

Safety Data Sheet

Product No. 155-9 GridStick™ Adhesive

Issue Date (4-2-15)

Review Date (3-18-16)

Section 1: Product and Company Identification

Product Name: GridStick™ Adhesive

Synonym: Gridstick Wizard

Company Name

Ted Pella, Inc., P.O. Box 492477, Redding, CA 96049-2477

Domestic Phone (800) 237-3526 (Mon-Thu. 6:00AM to 4:30PM PST; Fri 6:00AM to 4:00PM PST)

International Phone (01) (530) 243-2200 (Mon-Thu. 6:00AM to 4:30PM PST; Fri 6:00AM to 4:00PM PST)

Chemtrec Emergency Number 1-800-424-9300 24 hrs a day.

Section 2: Hazard Identification

2.1 Classification of substance or mixture

GHS Pictograms



GHS02



GHS08



GHS07

GHS Categories

GHS02 – Flammable

Flammable Liquids 2

H225: Highly flammable liquid and vapor.

GHS07 – Irritant

Skin Irritation 2

H315: Causes skin irritation.

Eye Irritation 2A

H319: Causes serious eye irritation.

GHS08 – Health

Reproductive Toxicity 2

H361: Suspected of damaging fertility or the unborn child.

STOT SE 3 (Lungs)

H335: May cause respiratory irritation.

STOT RE 2 (Central nervous system, liver, kidney, auditory system)

H373: May cause damage to organs (Central nervous system, liver, kidney, auditory system) through repeated or prolonged exposure.

2.2 Label elements

Hazard Pictograms



Signal Word: DANGER

Hazard Statements

- H225 Highly flammable liquid and vapor.
- H315 Causes skin irritation.
- H319 Causes serious eye irritation.
- H335 May cause respiratory irritation.
- H361 Suspected of damaging fertility or the unborn child.
- H373 May cause damage to organs (Central nervous system, liver, kidney, auditory system) through repeated or prolonged exposure.

Precautionary Statements

- 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.
- P240 Ground/bond container and receiving equipment.
- P241 Use explosion-proof electrical/ventilating/lighting/equipment.
- P242 Use only non-sparking tools.
- P243 Take precautionary measures against static discharge.
- P260 Do not breathe mist or vapors.
- P264 Wash skin thoroughly after handling.
- P271 Use only outdoors or in a well-ventilated area.
- P280 Wear protective gloves/eye protection/protective clothing/face protection.
- P303+P361+P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.
- P304+P340+P312 IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER or doctor/physician if you feel unwell.
- P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do so. Continue rinsing.
- P308+P313 IF exposed or concerned: Get medical advice/attention.
- P332+P313 If skin irritation occurs: Get medical advice/attention.
- P337+P313 If eye irritation occurs: Get medical advice/attention.
- P362 Take off contaminated clothing and wash before reuse.
- P403+P235 Store in a well-ventilated place. Keep cool.
- P405 Store locked up.

P501

Dispose of contents/container in accordance with local, regional, national and international regulations.

2.3 Other hazards

Vapors may form explosive mixture with air. Static-accumulating flammable liquid.

Health Effects:

NFPA Hazard Rating: Health: 2; Fire: 3; Reactivity: 0

HMIS® Hazard Rating: Health: 3; Fire: 3; Reactivity: 0
(0=least, 1=Slight, 2=Moderate, 3=High, 4=Extreme)

Results of PBT and vPvB assessment: ND

Emergency overview:

Appearance: Viscous, colorless liquid

Immediate effects: Severe irritation.

Potential health effects

Primary Routes of entry: Inhalation, skin, eyes and ingestion.

Signs and Symptoms of Overexposure: Overexposure by inhalation may cause drowsiness, dizziness, confusion or loss of coordination. Swallowing large amounts may cause internal injury.

Eyes: Causes serious eye irritation.

Skin: Causes skin irritation.

Ingestion: May cause vomiting. Aspiration of liquid while vomiting may seriously injure lungs.

Inhalation: May cause respiratory irritation. May irritate nose and throat.

Chronic Exposure: Suspected of damaging fertility or the unborn child. May cause damage to organs through prolonged or repeated exposure. May cause defatting and drying of skin, which may result in skin irritation and dermatitis. Repeated ingestion may cause internal injury.

Chemical Listed as Carcinogen or Potential Carcinogen: Ethylbenzene (100-41-1)

See Toxicological Information (Section 11)

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 TWA ppm	NTP Carcinogen	IARC Carcinogen	OSHA regulated Carcinogen
Xylene (1330-20-7)	49.7-56	435	100	No	No	No
Ethylbenzene (100-41-4)	3.1-6.3	435	20	No	2B	No

Propan-2-ol (67-63-0)	0.63- 3.1	980	200	No	No	No
Octamethylcyclotetrasiloxane (556-67-2)	0.63- 3.1	ND	ND	No	No	No
Decamethylcyclopentasiloxane (541-02-6)	0.63- 3.1	ND	ND	No	No	No
Toluene (108-88-3)	0.063- 0.63	200 ppm	ND	No	No	No

Section 4: First Aid Measures

If accidental overexposure is suspected

- Eye(s) Contact: In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. If present and easy to do, remove contact lenses. Get medical attention.
- Skin Contact: Immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Get medical attention. Wash clothing before reuse. Thoroughly clean shoes before reuse.
- Inhalation: Remove victim to fresh air. Get medical attention if symptoms occur.
- Ingestion: Do not induce vomiting. Get medical attention if symptoms occur. Rinse mouth thoroughly with water.

Section 5: Fire Fighting Measures

Flash Point: 13.3 °C

Flammable Limits: ND

Auto-ignition point: ND

Fire Extinguishing Media: Water spray, alcohol-resistant foam, dry chemical, carbon dioxide. DO NOT USE a solid water stream, as it may scatter and spread fire.

Special Fire Fighting Procedures: Flash back possible over considerable distance. Use water spray to cool unopened containers. Remove undamaged containers from fire area as soon as it is safe to do so. Evacuate area. Wear self-contained breathing apparatus and use personal protective equipment.

Unusual Fire and Explosion Hazards: Vapors may form explosive mixtures with air.

Hazardous combustion products: Carbon oxides, silicon oxides, chlorine compounds, metal oxides, formaldehyde.

DOT Class: Flammable liquid.

Section 6: Accidental Release Measures

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

Personal precautions, protective equipment, and emergency procedures: Remove all sources of ignition. Ventilate the area. Use personal protective equipment.

Environmental precautions: Discharge into the environment must be avoided. Prevent further leakage or spillage if safe to do so. Prevent spreading over a wide area (e.g. by

contaminant or oil barriers. Retain and dispose of contaminated wash water. Local authorities should be advised if significant spillages cannot be contained. Methods and materials for containment and cleanup: Non-sparking tools should be used. Soak up with inert absorbent material. Suppress (knock down) gases/vapors/mists with a water spray jet. For large spills, provide diking or other appropriate containment to keep material from spreading. If diked material can be pumped, store recovered material in appropriate container. Clean up remaining materials from spill with suitable absorbent. 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:

Technical measures: Ensure all equipment is electrically-grounded before beginning transfer operations. This material can accumulate static charge due to its inherent physical properties and can therefore cause an electrical ignition source to vapors. In order to prevent a fire hazard, as bonding and grounding may be insufficient to remove static electricity, it is necessary to provide an inert gas purge before beginning transfer operations. Restrict flow velocity in order to reduce the accumulation of static electricity.

Handling: Do not get on skin or clothing. Do not breathe vapors or mist. Do not swallow. Do not get in eyes. Handle in accordance with good industrial hygiene and safety practice. Non-sparking tools should be used. Keep container tightly closed. Keep away from sources of ignition. Take precautionary measures against static discharges. Take care to prevent spills, waste and minimize release to the environment.

Storage: Keep in properly labeled containers. Store locked up. Keep tightly closed. Keep in a cool, well-ventilated place. Store in accordance with particular governmental regulations. Keep away from heat and sources of ignition.

Storage temperature: ND

Storage Pressure: ND

Section 8: Exposure Controls / Personal Protection

Ingredients with workplace control parameters: See section 3

Biological occupational exposure limits

Sampling time: End of shift (as soon as possible after exposure ceases.)

Xylene (1330-20-7)	1.5 g/g creatinine (urine)
Ethylbenzene (100-41-4)	0.15 g/g creatinine (urine)
Propan-2-ol (67-63-0)	40 mg/l (urine)
Toluene (108-88-3)	0.02 mg/l (blood)
	0.03 mg/l (urine)

Engineering Controls

Ventilation required: Use with local, explosion-proof exhaust ventilation.

Personal Protection Equipment

Respiratory protection: Where concentrations are above recommended limits or are unknown, appropriate respiratory protection should be worn, following OSHA respirator regulations (29 CFR 1910.134) and using NIOSH/MSHA approved respirators. Use a positive-pressure air supplied respirator if there is potential for uncontrolled release, exposure levels are unknown, or other circumstances exist where air purifying respirators may not provide adequate protection.

Protective gloves: Antistatic, impervious, flame-retardant gloves.

Skin protection: Wear flame retardant, antistatic, impervious protective clothing (gloves, boots, aprons, etc.)

Eye protection: Safety goggles.

Additional clothing and/or equipment: Eyewash station and safety shower.

Exposure Guidelines

See Composition/Information on Ingredients (Section 3)

Section 9 Physical and Chemical Properties

Appearance and Physical State: Viscous, colorless liquid.

Odor (threshold): Aromatic (ND)

Specific Gravity (H₂O=1): 0.98

Vapor Pressure (mm Hg): ND

Vapor Density (air=1): ND

Percent Volatile by volume: ND

Evaporation Rate (butyl acetate=1): ND

Boiling Point: 141.0 °C

Freezing point / melting point: ND

pH: ND

Solubility in Water: ND

Molecular Weight: ND

Section 10: Stability and Reactivity

Stability: Stable under normal conditions.

Conditions to Avoid: Handling operations that can promote accumulation of static charges. Heat, flames and sparks. Incompatible materials.

Materials to Avoid (Incompatibility): Strong oxidizing agents, organic peroxides, flammable solids, pyrophoric liquids and solids, self-heating substances and mixtures, substances and mixtures which contact with water emit flammable gases, explosives and gases.

Hazardous Decomposition Products: Formaldehyde.

Hazardous Polymerization: Will not occur.

Section 11: Toxicological Information

Acute Toxicity

Product (using calculation method)

Oral Acute toxicity estimate: >5,000 mg/kg

Inhalation Acute toxicity estimate: >40 mg/l (4h; test atmosphere: vapor)
Dermal Acute toxicity estimate: >5,000 mg/kg

Ingredients

Xylene

Oral LD50 (Rat): 4,300 mg/kg (Directive 67-548-EEC, Annex V, B.1)
Inhalation Acute toxicity estimate: 11 mg/l (test atmosphere: vapor; expert judgement)
Dermal Acute toxicity estimate: 1,100 mg/kg (expert judgement)

Ethylbenzene

Oral LD50 (Rat): 3,500 mg/kg
Inhalation LC50 (Rat): 17.2 mg/l
Dermal LD50 (Rabbit): >5,000 mg/kg

Propan-2-ol

Oral LD50 (Rabbit): >5,000 mg/kg
Inhalation LC50 (Rat): 72.6 mg/l (4 h; test atmosphere: vapor)
Dermal LD50 (Rat): >5,000 mg/kg

Oxymethylcyclotetrasiloxane

The substance has no acute oral, inhalation, or dermal toxicity
Oral LD50 (Rat): >4,800 mg/kg
Inhalation LC50 (Rat): 2975 ppm (4 h; test atmosphere: vapor)
Dermal LD50 (Rabbit): >2.5 ml/kg

Decamethylcyclopentasiloxane

The substance has no acute oral or inhalation toxicity.
Oral LD50 (Rat): >24,134 mg/kg
Inhalation LC50 (Rat): 8.67 mg/l (4h; test atmosphere: dust/mist)

Toluene

Oral LD50 (Rat): >24,134 mg/kg
Inhalation LC50 (Rat): 28.1 mg/l (4 h; test atmosphere: vapor)
Dermal LD50 (Rabbit): >5,000 mg/kg

Human experience: ND

This product **does or does not** contain any compounds listed by NTP or IARC or regulated by OSHA as a carcinogen.

Section 12: Ecological Information

Ecotoxicity

Ingredients

Xylene

Fish (Oncorhynchus mykiss – rainbow trout) LC50: 13.5 mg/l (96 h)
Invertebrates (Daphnia magna – water flea) EC50: 3.2 mg/l (48 h)
Algae (Selenastrum capricornutum – green algae) EC50: 3.2 mg/l (72 h)
Bacteria EC50: >157 mg/l

Ethylbenzene

Fish (Oncorhynchus mykiss – rainbow trout) LC50: 4.2 mg/l (96 h)
Invertebrates (Daphnia magna – water flea) EC50: 1.8-2.4 mg/l (48 h)
Algae (Selenastrum capricornutum – green algae) EC50: 5.4 mg/l (72 h)
Bacteria (Nitrosomonas sp.) EC50: >157 mg/l (24 h)

Propan-2-ol

Fish (Pimephales promelas – fathead minnow)	LC50: 10,000 mg/l (96 h)
Invertebrates (Daphnia magna – water flea)	EC50: 10,000 mg/l (24 h)
Algae (Scenedesmus quadricauda – green algae)	ErC50: >1,800 mg/l (8 d)
Bacteria (Pseudomonas putida)	EC50: >1,050 mg/l (16 h)

Oxymethylcyclotetrasiloxane

Acute toxicity

Fish (Oncorhynchus mykiss – rainbow trout)	LC50: >0.022 mg/l (96 h)
Invertebrates (Daphnia sp.)	EC50: >0.015 mg/l (48 h)
Algae (Selanastrum capricornutum – green algae)	EC50: >0.022 mg/l (96 h)

Chronic toxicity

Fish (Oncorhynchus mykiss – rainbow trout)	NOEC: \geq 0.0044 mg/l
Invertebrates (Daphnia magna – water flea)	NOEC: >0.0079 mg/l (21 d)
Bacteria (Method: ISO 8192)	IC50: >10,000 mg/l

Decamethylcyclopentasiloxane

There is no toxicity to fish or invertebrates at the limit of solubility. This chemical has no known ecotoxicological effects.

Toluene

Acute toxicity

Fish (Oncorhynchus kisutch – coho salmon)	LC50: 5.5 mg/l (96 h)
Invertebrates (Ceriodaphnia dubia – water flea)	EC50: 3.78 mg/l (48 h)
Algae (Skeletonema costatum – marine diatom)	NOEC: 10 mg/l (72 h)
Bacteria (Nitrosomonas sp.)	EC50: 84 mg/l (24 h)

Chronic toxicity

Fish (Oncorhynchus kisutch – coho salmon)	NOEC: 1.39 mg/l (40 d)
Invertebrates (Daphnia magna – water flea)	NOEC: 1 mg/l (21 d)

Chemical Fate Information: ND

Section 13 Disposal Considerations

RCRA 40 CFR 261 Classification: waste codes D001 (ignitibility); D018

Dispose of as unused product. Empty containers should be taken to an approved waste handling site for recycling or disposal. Do not burn, or use a cutting torch on, the empty drum.

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: ADHESIVES

Hazard Class: 3

Packaging group: II

UN Number: UN 1133

Labels: Flammable liquid

IATA: Proper shipping name: ADHESIVES

Hazard Class: 3

Packaging group: II

UN Number: UN 1133

IMO: Proper shipping name: ADHESIVES
Hazard Class: 3
Packaging group: II
UN Number: UN 1133
Marine Pollutant: No
Canadian TDG: Proper shipping name: ADHESIVES

Section 15: Regulatory Information

United States Federal Regulations

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

SARA 311/312: Fire hazard; acute health hazard; chronic health hazard.

SARA Title III (Section 302): No chemicals in this material are subject to the reporting requirements

SARA Title III (Section 313): The following components are subject to reporting levels established by this section: Xylene (1330-20-7), 29%; Ethylbenzene (100-41-4), 8.4%; Propan-2-ol (67-63-0), 2.2%.

RCRA: Xylene (1330-20-7) – U239; toluene (108-88-3) – U037

TSCA: All components are either exempt or listed.

CERCLA:

Xylene (1330-20-7): RQ (component) – 100 lbs; RQ (calculated product) – 345 lbs

Ethylbenzene (100-41-4): RQ (component) – 1000 lbs; RQ (calculated product) – 11,905 lbs

Benzene (71-43-2): RQ (component) – 10 lbs; RQ (calculated product) – 101,010 lbs

State Regulations

California Proposition 65: This product contains chemicals known in the state of California to cause cancer, birth defects, and/or other reproductive harm: ethylbenzene (100-41-4); benzene (71-43-2); toluene (108-88-3).

International Regulations

Canada WHMIS: ND

Europe EINECS Numbers: ND

Section 16: Other Information

Label Information: Section 3

European Risk and Safety Phrases: ND

European symbols needed: ND

Canadian WHMIS Symbols: ND

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.

SDS Form 0013F1V4