipment to prevent repeated or prolonged skin contact.

9. Physical & Chemical Properties

PHYSICAL STATE: Liquid

VAPOR PRESSURE: >1 Torr @ 25 °C

BOILING POINT: >82 °C

EVAPORATION RATE (butyl acetate = 1): ~3

VAPOR DENSITY: ~2.5

SPECIFIC GRAVITY: 0.82

SOLUBILITY IN WATER: ~0.05%

APPEARANCE: Clear yellow liquid with strong aromatic odor. It ma turn green or orange when exposed to air for long periods.

ODOR THRESHOLD: .2-5 ppm

10. Stability & Reactivity

STABILITY: Material is stable when not allowed to dry.

CONDITIONS TO AVOID: May slowly produce peroxides on exposure to

air and under normal storage conditions. An explosion hazard may exist if the substance is distilled or allowed to evaporate to dryness.
INCOMPATIBILITY (MATERIALS TO AVOID): Strong oxidizers, fire and explosion hazards.
HAZARDOUS DECOMPOSITION PRODUCTS: Incomplete combustion may produce toxic oxides of carbon.
HAZARDOUS POLYMERIZATION: Will not occur.

11. Toxicological Information

ACUTE ORAL: See section 3 of this MSDS
ACUTE DERMAL: See section 3 of this MSDS
ACUTE INHALATION: See section 3 of this MSDS

12. Ecological Information

ENVIRONMENTAL: When used as indicated, no adverse environmental effects are foreseen.
MOBILITY: Volatile and soluble in water.
BIODEGRADABILITY: No evidence of biodegradation
BIOACCUMULATION: No evidence of bioaccumulation.

13. Disposal Considerations

Product and packaging must be disposed of in accordance with Federal, State and local regulations. Material may be returned for reclamation. Can be burned in a chemical incinerator equipped with an afterburner and scrubber.

14. Transport Classification

Shipped under UN1993. Reportable quantity for Toluene is 1000 lbs. EPA hazardous waste number F005

15. Regulatory Information

Listed on the TSCA Inventory and EINECS

16. Other Information

NFPA RATING

FLAMMABILITY	3
HEALTH HAZARD	2
REACTIVITY	0
SPECIAL HAZARD	NONE