Material Safety Data Sheet (as per 2001/58/CE)

Product name: **TXL-2000**
Date of issue: January 2, 2011

1. Substance / Preparation and Company Identification:-

Product name: TXL-2000

Application: **High Temperature Dry Lubricant (Tungsten Disulfide)**
Supplier: **Superior Industries, Inc.**
6180 Airways Blvd.
Chattanooga, TN 37421
Phone: 423-899-0467
Fax: 423-899-0421
Contact Person: P Meyer
www.superior-industries.com

Emergency contact: as above

2. Composition / Information on Ingredients:-

Chemical nature (substance): REFRACTORY METAL SULFIDE
CAS-Reg. No.: 12138-09-9
EINECS-NO.: 235-243-3

3. Possible Hazards:-

Hazard Description: Not Applicable

4. First Aid Measures:-

EMERGENCY AND FIRST AID PROCEDURES:
Inhalation - if symptoms of pulmonary involvement develop, remove from exposure and seek medical attention.
Skin contact - if irritation occurs, thoroughly wash affected area with mild soap and water and prevent further contact, contact medical help if irritation persists.
Eye contact - if irritation occurs, flush with copious amounts of Water, contact medical help if irritation persists.
Ingestion - if substantial quantities are swallowed, give person (if conscious) a large quantity of water to drink, induce vomiting, and seek medical attention.

5. Fire Fighting Measures:-

Flash Point: N/A
Flammability Limits: N/A
In case of fire, sulphur dioxide and tungsten trioxide are formed.
No Fire Hazard, Use extinguishing agents suitable for surrounding fire.
Special Procedures: Use a self-contained breathing apparatus to prevent inhalation of Dust, Mist or fumes that may be generated during fire frightening activities. No Unusual fire or explosion hazards.
Suitable extinguishing media: Dry Sand, Special Metal extinguishing powder.
Unsuitable extinguishing media: Water

…continued 2

6. Accidental Release Measures:-

If Spilled or Released: Ventilate area of spill, clean up using methods which avoid dust generation, such as Vacuuming with appropriate filter, wet dust mop, or wet clean up.
Precautionary measures regarding persons: Remove source of ignition. Avoid formation and deposition of dust. Ensure effective ventilation.
Use the PPE (Personal Protective Equipment) as per chapter 8
(European Union: Note German Technical Regulation on Dangerous Substances No. 200/201)

7. Handling and Storage:-

Handling:
Maintain good housekeeping procedures to prevent accumulation of dust. Use clean-up methods which minimize dust generation.
Storage: Keep in sealed containers in a dry place.
(European Union: Observe the rules contained in the VCI concept for separate/common storage. Observe official regulations. Storage class as per VCI: 11)

8. Exposure Controls and Personal Protection:-

Respiratory Protection: Use an appropriate NIOSH approved respirator. If airborne dust levels exceed the TLV, appropriate requirements set forth in 29 CFR 1910.134 should be met.

Wash thoroughly after handling and before eating, smoking and end of work shift. Do not shake clothing to remove dust. Avoid inhalation, ingestion and direct skin contact

Ventilation: Use local exhaust which is adequate to limit exposure levels below TLV.
Gloves: Recommended
Eye Protection: Recommended
(European Union: Respiratory equipment with filter type P according to DIN EN 143)

9. Physical and Chemical Properties:-

Appearance & Odour: GRAYISH-BLACK POWDER, NO ODOR
pH value: 2 @ 20^{o} C 100 g/l (aqueous suspension)
Boiling Point: N/A
Melting Point: 1250^{o} C (decomposition)
Vapor Pressure (mm HG): N/A
Vapor Density (air=1): N/A
Solubility in Water: INSOLUBLE
Specific Gravity: (H2O=1) 7.4
Percent Volatile by Volume: 0
Evaporation Rate: N/A
How Best Monitored: AIR SAMPLE
Non-Hazardous Ingredients
Material: TUNGSTEN DISULFIDE
Percent by Weight: 100
ACGIH TLV: 5MG/M^{3} (Limit is for insoluble compounds as W)

Contd...3

10. Stability and Reactivity:-

Reactivity Data
Stability: Stable
Conditions to avoid: N/A
Incompatible Materials to Avoid: Contact with strong acids may generate Hydrogen Sulfide
Hazardous Decomposition Products: Oxides of Sulfur and Tungsten may be evolved at extreme temperatures.

11. Toxicological Information:-

Toxicological tests:
Acute toxicity:
LD_{50} Oral, rat: > 2000 mg/Kg
LC_{50} inhalation, rat > 5.25 mg/l, 4 h of exposure
Irritating/Corrosive effects:
Irritation of eyes/rabbit: slightly irritant
Irritation of the skin/rabbit: non-irritant
Mutagenic effect: Salmonella typhimurium: No Indication of mutagenic effects.

12. Ecological Information:-

Aquatic toxicity:
Acute fish toxicity: 96 h LC_{50} (Brachydanio rerio): > 485 µg/l
(Maximum produceable concentration in the case of a weighed portion of 100 mg/l)

Acute toxicity for daphnia: 48 h EC_{50} (Daphnia magna): > 510 µg/l
(Maximum produceable concentration in the case of a weighed portion of 100 mg/l)

Toxicity for algae:
72 h EbC_o (Scenedesmus subspicatus): > 330 µg/l
72 h ErCo (Scenedesmus subspicatus): > 330 µg/l
(Maximum produceable concentration in the case of a weighed portion of 100 mg/l)

Toxicity to bacteria: 3 h EC_{50} (activated sludge): 8972 mg/l

13. Disposal Consideration:-

Disposal: Dispose off in accordance with appropriate Federal, Sate and Local regulations.
Unused material: reuse if possible.

14. Transport Information:-

Non Hazardous cargo. Keep separated from foodstuffs

15. Regulatory Information:-

No Special regulations. No regulated (Observe national regulations)
(European Union: No Labelling is required in accordance with the EEC directives.
TRGS 900 Atmospheric Threshold Value: Insoluble Tungsten Compounds: 5 mg/m3
Handling restrictions: none
Major accident regulations: not listed in the appendices
Technical Instruction for Air Pollution Control: Figure 5.2.1 Total dust
Water Pollution class (WGK): not harmful to water**)**

Contd…..4