

Safety Data Sheet (SDS)

Date Printed: 6/29/2026

18Ni300 Alloy Powder

Maraging Steel 300 / M300 / 1.2709 | Metal Alloy Powder

1. Identification

Item	Description
Product Name	18Ni300 Alloy Powder
Alternative Designation	Maraging Steel 300 / M300 / 1.2709
Material	Fe-Ni-Co-Mo-Ti maraging steel alloy
Particle Size	53-105 µm
Morphology	Spherical powder
Manufacturing Route	Gas atomization
Lot Number	CSTB-260625B039 / As Received
Supplier / Manufacturer	MetalsTek Engineering
Website	www.metalstek.com
Email	sales@metalstek.com
Recommended Use	Industrial and laboratory use; additive manufacturing, powder metallurgy and alloy development
Restrictions on Use	Not for food, drug, medical implant or consumer use

2. Hazard(s) Identification

Item	Description
GHS Classification	Combustible dust hazard; Skin sensitization Category 1; Carcinogenicity Category 2; STOT RE Category 2
Signal Word	Warning

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Item	Description
Hazard Statements	May form combustible dust concentrations in air. May cause an allergic skin reaction. Suspected of causing cancer by inhalation of dust or fume. May cause damage to respiratory system through prolonged or repeated exposure to dust or fume.
Precautionary Statements	Avoid breathing dust or fume. Prevent dust accumulation. Keep away from heat, sparks, open flames and static discharge. Wear protective gloves, protective clothing and eye/respiratory protection. Use only with adequate ventilation.
Other Hazards	Fine metal powders can present fire, flash-fire or explosion hazards when dispersed in air. Machining, grinding, melting or welding may generate hazardous dusts/fumes.

3. Composition / Information on Ingredients

Component	Symbol	Content
Iron	Fe	Balance
Nickel	Ni	17.0-19.0 wt. %
Cobalt	Co	8.5-10.0 wt. %
Molybdenum	Mo	4.5-5.2 wt. %
Titanium	Ti	0.6-0.8 wt. %
Aluminum	Al	0.05-0.15 wt. %
Chromium	Cr	<0.50 wt. %
Carbon	C	<0.03 wt. %
Manganese	Mn	<0.10 wt. %
Silicon	Si	<0.10 wt. %
Phosphorus	P	<0.010 wt. %

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Component	Symbol	Content
Sulfur	S	<0.010 wt.%

4. First-Aid Measures

Exposure Route	Measure
Inhalation	Move person to fresh air. If breathing is difficult or symptoms persist, seek medical attention.
Skin Contact	Wash with soap and water. Remove contaminated clothing. Seek medical advice if irritation or allergic reaction occurs.
Eye Contact	Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do. Seek medical attention if irritation persists.
Ingestion	Rinse mouth. Do not induce vomiting unless directed by medical personnel. Seek medical advice if discomfort occurs.
Most Important Symptoms	Dust may cause mechanical irritation. Nickel/cobalt-containing dust or fume may cause allergic reaction or respiratory effects in susceptible individuals.

5. Fire-Fighting Measures

Item	Description
Suitable Extinguishing Media	Class D dry powder, dry sand, or other extinguishing media suitable for metal powder fires. Use media appropriate for surrounding fire where powder is not involved.
Unsuitable Media	Do not use water jets on burning metal powder. Avoid methods that disperse dust clouds.

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Item	Description
Specific Hazards	Metal powder dust clouds may ignite or explode if exposed to ignition sources. Thermal decomposition or processing may produce metal oxide fumes.
Protective Equipment	Firefighters should wear self-contained breathing apparatus and full protective gear.

6. Accidental Release Measures

- Avoid dust generation and eliminate ignition sources.
- Wear suitable respiratory protection, gloves and protective clothing.
- Collect powder by non-sparking tools or HEPA-filtered vacuum equipment suitable for metal powders.
- Do not sweep dry powder in a way that generates airborne dust.
- Place collected material in a compatible, labeled container for reuse or disposal.

7. Handling and Storage

Item	Requirement
Handling	Handle in a well-ventilated area. Avoid inhalation, ingestion and skin contact. Prevent dust generation and static discharge. Ground/bond equipment where appropriate.
Storage	Store sealed in a dry, cool and well-ventilated area away from heat, sparks, oxidizers, acids and moisture.
Hygiene	Do not eat, drink or smoke while handling. Wash hands after use and before breaks.

8. Exposure Controls / Personal Protection

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Control	Recommendation
Engineering Controls	Use local exhaust ventilation or enclosed handling systems to keep airborne dust below applicable occupational exposure limits.
Respiratory Protection	Use a NIOSH-approved particulate respirator or equivalent when dust may be generated or ventilation is inadequate.
Eye / Face Protection	Safety glasses with side shields or chemical safety goggles.
Skin Protection	Protective gloves and laboratory or industrial work clothing.
Exposure Limits	Observe applicable limits for metal dusts and fumes including nickel, cobalt, molybdenum, iron and particulates not otherwise regulated.

9. Physical and Chemical Properties

Property	Value
Appearance	Gray metallic spherical powder
Odor	Odorless
Particle Size	53-105 μm
Melting Point	Not determined for supplied powder; alloy steel melting range depends on composition
Density	Not determined for supplied powder
Solubility in Water	Insoluble
Flammability	Bulk material is not readily flammable; airborne powder dust may present combustible dust hazard
Explosive Properties	Dust clouds may be explosive under certain conditions

10. Stability and Reactivity

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Item	Description
Reactivity	Stable under recommended storage and handling conditions.
Chemical Stability	Stable when kept dry and sealed.
Possibility of Hazardous Reactions	Dust clouds may ignite or explode in the presence of ignition sources.
Conditions to Avoid	Dust generation, heat, sparks, open flame, static discharge, moisture and incompatible materials.
Incompatible Materials	Strong acids, strong oxidizers and reactive chemicals.
Hazardous Decomposition Products	Metal oxides and fumes may form during high-temperature processing.

11. Toxicological Information

- Dust may cause mechanical irritation to eyes, skin and respiratory tract.
- Nickel- and cobalt-containing dust/fume may cause allergic skin or respiratory reactions in sensitized persons.
- Prolonged or repeated inhalation of metal dust or fume may affect the respiratory system.
- Toxicological effects depend on exposure level, particle size, process conditions and applicable alloy composition.

12. Ecological Information

- Avoid release to the environment.
- Metal powder may persist in the environment and should be handled as industrial waste.
- No product-specific aquatic toxicity data are available for the supplied alloy powder.

13. Disposal Considerations

- Recover or recycle unused powder where feasible.

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- Dispose of waste material, contaminated packaging and cleanup residues according to local, regional and national regulations.
- Do not discharge powder or contaminated wash water into drains or waterways.

14. Transport Information

Item	Information
UN Number	Not assigned for the product as supplied
Proper Shipping Name	Not regulated as dangerous goods for general transport when properly packaged, unless classified otherwise by carrier or local regulations
Transport Hazard Class	Not assigned
Packing Group	Not assigned
Special Precautions	Protect packaging from damage, moisture and ignition sources. Prevent powder release.

15. Regulatory Information

- This SDS is prepared for industrial handling of 18Ni300 alloy powder.
- Users must evaluate and comply with applicable occupational safety, environmental, transport and chemical control regulations in their jurisdiction.
- Nickel- and cobalt-containing materials may be subject to specific workplace exposure and reporting requirements.

16. Other Information

Item	Description
Document Type	Safety Data Sheet
Document Date	Jun. 29, 2026

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Item	Description
Prepared For	18Ni300 Alloy Powder, 53-105 μ m, spherical gas-atomized powder
Notice	Information is provided for safe handling of the supplied material. The user is responsible for determining suitability and compliance for the intended application.