SAFETY DATA SHEET

Section 1 - Chemical Product and Company Information

Product Name: Thread Grip (All grades unless otherwise indicated)

Product Code: TG Liquid

Details of Safety Data Sheet supplier

Thread and Head Solutions Ltd
Reg Office: Holybank, Copthorne, West Sussex RH10 3JH

Trade Name: Thread Grip

Manufactured by:

Tectorius
56732 Mound Road
Shelby Township, MI 48316

In Case of Emergency

Thread and Head Solutions Ltd
+44 7545 450552

Product use: Non-anaerobic fastener coating

Section 2 - Hazards Identification

GHS Ratings:

Flammable liquid	2	Flash point < 23°C and initial boiling point > 35°C (95°F)
Skin corrosive	3	Reversible adverse effects in dermal tissue, Draize score: >= 1.5 < 2.3
Eye corrosive	2A	Eye irritant: Subcategory 2A, Reversible in 21 days

GHS Hazards

H225	Highly flammable liquid and vapour
H316	Causes mild skin irritation
H319	Causes serious eye irritation

GHS Precautions

P201	Obtain special instructions before use
P202	Do not handle until all safety precautions have been read and understood
P210	Keep away from heat/sparks/open flames/hot surfaces – No smoking
P233	Keep container tightly closed
P243	Take precautionary measures against static discharge
P264	Wash hands thoroughly after handling
P280	Wear protective gloves/protective clothing/eye protection/face protection
P281	Use personal protective equipment as required
P303+P361+P353	IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower
P305+P351+P338	IF IN EYES: Rinse continuously with water for several minutes. Remove contact lenses if present and easy to do – continue rinsing
P308+P313	IF exposed or concerned: Get medical advice/attention
P332+P313	IF skin irritation occurs: Get medical advice/attention
P370+P378	In case of fire: Use CO2 for extinction
P403+P235	Store in a well-ventilated place. Keep cool
P501	Dispose of contents/container to an approved waste disposal facility.

Signal Word: Danger

Pre-existing skin, eye, and respiratory disorders may be aggravated by exposure to this product. Impaired kidney and liver functions from pre-existing disorders may be aggravated by exposure to this product.

Section 3 – Composition / Ingredient Information

Chemical Name	CAS number	Weight Concentration %
2-Butanone	78-93-3	60.00% - 70.00%
Copolymer, Methacrylate	Trade Secret	20.00% - 35.00%
Acrylic resin	Trade Secret	5.00% - 12.00%
Synthetic Terpolymer	Trade Secret	2.0%-8.0%
NN Dimethylformamide	68-12-2	0-5%
Epoxidized Synthetic Oligomer	Trade Secret	0-5%

(1) Liquid, vapor, and mist may cause moderate to severe discomfort in the eyes with persistent conjunctivitis, seen as slight excess redness of conjunctiva.

Section 4 – First Aid Measures

INHALATION If product is inhaled in the form of a spray mist, remove the person from exposure immediately. If breathing is difficult, irregular, or has stopped, start resuscitation; call a physician. Administer oxygen if a qualified operator is available.

EYE CONTACT In case of eye contact, flush the eyes with water for fifteen (15) minutes. If contact lenses are worn, quickly remove them, then flush the eyes with water. Have a physician examine the eyes.

SKIN CONTACT In case of skin contact, remove contaminated clothing. Flush the skin with large amounts of water, then wash the skin with soap and water. Dried and cured, residue is inert.

INGESTION If material is ingested, seek immediate medical attention. If vomiting occurs spontaneously, keep the head below the hips to prevent aspiration of liquid into the lungs.

Notes to Physician: No data found

Section 5 – Fire Fighting Measures

FLASH POINT: -4° C (25° F)

EXPLOSIVE LIMITS: LEL: 1.00 UEL: 12.00

EXTINGUISHING MEDIA: Use carbon dioxide (CO2), "alcohol" foam, dry chemical, or water spray/water fog extinguishing systems.

UNUSUAL FIRE OR EXPLOSION HAZARDS:
The product vapor is heavier than air and may travel a considerable distance to a source of ignition and flashback.

HAZARDOUS COMBUSTION PRODUCTS:
See section 10 for a list of hazardous decomposition products for this mixture.

FIRE FIGHTING: If evacuation of personnel is necessary, evacuate to an upwind area. Decontaminate personnel and equipment with a water wash-down after fire and smoke exposure

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FIRE FIGHTING EQUIPMENT: Firemen and emergency responders: wear full turnout gear or Level A equipment, including positive-pressure, self-contained breathing apparatus (SCBA).

Section 6 – Accidental Release Measures

SPILL AND LEAK PROCEDURES:
Spill supervisor - Ensure clean up personnel wear all appropriate Personal Protective Equipment (PPE), including respiratory protection. Remove all ignition sources. Keep nonessential personnel away from the contaminated area. Dried and cured, residue is inert.

SMALL SPILLS: Ventilate the contaminated area. Using non-sparking tools, mix the appropriate sorbent into the spilled material. Use an appropriate absorbent for aqueous, waterborne, and solvent-borne coatings.
Collect the saturated sorbent and transfer it into a covered container. Steel containers are acceptable for all wastes except wastes which contain acid. Use suitable plastic containers for acid-bearing wastes. Dispose of the waste in compliance with all national and local regulations.

LARGE SPILLS: Prevent this material from entering sewers and watercourses by diking or impounding the spilled material. Advise authorities if the product has entered or may enter, sewers, watercourses, or extensive land areas. Ventilate the contaminated area. Using non-sparking tools, mix the appropriate sorbent into the spilled material. Use an appropriate absorbent for aqueous, waterborne, and solvent-borne coatings.
Collect the saturated sorbent and transfer it into a covered container. Steel containers are acceptable for all wastes except wastes which contain acid. Use suitable plastic containers for acid-bearing wastes.

Waste Disposal: Dispose of the waste in compliance with all local authority and national regulations. Label the waste container

Section 7 – Handling and Storage

HANDLING PRECAUTIONS: Wear all appropriate Personal Protective Equipment (PPE). Wear respiratory protection and ensure adequate ventilation at all times as vapours can accumulate in confined or poorly ventilated areas.
Use the product in a manner which minimizes splashes and/or the creation of dust. Keep containers closed when not in use.
Do not handle or store material near heat, sparks, open flames, or other sources of ignition. Store at room temperatures, i.e., 40 to 95 F (4 to 35 C).

STORAGE: Do not store above 120° F (49 C).
Store only in original containers.

REGULATORY REQUIREMENTS: No data found

Section 8 – Exposure Controls / Personal Protection

Chemical Name / CAS No.	OSHA Exposure Limits	ACGIH Exposure Limits	Other Exposure Limits
2-Butanone 78-93-3	PEL: 200 ppm	TLV: 200 ppm STEL:300 ppm	Not Established
Acrylic polymer	Not Established	Not Established	Not Established
Acrylic resin	Not Established	Not Established	Not Established
Synthetic Terpolymer	Not Established	Not Established	Not Established
NN Dimethyl-formamide	10 PPM TWA	10 PPM SKIN	IDLH: 500 PPM
Epoxidized Synthetic Oligomer	Not Established	Not Established	Not Established

ENGINEERING: Ensure processing (curing) ovens are properly vented to prevent the introduction of processing fumes into the workplace. Use explosion-proof equipment and good manufacturing practice.

VENTILATION: Use only with adequate ventilation, i.e., ventilation in compliance with occupational exposure limits.

ADMINISTRATIVE CONTROLS:
No data found.

PROTECTIVE EQUIPMENT:
Wear splash goggles. If extra protection is required, wear a face shield over the splash goggles. Face shields are effective only if worn in addition to splash goggles.
Wear a chemical-resistant, butyl-rubber apron and other protective clothing, as deemed appropriate, to avoid skin contact with material.
Wear chemical-resistant gloves (butyl rubber or neoprene). Protective gloves should be inspected frequently and discarded when they exhibit cuts, tears, pinholes, or signs of excessive wear.
Respiratory protection may not be needed if the local exhaust is sufficient to maintain levels of hazardous ingredients below occupational exposure limits.

CONTAMINATED EQUIPMENT:
Dispose of the waste in compliance with all local authority and national regulations.

Section 9 – Physical and Chemical Properties

This mixture typically exhibits the following properties under normal circumstances:

(US Gal = 3.875 ltr or 0.834 Imperial Gal)

Appearance: Viscous Liquid **Physical State:** Liquid **Evaporation Rate:** Faster than ether	**Odour:** Solvent odour **Vapour Density:** Heavier than air **Boiling Range:** 30-60°C (86-140F)

Specific Gravity (SG): 0.897 **Kg VOC/ Litre Less Water:** 0.58 (Lb/G (US) 4.87)	**Kg/l:** 0.897 (Lb/Gal (US) 7.49) **% Volume Solids:** 20-40 (US)

Section 10 – Stability and Reactivity

Stability: **STABLE**

Components of this mixture are incompatible with the following materials:
Strong oxidizing agents, acids, and alkali/base/caustic solutions.
Reacts violently with nitric acid.
This mixture is likely to exhibit the following combustion products:
Carbon monoxide.
Hazardous polymerization will not occur.

Section 11 – Toxicology Information

Mixture Toxicity:

Component Toxicity:

Routes of Entry: Inhalation. Eye Contact. Ingestion

Organs Affected: Exposure to this material may affect the following organs:

Eyes, kidneys, liver, lungs, central nervous system and skin respiratory system

Effects of Overexposure:

Inhalation of excessive concentrations of vapours or mists may cause irritation of the nose and throat, and signs of central nervous system depression (dizziness, drowsiness, fatigue and loss of coordination).

Persons with impaired lung function or asthmatic typical conditions may experience additional breathing difficulties due to the irritant properties of this material. Liquid and high vapor concentrations may cause irritation of the respiratory tract.

Excessive exposure may cause central nervous system effects: headache, dizziness, loss of balance and coordination, unconsciousness, coma, respiratory failure and death.

Skin Contact: Prolonged or repeated exposure will dry and defat the skin leading to redness, drying, cracking and dermatitis.

Persons with pre-existing skin disorders may be more susceptible to the effects of this material. Prolonged or repeated skin contact with liquid tends to remove skin oils which may lead to irritation and dermatitis.

Skin Absorption: N/A

Ingestion: Liquid is moderately toxic and may be harmful if swallowed.

May cause irritation of the digestive tract and signs of central nervous system depression (dizziness, drowsiness, fatigue and loss of coordination). If vomiting occurs, breathing of vomitus into the lungs poses a pulmonary aspiration hazard.

Systemic Effects Prolonged or repeated exposure to vapor or mists may cause liver and kidney damage. Pre-existing liver and kidney disorders may be aggravated by exposure to this material.

Prolonged, repeated, and excessive exposures may cause other effects - chronic, adverse systemic effects including liver and kidney damage.

Eye Contact Vapours are irritating to the eyes. Mists and liquid may cause moderate severe irritation.

Carcinogenicity: The following chemicals comprise 0.1% or more of this mixture and are listed and/or classified as carcinogens or potential carcinogens by NTP, IARC, OSHA (mandatory listing), or ACGIH (optional listing).

CAS Number	Description	%Weight	Carcinogenic Rating
N/A	N/A	N/A	N/A

Section 12 – Ecological Information

TOXICITY TO FISH LC50 (Pimephales promelas (fathead minnow)) 96 hours: >100 mg/l; static test (literature value)

TOXICITY TO AQUATIC INVERTEBRATES
EC50 (Daphnia magna (Water flea)) 48 hours: > 100 mg/l; static test (literature value)

TOXICITY TO ALGAE EC50 (Pseudokirchneriella subcapitata (green algae)) 96 hours: > 100 mg/l; static test (literature value)

BIODEGRADATION Readily biodegradable. OECD Test Guideline 301D (28 d): > 60 % aerobic (literature value)

BIOACCUMULATIVE POTENTIAL
No bioaccumulation is to be expected (log Pow <= 4).

MOBILITY IN SOIL No data available

OTHER ADVERSE EFFECTS
This substance is not considered to be persistent, bioaccumulating and toxic (PBT).

Section 13 – Disposal Considerations

Disposal: Subject to national guidelines and regulations. Always consult utility providers, if in any doubt follow this link https://www.gov.uk/dispose-hazardous-waste

Please remember you are responsible for our environment, as we all are!

Section 14 – Transport Information

Under USA rules this product is suitable for shipping under DOT, IMDG and IATA UN number 1139 in packaging II with a Hazard class 3.

Thread And Head Solutions Limited are currently seeking the equivalent approvals but if any doubt regarding the onward transportation please refer to https://www.gov.uk/guidance/shipping-industry-regulation

Section 15 – Other Information

Thread and Head Solutions Limited is in the process of bringing these products to the market and will therefore accept no responsibility for any missing information in this Safety Data Sheet. Be assured of our development.

Please direct any requirements to sales@ThreadAndHeadSolutions.co.uk

There is no warranty either expressed or implied in the above