

1. PRODUCT AND COMPANY IDENTIFICATION

Product Name: Manganese Tungstate Nanowires, Research Grade

Catalog Number: NovaWire-MnWO-30

Formula: $MnWO_4$

Diameter: ~ 30 nm

Length: ~ 200 nm

Supplier: Novarials Corporation
800 W Cummings Park, Suite 4600
Woburn, MA 01801

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2. HAZARDS IDENTIFICATION

GHS Classification

Acute toxicity, Oral (Category 4), H302

Acute toxicity, Inhalation (Category 4), H332

Eye irritation (Category 2A), H319

STOT SE (Category 3), H335

GHS Label elements, including precautionary statements

Pictogram



Signal word WARNING

Hazard statement(s)

H302 + H332 Harmful if swallowed or if inhaled

H319 Causes serious eye irritation.

H335 May cause respiratory irritation

Precautionary statement(s)

P261 Avoid breathing dust/fume/gas/mist/vapors/spray.

P280 Wear protective gloves/protective clothing/eye protection/face protection.

P304+P340 IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.

P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P405
P501

Store locked up.
Dispose of contents/container to an approved waste disposal plant.

NFPA Ratings

Health Hazard: 2
Fire Hazard: 0
Reactivity Hazard: 0

HMIS Ratings

Health Hazard: 2
Flammability: 0
Physical Hazard: 0

3. COMPOSITION/INFORMATION ON INGREDIENTS

Synonyms: Manganese tungsten oxide
Formula: MnWO₄

| Component | Concentration |
|---------------------------------|---------------|
| Manganese tungsten oxide | |
| CAS-No. | 14177-46-9 |
| EC-No. | N/A |
| Water | |
| CAS-No. | 7732-18-5 |
| EC-No. | 231-791-2 |

4. FIRST AID MEASURES

General advice

Move out of dangerous area. Consult a physician. Show this safety data sheet to the doctor in attendance.

If inhaled

If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician.

In case of skin contact

Wash off with soap and plenty of water. Consult a physician.

In case of eye contact

Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician.

If swallowed

Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

5. FIREFIGHTING MEASURES

Suitable extinguishing media

Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

Special protective equipment for firefighters

Wear self-contained breathing apparatus for firefighting if necessary.

Hazardous combustion products

Hazardous decomposition products formed under fire conditions – tungsten oxides, manganese oxides

6. ACCIDENTAL RELEASE MEASURES

Personal precautions

Use personal protective equipment. Avoid dust formation. Avoid breathing vapors, mist or gas. Ensure adequate ventilation. Evacuate personnel to safe areas. Avoid breathing dust.

Environmental precautions

Do not let product enter drains.

Methods and materials for containment and cleaning up

Pick up and arrange disposal without creating dust. Sweep up and shovel. Keep in suitable, closed containers for disposal.

7. HANDLING AND STORAGE

Precautions for safe handling

Provide appropriate exhaust ventilation at places where dust is formed.

Conditions for safe storage

Keep container tightly closed in a cool, dry and well-ventilated place.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Personal protective equipment

Respiratory protection

For nuisance exposures use type P95 (US) or type P1 (EU EN 143) particle respirator. For higher level protection use type OV/AG/P99 (US) or type ABEK-P2 (EU EN 143) respirator cartridges. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

Hand protection

Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.

Eye/Face protection

Face shield and safety glasses Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).

Body protection

Complete suit protecting against chemicals. The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

Hygiene measures

Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.

9. PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE

Form slurry
Color grey

Safety data

pH no data available
Melting point/freezing point no data available
Boiling point no data available
Flash point no data available
Ignition temperature no data available
Auto ignition temperature no data available
Lower explosion limit no data available
Upper explosion limit no data available
Vapour pressure no data available
Density no data available
Water solubility no data available
Partition coefficient:
n-octanol/water no data available
Relative vapour density no data available
Odour no data available
Odour Threshold no data available
Evaporation rate no data available

10. STABILITY AND REACTIVITY**Reactivity**

no data available

Chemical stability

Stable under recommended storage conditions.

Possibility of hazardous reactions

no data available

Conditions to avoid

no data available

Materials to avoid

no data available

Hazardous decomposition products

Other decomposition products -no data available

11. TOXICOLOGICAL INFORMATION**Acute toxicity**

no data available

Skin corrosion/irritation

May irritate skin.

Serious eye damage/eye irritation

May cause serious eye irritation

Respiratory or skin sensitization

May cause respiratory irritation

Germ cell mutagenicity

no data available

Carcinogenicity

no data available

Reproductive toxicity

no data available

Specific target organ toxicity -single exposure (Globally Harmonized System)

no data available

Specific target organ toxicity -repeated exposure (Globally Harmonized System)

no data available

Aspiration hazard

no data available

12. ECOLOGICAL INFORMATION**Toxicity**

no data available

Persistence and degradability

no data available

Bioaccumulative potential

no data available

Mobility in soil

no data available

PBT and vPvB assessment

PBT/vPvB assessment not available as chemical safety assessment not required/not conducted.

Other adverse effects

no data available

13. DISPOSAL CONSIDERATIONS**Product**

Offer surplus and non-recyclable solutions to a licensed disposal company.

Contaminated packaging

Dispose of as unused product.

14. TRANSPORT INFORMATION**DOT (US), IMDG, IATA**

Not a dangerous goods.

15. REGULATORY INFORMATION**SARA 302 Components**

not required

SARA 313 Components

Manganese tungsten oxide

CAS-No. 14177-46-9

SARA 311/312 Hazards

no data available

Massachusetts Right To Know Components

Manganese tungsten oxide

CAS-No. 14177-46-9

Pennsylvania Right To Know Components

Manganese tungsten oxide

CAS-No. 14177-46-9

Water

CAS-No. 7732-18-5

New Jersey Right To Know Components

Manganese tungsten oxide

CAS-No. 14177-46-9

Water

CAS-No. 7732-18-5

California Prop. 65 Components

This product does not contain any chemical known to State of California to cause cancer, birth defects, or any other reproductive harm.

16. DISCLAIMER

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