



There is no correlation between the onset of symptoms, the length of exposure and the development of interstitial fibrosis. Dermatitis, primarily on the side of the neck, flexor parts of the forearm and the back of the hand were also detected. Vanadium dusts cause a persistent cough which can develop after five hours of exposure and may last up to ten days. Pulmonary irritation also results from vanadium, but there are no deviations in pulmonary function or other laboratory tests. Zinc dust is a skin and respiratory tract irritant. It is relatively nontoxic. However, if oxidation occurs prior to inhalation, one must deal with toxicities associated with zinc oxide such as metal fume fever, gastrointestinal disorders and hepatic dysfunction.

## V. EMERGENCY AND FIRST AID PROCEDURES

**INHALATION:** If acute overexposure to dust or fumes occurs, remove victim from the adverse environment and seek medical attention..

**SKIN CONTACT:** Wash area of contact thoroughly with soap and water. If irritation persists, seek medical attention.

**EYE CONTACT:** Flush immediately with running water for fifteen minutes. If irritation persists, seek medical attention.

**INGESTION:** N/A

## VI. FIRE AND EXPLOSION HAZARD DATA

**FLAMMABILITY CLASS:**

**FLASH POINT:** N/A

**EXTINGUISHING MEDIA:** As for the surrounding fire, use dry powder for metal fires.

**UNUSUAL FIRE HAZARD:** Contact of molten product with water can cause an explosion hazard.

**FIRE FIGHTING PROCEDURES:** Wear full protective clothing including helmet, self-contained positive pressure-demand breathing apparatus, protective clothing, and a face mask.

**SPECIAL PROCEDURES:** Firefighters should wear equipment to protect against noxious fumes.

**PRODUCT OF COMBUSTION:** Material will begin softening at approximately 2400 F, will proceed to a liquid and form irritating and toxic gaseous metallic oxides at extremely high temperatures.

## VII. SPILL OR LEAK PROCEDURES

**LARGE/SMALL SPILL:** Avoid creating dusts when cleaning spill. Small pieces may be collected using a broom and shovel.

Particulates and dust may be collected by using a vacuum with a HEPA filter. Place collected material in a closed container.

Minimal problems with spills of this product would occur because of its solid form. However, if there is a spill of dust, clean up using methods which avoid dust generation and the use of water, such as vacuum. If airborne dust is generated during the clean up, use an appropriate NIOSH-approved respirator.

**Waste Disposal Method:** Dispose of in accordance with appropriate federal, state and local regulations.

## VIII. SPECIAL PROTECTION

**VENTILATION:** Local exhaust ventilation should be provided to keep workers exposures within allowable limits. Whenever dusts, particulates, or fumes are generated, use appropriate local exhaust ventilation to keep exposures below the regulated limits.

**RESPIRATORY PROTECTION:** Use NIOSH/NSHA approved organic vapor respirators when vapor concentrations exceed the TLV.

**EYE PROTECTION:** Personal protective equipment should be worn when there is a reasonable probability of injury. Wear safety glasses with side shields.

**HAND PROTECTION:** Wear leather or other appropriate work gloves, if necessary for type of operation.

**OTHER:** Protective clothing coveralls.

## IX. CARCINOGENIC ASSESSMENT

Nickel and Chromium have been identified as suspect carcinogens by NTP and IARC.

## X. REACTIVITY DATA

**STABILITY:** Stable under normal conditions of handling and use.

**CONDITIONS TO AVOID:** Poor ventilation.

**INCOMPATIBILITY:** Strong acids (produce hydrogen gas)

**HAZARDOUS DECOMPOSITION PRODUCT:** Metallic oxide.

**HAZARDOUS POLYMERIZATION:** Will not occur

## XI. SPECIAL PRECAUTIONS

**HANDLING AND STORAGE:** Use good housekeeping practices to avoid excessive dust accumulation. As supplied, this product does not present a health hazard. Processing of the product for final uses can include formation of dusts, particulates, or fumes, some of which may present health hazards.

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