



LABORATORY CHEMICALS AND CONSUMABLES

# MATERIAL SAFETY DATA SHEET

## AMYL ALCOHOL

### 1. Chemical Product and Company information.

**Product name:** Amyl Alcohol

**Contact Information:**

Radchem cc  
PO Box 166982  
Brackendowns  
Alberton 1454  
Telephone : **011 867 3726 / 2864**

**Emergency Telephone Numbers:**

### 2. Hazard Identification

Hazardous in case of skin contact (irritant), of eye contact (irritant), of ingestion, of inhalation. Slightly hazardous in case of skin contact (permeator).

### 3. Composition / information on ingredients

**CAS #:** 71-41-0

**Synonym:** Primary Amyl alcohol; n-Pentanol; Amyl alcohol, normal; Pentanol; n-Butylcarbinol; Pentanol-1

**Chemical Name:** Pentyl Alcohol

**Chemical Formula:** C<sub>5</sub>H<sub>12</sub>O

### 4. First Aid Measures

**Eye Contact:** Check for and remove any contact lenses. Immediately flush eyes with running water for at least 15 minutes, keeping eyelids open. Cold water may be used. Get medical attention.

**Skin Contact:** In case of contact, immediately flush skin with plenty of water. Cover the irritated skin with an emollient. Remove contaminated clothing and shoes. Cold water may be used. Wash clothing before reuse. Thoroughly clean shoes before reuse. Get medical attention.

**Serious Skin Contact:** Wash with a disinfectant soap and cover the contaminated skin with an anti-bacterial cream. Seek immediate medical attention.



**Inhalation:** If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention.

**Serious Inhalation:** Evacuate the victim to a safe area as soon as possible. Loosen tight clothing such as a collar, tie, belt or waistband. If breathing is difficult, administer oxygen. If the victim is not breathing, perform mouth-to-mouth resuscitation. **WARNING:** It may be hazardous to the person providing aid to give mouth-to-mouth resuscitation when the inhaled material is toxic, infectious or corrosive. Seek medical attention.

**Ingestion:** Do NOT induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. Loosen tight clothing such as a collar, tie, belt or waistband. Get medical attention if symptoms appear.

**Serious Ingestion:** Not available.

## **5. Fire-fighting measures**

**Flammability of the Product:** Flammable.

**Fire Hazards in Presence of Various Substances:** Highly flammable in presence of open flames and sparks, of heat. Non-flammable in presence of shocks.

**Explosion Hazards in Presence of Various Substances:** Risks of explosion of the product in presence of mechanical impact: Not available. Risks of explosion of the product in presence of static discharge: Not available. Slightly explosive in presence of heat.

**Fire Fighting Media and Instructions:** Flammable liquid, soluble or dispersed in water. **SMALL FIRE:** Use DRY chemical powder. **LARGE FIRE:** Use alcohol foam, water spray or fog. Cool containing vessels with water jet in order to prevent pressure build-up, auto ignition or explosion.

**Special Remarks on Fire Hazards:** Vapour may travel considerable distance to source of ignition and flash back.

**Special Remarks on Explosion Hazards:** Not available.

## **6. Accidental release measures**

**Small Spill:** Dilute with water and mop up, or absorb with an inert dry material and place in an appropriate waste disposal container.

**Large Spill:** Flammable liquid. Keep away from heat. Keep away from sources of ignition. Stop leak if without risk. Absorb with DRY earth, sand or other non-combustible material. Do not touch spilled material. Prevent entry into sewers, basements or confined areas; dike if needed. Be careful that the product is not present at a concentration level above TLV. Check TLV on the MSDS and with local authorities.

## **7. Handling and storage**

**Precautions:** Keep locked up.. Keep away from heat. Keep away from sources of ignition. Ground all equipment containing material. Do not ingest. Do not breathe gas/fumes/ vapour/spray. Wear suitable protective clothing. In case of insufficient ventilation, wear suitable respiratory equipment. If ingested, seek medical advice immediately and show the container or the label. Avoid contact with skin and eyes. Keep away from incompatibles such as oxidizing agents, acids.

**Storage:** Store in a segregated and approved area. Keep container in a cool, well-ventilated area. Keep container tightly closed and sealed until ready for use. Avoid all possible sources of ignition (spark or flame).



## **8. Exposure controls/personal protection**

**Engineering Controls:** Provide exhaust ventilation or other engineering controls to keep the airborne concentrations of vapours below their respective threshold limit value. Ensure that eyewash stations and safety showers are proximal to the work-station location..

**Personal Protection:** Splash goggles. Lab coat. Vapour respirator. Be sure to use an approved/certified respirator or equivalent. Gloves.

**Personal Protection in Case of a Large Spill:** Splash goggles. Full suit. Vapour respirator. Boots. Gloves. A self contained breathing apparatus should be used to avoid inhalation of the product. Suggested protective clothing might not be sufficient; consult a specialist BEFORE handling this product.

## **9. Physical and chemical properties**

**Physical state and appearance:** Liquid.

**Odour:** Alcohol like. Characteristic Fusel-like. Pleasant. Sweetish

**Taste:** Burning. Pungent. Repulsive

**Colour:** Clear Colourless.

**Boiling Point:** 137.5°C.

**Melting Point:** -79°C

**Critical Temperature:** 313°C

**Specific Gravity:** 0.8146 (Water = 1)

**Vapour Density:** 3 (Air = 1)

**Volatility:** 100% (w/w)

**Odour Threshold:** 0.1 ppm

**Ionicity (in Water):** Not available.

**Dispersion Properties:** See solubility in water, acetone.

**Solubility:** Soluble in acetone. Partially soluble in cold water, hot water Solubility in water: 2.7 g/100 ml @ 22 deg. C. Miscible with alcohol, ether, and most organic solvents

## **10. Stability and reactivity**

**Stability:** The product is stable.

**Instability Temperature:** Not available.

**Conditions of Instability:** Heat, ignition sources (flames, sparks), incompatible materials

**Incompatibility with various substances:** Reactive with oxidizing agents, acids.

**Corrosivity:** Not available.

**Special Remarks on Reactivity:** Incompatible with hydrogen trisulfide, strong inorganic acids.

**Special Remarks on Corrosivity:** Not available.

**Polymerization:** Will not occur.

## **11. Toxicological information**

**Routes of Entry:** Absorbed through skin. Eye contact. Inhalation. Ingestion.

**Toxicity to Animals:** WARNING: THE LC50 VALUES HEREUNDER ARE ESTIMATED ON THE BASIS OF A 4-HOUR EXPOSURE. Acute oral toxicity (LD50): 3030 mg/kg [Rat (The Merck Index)]. Acute dermal toxicity (LD50): 2306 mg/kg [Rabbit]. Acute toxicity of the vapour (LC50): 14000 mg/m 6 hours [Mouse]. 3

**Chronic Effects on Humans:** MUTAGENIC EFFECTS: Mutagenic for bacteria and/or yeast.



**Other Toxic Effects on Humans:** Hazardous in case of skin contact (irritant), of ingestion, of inhalation. Slightly hazardous in case of skin contact (permeator).

**Special Remarks on Toxicity to Animals:** Lowest Published Lethal Dose: LCL [Rat, Mouse] - Route: Inhalation; Dose: 14000 mg/m<sup>3</sup> for 6 hours. Lethal Dose/Conc. 50% Kill: LD50[Rat] - Route: Oral; Dose: 5660 ul/kg LD50[Rabbit] - Route: Skin; Dose: 2830 ul/kg (Registry of Toxic Effects of Chemicals)

**Special Remarks on Chronic Effects on Humans:** Not available.

**Special Remarks on other Toxic Effects on Humans:** Acute Potential Health Effects: Skin: Causes moderate to severe eye irritation. It can be absorbed through the skin and cause systemic (liver, kidney) effects. Eyes: Causes moderate to severe eye irritation. Inhalation: Causes respiratory tract irritation, stinging sensation of the eyes producing lacrimation, hyperaemia of the conjunctiva without significant corneal injury, nasal discomfort and discharge, chest pain, nausea, vomiting. Inhalation of high concentrations of vapour can also affect the brain, behaviour/central nervous system/nervous system, cardiovascular system, vision, respiration, liver, kidneys, and cause vertigo, delirium, ataxia, sedation, dizziness, drowsiness, giddiness, light-headedness, headache, spastic paralysis, dyspnoea, coughing, acute pulmonary edema, respiratory depression, hypotension, cardiac dysrhythmias, double vision, deafness, acute renal failure, acute tubular necrosis. Ingestion: Causes gastrointestinal tract irritation with nausea, vomiting, diarrhoea. Can affect behaviour/central nervous system/nervous system (symptoms similar to acute inhalation), liver, kidneys (abnormal renal function, glycosuria, myoglobinuria, acute renal failure, acute tubular necrosis). Chronic Potential Health Effects: Prolonged or repeated inhalation may result in pulmonary edema and kidney injury. Other effects of overexposure are currently unknown.

## **12. Ecological information**

**Ecotoxicity:** Ecotoxicity in water (LC50): 370 mg/l 96 hours [Fish (Trout)]

**BOD5 and COD:** Not available.

**Products of Biodegradation:** Possibly hazardous short term degradation products are not likely. However, long term degradation products may arise.

**Toxicity of the Products of Biodegradation:** The products of degradation are less toxic than the product itself.

**Special Remarks on the Products of Biodegradation:** Not available.

## **13. Disposal considerations**

**Waste Disposal:** Waste must be disposed of in accordance with federal, state and local environmental control regulations.

## **14. Transport information**

**DOT Classification:** CLASS 3: Flammable liquid.

**Identification:** : Pentanols UNNA: 1105 PG: III

**Special Provisions for Transport:** Not available.

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