Honeywell

Nickel Oxide

Product Stewardship Summary

February 2012

NiO

Chemical Name:	Nickel Oxide
Chemical Category (if applicable):	Inorganic metal compound
Synonyms:	Nickel(II) oxide; Nickel monoxide; Nickelous oxide; Mononickel oxide; Oxonickel; NiO; Black nickel oxide; Green nickel oxide; Bunsenite; C.I. 77777; Nickel oxide sinter 75; Nickel protoxide; Nickel(2+) oxide
CAS Number:	1313-99-1
CAS Name:	Nickel(II) Oxide
EC (EINECS) Number:	215-215-7
Other identifier (Please specify):	GPS0060

- Nickel oxide is an ingredient in Honeywell solid catalysts and adsorbents that are used by petroleum and petrochemical industrial customers to produce and treat a variety of raw materials, intermediates and finished products. A catalyst is a substance that affects the rate of a chemical reaction by either speeding up the reaction or slowing down the reaction. Catalysts make the processes that Honeywell customers use more efficient, meaning their products can be made using fewer resources and with less waste. Catalysts are not consumed within the reaction process so they can be used repeatedly.

- The primary risk of worker exposure to nickel oxide is by inhaling its dust during its production, processing, storage and use. This risk is considered minimal because exposures to nickel oxide dust are controlled with process enclosures, local exhaust ventilation, general dilution ventilation, and use of personal protective equipment. Workplace exposure limits have been established for use of nickel compounds in worksite safety programs. Please see the MSDS for additional information. Since catalysts containing nickel oxide are used in an industrial setting, the risk of exposure to nickel oxide by the general public and consumers is considered negligible.

- Nickel oxide is an odorless solid in the form of a black or green powder. It is not combustible. Nickel oxide can react violently with fluorine, hydrogen peroxide, hydrogen sulfide, iodine, barium oxide + air, and calcium oxide + air. Nickel oxide is slowly attacked by dilute hydrochloric or sulfuric acid and is readily attacked by nitric acid. It is not attacked by fused alkali hydroxides.

- Breathing nickel oxide dust can irritate the nose, throat, and lungs. Repeated or prolonged contact with the skin may induce skin sensitization. Repeated or prolonged inhalation of airborne nickel oxide dust may cause breathing difficulty and induce asthma. Inhaled nickel oxide is slowly removed from the lungs and may persist in the body for long periods of time.

- Nickel oxide is considered carcinogenic to humans.

- Nickel oxide is not soluble in water. It is considered practically nontoxic to freshwater organisms (e.g., fish, invertebrates and algae) based on results of acute aquatic toxicity testing.

- Please contact us for more information. Additional information may also be found at the following links:

  IARC Monograph - Nickel & Nickel Compounds
  Nickel Institute - Safe Use of Nickel in the Workplace
  NIOSH - Nickel metal and other compounds
  OSHA - Nickel, metal and insoluble compounds, as Ni
  WHO Air Quality Standards - Nickel

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