西亚试剂® Xiya Reagent 说明书

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化 学 品 安 全 技 术 说 明 书

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MSDS标题

WIA ZIRCONIATED TUNGSTEN ELECTRODE MSDS报告

产品标题

钨灯丝;钨坩埚;钨箔;钨带;钨单晶

CAS号

7440-33-7

化学品及企业标识

PRODUCT NAME

WIA ZIRCONIATED TUNGSTEN ELECTRODE

NFPA

Flammability	0
Toxicity	1
Body Contact	2
Reactivity	0
Chronic	2

SCALE: Min/Nil=0 Low=1 Moderate=2 High=3 Extreme=4

PRODUCT USE

Alloyed tungsten electrode for gas/tungsten arc welding using alternating current. GTAW-TIG. Note that Zirconium oxide is thermally stable. Tungsten metal exposed to air at >500 deg. C. forms an oxide (WO3) and, from 850 deg. C. onwards, evaporation can cause a build-up of tungsten oxides

SYNONYMS

"TIG welding electrode", "zirconated tungsten rod", TUNGZIxx, "GTAW electrode"

CANADIAN WHMIS SYMBOLS

EMERGENCY OVERVIEW

RISK

POTENTIAL HEALTH EFFECTS

ACUTE HEALTH EFFECTS

SWALLOWED

Although ingestion is not thought to produce harmful effects, the material may still be damaging to the health of the individual following ingestion, especially where pre- existing organ (e.g. liver, kidney) damage is evident. Present definitions of harmful or toxic substances are generally based on doses producing mortality (death) rather than those producing morbidity (disease, ill-health). Gastrointestinal tract discomfort may produce nausea and vomiting. In an occupational setting however, ingestion of insignificant quantities is not thought to be cause for concern. Not normally a hazard due to physical form of product. Considered an unlikely route of entry in commercial/industrial environments.

EYE

There is some evidence to suggest that this material can causeeye irritation and damage in some persons. Fumes from welding/brazing operations may be irritating to the eyes. The material may be irritating to the eye, with prolonged contact causing inflammation. Repeated or prolonged exposure to irritants may produce conjunctivitis.

SKIN

The material is not thought to produce adverse health effects or skin irritation following contact (as classified using animal models). Nevertheless, good hygiene practice requires that exposure be kept to a minimum and that suitable gloves be used in an occupational setting. Skin contact does not normally present a hazard, though it is always possible that occasionally individuals may be found who react to substances usually regarded as inert. The material may cause skin irritation after prolonged or repeated exposure and may produce on contact skin redness, swelling, the production of vesicles, scaling and thickening of the skin.

INHALED

The material is not thought to produce adverse health effects or irritation of the respiratory tract (as classified using animal models). Nevertheless, good hygiene practice requires that exposure be kept to a minimum and that suitable control measures be used in an occupational setting. Fumes evolved during welding operations may be irritating to the upper-respiratory tract and may be harmful if inhaled. Harmful levels of ozone may be found when working in confined spaces. Symptoms of exposure include irritation of the upper membranes of the respiratory tract and lungs as well as pulmonary (lung) changes including irritation, accumulation of fluid (congestion and edema) and in some cases hemorrhage. Exposure may aggravate any pre-existing lung condition such as bronchitis, asthma or emphysema.

CHRONIC HEALTH EFFECTS

Principal route of exposure is inhalation of welding fumes from electrodes and workpiece. Reaction products arising from electrode core and flux appear as welding fume depending on welding conditions, relative volatilities of metal oxides and any coatings on the workpiece. Studies of lung cancer among welders indicate that they may experience a 30- 40% increased risk compared to the general population. Since smoking and exposure to other cancer-causing agents, such as asbestos fibre, may influence these results, it is not clear whether welding, in fact, represents a significant lung cancer risk. Whilst mild steel welding represents little risk, the stainless steel welder, exposed to chromium and nickel fume, may be at risk and it is this factor which may account for the overall increase in lung cancer incidence among welders. Cold isolated electrodes are relatively harmless. Welding fume with high levels of ferrous materials may lead to particle deposition in the lungs (siderosis) after long exposure. This clears up when exposure stops. Chronic exposure to iron dusts may lead to eye disorders. With the exception of two Russian studies that found early signs of pulmonary fibrosis in some workers exposed to tungsten and tungsten trioxide most studies have found tungsten to be toxicologically inert. Ozone is suspected to produce lung cancer in laboratory animals; no reports of this effect have been documented in exposed human populations. Other welding process exposures can arise from radiant energy UV flash burns, thermal burns or electric shockThe welding arc emits ultraviolet radiation at wavelengths that have the potential to produce skin tumours in animals and in over-exposed individuals, however, no confirmatory studies of this effect in welders have been reported.