

PRODUCT STEWARDSHIP SUMMARY

Mixed metal nitrate solutions

1. Chemical identity

- Nitrate salts of Nickel, Cobalt, Iron, Bismuth, Cesium, Magnesium, Manganese, Cerium, Chromium and Potassium
- Water, C.A.S. No. 7732-18-5, Chemical formula H₂O
- Nitric Acid, C.A.S. No. 7697-37-2, Chemical formula HNO₃

2. Uses and Applications

Mixed metal nitrate solutions are used for the manufacture of acrylonitrile catalysts.

3. Physical / Chemical Properties

Mixed metal nitrate solutions are green or red transparent liquids with a slight odor of nitric acid. They are normally stable. Mixed metal nitrate solutions are corrosive and may produce oxides of nitrogen upon thermal decomposition.

4. Globally Harmonized System (GHS) Classification



Danger. Harmful if swallowed. Causes severe skin burns and eye damage. May cause an allergic skin reaction. Causes serious eye damage. May cause allergy or asthma symptoms or breathing difficulties if inhaled. Suspected of causing genetic defects. May cause cancer. May damage the unborn child. Causes damage to organs through prolonged or repeated exposure. Very toxic to aquatic life with long lasting effects.

5. Exposure

Exposure to mixed metal nitrate solutions may occur in industrial applications where engineering controls have failed or are not in place. Exposure can also result when safe work procedures are not followed, or workers do not use personal protective equipment. Exposure to mixed metal nitrate solutions may occur during environmental releases if response operations are not conducted properly or in a timely manner.

6. Risk Management



Engineering controls such as exhaust ventilation, dedicated closed systems, leak detection, welded joints, and properly designed storage equipment are recommended to minimize the risk of exposure to mixed metal nitrate solutions. Safe work practices and worker training on the handling of corrosive liquids is also recommended. Personal protective equipment such as safety glasses, impervious gloves, respirators, and work uniforms are necessary to prevent worker exposure. In the event of an environmental release of mixed nitrate solutions, emergency personnel should follow appropriate emergency response guidelines for corrosive liquids and wear adequate protective equipment to minimize exposure during response operations.

7. Additional Information

- The Shepherd Chemical Company Safety Data Sheets, www.shepchem.com
- Hazardous Substance Data Bank (HSDB), <http://toxnet.nlm.nih.gov/cgi-bin/sis/htmlgen?HSDB>

8. Contact Information

For more information, call (513) 458-6847 or email bpelsor@shepchem.com