MATERIAL SAFETY DATA SHEET

MSDS FORMAT MEETS ANSI Z400.1-1993 AND OSHA 1910.1200

SUPERIOR'S

BioTrac 301 Lubricant

REVISION# 1

MSDS #

REVISION DATE: November 27, 2012

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Superior's BioTrac 301 Wire Rope Lubricant

PRODUCT NUMBER (S): 04301

SYNONYM: Superior's BioTrac

COMPANY IDENTIFICATION

Superior Industries, Inc.
6180 Airways Blvd.
Chattanooga. TN 37421

EMERGENCY TELEPHONE NUMBERS

HEALTH (24 hr) : (800) 476-2072 or (423) 899-0467
TRANSPORTATION (24 hr) : (800) 476-2072
or (423) 899-0467 Int'l collect calls accepted

PRODUCT INFORMATION:

MSDS Requests: (800) 476-2072
Environmental, Safety, & Health Info: (800) 476-2072
Product Information: (800) 476-2072

2. HAZARDS IDENTIFICATION

HUMAN HEALTH EFFECTS:

Skin contact may cause skin irritation with discomfort or rash. Eye contact may cause eye irritation with discomfort, tearing, or blurring of vision. Inhalation may cause irritation of the upper respiratory passages, with coughing and discomfort. Some individuals who have been overexposed by inhalation or skin contact experienced blurry vision.

The mechanism of blurred vision in humans is unknown. Based on observed effects from animal studies, we believe that some symptoms of pre-existing eye disease could be aggravated by overexposure to this material.

Carcinogenicity Information

None of the components present in this material at concentrations equal to or greater than 0.1% are listed by IARC, NTP, OSHA, or ACGIH as a carcinogen.

3. FIRST AID MEASURES

EYE:
In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Call a physician.

SKIN
Flush skin with water after contact. Wash contaminated clothing before reuse.

INGESTION
If swallowed, do not induce vomiting. Immediately give 2 glasses of water. Never give anything by mouth to an unconscious person. Call a physician.

INHALATION
If inhaled, immediately remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Call a physician.

NOTE TO PHYSICIANS
Activated charcoal mixture may be beneficial. Suspend 50 g activated charcoal in 400 mL water and mix well. Administer 5 mL/kg, or 350 mL for an average adult.

In an accident involving high-pressure systems, this product may be injected under the skin. Such an accident may result in a small, sometimes bloodless, puncture wound. However, because of its driving force, material injected into a fingertip can be deposited into the palm of the hand. Within 24 hours, there is usually a great deal of swelling, discoloration, and intense throbbing pain. Immediate treatment at a surgical emergency center is recommended.

4. FIRE FIGHTING MEASURES

FIRE CLASSIFICATION:
Classification (29 CFR 1910.1200): Not classified by OSHA as flammable or combustible

FLAMMABLE PROPERTIES:

FLASH POINT: 100°C (212°F) Min.

AUTOIGNITION: 370°C (698°F)
Actual Autoignition Temperature (AIT) can be affected by the concentration of vapors and oxygen, vapor/air contact time, pressure, volume, catalytic impurities, etc. Process conditions should be analyzed to determine if the AIT's may be higher or lower.

FLAMMABILITY LIMITS (% by volume in air): Lower: NA UPPER: NA

EXTINGUISHING MEDIA: Water Spray, Foam, Dry Chemical, CO2.

NFPA RATINGS: Health 1; Flammability 1; Reactivity; 0.

FIRE FIGHTING INSTRUCTIONS:
Keep personnel removed and upwind of fire. Wear self-contained breathing apparatus. Wear full protective equipment. Cool tank. container with water spray.

5. ACCIDENTAL RELEASE MEASURES

Safeguards (Personnel)

NOTE: Review FIRE FIGHTING MEASURES and HANDLING (PERSONNEL) sections before proceeding with clean up. Use appropriate PERSONAL PROTE CTIVE EQUIPMENT during clean up.

Initial Containment

Remove source of heat, sparks, flame, impact, friction or electricity. Dike spill. Prevent material from entering sewers, waterways, or low areas.

Spill Clean Up

Recover free liquid for reuse or reclamation. Recover undamaged and minimally contaminated material for reuse and Reclamation. Soak up with sawdust, sand, oil dry or other absorbent material.

6. HANDLING AND STORAGE

Handling (Personnel)

Avoid breathing vapors or mist. Avoid contact with eyes, skin, or clothing. Wash thoroughly after handling.

Storage

Do not mix with strong oxidants, acids or alkalies. Store in a well ventilated place. Keep tightly closed.

DO NOT USE IN HIGH PRESSURE SYSTEMS in the vicinity of flames, sparks and hot surfaces. Use only in well ventilated areas. Keep container closed.

Drum is not designed to contain pressure. Do not use pressure to empty drum or drum may rupture with explosive force. Empty containers retain product residue (solid, liquid, and/or vapor) and can be dangerous. Do not pressurize, cut, weld, braze, solder, drill, grind, or expose such containers to heat, flame, sparks, static electricity, or other sources of ignition. They may explode and cause injury or death. Empty drums should be completely drained, properly bunged, and promptly returned to a drum re-conditioner, or properly disposed of. Avoid contaminating soil or releasing this material into sewage and drainage systems and bodies of water.

7. EXPOSURE CONTROLS/PERSONAL PROTECTION

Engineering Controls

Use sufficient ventilation to keep employee exposure below recommended limits.

Personal Protective Equipment

EYE/FACE PROTECTION

Wear safety glasses. Wear coverall chemical splash goggles when possibility exists for eye and face contact due to splashing or spraying material.

RESPIRATOR

A NIOSH approved air-purifying respirator with an organic vapor cartridge or canister may be permissible under certain circumstances where airborne concentrations are expected to exceed exposure limits. Protection provided by air purifying respirators is limited. Use a NIOSH approved positive pressure air-supplied respirator if there is any potential for an uncontrolled release, exposure levels are not known, or any other circumstances where air-purifying respirators may not provide adequate protection.

PROTECTIVE CLOTHING
Wear impervious clothing, such as gloves, apron, boots, or whole bodysuit as appropriate.

Recommended glove and clothing material: Butyl Rubber.

Exposure Guidelines
Exposure Limits
DBE

PEL (OSHA)	None Established
TLV (ACGIH)	None Established
AEL* (DuPont)	1.5 ppm, 10 mg/m3, 8 Hr. TWA This limit is for DBE

*AEL is DuPont's Acceptable Exposure Limit. Where governmentally imposed occupational exposure limits which are lower than the AEL are in effect, such limits shall take precedence.

8. PHYSICAL AND CHEMICAL PROPERTIES

PHYSICAL DESCRIPTION:
Colorless, Sweet Odor, Fluid

pH:	NDA
VAPOR PRESSURE:	0.2 mm Hg @ 20°C (68°F)
VAPOR DENSITY (AIR = 1):	NA
BOILING POINT:	196-225°C (385-437°F)
FREEZING POINT:	NA
MELTING POINT:	~-20°C (~-4°F)
SOLUBILITY IN WATER :	5.3 WT% @ 20°C (68°F)
SPECIFIC GRAVITY:	1.02 @ 20°C (68°F)
EVAPORATION RATE:	<0.1 (Butyl Acetate=1.0)
VISCOSITY:	.85 @ 100°C
PERCENT VOLATILE	NA

9. STABILITY AND REACTIVITY

Chemical Stability
Stable

Incompatibility with other materials
Incompatible or can react with strong oxidizers, acids, alkalies

Decomposition
Decomposes with heat

Polymerization
Polymerization will not occur

10. TOXILOGICAL INFORMATION

Animal Data

Inhalation 4 hour LC50: >11 mg/L in rats
Inhalation 1 hour LC50: >10.7 mg/L in rats
Skin absorption LD50 : >2,250 mg/kg in rabbits
Oral LD50 : 8,191 mg/kg in rats

The mixture is a mild to severe skin irritant and a moderate eye irritant but is not a skin sensitizer in animals. Toxic effects described in animals from exposure by inhalation include upper respiratory tract irritation. A single 4-hour exposure to 60 ppm caused transient corneal opacity and transient increases in the distance from the cornea to the anterior surface of the lens of the eye. Toxicity described in animals from repeated exposure by inhalation include decreased weight gain, absolute and relative liver weight decrease and degeneration of olfactory epithelium (nasal tissue). Toxicity described in animals from repeated exposure by ingestion include weight loss, but there were no pathological abnormalities noted.

A single application of 10 uL to the eye caused corneal opacity. The administration of 10-100 uL of a similar mixture caused corneal opacity, transient increases in corneal thickness, and transient corneal anesthesia. A single application of approximately 60 mg/kg to the skin caused transient increases in the distance from the cornea to the anterior surface of the lens of the eye.

The mixture does not produce genetic damage in animals, or in bacterial cell cultures, but it was positive in one study with cultured mammalian cells. Animal testing indicates that this mixture does not have developmental or reproductive effects.

11. ECOLOGICAL INFORMATION

Ecotoxicological Information

AQUATIC TOXICITY:

DBE
96 hour LC50 – Fathead minnows: 18-24 mg/L Moderately toxic.

48 hour LC50 – Daphnia magna: 112-150 mg/L

12. DISPOSAL CONSIDERATIONS

Waste Disposal
Treatment, storage, transportation and disposal must be in accordance with applicable Federal, State/provincial and local regulations.

Recover unusable free liquid and dispose into either and approved and permitted incinerator or approved and permitted biological treatment system.

Recover any contaminated water and dispose of into an approved and permitted biological treatment system.

Do not flush any water or solids into surface water drains or sanitary sewer system.

Remove unusable solid material or contaminated soil for disposal into an approved and permitted landfill.

13. TRANSPORTATION AND OSHA RELATED LABEL INFORMATION

Shipping Information

Not Regulated as a hazardous material by DOT, IMO, or IATA.

14. REGULATORY INFORMATION

U.S. Federal Regulations

TSCA Inventory Status: Reported/Included

Title III Hazard Classifications Sections 311, 312

1. Immediate (Acute) Health Effects: YES
2. Delayed (Chronic) Health Effects: NO
3. Fire Hazard: NO
4. Sudden Release of Pressure Hazard: NO
5. Reactivity Hazard: NO

HAZARDOUS CHEMICAL LISTS

SARA Extremely Hazardous Substance: NO
CERCLA Hazardous Substance : NO
SARA Toxic Chemical : NO

VOC's for DBE per the EPA Federal Register/Volume 57, No. 22/, 2/3/92/ Page 3945, considered to be 100% VOC (1090 gr/ltr).

Canadian Regulations
Class D Div. 2 Subdiv. B - Toxic Material. Skin or Eye Irritant.

15. OTHER INFORMATION

NFPA RATINGS: Health 1; Flammability 1; Reactivity 0;

HMIS RATINGS: Health 1; Flammability 1; Reactivity 0;

(0-Least, 1-Slight, 2-Moderate, 3-High, 4-Extreme, PPE:- Personal Protection rating to be supplied by user depending on use conditions).

REVISION STATEMENT:
This is a new Material Safety Data Sheet.

ABBREVIATIONS THAT MAY HAVE BEEN USED IN THIS DOCUMENT:

TLV	-	Threshold Limit Value	TWA	-	Time Weighted Average
STEL	-	Short-term Exposure Limit	TPQ	-	Threshold Planning Quantity
RQ	-	Reportable Quantity	PEL	-	Permissible Exposure Limit
C	-	Ceiling Limit	CAS	-	Chemical Abstract Service Number
A1-5	-	Appendix A Categories	( )	-	Change Has Been Proposed
NDA	-	No Data Available	NA	-	Not Applicable

Prepared according to the OSHA Hazard Communication Standard
(29 CFR 1910.1200) and the ANSI MSDS Standard (Z400.1)

The above information is based on the data of which we are aware and is believed to be correct as of data hereof. Since this information may be applied under conditions beyond our control and with which we may be unfamiliar and since data made available subsequent to the date. Hereof may suggest modification of the information, we do not assume any responsibility for the results of its use. This information is furnished upon condition that the person receiving it shall make his own determination of the suitability of the material for his particular purpose.

Additional Information

The hydrogen cyanide concentration in this product is so low (<10 ppm) as to be toxicologically insignificant when this product is used as a solvent. However, when this product is chemically reacted with alcohols, and methanol is recovered from that reaction and purified for reuse by distillation, concentration of highly volatile impurities such as hydrogen cyanide to toxicologically significant levels can occur in the waste stream from this process. Processors using this product as a raw material should be aware of this potential hazard.