



LABORATORY CHEMICALS AND CONSUMABLES

# MATERIAL SAFETY DATA SHEET

## FORMAMIDE

### 1. Chemical Product and Company information.

**Product name:** Formamide

**Contact Information:**

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

### 2. Hazard Identification

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

### 3. Composition / information on ingredients

**CAS #:** 75-12-7

**Synonym:** Methanamide; Methanoic acid, amide; Formimidic acid; Carbamaldehyde

**Chemical Name:** Formamide

**Chemical Formula:** C-H3-N-O or H-C-O-N-H2

### 4. First Aid Measures

**Eye Contact:** Check for and remove any contact lenses. In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. 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:** Not available

**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:** May be combustible at high temperature

**Fire Hazards in Presence of Various Substances:** Slightly flammable to 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.

**Fire Fighting Media and Instructions:** SMALL FIRE: Use DRY chemical powder. LARGE FIRE: Use water spray, fog or foam. Do not use water jet.

**Special Remarks on Fire Hazards:** COMBUSTIBLE

**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. Finish cleaning by spreading water on the contaminated surface and dispose of according to local and regional authority requirements.

**Large Spill:** Absorb with an inert material and put the spilled material in an appropriate waste disposal. Finish cleaning by spreading water on the contaminated surface and allow to evacuate through the sanitary system. 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 away from heat. Keep away from sources of ignition. Empty containers pose a fire risk; evaporate the residue under a fume hood. Ground all equipment containing material. Do not ingest. Do not breathe gas/fumes/ vapour/spray. Wear suitable protective clothing. 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, alkalis.

**Storage:** Keep container tightly closed. Keep container in a cool, well-ventilated area.

#### **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 (Slightly Viscous liquid)

**Odour:** Ammoniacal. Odourless (Slight)

**Taste:** Not available

**Colour:** Colourless

**Boiling Point:** 210.5°C

**Melting Point:** 2.55°C

**Critical Temperature:** Not available

**Specific Gravity:** 1.1334 (Water = 1)

**Vapour Density:** 1.55 (Air = 1)

**Volatility:** Not available

**Odour Threshold:** Not available

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

**Dispersion Properties:** See solubility in water, diethyl ether, acetone

**Solubility:** Soluble in cold water, hot water, diethyl ether, and acetone. Soluble in alcohol. Insoluble in ethanol. Miscible in petroleum, Chloroform, acetic acid, phenol, methanol, ethylene glycol, dioxane. Dissolves casein, glucose, zein, tannins, starch, lignin, polyvinyl alcohol, cellulose, acetate, nylon, chlorides of copper, lead, zinc, tin, iron, cobalt, aluminium, nickel, the acetates of Alkali metals, some inorganic sulphates, and nitrates.

## **10. Stability and reactivity**

**Stability:** The product is stable.

**Instability Temperature:** Not available.

**Conditions of Instability:** Excess heat, incompatible materials, moisture

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

**Corrosivity:** Not available

**Special Remarks on Reactivity:** Hygroscopic; keep container tightly closed. Incompatible with iodine, pyridine, sulphur trioxide, copper, brass, lead, acids, bases.

**Special Remarks on Corrosivity:** Attacks copper, brass and lead

**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): 3150 mg/kg [Mouse]. Acute dermal toxicity (LD50): 17000 mg/kg [Rabbit]. Acute toxicity of the vapour (LC50): >3900 6 hours [Rat].

**Chronic Effects on Humans:** May cause damage to the following organs: blood, kidneys, liver, central nervous system (CNS).

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

**Special Remarks on Toxicity to Animals:** Not available



**Special Remarks on Chronic Effects on Humans:** May cause adverse reproductive effects and birth defects (teratogenic). May affect genetic material (mutagenic)

**Special Remarks on other Toxic Effects on Humans:** Acute Potential Health Effects: Skin: It is mildly to moderately irritating to skin. It may cause skin rash. It may be absorbed through the skin and cause systemic effects similar to that of ingestion. Eyes: It is moderately to severely irritating to eyes. Inhalation: Inhalation of high concentrations may cause central nervous system effects characterized by nausea, headache, dizziness, unconsciousness, and coma and other CNS symptoms similar to ingestion. It may cause respiratory tract (nose, throat) irritation. Moderately irritating to mucous membranes. Symptoms may include coughing, shortness of breath. Ingestion: May cause gastritis with nausea, vomiting, abdominal pain. May affect behaviour, and cause central nervous system effects such as seizures, fatigue, dizziness, ataxia, and somnolence. It may affect the urinary system, | Chronic Potential Health Effects: Inhalation: Prolonged or repeated inhalation may affect the blood (polycythemia, suppressed platelet, and lymphocyte counts), metabolism (marked weight loss, malnutrition) Ingestion: Prolonged or repeated ingestion may cause liver damage and affect the urinary system (Proteinuria), and brain Skin: Prolonged or repeated absorption by the skin may affect the blood.

## **12. Ecological information**

**Ecotoxicity:** Not available

**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:** Not a DOT controlled material

**Identification:** Not applicable

**Special Provisions for Transport:** Not available

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