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| **Title:** | S226: Thermodynamic Properties of Binary Mixtures | | |
| **Name:** | Jameson | **Date:** | 23/02/2025 |
| **College:** | Wadh | **Year:** | 2 |

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| **Substances/ Equipment Used** | **Mass/**  **Volume** | **Hazards** | **Exposure Route** | **Control Measures** |
| Sodium chloride | 5 g | No Documented Hazards | Absorption:  Eyes  Skin  Inhalation  Ingestion | In case of spill, consult a demonstrator, technician or senior member of staff  Safety spectacles  Lab coat  Gloves  Fumehood  Keep away from naked flames and sources of ignition  Heat using temperature-controlled water bath  Not to be used if pregnant  Do not store or use near water (store in oil)  Add dropwise to solution  Do not expose to air |
| Sodium bromide | 1 g | No Documented Hazards | Absorption:  Eyes  Skin  Inhalation  Ingestion | In case of spill, consult a demonstrator, technician or senior member of staff  Safety spectacles  Lab coat  Gloves  Fumehood  Keep away from naked flames and sources of ignition  Heat using temperature-controlled water bath  Not to be used if pregnant  Do not store or use near water (store in oil)  Add dropwise to solution  Do not expose to air |
| Sodium iodide | 1 g | H315 : Causes skin irritation H319 : Causes serious eye irritation H335 : May cause respiratory irritation H372 : Causes damage to organs through prolonged or repeated exposure H400 : Very toxic to aquatic life | Absorption:  Eyes  Skin  Inhalation  Ingestion | In case of spill, consult a demonstrator, technician or senior member of staff  Safety spectacles  Lab coat  Gloves  Fumehood  Keep away from naked flames and sources of ignition  Heat using temperature-controlled water bath  Not to be used if pregnant  Do not store or use near water (store in oil)  Add dropwise to solution  Do not expose to air |
| Potassium chloride | 1 g | No Documented Hazards | Absorption:  Eyes  Skin  Inhalation  Ingestion | In case of spill, consult a demonstrator, technician or senior member of staff  Safety spectacles  Lab coat  Gloves  Fumehood  Keep away from naked flames and sources of ignition  Heat using temperature-controlled water bath  Not to be used if pregnant  Do not store or use near water (store in oil)  Add dropwise to solution  Do not expose to air |
| Potassium bromide | 1 g | H315 : Causes skin irritation H319 : Causes serious eye irritation H335 : May cause respiratory irritation | Absorption:  Eyes  Skin  Inhalation  Ingestion | In case of spill, consult a demonstrator, technician or senior member of staff  Safety spectacles  Lab coat  Gloves  Fumehood  Keep away from naked flames and sources of ignition  Heat using temperature-controlled water bath  Not to be used if pregnant  Do not store or use near water (store in oil)  Add dropwise to solution  Do not expose to air |
| Potassium Iodide | 1 g | H302 : Harmful if swallowed H315 : Causes skin irritation H317 : May cause an allergic skin reaction H319 : Causes serious eye irritation H334 : May cause allergy or asthma symptoms or breathing difficulties if inhaled H372 : Causes damage to organs through prolonged or repeated exposure H373 : May causes damage to organs through prolonged or repeated exposure H411 : Toxic to aquatic life with long lasting effects | Absorption:  Eyes  Skin  Inhalation  Ingestion | In case of spill, consult a demonstrator, technician or senior member of staff  Safety spectacles  Lab coat  Gloves  Fumehood  Keep away from naked flames and sources of ignition  Heat using temperature-controlled water bath  Not to be used if pregnant  Do not store or use near water (store in oil)  Add dropwise to solution  Do not expose to air |
| Dry Ice | 20 g | Cryogenic Burn and Asphyxiation Hazard | Absorption:  Eyes  Skin  Inhalation  Ingestion | In case of spill, consult a demonstrator, technician or senior member of staff  Safety spectacles  Lab coat  Gloves  Fumehood  Keep away from naked flames and sources of ignition  Heat using temperature-controlled water bath  Not to be used if pregnant  Do not store or use near water (store in oil)  Add dropwise to solution  Do not expose to air |
| Ethanol | ~25 mL | H225 – Highly Flammable Liquid and Vapour  H319 – Causes Serious Eye Irritation | Absorption:  Eyes  Skin  Inhalation  Ingestion | In case of spill, consult a demonstrator, technician or senior member of staff  Safety spectacles  Lab coat  Gloves  Fumehood  Keep away from naked flames and sources of ignition  Heat using temperature-controlled water bath  Not to be used if pregnant  Do not store or use near water (store in oil)  Add dropwise to solution  Do not expose to air |
| Urea | 5 g | No Documented Hazards | Absorption:  Eyes  Skin  Inhalation  Ingestion | In case of spill, consult a demonstrator, technician or senior member of staff  Safety spectacles  Lab coat  Gloves  Fumehood  Keep away from naked flames and sources of ignition  Heat using temperature-controlled water bath  Not to be used if pregnant  Do not store or use near water (store in oil)  Add dropwise to solution  Do not expose to air |
| Phenol | Between 0.5 and 7 g  (in sealed vials) | H301 : Toxic if swallowed H311 : Toxic in contact with skin H314 : Causes severe skin burns and eye damage H318 : Causes serious eye damage H331 : Toxic if inhaled H341 : Suspected of causing genetic defects H373 : May causes damage to organs through prolonged or repeated exposure H411 : Toxic to aquatic life with long lasting effects | Absorption:  Eyes  Skin  Inhalation  Ingestion | In case of spill, consult a demonstrator, technician or senior member of staff  Safety spectacles  Lab coat  Gloves  Fumehood  Keep away from naked flames and sources of ignition  Heat using temperature-controlled water bath  Not to be used if pregnant  Do not store or use near water (store in oil)  Add dropwise to solution  Do not expose to air |
| 2,6-Lutidine | Between 0.5 and 7 g  (in sealed vials) | H226 : Flammable liquid and vapor H302 : Harmful if swallowed H315 : Causes skin irritation H319 : Causes serious eye irritation H335 : May cause respiratory irritation | Absorption:  Eyes  Skin  Inhalation  Ingestion | In case of spill, consult a demonstrator, technician or senior member of staff  Safety spectacles  Lab coat  Gloves  Fumehood  Keep away from naked flames and sources of ignition  Heat using temperature-controlled water bath  Not to be used if pregnant  Do not store or use near water (store in oil)  Add dropwise to solution  Do not expose to air |

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| **Specific Safety or Risk Implication:** | **Y** | **If Yes, Prevention Measures:** |
| Fire or Explosion |  | Keep away from naked flames and sources of ignition |
| Thermal Runaway |  |  |
| Gas Release |  |  |
| Malodorous Substances |  |  |
| Special measures: |  |  |

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| **Waste Disposal:** | |  | |
|  | Halogenated |  | Aqueous |
|  | Hydrocarbon |  | Named Waste |
|  | Contaminated solid waste |  | Silica/TLC |

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| **Approved By:** |  | **Date:** |  |