Safety Data Sheet

Brite Zinc Touch-Up Pens

SECTION 1: IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND THE COMPANY/UNDERTAKING

1.1 Product Identifier

Trade Name Brite Zinc Touch-Up Pens
Product Number B-001

1.2 Relevant Identified Uses of the Substance or Mixture and Uses Advised Against

Product Use: Welding Process Aid

1.3 Details of the Supplier of the Safety Data Sheet

Manufacturer: Weld-Aid Products
14650 Dequindre
Detroit , Michigan
Information Phone Number: +1 (313) 883-6977
+1 (313) 883-4930
E-mail info@weldaid.com

1.4 Emergency Telephone Number

Emergency Spill Information +1 (800) 255-3924

SDS Date of Preparation: September 7, 2017

SECTION 2: HAZARDS IDENTIFICATION

2.1 Classification of the Substance or Mixture

CLP/GHS Classification (1272/2008):

Physical:	**Health:**	**Environmental**
Flammable Liquid Category 2	Aspiration Toxicity Category 1 Skin Irritation Category 2 Eye Irritation Category 2 Specific Target Organ Toxicity – Single Exposure Category 3 (Nervous System) Reproductive Toxicity Category 2 Specific Target Organ Toxicity – Repeat Exposure Category 2	Aquatic Acute Category 1 Aquatic Chronic Category 1

2.2 Label Elements

DANGER! Contains toluene, solvent naphtha, butyl acetate

Hazard Phrases

H225	Highly flammable liquid and vapor.
H304	May be fatal if swallowed and enters airways.
H315	Causes skin irritation.
H319	Causes serious eye irritation
H336	May cause drowsiness or dizziness.
H361	Suspected of damaging fertility or the unborn child.
H373	May cause damage to kidneys, liver, nervous system and hearing through prolonged or repeated exposure.
H410	Very toxic to aquatic life with long lasting effects.

Precautionary Phrases

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, and hot surfaces. No smoking.

P233	Keep container tightly closed.
P240	Ground and bond container and receiving equipment
P241	Use explosion-proof electrical, ventilating and lighting equipment.
P242	Use only non-sparking tools.
P243	Take precautionary measures against static discharge.
P260	Do not breathe mist, vapors or spray.
P264	Wash thoroughly after handling.
P271	Use only outdoors or in a well-ventilated area.
P273	Avoid release to the environment.
P280	Wear protective gloves and eye protection.
P301 + P310	IF SWALLOWED: Immediately call a POISON CENTER or doctor.
P331	Do NOT induce vomiting.
P302 + P352	IF ON SKIN: Wash with plenty of soap and water.
P332 + P313	If skin irritation occurs: Get medical attention.
P362	Take off contaminated clothing and wash before reuse.
P304 + P340	IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P312	Call a POISON CENTER or doctor 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. Continue rinsing.
P337 + P313	If eye irritation persists: Get medical attention.
P308 + P313	IF exposed or concerned: Get medical attention.
P370 + P378	In case of fire: Use carbon dioxide, alcohol foam or dry chemical for extinction.
P391	Collect spillage.
P403 + P235	Store in a well-ventilated place. Keep cool. Keep container tightly closed.
P405	Store locked up.
P501	Dispose of contents and container in accordance with local and national regulations.

2.3 Other Hazards: None

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

3.1 Substances:

Chemical Name	CAS# /	EINECS#	GHS Classification Regulation (EC) No 1272/2008	%
Zinc	7440-66-6	231-175-3	Aquatic Acute Category 1 (H400) Aquatic Chronic Category 1 (H410)	30-40
Solvent Naphtha	64742-95-6	265-199-0	Flammable Liquid Category 2 (H226) Skin Irritation Category 2 (H315), Aspiration Toxicity Category 1 (304) Specific Target Organ Toxicity – Single Exposure 3 (H336) Aquatic Chronic Category 2 (H411)	20-30
Toluene	108-88-3	203-625-9	Flammable Liquid Category 2 (H226), Reproductive Toxicity Category 2 (H361), Aspiration Toxicity Category 1 (304) Specific Target Organ Toxicity – Repeat Exposure Category 2 (H373) Skin Irritation Category 2 (H315), Specific Target Organ Toxicity – Single Exposure 3 (H336)	10-20
VM&P naphtha	64742-89-8	265-192-2	Aspiration Toxicity Category 1 (H304) Flammable Liquid 3 (H226)	5-10
Stoddard Solvent	8052-41-3	232-489-3	Aspiration Toxicity Category 1 (H304) Flammable Liquid 3 (H226)	5-10
2-methoxy-1-methylethyl acetate	108-65-6	203-603-9	Flammable Liquid 3 (H226)	1-5
Butyl Acetate	123-86-4	204-658-1	Flammable Liquid 3 (H226)	1-5

			Specific Target Organ Toxicity – Single Exposure 3 (H336)	

See Section 16 for further information on the GHS Classification.

SECTION 4: FIRST AID MEASURES

4.1 Description of First Aid Measures

Eyes: Flush eyes immediately with water for several minutes, holding the eyelids apart. If irritation persists, get medical attention.

Skin: Remove contaminated clothing and shoes. Wash exposed area thoroughly with soap and water. Wash contaminated clothing before reuse. Get medical attention if irritation persists.

Inhalation: Remove to fresh air. If irritation or breathing difficulty occurs, get medical attention.

Ingestion: Ingestion is unlikely due to physical form. If swallowed, rinse mouth. Do not induce vomiting. Never give anything by mouth to an unconscious or drowsy person. Get immediate medical attention.

Notes to Physicians: Treat symptomatically.

4.2 Most Important symptoms and effects, both acute and delayed: Causes eye irritation. Causes skin irritation. Inhalation of vapors may cause respiratory irritation and central nervous system effects such as headache, dizziness, drowsiness, nausea and unconsciousness. Harmful or fatal if swallowed. Overexposure may cause liver, kidney, blood system and nervous system damage.

4.3 Indication of any immediate medical attention and special treatment needed: Immediate medical treatment is required if ingested.

SECTION 5: FIRE FIGHTING MEASURES

5.1 Extinguishing Media:

Use carbon dioxide, alcohol foam or dry chemical. Do not use water to extinguish fire. Water spray can be used to cool exposed containers and structures.

5.2 Special Hazards Arising from the Substance or Mixture

Unusual Fire and Explosion Hazards: Flammable liquid and vapor. Vapors are heavier than air and may and accumulate in low lying area.

Hazardous Decomposition Products: Combustion may produce carbon monoxide, carbon dioxide and zinc oxide.

5.3 Advice for Fire-Fighters:

Firefighters should always wear self-contained breathing apparatus and full protective clothing for fires involving chemicals or in confined spaces.

SECTION 6: ACCIDENTAL RELEASE MEASURES

6.1 Personal Precautions, Protective Equipment and Emergency Procedures:

Evacuate spill area and keep unprotected personnel away. Eliminate all ignition sources. Ventilate area. Wear appropriate protective clothing as described in Section 8.

6.2 Environmental Precautions:

Report releases as required by local, state and federal authorities.

6.3 Methods and Material for Containment and Cleaning Up:

Pick up and place into a container for disposal. Collect liquid with an absorbent material and place in an appropriate container for disposal.

6.4 Reference to Other Sections:

Refer to Section 8 for protective equipment and Section 15 for disposal considerations.

SECTION 7: HANDLING AND STORAGE

7.1 Precautions for Safe Handling:

Avoid contact with the eyes, skin and clothing. Avoid breathing vapors. Wear protective clothing and equipment as described in Section 8. Use with adequate ventilation. Do not use in poorly ventilated or confined spaces. Wash thoroughly with soap and water after handling and before eating, drinking or using restroom. Do not eat, drink or smoke in work areas.

Follow all SDS precautions when handling empty containers.

7.2 Conditions for Safe Storage, Including any Incompatibilities

Store in a cool, dry, well ventilated area away oxidizing agents and other incompatible materials. Keep containers tightly closed when not in use. Keep away from heat, sparks and flames. Protect from physical damage.

7.3 Specific end use(s):

Welding product

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 Control Parameters:

Chemical Name	Exposure Limits
Zinc (as metal)	0.1 mg/m3 TWA DFG MAK; 0.4 mg/m3 STEL (respirable) 2 mg/m3 TWA DFG MAK
Solvent Naphtha (as stoddard solvent)	100 ppm TWA ACGIH TLV 500 ppm TWA OSHA PEL
Toluene	200 ppm TWA OSHA PEL, 300 ppm STEL 20 ppm TWA ACGIH TLV 50 ppm TWA EU IOEL, 100 ppm STEL 50 ppm TWA DFG MAK, 200 ppm STEL 50 ppm TWA UK OEL, 100 ppm STEL
VM&P naphtha	5 mg/m3 TWA ACGIH TLV (inhalable) (as mineral oil) 5 mg/m3 TWA OSHA PEL (as oil mist) 10 mg/m3 STEL UK OEL
Stoddard Solvent	100 ppm TWA ACGIH TLV 500 ppm TWA OSHA PEL
2-methoxy-1-methylethyl acetate	50 ppm TWA AIHA WEEL
Butyl Acetate	150 ppm TWA OSHA PEL 150 ppm TWA, 200 ppm STEL ACGIH TLV 100 ppm TWA DFG MAK, 200 ppm STEL 150 ppm TWA UK OEL, 200 ppm STEL

8.2 Exposure Controls:

Engineering Controls: Use with adequate local exhaust ventilation to maintain exposures below the occupational exposure limits. Use explosion proof equipment where required.

Respiratory Protection: None required under normal use conditions. If the exposure limits are exceeded an approved organic vapor respirator appropriate for the form and concentration of the contaminants should be used. Selection and use of respiratory equipment must be in accordance with applicable regulations and good industrial hygiene practice.

Skin Protection: Wear impervious gloves such as viton or Teflon.

Eye Protection: Follow facility requirements. Chemical safety glasses should be worn to if contact is possible.

Other: Impervious clothing as needed to prevent contact.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic Physical and Chemical Properties:

Appearance Silver liquid	**Vapor Density:** >1
Odor: Solvent	**Specific Gravity:** 1.4
Odor Threshold: 2.14 ppm (toluene)	**Water Solubility:** Negligible
pH: Not available	**Octanol/Water Partition Coefficient:** Not available
Melting Point/Freezing Point: Not available	**Autoignition Temperature:** Not applicable

Boiling Point: 210°F (98.8°C)	**Decomposition Temperature:** Not applicable
Flash Point: 45°F (7.2C)	**Viscosity:** Not applicable
Evaporation Rate: <1 (ether = 1)	**Explosion Properties:** Vapors may be explosive in confined areas.
Flammable Limits: LEL: 0.7% UEL: 22.7%	**Oxidizing Properties:** No data available
Vapor Pressure: Not available	**VOC:** 55.31%

9.2 Other Information:
None

SECTION 10: STABILITY AND REACTIVITY

10.1 Reactivity:
Not reactive under normal conditions of use.

10.2 Chemical Stability:
Stable under normal storage and handling conditions.

10.3 Possibility of Hazardous Reactions:
None known

10.4 Conditions to Avoid:
Keep away from heat, sparks and open flames.

10.5 Incompatible Materials:
Avoid alkalies, acids and oxidizing agents.

10.6 Hazardous Decomposition Products:
Carbon monoxide, carbon dioxide and zinc oxide.

SECTION 11: TOXICOLOGICAL INFORMATION

11.1 Information on Toxicological Effects:

Eyes: May cause irritation with redness, tearing and swelling.
Skin: Skin contact may cause irritation, defatting of the skin or dermatitis.
Ingestion: Swallowing may cause gastrointestinal effects, and central nervous system effects including nausea, vomiting, diarrhea, dizziness, drowsiness, and unconsciousness. Aspiration during swallowing or vomiting may cause chemical pneumonia or lung damage.
Inhalation: May cause respiratory tract irritation and central nervous system effects such as dizziness, drowsiness, nausea, headache lightheadedness, stupor, and unconsciousness.

Acute Toxicity Values:
Zinc: Oral rat LD50 630 mg/kg
Solvent Naphtha: Oral rat LD50 >5000 mg/kg, Inhalation rat LC50 >7.63 mg/L, Dermal rat LD50 >2000 mg/kg
Toluene: LD50 oral rat 5000 mg/kg; LD50 dermal rabbit 12,214 mg/kg; LC50 inhalation rat 8000 ppm/4hr.
Aliphatic Petroleum Distillates: Oral rat LD50 >3000 mg/kg Skin rabbit LD50 3160 mg/kg
Stoddard Solvent: Oral rat LD50 >5000 mg/kg, Skin rabbit LD50 >2000 mg/kg
2-Methoxy-1-methylethyl Acetate: Oral rat LD50 - 8532 mg/kg; Skin rabbit LD50 - >5 gm/kg
Butyl Acetate: Oral rat LD50 12789 mg/kg, Inhalation rat LC50 >21 mg/L, Dermal rabbit LD50 14112 mg/kg

Irritation: Prolonged skin contact with petroleum solvent may cause defatting of the skin and dermatitis. Toleune may cause mild irritation in rabbit's eye.

Corrosivity: This is not a corrosive product.

Sensitization: This product is not expected to cause sensitization. None of the components are respiratory or skin sensitizers.

Repeat Dose Toxicity: In animal studies, toluene has been shown to cause damage to the liver, kidneys, brain and hearing. Reports have associated repeated and prolonged overexposure to petroleum distillates with adverse liver, kidney and bone

marrow effects and with permanent brain and nervous system damage. Intentional misuse by deliberately concentrating and inhaling the product may be harmful or fatal. Stoddard solvent and VM&P naphtha have been shown to cause kidney and liver damage in repeat dose animal studies.

Carcinogen Status: NTP conducted a two year carcinogenicity study with Stoddard solvent in rats and mice. The studies indicated there was some evidence of carcinogenic activity in male rats but none in female rats. In mice there is equivocal evidence in female mice for carcinogenic activity but no evidence in male mice. IARC has classified petroleum solvents "not classifiable as to their carcinogenicity to humans. None of the components are listed as carcinogens by IARC, NTP, ACGIH, OSHA or the EU Substances Directive.

Germ Cell Mutagenicity: Stoddard solvent was negative in the AMES test, n a mouse lymphoma assay and in an in vivo bone marrow assay. Toluene was negative in the AMES and did not induce sister chromatid exchanges or chromosomal aberrations in a Chinese hamster ovary assay.

Toxicity for Reproduction In animal studies, toluene has been shown to cause fetal lethality and delayed development. Toluene has been detected in maternal milk in humans. It passes through the placental barrier in animals.

SECTION 12: ECOLOGICAL INFORMATION

12.1 Toxicity:

Zinc: 96 hr LC50 Pimephales promelas 780 ug/L, 48 hr EC50 daphnia magna 2909 ug/L, 72 hr IC50 Pseudokirchnerella subcapitata 150 ug/L
Solvent Naphtha: 96 hr LL50 Pimephales promelas 8.2 mg/L 48 hr EL50 daphnia magna 4.5 mg/L, 96 hr EL 50 Pseudokirchnerella subcapitata 3.7 mg/L
Toluene: 96 hr LC50 Pimephales promelas (fathead minnow) 34.27 mg/l; 48 hr LC50 daphnia magna 313 mg/L
Stoddard Solvent: 72 hr EC50 Selenastrum capricornutum (algae) 4700 mg/L
Butyl Acetate: 96 hr LC50 Pimephales promelas 18 mg/L, 48 hr EC50 daphnia sp. 44 mg/L, 72 hr EC50 Scenedesmus subspicatus 674.7 mg/L

12.2 Persistence and Degradability:

Toluene, and stoddard solvent, VM&P naphtha are readily biodegradable.

12.3 Bioaccumulative Potential::

The BCF for toluene is 13-90 which suggests bioaccumulation is low to moderate in aquatic organisms. Stoddard solvent, and VM&P naphtha have a calculated BFC of >3 which indicates there is a potential for bioaccumulation.

12.4 Mobility in Soil:

Toluene is estimated to have a KoC of 37-178 which indicates it will have a moderate to high mobility on soil.

12.5 Results of PBT and vPvB Assessment:

Not required.

12.6 Other Adverse Effects:

This product is classified as very toxic to aquatic organisms based on zinc content.

SECTION 13: DISPOSAL INFORMATION

13.1 Waste Treatment Methods

Dispose in accordance with local and national environmental regulations.

SECTION 14: TRANSPORT INFORMATION

	41.1 UN Number	**41.2 UN Proper Shipping Name**	**14.3 Transport Hazard Class(s)**	**14.4 Packing Group**	**14.5 Environmental Hazards**
US DOT		Consumer Commodity ORM-D			No
EU ADR/RID	UN1263	Paint Related Material	3	PGII	Yes

IMDG	UN1263	Paint Related Material	3	PGII	Yes

14.6 Special Precautions for User:
None

14.7 Transport in Bulk According to Annex II of MARPOL 73/78 and the IBC Code:
Not applicable

SECTION 15: REGULATORY INFORMATION

15.1 Safety, Health and Environmental Regulations/Legislation Specific for the Substance or Mixture:

International Inventories:
US EPA TSCA Inventory: All of the components are listed on the TSCA inventory.
Canadian Environmental Protection Act: All of the ingredients are listed on the Canadian Domestic Substances List.
Australia: All of the ingredients of this product are listed on the Australian Inventory of Chemical Substances (AICS).

U.S. REGULATIONS
CERCLA: This product has a Reportable Quantity (RQ) of 2,500 lbs. based on the RQ for zinc of 1,000 lbs. Releases above the RQ must be reported to the National Response Center. Many states have more stringent release reporting requirements. Report spills required under federal, state and local regulations.

EPA SARA 302: This product does not contain chemicals regulated under SARA Section 302.
EPA SARA 311 Hazard Classification: Acute Health, Chronic Health, Fire Hazard
EPA SARA 313: This product contains the following chemicals that are regulated under SARA Title III, section 313:

Toluene	108-88-3	10-20%
Zinc	7440-66-6	30-40%

California Proposition 65: This product contains the following chemicals which are known to the State of California to cause cancer, reproductive toxicity or birth defects: Toluene 10-20% (developmental).)

15.2 Chemical Safety Assessment:
Not required

SECTION 16: OTHER INFORMATION

SDS Revision History:
12/30/11: Converted US SDS to EU REACH SDS
4/29/15: Change in formulation - All Sections revised
9/7/17: Section 2 H Phrase Number, EU Classification, Section 3 EU Classification, section 15 WHMIS Classification, EU Classes and Risk Phrases for Reference Section 16

GHS Phrases for Reference (See Section 2 and 3):
H225 Highly Flammable liquid and vapor.
H226 Flammable liquid and vapor
H304 May be fatal if swallowed and enters airways.
H315 Causes skin irritation.
H336 May cause drowsiness or dizziness.
H361 Suspected of damaging fertility or the unborn child.
H373 May cause damage to kidneys, liver, nervous system and hearing through prolonged or repeated exposure.
H400 Very toxic to aquatic life.
H410 Very toxic to aquatic life with long lasting effects.
H411 Toxic to aquatic life with long lasting effects