

# Material Safety Data Sheet

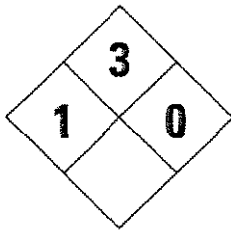
## General Information

## Flex 80

**Date Issued:** 2-1-06  
**Patent Number:** 4,911,915  
**Manufacturer:** Richard-Allan Scientific  
 4481 Campus Drive  
 Kalamazoo, MI 49008  
 800 522-7270  
**CHEMTREC:** 800 424 9300 For transportation emergencies  
**Chemical Family:** Alcohols

Flex 80

## Hazard Symbology



**Health Hazard**  
 4 Deadly  
 3 Extreme danger  
 2 Hazardous  
 1 Slightly hazardous  
 0 Normal material

**Fire Hazard**  
**Flash Points (FP)**  
 4 Flammable Gas  
 3 Below 100" F  
 2 Above 100" Beiw 200" F  
 1 Greater than 200" F  
 0 Will not burn Below 1500" F

**Reactivity**  
 4 May detonate  
 3 Shock & heat may detonate  
 2 Violent chemical change  
 1 Unstable if heated  
 0 Stable

**Specific Hazard**  
 ACID - Acid  
 COR - Corrosive  
 OXY - Oxidizer  
 P - Polymerization  
 ✱ - Radioactive  
 W - Use No Water

## Hazardous Ingredients

	CAS No.	PEL 8 hr. TWA	STEL	Agency
Isopropanol	67-63-0	400 ppn	500 ppm	OSHA, ACGIH
Methanol	67-56-1	200 ppm	250 ppm	OSHA, ACGIH

## Physical Data

**Appearance and Odor:** Water white liquid. Mild characteristic odor.  
**Boiling Point:** 72.2 - 96.1" C (162 - 205" F)  
**Evaporation Rate:** 2.8 (Butyl Acetate = 1)  
**Percent Volatile by Volume:** 100%  
**Solubility in Water:** Complete  
**Specific Gravity:** 0.85 @ 21" C (Water = 1)  
**Vapor Density:** 1.3 (Air = 1)  
**Vapor Pressure:** 30 mrn Hg

### Emergency and First Aid Procedures

**Skin Contact:** Remove contaminated clothing including shoes immediately. Wash the affected area of your body with soap or mild detergent and large amounts of water until no evidence of the chemical remains – at least 15 to 20 minutes.

**Eye Contact:** In case of eye contact, immediately flush eye with plenty of water for at least 15 minutes, occasionally lifting upper and lower lids. Call a physician. If you have appreciable eye irritation from a splash or excessive exposure, you should be referred to an ophthalmologist for evaluation.

**Inhalation:** If affected by vapors, move patient to fresh air immediately. If breathing is difficult, administer oxygen. If breathing has stopped, give artificial respiration. Keep the affected person warm and at rest.

**Ingestion:** Immediately drink two glasses of water and induce vomiting by either giving ipecac syrup or by placing finger at back of throat. Never give anything by mouth to an unconscious person. Get medical attention immediately.

### Spill, Leak and Disposal Procedures

**Emergencies:** If a spill of appreciable quantity occurs, leave the area quickly unless you have specific emergency duties. Do not touch spilled material. Designated person may stop the leak and shut off ignition sources if these procedures can be done without risk. Designated persons should isolate the hazard area and deny entry except for necessary people protected by suitable protective clothing and respirators adequate for the exposure. Use water spray to reduce vapors. Do not smoke, and prohibit all flames or flares in the hazard area.

**Occupational Spill:** For small containers, place the leaking container in a well ventilated area. Take up small spills with absorbent material and transfer to hood. Place the waste into properly labeled containers for later disposal. For larger spills, dike the spill to minimize contamination and facilitate salvage or disposal. Remaining liquid may be taken up on sand, clay, earth, floor absorbent, or other absorbent material and shoveled into containers. Prevent run-off to sewers, streams, or other bodies of water. Your employer must comply with EPA rules regarding the clean-up of toxic waste and notify state and local authorities, if required.

**Waste Disposal:** Your employer must dispose of waste containing alcohol in accordance with applicable local, state and federal laws (each has unique requirements) and in a manner that minimizes exposure of employees at the site and of the clean-up crew. Flex 80 is considered to be a hazardous waste - Hazardous waste code D001.

### Shipping Information

**Storage Conditions:** Keep container closed. Keep away from heat and open flame. Store at room temperature: 15 - 30° C (59 - 86° F).

**Transportation:** DOT shipping name is 'Flammable Liquid, N.O.S.' DOT hazard class is '3'.

**Shipping Containers:** Drums, Bottles.

**Fire and Explosion  
Hazard Data**

**Flammability Class (OSHA):** IB  
**Flash Point (TCC):** 20.5° C (68° F) Closed Cup  
**Flammable Limits in Air;  
 % by Volume:** LOWER 2.5  
 UPPER 35

**Extinguishing Media:** Alcohol foam, dry chemicals, carbon dioxide, water in flooding amounts as a fog. Solid streams may not be effective. Cool fire-exposed containers with water from side until well after fire is out. Use of water spray to flush spills can also dilute the spill to produce non-flammable mixtures. Water runoff, however, should be contained for treatment.

**Special Fire and Explosion Hazards:** Vapors are heavier than air and may travel along the ground or may be moved by ventilation and ignited by pilot lights, other flames, sparks, heaters, smoking, electric motors, static discharge, or other sources at locations distant from material handling point.

**Special Fire Fighting Procedures:** Wear self-contained breathing apparatus with a full face piece operated in the positive pressure demand mode when fighting fires.

**Reactivity Data**

**Stability:** Stable.

**Incompatibility:** Avoid contact with strong oxidizing agents.

**Hazardous Decomposition:** Thermal decomposition or burning may produce carbon monoxide and/or carbon dioxide.

**Hazardous Polymerization:** None

**Health Hazard Data**

**Skin Effects:** Prolonged or repeated contact can cause moderate irritation, defatting, dermatitis.

**Eye Effects:** Can cause severe irritation, redness, tearing, blurred vision

**Systemic Effects:**

**Ingestion:** Can cause gastrointestinal irritation, nausea, vomiting, diarrhea, blindness, death.

**Inhalation:** Excessive inhalation of vapors can cause nasal and respiratory irritation, central nervous system effects including dizziness, weakness, fatigue, nausea, headache, unconsciousness, and even death.

**Chronic Effects of Exposure:**

Overexposure to this material, or its components, has been suggested as a cause of the following effects in humans: Liver abnormalities, eye damage, and kidney damage.

**Protective Equipment**

**Ventilation:** General mechanical ventilation or fume hood.

**Personal Protective Equipment:** Chemical resistant gloves; chemical splash goggles; and NIOSH/MSHA approved respirators are advised in the absence of proper environmental control.