Safety Data Sheet

Brite Zinc

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

1.1 Product Identifier

Trade Name Brite Zinc
Product Number B-100

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: August 29, 2014

SECTION 2: HAZARDS IDENTIFICATION

2.1 Classification of the Substance or Mixture

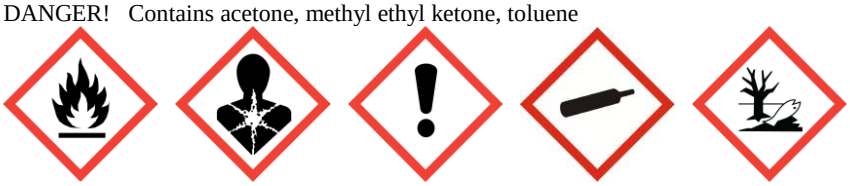
CLP/GHS Classification (1272/2008):

Physical:	**Health:**	**Environmental**
Flammable Aerosol Category 1 Gases Under Pressure – Compressed Gas	Aspiration Toxicity Category 1 Reproductive Toxicity Category 2 Specific Target Organ Toxicity – Repeat Exposure Category 2 Eye Irritation Category 2A Specific Target Organ Toxicity – Single Exposure 3	Aquatic Acute Category 2 Aquatic Chronic Category 2

EU Classification (67/548/EEC): Extremely Flammable (F+), Harmful (Xn), Irritant (Xi), Dangerous for the Environment (N) (Repr Cat 3), R12, R63, R36, R65, R66, R67, R51/53

2.2 Label Elements

DANGER! Contains acetone, methyl ethyl ketone, toluene



Hazard Phrases

H222	Extremely flammable aerosol.
H280	Contains gas under pressure; may explode if heated.
H304	May be fatal if swallowed and enters airways.
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.
H411	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.
P211	Do not spray on an open flame or other ignition source.
P251	Pressurized container: Do not pierce or burn, even after use.
P260	Do not breathe mist, vapors and 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, protective clothing, eye protection or face protection.
P301 + P310	IF SWALLOWED: Immediately call a POISON CENTER or doctor.
P331	Do NOT induce vomiting.
P304 + P340	IF INHALED: Remove to fresh air and keep at rest in a position 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.
P391	Collect spillage.
P403 + P233	Store in a well-ventilated place. Keep container tightly closed.
P405	Store locked up.
P410 + P412	Protect from sunlight. Do not expose to temperatures exceeding 50°C/122°F.
P501	Dispose of contents and container in accordance with local and national regulations.

2.3 Other Hazards: None

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

3.2 Mixture:

Chemical Name	CAS#	EINECS#	EU Classification (67/548/EEC)	GHS Classification Regulation (EC) No 1272/2008	%
Propane/Butane Propellant	106-97-8 74-98-6	203-448-7 200-827-9	F+ R12	Flammable Gas Category 1 (H220)	10-30
Zinc	7440-66-6	231-175-3	N R50/53	Aquatic Acute Category 1 (H400) Aquatic Chronic Category 1 (H410)	10-20
VM&P Naphtha	8032-32-4	232-453-7	F, Xn R11, R65	Flammable Liquid Category 2 (H226), Aspiration Toxicity Category 1 (H304)	10-20
Acetone	67-64-1	200-662-2	F, Xi R11, R36, R66, R67	Flammable Liquid Category 2 (H226), Eye Irritation Category 2A (H319) Specific Target Organ Toxicity – Single Exposure 3 (H336)	10-20
Methyl Ethyl Ketone	78-93-3	201-159-0	F, Xi R11, R36, R66, R67	Flammable Liquid Category 2 (H226), Eye Irritation Category 2A (H319), Specific Target Organ Toxicity – Single Exposure 3 (H336)	10-20
Toluene	108-88-3	203-625-9	F, Xi, Xn (Repr Cat. 3) R11, R38, R48/20, R63, R65, R67	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)	1-<10
Stoddard Solvent	8052-41-3	232-489-3	Xn R10, R65	Aspiration Toxicity Category 1 (H304) Flammable Liquid 3 (H226)	<5
Aluminum	7429-90-5	231-072-3	Not dangerous	Not hazardous	<5

Aliphatic Petroleum Distillates	64742-89-8	265-192-2	F, Xn R11, R65	Aspiration Toxicity Category 1 (H304) Flammable Liquid 3 (H226)	<5

See Section 16 for further information on EU and 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, call a physician.

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

Inhalation: Remove to fresh air. If breathing is difficult have qualified personnel administer oxygen. If breathing has stopped, administer artificial respiration. Get medical attention**.**

Ingestion: Ingestion is an unlikely route of exposure for aerosol products. If ingestion occurs rinse mouth with a small amount of water. Aspiration hazard – DO NOT Induce Vomiting. Never give anything by mouth to an unconscious or drowsy person. Get immediate medical attention.

4.2 Most Important symptoms and effects, both acute and delayed: May cause eye and skin irritation. Inhalation of vapors or mist may cause respiratory irritation and central nervous system effects such as headache, dizziness, drowsiness, nausea and unconsciousness. Aspiration Hazard - harmful or fatal if swallowed. Overexposure may cause adverse effects to the liver, kidney, nervous system and hearing. May cause adverse reproductive effects based on animal data.

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

SECTION 5: FIRE FIGHTING MEASURES

5.1 Extinguishing Media:

Use carbon dioxide, dry chemical or foam to extinguish fire. Cool fire exposed containers with water.

5.2 Special Hazards Arising from the Substance or Mixture

Unusual Fire and Explosion Hazards: Contents under pressure. Extremely flammable aerosol. Exposure of containers to extreme heat and flames can cause them to rupture often with violent force. Vapors are heavier than air and may and accumulate in low lying area. Combustion products are toxic.

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

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. Do not allow run-off from fire fighting to enter drains or water courses. Use shielding to protect against bursting containers.

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:

Avoid contamination of soil, surface water and ground water. Do not flush to sewer! Report releases as required by local, state and federal authorities.

6.3 Methods and Material for Containment and Cleaning Up:

Contain and collect using an absorbent material and place in an appropriate container for disposal. Leaking cans should be placed in a plastic bag or open pail until the pressure has dissipated.

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. Do not swallow. Wear protective clothing and equipment as described in Section 8. Use only with adequate ventilation. Do not use in poorly ventilated or confined spaces. Vapors are heavier than air and will collect in low areas. Wash thoroughly with soap and water after handling and before eating, drinking or using restroom. Contents under pressure. Do not puncture or incinerate container. Do not eat, drink or smoke in work areas.

Do not cut, drill, grind or weld on or near containers, even empty containers. 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 from ignition sources. Keep containers tightly closed when not in use. Store away from oxidizers and other incompatible materials. Do not store above 120°F. Keep away from heat, sparks and open flames. Store away from direct sunlight.

7.3 Specific end use(s):

Welding product

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 Control Parameters:

Chemical Name	Exposure Limits
Aliphatic Petroleum Distillates	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
VM&P Naphtha	5 mg/m3 TWA ACGIH TLV (inhalable) (as mineral oil) 5 mg/m3 TWA OSHA PEL (as oil mist)
Acetone	500 pm TWA ACGIH TLV; 750 ppm STEL 1000 ppm TWA OSHA PEL 500 ppm TWA EU IOEL 500 ppm TWA DFG MAK, 1000 ppm STEL 500 ppm TWA UK OEL, 1500 ppm STEL
Toluene	200 ppm TWA OSHA PEL, 300 ppm Ceiling 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
Methyl Ethyl Ketone	200 ppm TWA ACGIH TLV; 300 ppm STEL 200 ppm TWA OSHA PEL 200 ppm TWA EU IOEL; 300 ppm STEL 200 ppm TWA DFG MAK 200 ppm TWA UK OEL; 300 ppm STEL
Aluminum (as metal)	5 mg/m3 TWA OSHA PEL (respirable fraction), 15 mg/m3 TWA (total dust) 1 mg/m3 TWA ACGIH TLV (respirable) 1.5 mg/m3 TWA DFG MAK (respirable); 4 mg/m3 TWA (inhalable) 4 mg/m3 TWA UK OEL (respirable); 10 mg/m3 TWA (inhalable)
Zinc (as metal)	0.1 mg/m3 TWA DFG MAK; 0.4 mg/m3 STEL (respirable) 2 mg/m3 TWA DFG MAK, 4 mg/m^3 STEL (inhalable)
Butane	1000 ppm TWA ACGIH STEL 1000 ppm TWA DFG MAK; 4000 ppm STEL 600 ppm TWA UK OEL; 750 ppm STEL

Propane	1000 ppm TWA OSHA PEL 1000 ppm TWA DFG MAK; 4000 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: If the exposure limits are exceeded an approved organic vapor respirator or self-contained breathing apparatus 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 4H.

Eye Protection: Chemical safety goggles should be worn if contact is possible.

Other: Solvent resistant boots apron and headgear should be used to prevent contact. A safety shower and eye wash should be available in the immediate work area.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic Physical and Chemical Properties:

Appearance Clear, colorless liquid in an aerosol container	**Vapor Density:** 2.4 (methyl ethyl ketone)
Odor: Solvent odor.	**Relative Density** 0.896
Odor Threshold: 0.16 ppm (toluene)	**Water Solubility:** Insoluble
pH: Not available	**Octanol/Water Partition Coefficient:** Not available
Melting Point/Freezing Point: -84.2°F (-64.9°C) (acetone)	**Autoignition Temperature:** 896°F (480°C)
Boiling Point: 132.9°F (56.05°C) (acetone)	**Decomposition Temperature:** Not applicable
Flash Point: <-25°F (-31.7°C)	**Viscosity:** Not applicable
Evaporation Rate: 7.7 (butyl acetate = 1)	**Explosion Properties:** Not applicable
Flammability: Not applicable	**Oxidizing Properties:** No data available
Flammable Limits: LEL: 1.1% (toluene) UEL: 12.8% (acetone)	
Vapor Pressure: 231 mmHg @ 25°C (acetone)	

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. Do not store in direct sunlight.

10.5 Incompatible Materials:

Avoid oxidizing agents.

10.6 Hazardous Decomposition Products:

Carbon monoxide and carbon dioxide, zinc oxide and hydrocarbons.

SECTION 11: TOXICOLOGICAL INFORMATION

11.1 Information on Toxicological Effects:

Eyes: Vapors or mists may cause irritation, redness and tearing.

Skin: Skin contact may cause irritation, defatting of the skin or dermatitis.

Ingestion: Not a normal route for exposure in aerosol products. Ingestion of the liquid may cause gastrointestinal irritation, nausea, vomiting or diarrhea and central nervous system effects similar to those listed under inhalation. Aspiration into the lungs during ingestion or vomiting may cause serious lung damage which may be fatal.
Inhalation: Inhalation of vapors or mists may cause mucous membrane and respiratory irritation and central nervous system depression with symptoms of headache, dizziness, nausea, incoordination, drunkenness, stupor, depressed respiration and heart rate, irregular heartbeat, unconsciousness and death
Chronic Effects: Reports have associated repeated and prolonged occupational overexposure to solvents with irreversible brain and nervous system damage. Toluene and methyl ethyl ketone have been shown to cause damage to the kidneys, liver, hearing and central nervous system. Toluene has been shown to cause birth defects based on animal data.

Acute Toxicity Values:
n-Butane: Inhalation rat LC50 658 mg/l/4 hr
Propane: Inhalation rat LC50 >1464 mg/L/15 minutes
Zinc: Oral rat LD50 >2000 mg/kg; Inhalation rat LC50 > 5.410 mg/L/4 hr
VM&P Naphtha: Oral rat LD50 >5000 mg/kg; Inhalation rat LC50 > 7.630 mg/L/4 hr: Dermal rabbit LD50 >2000 mg/kg.
Acetone: Oral rat LD50 5800 mg/kg
Methyl Ethyl Ketone: Oral rat LD50 2900 mg/kg, Inhalation rat LC50 34,500 mg/m#
Stoddard Solvent: No data available
Toluene: LD50 oral rat 5000 mg/kg; LD50 dermal rabbit 12,214 mg/kg; LC50 inhalation rat 8000 ppm/4hr.
Aluminum: No toxicity data available

Irritation: Toluene and methyl ethyl ketone may cause mild irritation in rabbit's eyes. Butane is mildly irritating to rabbit's skin.

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. In animal studies, acetone was shown to cause central nervous system depression and damage to the kidneys and liver. 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 aromatic 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 CLP.

Germ Cell Mutagenicity: Methyl ethyl ketone was negative in the AMES test, mouse lymphoma assay, unscheduled DNA synthesis and micronucleus test. Acetone was negative in the AMES test and sister chromatid exchange assay and chromosome aberrations assay. Butane tested negative in the AMES test. Stoddard solvent was negative in the AMES test, n a mouse lymphoma assay and in an in vivo bone marrow 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. Methyl ethyl ketone has been shown to cause maternal toxicity and fetotoxicity at 3000 ppm. In a 6 week reproductive study, rats were given 0.5% acetone in their drinking water. At the completion of the study it was determined that acetone did not affect reproductive or testicular activity.

SECTION 12: ECOLOGICAL INFORMATION

12.1 Toxicity:

Toluene: 96 hr LC50 Pimephales promelas (fathead minnow) 34.27 mg/l; 48 hr LC50 daphnia magna 313 mg/L
Methyl Ethyl Ketone: 96 hr LC50 Lepomis macrochirus (bluegill) 1,690 mg/L48 hr LC50 daphnia magna 1382 mg/L
Acetone: 96 hr LC50 Oncorhynchus mykiss/ (Rainbow trout) 5540 mg/L, 48 hr LC50 daphnia magna 7630 mg/L\
Aromatic Naphtha: 96 hr LC50 Oncorhynchus mykiss 9.22 mg/L, 48 hr LC50 daphnia magna 6.14 mg/L
Stoddard Solvent: 72 hr EC50 Selenastrum capricornutum (algae) 4700 mg/L

12.2 Persistence and Degradability:
Toluene, acetone, stoddard solvent, VM&P naphtha and aromatic 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. The BCF for methyl ethyl ketone and acetone is 3 which suggests bioaccumution is low in aquatic orgnisms. Stoddard solvent, Aliphatic Petroleum Distillates 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. Acetone and methyl ethyl ketone are expected to have a high mobility in soil.

12.5 Results of PBT and vPvB Assessment:
Not required.

12.6 Other Adverse Effects:
This product is classified as 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	UN1950	Aerosols	2.1	Not applicable	No
EU ADR/RID	UN1950	Aerosols	2.1	Not applicable	Yes
IMDG	UN1950	Aerosols	2.1	Not applicable	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 – product is transported only in packaged form.

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.

U.S. REGULATIONS
CERCLA: This product has a Reportable Quantity (RQ) of 5,000 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, Sudden Release of Pressure
EPA SARA 313: This product contains the following chemicals that are regulated under SARA Title III, section 313:

Toluene	108-88-3	1-<10%
Zinc	7440-66-6	10-20%

Aluminum	7429-90-5	1-5%	

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	108-88-3	1-<10%	developmental female reproductive toxicity

INTERNATIONAL REGULATIONS

WHMIS Classification: Class B5 (Flammable Aerosol), Class D Division 2 Subdivision A (Very toxic material causing other toxic effects)

15.2 Chemical Safety Assessment:
Not required

SECTION 16: OTHER INFORMATION

SDS Revision History:
12/2/11: Converted US SDS to EU REACH SDS
8/29/14: Section 2.1 GHS Classification; 2.2 Label Elements; 4.1 Description of First Aid Measures, 5.2 Special Hazards Arising from the Substance or Mixture Unusual Fire and Explosion Hazards 8.1 Control Parameters, Section 9.1 Appearance, Flammability, Relative Density 11.1 Information on Toxicological Effects, Acute Toxicity Values, 12.1 Toxicity; 14.7 Transport in Bulk According to Annex II of MARPOL 73/78 and the IBC Code, Section 16 EU Classes and Risk Phrases for Reference

GHS Phrases for Reference (See Section 2 and 3):
H220 Extremely flammable gas
H226 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.
H373 May cause damage to kidneys, liver, nervous system and hearing through prolonged or repeated exposure.
H361 Suspected of damaging fertility or the unborn child.
H400 Very toxic to aquatic life.
H410 Very toxic to aquatic life with long lasting effects.

EU Classes and Risk Phrases for Reference (See Sections 2 and 3):
F+ Extremely Flammable
F Highly flammable
N Dangerous for the Environment.
Xn Harmful
Xi Irritant
Rep Cat 3 Reproductive Category 3
R12 Extremely flammable
R11 Highly flammable
R10 Flammable
R36 Irritating to eyes.
R38 Irritating to skin.
R48/20 Harmful: danger of serious damage to health by prolonged exposure through inhalation.
R63 Possible risk of harm to the unborn child.
R65 Harmful: may cause lung damage if swallowed.
R66 Repeated exposure may cause skin dryness or cracking.
R67 Vapours may cause drowsiness and dizziness.
50/53 Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
R51/53 Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

This sheet was compiled from the latest available information and reliable sources. Procedures are based on accepted usage. They are not necessarily all-inclusive and may vary in every circumstance. Weld-Aid provides no warranties either expressed or implied and assumes no responsibility for the accuracy or completeness of the data herein.