

R-342-50 (Rev. 12-89)

Label No.
5141

NICKEL STEEL

WARNING: This product is not a physical or health hazard in bulk form. Welding or machining nickel steel may generate dusts and fumes which may cause eye, nose, and throat irritation. Ozone may be emitted as a by-product during welding or plasma arc cutting. Chronic overexposure to ozone and some of the ingredients in nickel steel may cause lung damage. Nickel and chromium are listed by the International Agency for Research on Cancer and the National Toxicology Program as carcinogens.

For further information, refer to Reynolds Material Safety Data Sheet.

Ingredients	CAS Number
Aluminum	7429905
Silicon	7440213
Iron	7439896
Copper	7440508
Magnesium	7439965
Chromium	7440473
Nickel	7440020
Cobalt	7440484
Molybdenum	7439987
Tungsten	7440337
Titanium	7440326



REYNOLDS METALS COMPANY
P. O. Box 27003
Richmond, Virginia 23261-7003

This label is required by the OSHA Hazard Communication Standard.

**MATERIAL SAFETY DATA SHEET**

("Essentially Similar" to Form OSHA-174)

REYNOLDS METALS COMPANY R-1087-19

DATE PREPARED
12/21/89REVISION DATE
9/24/93MSDS #
5141**SECTION 1 - MATERIAL IDENTIFICATION**

MANUFACTURER: Reynolds Metals Company
P. O. Box 27003
Richmond, Virginia 23261-7003

EMERGENCY TELEPHONE NUMBER:
(804) 281-2265

PRODUCT CLASS: Nickel Steel
GRADE NAME: SHEET, PLATE, ROD, BAR,
EXTRUDED PRODUCTS

MANUFACTURER'S CODE IDENTIFICATION
SHEET, PLATE, ROD, BAR,
EXTRUDED PRODUCTS

SECTION 2 - HAZARDOUS INGREDIENTS OF MATERIAL

Hazardous Ingredients	Typical Percent	OSHA PEL			ACGIH TLV			CAS Numbers
		Gas ppm	Respirable Dust/Mist mg/m ³	Total Dust mg/m ³	Gas ppm	Respirable Dust/Mist mg/m ³	Total Dust mg/m ³	
Nickel **	max 99.2			1		0.05	7440-02-0	
Cobalt **	max 65.0		0.1	0.1	0.05	0.05	7440-48-4	
Copper **	max 55.0		0.1	1	0.2	1	7440-50-8	
Iron	max 53.0		10		5		7439-89-6	
Chromium **	max 29.5			1		0.5	7440-47-3	
Molybdenum	max 28.0		5	15		10	7439-98-7	
Tungsten	max 15.0					5	7440-33-7	
Aluminum **	max 4.5		5	15	5	10	7429-90-5	
Titanium	max 3.1		5	15		10	7440-32-6	
Manganese **	max 2.5		5C*		1	5	7439-96-5	
Carbon	max 1.0		5	15		10	7440-21-3	

* indicates ceiling value
** On SARA Section 313 list.

SECTION 3 - PHYSICAL DATA OF MATERIAL

BOILING POINT: 2732C (Nickel)
SPECIFIC GRAVITY: 8.9 (Nickel)
VAPOR PRESSURE: N/A
VAPOR DENSITY: N/A
COEFFICIENT OF WATER/OIL DIST: N/A
ODOR THRESHOLD: N/A

FREEZING POINT: 1453C (Nickel)
SOLUBILITY IN WATER: Insoluble
PHYSICAL STATE: Solid
pH: N/A
EVAPORATION RATE: N/A
APPEARANCE/ODOR: Odorless, silver color

SECTION 4 - FIRE AND EXPLOSION HAZARD OF MATERIAL

FLAMMABILITY: YES? NO? X

WHAT CONDITIONS? N/A

FLASH POINT (Method Used): N/A

UEL: N/A
LEL: N/A

MEANS OF EXTINCTION:

This product is not combustible. For fires involving metal dust, use dry powdered dolomite, dry sand, or dry graphite. Do not use water.

SPECIAL PROCEDURES:

Make certain any material that is to be remelted is free of moisture. For fire fighting, use self-contained breathing apparatus in pressure demand mode.

IGNITION TEMPERATURE: N/A

HAZARDOUS COMBUSTION PRODUCTS: None known

SENSITIVITY TO IMPACT: None known

SENSITIVITY TO STATIC DISCHARGE: None known

ND = NOT DETERMINED

N/A = NOT APPLICABLE

SECTION 7 - PREVENTIVE MEASURES**PERSONAL PROTECTIVE EQUIPMENT:**

GLOVES: As needed.

EYEWEAR: Safety glasses, goggles, face shield, or welding helmet, etc., as needed.

RESPIRATORY: Use NIOSH/MSHA-approved respirator for dusts/fume/mist, if TLVs or PELs are exceeded.

FOOTWEAR: Safety shoes, as needed.

CLOTHING: As needed.

ENGINEERING CONTROLS: Local exhaust if TLVs or PELs are exceeded.

LEAK AND SPILL PROCEDURE: None known

WASTE DISPOSAL:

For disposal of this material as a waste, act in accordance with all applicable federal, state, and local waste management regulations.

HANDLING PROCEDURES AND EQUIPMENT: None known

STORAGE REQUIREMENTS: If remelted, make certain no water or moisture is present in cavities or on external surfaces

HAZARDOUS SHIPPING INFORMATION: None known

SECTION 8 - FIRST AID MEASURES

SKIN: For minor burns, apply cold water. For severe burns, seek immediate medical attention.

EYES: Immediately flush with water for 15 minutes. Seek medical attention if irritation persists.

INHALATION: Remove to fresh air.

INGESTION: Does not represent a hazard.

SECTION 9 - SPECIAL PRECAUTIONS AND COMMENTS

Product contains a chemical or chemicals subject to the reporting requirements of Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 and 40 CFR 372.

HMIS RATINGS

Health: 1
Flammability: 1
Reactivity: 1

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