TED PELLA, INC.
Microscopy Products for Science and Industry

Safety Data Sheet

Product No. 16033 Mikrostik™
Issue Date (07-09-15)
Review Date (08-31-17)

Section 1: Product and Company Identification

Product Name: Mikrostik™
Synonym: None
Company Name
Ted Pella, Inc., P.O. Box 492477, Redding, CA 96049-2477
Inside USA and Canada 1-800-237-3526 (Mon-Thu. 6:00AM to 4:30PM PST; Fri 6:00AM to 4:00PM PST)
Outside USA and Canada 1-530-243-2200 (Mon-Thu. 6:00AM to 4:30PM PST; Fri 6:00AM to 4:00PM PST)
CHEMTREC USA and Canada Emergency Contact Number 1-800-424-9300 24 hours a day
CHEMTREC Outside USA and Canada Emergency Contact Number +1-703-741-5970 24 hours a day

Section 2: Hazard Identification

2.1 Classification of the substance or mixture

GHS Pictograms:


Flammable Health hazard Irritant

GHS Categories:

GHS02 Flame
- Flam. liq. 2 — H225: Highly flammable liquid and vapor.

GHS08 Health Hazard
- Resp. Sens. 1 — H334: May cause allergy or asthma symptoms or breathing difficulties if inhaled.
- Repr. 2 — H361d: Suspected of damaging the unborn child.

GHS07 Irritant
- Acute Tox. 4 — H302: Harmful if swallowed.
- Eye Irrit. 2 — H319: Causes serious eye irritation.
- STOT SE 3 — H336: May cause drowsiness or dizziness.

2.2 Label Elements

Signal Word: DANGER

Labelling according to Regulation (EC) No 1272/2008
The product is classified and labelled according to the CLP regulation.

Hazard Pictograms:


GHS02 GHS07 GHS08

Hazard-determining components of labeling:
Methyl Ethyl Ketone
Polyvinyl Chloride Resin
Toluene

Hazard statements
H225 Highly flammable liquid and vapor.
H302 Harmful if swallowed.
H304 May be fatal if swallowed and enters airways
H315 Causes skin irritation
H319 Causes serious eye irritation.
H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.
H361d Suspected of damaging the unborn child.
H336 May cause drowsiness or dizziness.
H373 May cause damage to organs through prolonged or repeated exposure.

Precautionary statements

P101	If medical advice is needed, have product container or label at hand.
P102	Keep out of reach of children.
P103	Read label before use.
P210	Keep away from heat/sparks/open flames/hot surfaces. - No smoking.
P241	Use explosion-proof electrical/ventilating/lighting/equipment.
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 cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P405	Store locked up.
P501	Dispose of contents/container in accordance with local/regional/national/international regulations.

Results of PBT and vPvB assessment:
PBT: NA
vPvB: NA

Emergency overview:
Appearance: Clear to hazy viscous liquid
Immediate effects: ND
Potential health effects
Primary Routes of entry: Dermal, inhalation, ingestion
Signs and Symptoms of Overexposure: ND
Eyes: Severe irritation, redness, tearing blurred vision
Skin: Moderate irritation, defatting dermatitis
Ingestion: Gastrointestinal irritation, nausea, vomiting, and diarrhea
Inhalation: Nasal and respiratory irritation, dizziness, fatigue, nausea, headache and narcosis. Prolonged or repeated breathing of high concentrations may cause liver, kidney damage, and neural dysfunction
Chronic Exposure: ND
Chemical Listed As Carcinogen Or Potential Carcinogen: Toluene
See Toxicological Information (Section11)
Potential environmental effects
See Ecological Information (Section 12)

Section 3: Composition / Information on Ingredients

Principle Hazardous Component(s) (chemical and common name(s)) **(Cas. No)**	**%**	**OSHA PEL mg/m3**	**ACGIH TLV mg/m3**	**NTP** Carcinogen	**IARC** Carcinogen	**OSHA regulated** Carcinogen
Methyl Ethyl Ketone (78-93-3) EINECS: 201-159-0 Flam. Liq. 2: H225 Eye Irrit. 2: H319 STOT SE3: H336	78-80%	590	200 ppm	No	No	No
Polyvinyl Chloride Resin (9002-86-2) Resp. Sens. 1: H334 Eye Irrit. 2: H319	12-14%	NE	NE	ND	ND	ND
Isobutyl Acetate (110-19-0) EINECS: 203-745-1 Flam. Liq. 2: H225	4-6%	700	20 ppm	No	No	No
Toluene (108-88-3) EINECS: 203-625-9 Flam. Liq. 2: H225 Repr. 2: H361d STOT RE 2: H373 Asp. Tox. 1: H304 Skin Irrit. 2: H315 SOTO SE 3: H336	2-4%	200	50 ppm	No	3	No

Section 4: First Aid Measures

If accidental overexposure is suspected

General information: Symptoms of poisoning may even occur after several hours; therefore, medical observation for at least 48 hours after the accident.
Eye(s) Contact: Flush with water for at least 15 minutes. Get medical attention.
Skin Contact: Wash thoroughly with soap and water. Remove all contaminated clothing.
Inhalation: Remove to fresh air. If breathing difficult administer oxygen. If breathing has stopped give artificial respiration. Call a physician.
Ingestion: Do not induce vomiting. Call a physician.

Section 5: Fire Fighting Measures

Flash Point: -6 °C
Flammable Limits: LEL: 1.2
Auto-ignition point: Product is not self-igniting.
Fire Extinguishing Media: Foam, "Alcohol" Foam, CO2, Dry Chemical, Water Fog.
Unusual Fire and Explosion Hazards: Closed containers may explode if exposed to temperatures exceeding the boiling point. Use water spray to keep closed containers cool. Product is not explosive. However, formation of explosive air/vapour mixtures are possible.
Special firefighting procedures: Wear positive pressure self-contained breathing apparatus.
Hazardous combustion products: Carbon dioxide and carbon monoxide
DOT Class: Flammable

Section 6: Accidental Release Measures

Steps to be Taken in Case Material is Released or Spilled:

Wear protective gloves and glasses.
Do not allow to enter sewers/surface or ground water.
Eliminate all ignition sources immediately. Dike large spills. Collect with vermiculite or other absorbent material. If TLV is exceeded personnel should wear air supplied respirator or for large spills impervious clothing and boots are advised.
Waste Disposal Methods: Dispose of waste according to Federal, State and Local Regulations.

Section 7: Handling and Storage
Precautions to be taken in Handling and Storage:
Ensure good ventilation/exhaustion at the workplace. Prevent formation of aerosols. Protect against electrostatic charges.
Keep container tightly sealed. Store in cool, dry conditions in well-sealed receptacles. Protect from heat and direct sunlight. Keep away from heat, sparks, flame.
Storage temperature: Room temperature
Storage Pressure: NA

Section 8: Exposure Controls / Personal Protection
Engineering Controls
Ventilation required: Sufficient mechanical ventilation should be provided to maintain exposure below TLV.
Control parameters:

Ingredients with limit values that require monitoring at the workplace:	
78-93-3 Methyl Ethyl Ketone	
WEL	Short-term value: 899 mg/m³, 300 ppm Long-term value: 600 mg/m³, 200 ppm Sk, BMGV
110-19-0 Iso-butyl Acetate	
WEL	Short-term value: 903 mg/m³, 187 ppm Long-term value: 724 mg/m³, 150 ppm
108-88-3 Toluene	
WEL	Short-term value: 384 mg/m³, 100 ppm Long-term value: 191 mg/m³, 50 ppm Sk
Ingredients with biological limit values:	
78-93-3 Methyl Ethyl Ketone	
BMGV	70 µmol/L Medium: urine Sampling time: post shift Parameter: butan-2-one

Personal Protection Equipment
General protective and hygienic measures: Keep away from foodstuffs, beverages and feed. Avoid contact with the eyes and skin. Eyewash advised. Remove any contaminated clothing. Wash hands thoroughly before eating or smoking.
Respiratory protection: If the TLV is exceeded a NIOSH/MSHA approved air supplied respirator is advised.
Protective gloves: The glove material has to be impermeable and resistant to the product/ the substance/the preparation. Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation. Material of gloves: natural rubber or neoprene. Penetration of glove material: The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.
Skin protection: Gloves and protective clothing.
Eye protection: Tightly sealed goggles; chemical splash goggles are advised.
Exposure Guidelines

See Composition/Information on Ingredients (Section 3)

Section 9 Physical and Chemical Properties
Appearance and Physical State: Clear to hazy viscous liquid
Odor (threshold): Sharp pungent
Specific Gravity (H_2O=1): 0.85 g/cm^3
Vapor Pressure (mm Hg): 71 mm Hg
Vapor Density (air=1): >1
Percent Volatile by volume: ND

Evaporation Rate (butyl acetate=1): >2
Boiling Point: 79 °C
Freezing point / melting point: ND
pH: ND
Solubility in Water: Partial
Molecular Weight: NA

Section 10: Stability and Reactivity
Stability: Stable
Conditions to Avoid: Temperatures exceeding 65 °C
Materials to Avoid (Incompatibility): Oxidizing agents
Hazardous Decomposition Products: Fire conditions, carbon dioxide and carbon monoxide
Hazardous Polymerization: Will not occur

Section 11: Toxicological Information
Results of component toxicity test performed:

LD/LC50 values relevant for classification		
78-93-3 Methyl Ethyl Ketone		
Oral	LD50	616 mg/kg (mouse) 2737 mg/kg (rat)
Dermal	LD50	6480 mg/kg (rabbit)
Inhalative	LC50/4 h	32 mg/l (mouse)
108-88-3 Toluene		
Oral	LD50	636 mg/kg (rat)
Dermal	LD50	14100 mg/kg (rabbit)
Inhalative	LC50/4 h	5320 mg/l (mouse)
110-19-0 Iso-butyl Acetate		
Oral	LD50	13400 mg/kg (rat)
Dermal	LD50	17400 mg/kg (rabbit)

On the skin: Irritant to skin and mucous membranes.
On the eye: Irritating effect.
Sensitization: May cause sensitizing effects.
Additional toxicological information:
The product shows the following dangers according to the calculation method of the General EU Classification Guidelines for Preparations as issued in the latest version:
Harmful
Irritant
This product DOES contain compounds listed by NTP or IARC or regulated by OSHA as a carcinogen. Toluene (108-88-3)
CMR effects (carcinogenity, mutagenicity and toxicity for reproduction): Repr. 2

Section 12: Ecological Information

Toxicity

Aquatic toxicity: No further relevant information available.

Persistence and degradability: No further relevant information available.

Bioaccumulative potential: No further relevant information available.

Mobility in soil: No further relevant information available.

Additional ecological information:

General notes:

Water hazard class 1 (German Regulation) (Self-assessment): slightly hazardous for water

Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.

Chemical Fate Information: ND

Section 13 Disposal Considerations

RCRA 40 CFR 261 Classification: ND

Must not be disposed together with household garbage. Do not allow product to reach sewage system.

Federal, State and local laws governing disposal of materials can differ. Ensure proper disposal compliance with proper authorities before disposal.

Section 14: Transportation Information

US DOT Information: Proper shipping name: Flammable liquid, n.o.s. (Methyl Ethyl Ketone solution)

Hazard Class: 3

Packaging group: III

UN Number: UN1993

IATA: Proper shipping name: Flammable liquid, n.o.s. (Methyl Ethyl Ketone solution)

Hazard Class: 3

Packing group: III

UN Number: UN1993

IMO: Proper shipping name: Flammable liquid, n.o.s. (Methyl ethyl Ketone solution)

Class: 3

UN Number: UN1993

Packing group: III

Marine Pollutant: No

Canadian TDG: Flammable liquid, n.o.s. (Methyl ethyl Ketone solution)

IMDG Page:

Limited quantities: 1L

Excepted quantities:

Code: E2

Maximum net quantity per inner packaging: 30 ml

Maximum net quantity per outer packaging: 500 ml

Section 15: Regulatory Information

United States Federal Regulations

SDS complies with OSHA's Hazard Communication Rule 29, CFR 1910.1200.

SARA: Components No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.

SARA 313 Components: The following components are subject to reporting levels established by SARA Title III, Section 313: Toluene CAS-No. 108-88-3 Revision Date 2007-07-01

SARA Title III: SARA 311/312 Hazards: Fire Hazard, Acute Health Hazard, Chronic Health Hazard

RCRA: ND

TSCA: All components are listed

CERCLA: Toluene (108-88-3): RQ = 1000 lbs (454 Kg). Methyl Ethyl Ketone (78-93-3): RQ = 5000 lbs (2270 Kg).

State Regulations

California Proposition 65: This product contains Chemical(s) known to the State of California to cause reproductive harm: Toluene (108-88-3)

International Regulations

Canada WHMIS: ND

Europe EINECS Numbers: See Section 3.

Section 16: Other Information

Label Information: Harmful by inhalation, ingestion and skin contact

European Risk and Safety Phrases: ND

European symbols needed: ND

Canadian WHMIS Symbols: ND

Hazard rating: Health: 2; Fire: 3; Reactivity: 0

Estimated Hazard Rating.

(0=least, 1=Slight, 2=Moderate, 3=High, 4=Extreme)

Abbreviations used in this document

NE= Not established

NA= Not applicable

NIF= No Information Found

ND= No Data

Disclaimer

Ted Pella, Inc. makes no warranty of any kind regarding the information furnished herein. Users should independently determine the suitability and completeness of information from all sources. While this data is presented in good faith and believed to be accurate, it should be considered only as a supplement to other information gathered by the user. It is the User's responsibility to assure the proper use and disposal of these materials as well as the safety and health of all personnel who may work with or otherwise come in contact with these materials.