

Section 1 Identification

Product Name: **Metallic Tooling Pin**

Synonyms:

- Weld Nut Pin: Stainless Steel (CenterLine type: GA, GP, RA, RP), Coated Tool Steel (CenterLine type: CA, KA, CP, KP and JA, SA, JP and SP DURAPINS).
- Similar locating pins identified with tool, project, or Customer specific part numbers.

Recommended Use: Metallic tooling pins are used, generally without modification, to establish the location of a workpiece by locating an attribute such as a hole. An example is a weld nut locating pin. The locating pin may have an applied coating or coating system to improve its operational performance.

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Section 2 Hazard(s) identification

During normal operation and usage, this non-combustible, non-reactive, solid material article does not present inhalation, ingestion, or other chemical hazards. The product is not classified as a health or environmental hazard under current legislation including Regulation (EC) No 1272/2008 and the Council Directives 67/548/EEC and 1999/45/EEC. No obligation exists to issue a safety data sheet according to REACH Art. 31. This SDS is provided for unusual situations where this article may be machined or otherwise modified by the user, creating dusts or fumes which may be potentially hazardous if the exposure limits described in Section 3 are exceeded.

Section 3 Composition/information on ingredients

Listed constituents applicable to the range of similar products in the named product class are dispersed in either the substrate pin or its applied coating. These products may not contain all of the materials listed. Concentration percent by weight (% WT) must not be interpreted as a specification for a particular product.

| MATERIAL OR COMPONENT | CAS. NO. | EINECS NO. | % WT | OSHA-PEL | ACGIH-TLV |
|---|------------|------------|---------|------------------------|-------------------------|
| MAY CONTAIN THE FOLLOWING: | | | | | |
| 1. Iron | 7439-89-6 | 231-096-4 | 60 - 88 | N/E ^b | N/E ^b |
| 2. Iron Oxide Fume ^a | 1332-37-2 | 215-570-8 | - | 10 mg/m ³ | 5 mg/m ³ |
| 3. Chromium | 7440-47-3 | 231-157-5 | 5 - 30 | 1 mg/m ³ | 0.5 mg/m ³ |
| 4. Nickel | 7440-02-0 | 231-111-4 | 0 - 21 | 0.5 mg/m ³ | 1.5 mg/m ³ |
| 5. Aluminum | 7429-90-5 | 231-072-3 | 3 - 8 | 5 mg/m ^{3a} | 1 mg/m ^{3a} |
| 6. Carbon | 7440-44-0 | 231-153-3 | < 2 | 5 mg/m ^{3a} | 10 mg/m ³ |
| 7. Manganese | 7439-96-5 | 231-105-1 | < 2 | 5 mg/m ³ | 0.02 mg/m ^{3a} |
| 8. Molybdenum | 7439-98-7 | 231-107-2 | < 2 | 5 mg/m ^{3a} | 10 mg/m ³ |
| 9. Vanadium | 7440-62-2 | 231-171-1 | < 1 | 0.5 mg/m ^{3a} | 0.05 mg/m ³ |
| 10. Silicon | 7440-21-3 | 231-130-8 | < 1 | 5 mg/m ^{3a} | 10 mg/m ³ |
| 11. Titanium | 7440-32-6 | 241-036-9 | < 0.5 | 5 mg/m ^{3a} | 10 mg/m ³ |
| 12. Titanium Aluminum Nitride | - | - | < 0.5 | 5 mg/m ^{3a} | 10 mg/m ³ |
| 13. Titanium Carbonitride | 12654-86-3 | - | < 0.5 | 5 mg/m ^{3a} | 10 mg/m ³ |
| 14. Titanium Nitride | 25583-20-4 | 247-117-5 | < 0.5 | 5 mg/m ^{3a} | 10 mg/m ³ |
| 15. Aluminum Oxide | 1344-28-1 | 215-691-6 | < 0.5 | 5 mg/m ^{3a} | 10 mg/m ³ |
| 16. Aluminum Chromium Nitride | - | - | < 0.5 | 5 mg/m ^{3a} | 10 mg/m ³ |
| 17. Zirconium Oxide | 1314-23-4 | 215-227-2 | < 0.5 | 5 mg/m ^{3a} | 10 mg/m ³ |
| 18. Vanadium Carbide | 12070-10-9 | 235-122-5 | < 0.5 | 5 mg/m ^{3a} | 10 mg/m ³ |
| 19. Phosphorus | 7723-14-0 | 231-768-7 | < 0.1 | 0.1 mg/m ³ | 0.1 mg/m ³ |
| 20. Sulfur | 7704-34-9 | 231-722-6 | < 0.1 | N/E ^b | N/E ^b |
| <p>^a Respirable fraction</p> <p>^b N/E = Not established</p> | | | | | |



Section 4 First-aid measures

Inhalation: If breathing has stopped, perform artificial respiration and obtain medical aid immediately. If breathing is difficult, provide fresh air and seek medical attention as soon as possible.

Skin: Cuts or abrasions should be treated promptly with thorough cleansing of the affected area. Wash the skin using soap or mild detergent and water. Get medical attention if irritation develops and persists.

Eyes: Eye injuries from solid particles should receive immediate medical attention. Dust may be flushed from eyes immediately with large amounts of water, lifting the lower and upper lids occasionally; seek medical attention.

Ingestion: If the product or dust is swallowed, seek immediate medical attention or advice. Do not induce vomiting.

Section 5 Fire-fighting measures

Suitable extinguishing media: This material is noncombustible. Use extinguishing media appropriate to the surrounding fire.

Special Fire Fighting Procedures: Not applicable

Unusual fire and explosion hazard: A fire or explosion hazard is not likely but, is possible if dusts generated by grinding are present in certain combinations of particle size, dispersion, concentration, and strong ignition source.

Hazardous combustion products: Oxides of aluminum, titanium, carbon dioxide and carbon monoxide.

Special protective equipment and precautions for fire-fighters: For a dust fire confined to a small area, use a respirator approved for toxic dusts and fumes.

Section 6 Accidental release measures

Clean-Up Procedures: Product in solid form may be picked up by hand or other means to be placed into a container. When cleaning dust, use methods that minimize the dispersion of dust such as a high efficiency particulate air (HEPA) vacuum, wet dust mop, or wet clean-up. Put recovered material in a suitable, covered, and labeled container.

Personal precautions, protective equipment and emergency procedures: Refer to Section 8.

Environmental precautions: Refer to Section 12.

Section 7 Handling and storage

Safe handling procedures: This product does not require special safety precautions for handling prior to installation. Installation and removal of the product may cause exposure to dusts and other materials or chemicals associated with the installation (work) environment. Operations such as grinding, cutting, burning, and welding may generate dusts or fumes which may require special handling procedures.

Hygienic Practices: Wash hands thoroughly after handling, and before eating or smoking. Smoking and consumption of food or beverages should be restricted from areas where hazardous dust or chemical may be present. Do not shake clothing, rags, or other items to remove dust. Dust should be removed by laundering or vacuuming (with appropriate filters) the clothing, rags, or other items.

Conditions for safe storage: Maintain good housekeeping to prevent exposure to materials and chemicals that may contaminate the product.

Section 8 Exposure controls/personal protection

Control parameters: Refer to table in Section 3 for occupational exposure limit values.

Appropriate engineering controls: When machining, heating, or melting, use adequate local (preferably) or general exhaust ventilation to ensure that concentrations of dusts or fumes do not exceed exposure limits. Keep workplace clean and dry. Train personnel to minimize exposure to hazards during installation and replacement of product. On a regular basis, verify condition and proper function of equipment in which the product will be installed.

Individual protection measures: Always wear safety glasses with side shields when grinding or cutting. Use an approved respirator, with the proper assigned protection factor, whenever airborne concentrations of hazardous components exceed exposure limits listed in Section 3. Protective gloves or barrier cream and clothing are recommended to prevent skin contact with dusts.

**Section 9 Physical and chemical properties**

| | |
|---------------------------------|--|
| Appearance | Metallic solid with a silver, grey, brown, or black colour |
| Odor: | None |
| Boiling point and range: | Not determined |
| Flash point: | Not determined |
| Evaporation rate: | Not applicable |
| Flammability: | Not flammable |
| Vapor pressure: | Not applicable |
| Vapor density: | Not applicable |
| Density: | 7.6-8.0 g/cc (0.27-0.29 lb/in ³) |
| Solubility in water: | Insoluble |

Section 10 Stability and reactivity

| | |
|--|---|
| Reactivity: | Not determined |
| Chemical Stability: | Stable under normal use conditions |
| Possibility of hazardous reactions: | May react with strong acids. Contact of dust with strong oxidizers may cause fire or explosion. |
| Conditions to avoid: | Temperatures > 850 °C |
| Incompatible materials: | None known. |
| Hazardous decomposition products: | The melting of this product may release metal oxide fumes. |

Section 11 Toxicological information**Symptoms related to the physical, chemical and toxicological characteristics**

Under normal handling and use, exposure to product presents few health hazards. Dusts may cause mechanical irritation to eyes and skin. Ingestion may cause transient irritation of throat, stomach and gastrointestinal tract. Inhalation may cause coughing, nose and throat irritation, and sneezing. Higher dust exposures may cause difficulty breathing, congestion, and chest tightness.

Delayed and immediate effects and also chronic effects from short and long term exposure

Possible effects by route of exposure:

- Inhalation:** Breathing metal dust may worsen symptoms of individuals with pre-existing chronic respiratory disease. Inhalation of high concentration of ferric oxide may possibly enhance the risk of lung cancer development in workers exposed to pulmonary carcinogens. Exposure to high concentrations of dust and fumes of chromium and nickel can cause inflammation and/or ulceration of upper respiratory tract and possibly cancer of nasal passages and lungs.
- Skin contact:** Exposure to high concentrations of dust and fumes of chromium and nickel can cause sensitization dermatitis.
- Skin absorption:** Metal dust exposure in hot, humid atmospheres may cause skin irritation.
- Eye contact:** If present as dust, may cause irritation and/or sensitization.
- Ingestion:** Serious effects may occur if large amounts of dust are swallowed.

Numerical measures of toxicity

- Iron:** LD₅₀ oral rat 30,000 mg/kg
- Nickel:** LD_{Lo} oral rat 5000 mg/kg. The International Agency for Research on Cancer (IARC) lists metallic nickel and nickel compounds as a Group 2B carcinogen (Possibly carcinogenic to humans). Epidemiological studies indicate increased incidence of cancer of the nasal cavity, lungs, and possibly the larynx in nickel refinery workers. Nickel is an eye, skin, and mucous membrane irritant and a pulmonary and skin sensitizer.
- Chromium:** The International Agency for Research on Cancer (IARC) lists metallic chromium and chromium[III] compounds as Group 3 (Not classifiable as to its carcinogenicity to humans). Chromium[VI] is listed as a Group 1 carcinogen (Carcinogenic to humans).

Section 12 Ecological information

No ecotoxicity data is available. This product is not expected to present an environmental hazard. Avoid releasing dusts and fumes into the environment.



Section 13 Disposal considerations

Product may be recyclable as scrap steel. May be treated as general industrial solid waste if permitted by federal, state, and local disposal regulations.

Section 14 Transport information

UN number: Not applicable
UN proper shipping name: Not applicable
Transport hazard class(es): Not applicable
Packing group number: Not applicable
Environmental hazards: Not applicable
IMDG Code: Not applicable
Transport in bulk: Not applicable
Special precautions: No special requirements are necessary in transporting this product.

Section 15 Regulatory information

None.

Section 16 Other information

Key/Legend

ACGIH = American Conference of Governmental Industrial Hygienists
CAS = Chemical Abstracts Service (registry)
EINECS = European Inventory of Existing Commercial Chemical Substances
HMIS = Hazardous Materials Identification System
IARC = International Agency for Research on Cancer
IMDG = International Maritime Dangerous Goods
LD₅₀ = lethal dose (50 percent kill)
LD_{Lo} = lowest published lethal dose
OSHA = Occupational Safety and Health Administration
PEL = permissible exposure limit
TLV = threshold limit value
TWA = time weighted average
UN number = Designation assigned by the United Nations Committee of Experts on the Transport of Dangerous Goods.
% WT = percent weight

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