



## MATERIAL SAFETY DATA SHEET

### 1. Identification of the substance(s)

**Product Name:** Kovac's Reagent, 100 ml

**Product Code:** R50-08

**Alternative Name:** Not applicable

**Revision: 5**      **Date:** 30.04.2012

**Supplier:** Technical Service Consultants Ltd

Microbiology House, Fir St, Heywood,  
Lancashire OL10 1NW, UK

### 2. Constitutions

A mixture of organic and inorganic compounds, supplied in plastic bottle.

### 3. Hazard identification

2-Butanol, corrosive, causes burns, flammable liquid and vapour. Hydrochloric acid, corrosive, causes burn.

**Classification of preparation:** Corrosive, Flammable Liquid.

**Symbol:** C

**Risk Phrases:** R10, R20/21/22, R37/R38, R67.

**Safety Phrases:** S23, S26, S27, S36/37/39, S62.

**CAS number:** 2-Butanol - 78-92-2; Hydrochloric acid - 7647-01-0.

**EC-No.:** Not applicable, product is a mixture.

**Chemical characterisation:** Chemical liquid.

**Percentage contained in product:** 75%, 25% respectively.

### 4. First aid measures

**Eye contact:** Flush with large amount of water for at least 15 min. Get medical help.

**Inhalation:** Remove to fresh air, apply CPR or oxygen if needed. Get medical help.

**Skin contact:** Wash off skin thoroughly with water. Remove contaminated clothing and wash before re-use. In severe cases, OBTAIN MEDICAL ATTENTION.

**Ingestion:** If conscious, rinse mouth with milk or water. Give milk or water to dilute. Do not induce vomiting. Get immediate medical help.

### 5. Fire-fighting measures

**Special risks:** Flammable Liquid. Combustible. May evolve toxic fumes in fire.

**Extinguishing media:** Dry chemical powder, or appropriate foam. Water maybe effective for cooling, but not extinguishment.





## 6. Accidental release measures

Wear appropriate protective clothing (see section 8). Inform others to keep at a safe distance. Do not inhale vapours and ventilate the area thoroughly. Spill Release Procedures: Remove all sources of ignition. Wear protective clothing. Collect spill with sand or other non-combustible absorbent. Place in container for disposal. Neutralize remaining traces with sodium bicarbonate solution. Ventilate area and wash spill site after material pickup is complete.

## 7. Handling and storage

**Handling:** Wear appropriate protective clothing. Avoid contact with skin and eyes. Do not breathe vapour. Avoid prolonged or repeated exposure. Normal laboratory safety procedures should be observed. Handle with care.

**Storage:** Keep tightly closed. Keep away from heat, sparks and open flame.

**Neutralising Agent:** Sodium Bicarbonate.

**Special Requirements:** May develop pressure. Open carefully. Moisture sensitive

## 8. Exposure controls/personal protection

**Respiratory protection:** Avoid excessive inhalation of concentrated vapours.

**Eye protection :** Wear safety glasses.

**Skin protection :** Avoid skin contact. Use chemically resistant gloves.

**Other Precautions:** Prevent contact with eyes, skin. Use with adequate ventilation. Avoid breathing vapour. Wash thoroughly after handling. Keep away from all sources of ignition. Prohibit smoking in storage and use areas.

## 9. Physical and chemical properties

<b>Appearance:</b>	Clear deep yellow liquid.	<b>Vapour pressure:</b>	Not applicable
<b>Colour:</b>	yellow-green	<b>Water Solubility:</b>	Soluble with heat
<b>Odour:</b>	characteristic odour	<b>Explosive Properties:</b>	Not applicable
<b>pH:</b>	<1 (20°C)	<b>Oxidising Properties:</b>	Not applicable
<b>Melting temperature:</b>	Not applicable	<b>Flash point:</b>	36°C
<b>Boiling temperature:</b>	Not applicable	<b>Relative Density:</b>	No data
<b>Density(g/ml):</b>	0.92g/cm <sup>3</sup>		

## 10. Stability and reactivity

**Reactivity:** Do not heat, or allow to be near any heat sources. Avoid contact with strong acids, alkali or oxidising agents. Incompatible with various metals, artificial and/or natural resins.

**Decomposition:** Carbon monoxide and unidentified organic compounds may be formed during combustion.



## 11. Toxicological information

**Signs and symptoms of exposure:** Material is extremely destructive to tissue of the mucous membranes and upper respiratory tract, eyes, and skin. Inhalation may result in spasm and inflammation. Symptoms of exposure may include burning sensation, coughing, wheezing, laryngitis, shortness of breath, headache, nausea, and vomiting. Can cause Central Nervous System depression. Exposure can cause: gastrointestinal disturbances, drying, cracking or irritation of the skin.

**Route of exposure:**

**Skin contact:** Causes burns. **Skin absorption:** May be harmful if absorbed through the skin. **Eye contact:** Causes burns.

**Inhalation:** Material is extremely destructive to the tissue of the mucous membranes and upper respiratory tract. Toxic if inhaled.

**Ingestion:** Harmful if swallowed.

**Target organ information:**

Central nervous system. Ears. Liver. Kidney. Blood

Based on the ingredients in this composition and their concentrations, this product is according to the conventional method of EEC directive 88/379/EEC classified as:

Harmful to the eyes, skin and respiratory system.

Do not induce vomiting. Handle product with care.

## 12. Ecological information

Harmful to aquatic life. Caustic even in diluted form. Harmful effect due to pH shift. Do not allow to enter the water, wastewater or sewage systems.

## 13. Disposal considerations

Chemical residues are generally classified as special waste, and as such are covered by national regulations that vary according to locality. For advice on disposal, contact your local waste disposal authority, or pass to a chemical disposal company.

## 14. Transport information

	Class	Packaging group	Substance Risk	UN no.
Road: (GGVS, GGVE, ADR, RID)	: 8/68b	II	6.1	2920
Air: (IATA, ICAO)	: 8/3	II	6.1	2920 Sea: (IMDG,
GGVS)	: 8/3	II	6.1	2920





## 15. Regulatory information

Classification packaging/labelling (Directive 88/379/EEC):-

Hazard Symbol : C, Corrosive  
Risk phrases : R20/21/22- Harmful by inhalation, in contact with skin & swallowed.  
: R37/R38- Irritating to respiratory system & skin.  
: R67- Vapours may cause drowsiness & dizziness.  
Safety phrases : S23 – Do not breath vapour.  
: S26- In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.  
: S27- Take off immediately all contaminated clothing.  
: S36/37/39- Wear suitable protective clothing, gloves & eye/face protection.  
: S62- If swallowed, do not induce vomiting: seek medical advice immediately and show this container or label.

## 16. Other information

Revision. 5	Supersedes issue of 15.03.2011
Changes in Section :	New logo and change of address
Date of issue:	30.04.2012

The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. The information given in the data sheet does not constitute the user's own assessment of risk as required by Health & Safety legislation currently in force. All chemicals should be handled only by competent personnel within a suitably controlled environment. Technical Service Consultants Limited shall not be held liable for any damage from handling or from contact with the product(s).





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