Safety Data Sheet

According to 29 CFR 1910.1200 (OSHA HCS)

SDS No. 1052 Review date September 11, 2015

1 Identification of substance and company

Product details

Product name: ***Iron metal powder, <75 microns***

Product code: 11593, 17001, 18327, 90990

Recommended use of the chemical and restrictions on use: Research and product development

Manufacturer/Supplier: Noah Technologies Corporation
1 Noah Park
San Antonio, Texas 78249-3419
Phone: (210) 691-2000
Web site: www.noahtech.com

Emergency information: CHEMTREC
800-424-9300

2 Hazards identification

Signal Word: None

Pictogram: None

Classification: Not a hazardous substance

Hazard statements: None

Precautionary statements: None

HMIS ratings (scale 0-4):

HEALTH	**0**
FLAMMABILITY	**1**
PHYSICAL HAZARD	**0**

3 Composition/Information on ingredients

Chemical name: Iron metal powder, <75 microns

Designation: (CAS#): 7439-89-6

EC Number: 231-096-4

Formula: Fe

Synonyms: None identified

4 First aid measures

After inhalation: Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen.
Seek medical advice

After skin contact: Instantly wash with water and soap and rinse thoroughly
Seek medical advice

After eye contact: Rinse opened eye for at least 15 minutes under running water. Assure adequate flushing by separating the eyelids with fingers.
Seek medical advice

After swallowing: If conscious, rinse mouth with water. Never give anything by mouth to an unconscious person. Seek medical advice.

Most important symptoms and effects, both acute and delayed: None identified

Indication of any immediate medical attention and special treatment needed: None identified

5 Fire-fighting measures

Suitable extinguishing agents: Special powder for metal fires, alcohol-resistant foam, dry chemical or carbon dioxide. Do not use water.

Special hazards arising from the chemical: Dust explosion hazard

Products of combustion or resulting gases: Oxides of iron

Protective equipment: Wear self-contained breathing apparatus
Wear fully protective fire fighting equipment/clothing in fire situations

Advice for firefighters: Do not use halogenated extinguisher

6 Accidental release measures

Person-related safety precautions: Wear personal protective equipment. Keep unprotected persons away.
Ensure adequate ventilation

Measures for environmental protection: Do not allow material to be released to the environment without proper governmental permits

Measures for cleaning/collecting: Evacuate area. Shut off all sources of ignition. Avoid raising dust. Use non-sparking tools.
Ventilate and wash spill site after material removal is complete

Additional information: See Section 7 for information on safe handling
See Section 8 for information on personal protective equipment
See Section 13 for information on disposal

7 Handling and storage

Information for safe handling:
Keep container closed.
Keep away from heat, sparks and open flames.
Use explosive proof equipment
Store under inert atmosphere conditions

Information about protection against explosions and fires:
Dust explosion hazard

Storage requirements to be met by storerooms and containers:
Keep away from heat, sparks, and open flames. Keep container tightly closed.

Information about storage in one common storage facility:
Do not store with strong oxidizers

Further information about storage conditions:
Store under dry conditions. Moisture sensitive.
Keep container tightly sealed
Store in cool, dry conditions in well sealed containers

8 Exposure controls/personal protection

Additional information about design of technical systems:
Properly operating chemical fume hood designed for hazardous chemicals and having an average face velocity of at least 100 feet per minute

Components with critical values that require monitoring at the workplace:
This material does not contain any relevant quantities of materials with critical values that have to be monitored at the workplace.

Additional information:
No data

Personal protective equipment

General protective and hygienic measures:
The usual precautionary measures should be adhered to in handling the chemicals
Keep away from foodstuffs, beverages and food
Instantly remove any soiled and impregnated garments
Wash hands during breaks and at the end of the work
Avoid contact with the eyes and skin

Respiratory protection:
Use suitable respirator when high concentrations are present. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).
Use a respirator with type N95 (USA) or PE (EN143) cartridges as a backup to engineering controls.

Hand protection:
Impervious gloves

Eye protection:
Safety glasses

Skin protection:
Protective work clothing

Additional protective equipment:
Sufficient to prevent contact
Emergency eyewash and safety shower

9 Physical and chemical properties

General Information:

Physical state: Powder
Color: Dark grey
Smell: Odorless
Molecular Weight (Calculated): 55.845
pH (5% solution) Not determined
Melting point/range: 1535 C
Boiling point/range: 2750 C
Sublimation temperature/start: Not determined
Flash point: Not determined
Autoignition temperature: Not determined
Decomposition temperature: Not determined
Flammability (solid, gas) Not determined
Danger of explosion: Not determined
Flammable limits: Not determined
Lower: Not determined
Upper: Not determined
Vapor pressure (mm Hg): 1 mm @ 1787 C
Density at 20 °C 7.874 g/cm3
Solubility in/Miscibility with water at 15 °C Insoluble

10 Stability and reactivity

Conditions to be avoided:
Heat / Open flames / Sparks / Ignition sources
See section 7 for information on proper handling and storage

Materials to be avoided:
Strong oxides and acids
Oxygen, halogens, and phosphorus. Moisture and air sensitive.

Dangerous reactions:
Dust explosion hazard

Hazardous decomposition products:
Oxides of iron

11 Toxicological information

Acute toxicity:

LD/LC50 values that are relevant for classification:
oral-rat LD_{50}: 30,000 mg/kg

Primary irritant effect:

on the skin:	Mild irritation
on the eye:	Mild irritation
Sensitization:	None
Carcinogenicity:	No classification data on carcinogenic properties of this material is available from the EPA, IARC, NTP, OSHA or ACGIH
Additional information:	Human effects: irritability, nausea or vomiting, diarrhea, pink urine, black stool, normocytic anemia, liver damage. Iron is potentially toxic in all forms and by all routes of exposure. The inhalation of large amounts of iron dust results in iron pneumoconiosis. Chronic exposure to excess levels of iron (>50-100 mg Fe/day) can result in pathological deposition of iron in the body tissues, the symptoms of which are fibrosis of the pancreas, diabetes mellitus, and liver cirrhosis. To the best of our knowledge the acute and chronic toxicity of this substance is not fully known

12 Ecological information

Toxicity

Aquatic toxicity:	No ecological information available
Persistence and degradability:	No further relevant information available
Behavior in environmental systems:	
Bioaccumulative potential:	No further relevant information available
Mobility in soil:	No further relevant information available
Additional ecological information:	
General notes:	Do not allow material to be released to the environment without proper governmental permits Avoid transfer into the environment

13 Disposal considerations

Recommendation:	Consult state, local or national regulation for proper disposal Allow professional disposal company to handle waste Must be specially treated under adherence to official regulations
Unclean packaging	
Recommendation:	Disposal must be made according to official regulations

14 Transport information

Land transport DOT:

Proper shipping name:	Chemicals Non-Hazardous
Technical name:	Iron metal powder

Air transport ICAO-TI and IATA-DGR:

Proper shipping name:	Chemicals Non-Hazardous
Technical name:	Iron metal powder

UPS Ground/ FedEx Ground:

Proper shipping name:	Chemicals Non-Hazardous
Technical name:	Iron metal powder

UPS Air:

Proper shipping name:	Chemicals Non-Hazardous
Technical name:	Iron metal powder

15 Regulatory information

SARA Section 302 Extremely Hazardous:	No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302
SARA 311/312 Hazards:	None
SARA Section 313 components:	This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313
California Prop. 65 components:	This product does not contain any chemicals known to State of California to cause cancer, birth defects or any other reproductive harm
TSCA:	This material is listed on the TSCA inventory

16 Other information

The above information is accurate to the best of our knowledge. However, since data, safety standards and government regulation are subject to change and the conditions of handling and use, or misuse are beyond our control. NOAH MAKES NO WARRANTY, EITHER EXPRESSED OR IMPLIED, WITH RESPECT TO THE COMPLETENESS OR CONTINUING ACCURACY OF THE INFORMATION CONTAINED HEREIN AND DISCLAIMS ALL LIABILITY FOR RELIANCE THEREON. User should satisfy himself that he has all current data relevant to his particular use.