Safety Data Sheet (SDS)

Section 1: Product and Company Identification

Product Identifier:	**Liquid Gasflux (Type "W")**
Product Use:	Liquid gas flux for brazing
Item Code:	GF-1, GF-5, GF-53
Supplier Name:	Powerweld Inc.
Supplier Address:	2501 Beech Street Valparaiso, IN 46383
Supplier Web Address:	www.powerweldinc.com
Supplier Phone:	219-462-8700 1-800-826-9073
Manufacturer:	The Gasflux Company
Manufacturer Address:	32 Hawthorne Street Elyria, OH 44036
Manufacturer Web Address:	www.gasflux.com
Manufacturer Phone:	1-440-365-1941
Emergency Phone:	(24-hour) 1-800-535-5053
Prepared By:	Powerweld Inc.
Preparation Date:	1 January 2026

Section 2: Hazard Identification

Classification:	Acute toxicity – oral	Category 4
	Acute toxicity – dermal	Category 4
	Acute toxicity – inhalation (vapours)	Category 4
	Serious eye damage/eye irritation	Category 2
	Specific target organ toxicity (single exposure)	Category 1
	Flammable liquids	Category 2

Symbols:

Signal Word: DANGER!

Hazard Statements:

H225	Highly flammable liquid and vapour
H302	Harmful if swallowed.
H312	Harmful in contact with skin.
H319	Causes serious eye damage.
H332	Harmful if inhaled.
H370	Causes damage to organs.
H412	Harmful to aquatic life with long-lasting effects.

Precautionary Statements:

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 equipment.
P242 Use only non-sparking tools.
P243 Take precautionary measures against static discharge.
P260 Do not breathe dust/fume/gas/mist/vapours/spray.
P264 Wash face, hands and any exposed skin after handling.
P270 Do not eat, drink or smoke when using this product.
P271 Use only outdoors or in a well-ventilated area.
P280 Wear protective gloves/protective clothing/eye protection /face protection.
P307+ IF exposed:
P311 Call a POISON CENTER or a doctor/physician.
P305+ IF IN EYES:
P351+ Rinse cautiously with water for several minutes.
P338+ Remove contact lenses, if present and easy to do. Continue rinsing.
P313 Get medical advice/attention.
P363 Wash contaminated clothing before reuse.
P303+ IF ON SKIN (or hair):
P361+ Remove/Take off immediately all contaminated clothing.
P353+ Rinse skin with water/shower.
P312 Call a POISON CENTER or doctor/physician if you feel unwell.
P304+ IF INHALED:
P340+ Remove victim to fresh air and keep at rest in a position comfortable for breathing.
P312 Call a POISON CENTER or doctor/physician if you feel unwell.
P301+ IF SWALLOWED:
P310+ Immediately call a POISON CENTER or doctor/physician.
P330 Rinse mouth.
P370+ In case of fire: Use CO_2, dry chemical or foam for extinction.
P405 Store locked up.
P403+ Store in a well-ventilated place.
P235 Keep cool.
P501 Dispose of contents/container to an approved waste disposal plant.

Other Hazards: Arc rays and heat rays (infrared radiation) from flame or hot metal can injure eyes. Overexposure to brazing fumes and gases can be hazardous.

Section 3: Composition/Information on Hazardous Ingredients

HAZARDOUS INGREDIENTS	CAS NUMBER	APPROXIMATE CONCENTRATION (%)
Trimethyl Borate	121-43-7	55
Acetone	67-64-1	25
Methanol	67-56-1	20

Section 4: First-aid Measures

Provide this SDS to medical personnel for treatment. Always contact physician or poison control center in case of medical emergency. Treatment may vary with condition of victim and specifics of the incident.

Inhalation:	Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Seek medical attention.
Ingestion:	If swallowed, do not induce vomiting, immediately give several glasses of warm water. Do not give liquids if victim is unconscious or very drowsy. Seek medical attention immediately
Eye Contact:	Immediately flush with plenty of clean water for at least 15 minutes. Make sure to flush under the eyelids. Immediately consult a physician for definitive treatment.
Skin Contact:	Remove with soap and water. Continue flushing with water for several minutes. Use skin cream to counter resulting dryness. Consult a physician if irritation continues or if large skin area is affected.
Symptoms:	Treat symptomatically. Symptoms may be delayed. Ethanol and fomepizole are effective antidotes for methanol poisoning, although fomepizole is preferred. Target organs for methanol: kidneys, heart, central nervous system, liver, eyes. High vapour concentrations may cause irritation of eyes, nose and throat. Prolonged inhalation may cause headaches, nausea and drowsiness. Contact may cause irritation to the eyes and mucus membranes. Prolonged contact causes dryness and irritation. Ingestion may cause headache, fatigue, nausea, circulatory and/or respiratory failure and death. Repeated and/or prolonged exposure by inhalation/absorption may cause systematic poisoning.

NOTE: In all severe cases, contact physician immediately. Local telephone operators can provide number of regional poison control centre.

Section 5: Fire-fighting Measures

Flammable:	Yes
Means of Extinction:	Dry-chemical, CO_2, water spray or foam
Auto-ignition Temperature:	Not available
Hazardous Combustion Products:	This product burns with a clear flame which is virtually invisible in daylight. Evacuate nonessential personnel from the fire area. Prevent human exposure to fire, smoke, fumes or products of combustion. Keep containers which are exposed to heat or fire cool with water spray to prevent rupture or build-up of pressure. Do not use welding or cutting torch on or near any shipping/storage container of this material, full or empty.
Explosion Data Sensitivity to Mechanical Impact:	Not available
Explosion Data Sensitivity to Static Discharge:	Take precautionary measures against static discharge.
Special Equipment:	See below

Precautions for Fire Fighters:	As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

Section 6: Accidental Release Measures

Protective Equipment:	See Section 8
Emergency Procedures:	Extinguish all sources of ignition within 35 feet (11m) of spill or vapour release. Provide adequate ventilation. If spill is of significant or unknown quantity, use self-contained breathing apparatus during clean-up. Always wear proper protective clothing to prevent skin or eye contact.
Leak or Spill Procedure:	Absorb and contain small spills with sand or fullers earth. Use clean non-sparking tools to collect absorbed material. Sweep up absorbed material and shovel into suitable containers for disposal. Large spills should be diluted and pumped into approved containers for disposal in accordance with all local, regional, and federal laws and regulations. Released product which has evaporated forms smooth, slippery surface on floors, posing an accident risk.

Section 7: Handling and Storage

Handling Procedures and Equipment:	Always wear proper protective clothing when handling. Do not breathe vapours. Avoid eye, skin and clothing contact when transferring from container. Flammable liquid - keep away from heat, sparks and flame. Never transfer liquid within 35 feet (11m) of an open flame. To reduce potential of sudden release of pressure, loosen closures slowly and cautiously before opening. To reduce potential of static discharge, effectively bond and ground containers when transferring material. Protect containers from physical damage or punctures resulting in leakage. Keep containers tightly closed when not in use. Do not reuse shipping containers. Empty containers retain vapours and must be treated as having the same hazards as containers full of liquid. Many plastics are attacked by this product. Wash face, hands, and any exposed skin thoroughly after handling. Do not eat, drink or smoke when using this product. Use only with adequate ventilation. Use spark-proof tools and explosion-proof equipment.
Storage Requirements:	Store in accordance with 29 CFR §1910.106 *Flammable and Combustible Liquids*, *BOCA National Fire Prevention Code*, *NFPA 30Flammable and Combustible Liquids Code* and all local codes and regulations. Store in a cool, well-ventilated area at least 35 feet (11m) from open flames or other sources of ignition. Always store product in the original shipping container. Tightly close storage containers after transfer. Vapours can travel to a source of ignition and flash back. Moisture, in any form, will contaminate this product rendering it unusable. Retain all original labels. Store away from foodstuffs or animal feed. Prevent container damage. Store locked up.

Incompatibilities: Avoid strong oxidizing agents, such as peroxides, nitrates and hypochlorites; aluminum and zinc. Deteriorates many plastics. Will hydrolyze in the presence of water, liberating boric acid.

Section 8: Exposure Controls/Personal Protection

Exposure Limits:

HAZARDOUS INGREDIENTS	CAS NUMBER	ACGIH TLV	OSHA PEL
Acetone	67-64-1	STEL: 750 ppm TWA: 500 ppm	TWA: 1000 ppm TWA: 2400 mg/m^3 (vacated) TWA: 750 ppm (vacated) TWA: 1800 mg/m^3 *The acetone STEL does not apply to the cellulose acetate fiber industry. It is in effect for all other sectors.* (vacated) STEL: 1000 ppm
Methanol	67-56-1	STEL: 250 ppm TWA: 200 ppm	TWA: 200 ppm TWA: 260 mg/m^3 (vacated) TWA: 200 ppm (vacated) TWA: 260 mg/m^3 (vacated) STEL: 250 PPM (vacated) STEL: 325 mg/m^3 (vacated)

Engineering Controls: When brazing, use enough ventilation and local exhaust at the flame site to keep the fumes and gases below the TLV-TWA (Threshold Limit Value - Time Weighted Average) for welding fumes in the brazer's breathing zone and in the general air. Use an approved air-purifying or air supplied respirator when brazing in a confined space or where local exhaust or ventilation does not keep exposure below the TLV-TWA. Refer to the current *American Conference of Governmental Industrial Hygienists* (ACGIH) *Threshold Limit Values for Chemical Substances and Physical Agents* for the most updated exposure limits.

As outlined by the ANSI/AWS A5.31-92 (A4.1), *Specifications For Fluxes For Brazing and Braze Welding*, there are five predominant variables, which contribute to the quality and quantity of fumes in the affected area which brazing operators and bystanders are exposed to during the brazing process. These include (but are not limited to):

1) Dimension of the brazing area - with attention to ceiling height.

2) The total number of brazers working in the given space.

3) Depending on the material and process utilized, the rate of formation of fumes, gases or dusts from the process.

4) The location of the brazer in relation to the fumes in the affected area.

5) Exhaust and/or ventilation available in the brazing area.

Important! Read and understand the manufacturer's instructions and precautionary labels on the product. The installation, operation, and maintenance of welding equipment should conform to ANSI Standard Z49.1 *Safety in Welding and Cutting*, ANSI Standard Z87.1 *Occupational and Educational Eye and Face Protection*, and OSHA Standard, 29 CFR 1910

Personal Protective Equipment:	Eyes/Face – (Transferring/Handling) Due to the possibility of eye contact during material transfer, chemical safety goggles, full face shield or safety glasses with side shields should be worn. (Brazing) Always wear protective glasses, goggles or full face shield with shade 4 or 5 lenses when brazing. Protective eyewear and eye safety programs should comply with ANSI Standard Z87.1 *Occupational and Educational Eye and Face Protection*. Skin/Body – To prevent contact with skin, wear impervious clothing such as gloves, apron, boots or full-body suits made from neoprene, as appropriate. Respiratory Protection – (Transferring/Handling) Ventilation may be required when handling or using this product to keep exposure to airborne contaminants below permissible exposure limits. If adequate ventilation is not available during handling or transfer of this product, use NIOSH approved organic vapor respirators with dust, mist and fume filters to reduce the potential of inhalation exposure. Protection provided by air-purifying respirators is limited. Use a positive pressure, air supplied respirator if there is any potential for uncontrolled release, unknown exposure levels, or any other circumstances where air-purifying respirators may not provide adequate protection. Respiratory protection programs must follow OSHA's 29 CFR 1910.134 and ANSI Z88.2 requirements where there may be the potential for airborne exposure. General Hygiene – Do not eat, drink or smoke when using this product. Avoid contact with skin, eyes and clothing. Wash hands and face before breaks and immediately after handling the product. Avoid breathing vapours, mist or gas.

Section 9: Physical and Chemical Properties

Physical State:	Liquid
Odour and Appearance:	Odourless clear/colourless liquid
Odour Threshold (ppm):	Not determined
pH:	Not determined
Melting Point:	Not applicable
Freezing Point:	-32°C / -26°F
Boiling Point:	58°C / 137°F
Flashpoint:	-7.7°C / 18°F
Upper Flammable Limit (% by volume):	6.0
Lower Flammable Limit (% by volume):	36.5
Evaporation Rate:	16 (butyl acetate = 1)
Vapour Pressure:	161 mm Hg
Vapour Density:	1.6 (Air = 1)
Specific Gravity:	0.850 – 0.865
Water Solubility:	Decomposes at 10%

Section 10: Stability and Reactivity

Chemical Stability:	Stable under recommended storage conditions.
Possible Hazardous Reactions:	None under normal processing.
Conditions to Avoid:	Water, moist air or aqueous liquids will liberate borates from the mixture, rendering it unusable. Keep containers tightly closed when not in use. This product is not sensitive to physical impact.
Materials to Avoid (Incompatibilities):	Avoid strong oxidizing agents, such as peroxides, nitrates and hypochlorites; aluminum and zinc. Deteriorates many plastics. Will hydrolyze in the presence of water, liberating boric acid.
Conditions of Reactivity:	Not reactive under normal conditions.
Hazardous Decomposition By-Products:	Brazing fumes and gases cannot be classified simply. The composition and quantity of the fumes and gases are dependent upon the base metal, the flux and filler metal being used. Coatings or residue on the base metal such as cleaning or degreasing agents, paint, galvanizing or plating will produce fumes as well. Other conditions which influence the composition and quality of the fumes and gases to which workers may be exposed are: the number of operators relative to the volume of the work area, the quality and amount of ventilation, the position of the user's head in respect to the fume plume, as well as the presence of contaminants in the atmosphere such as halogenated hydrocarbon vapors from cleaning and degreasing activities. When brazing, the composition of the fumes and gases are usually different from the composition of the ingredients mentioned in Section 3. Fume ingredients of normal operation include those originating from volatilization, reaction, or oxidation of the materials noted in the above paragraph. Reasonably expected fume constituents include oxides of boron (OSHA PEL of 10 mg/m^3 and ACGIH (TLV) of 2 mg/m^3) and oxides of carbon.
Hazardous Polymerization:	Not applicable

Section 11: Toxicological Information

Skin Contact:	Harmful in contact with skin.
Skin Absorption:	See above
Eye Contact:	Causes serious eye irritation.
Inhalation:	Harmful if inhaled.
Ingestion:	Harmful if swallowed – may cause blindness.
Effects of Acute Exposure:	High vapour concentrations may cause irritation of eyes, nose and throat. Contact may cause irritation to the eyes and mucus membranes. Ingestion may cause headache, fatigue, nausea, circulatory and/or respiratory failure and death.
Effects of Chronic Exposure:	Prolonged inhalation may cause headaches, nausea and drowsiness. Prolonged contact causes skin dryness and irritation. Repeated and/or prolonged exposure by inhalation/absorption may cause systematic poisoning.

Irritancy of Product:	Repeated and/or prolonged exposure by inhalation/absorption may cause systemic poisoning, blindness and death.
Sensitization to Product:	See above
Carcinogenicity:	This product does not contain any carcinogens or potential carcinogens as listed by OSHA, IARC or NTP.
Reproductive Effects:	Not available
Respiratory Sensitization:	See above
Toxicological Data:	Trimethyl Borate Oral, rat – 6140 mg/kg (LD50) Dermal, rabbit – 1980 µL/kg (LD50) Acetone Oral, rat – 5800 mg/kg (LD50) Methanol Oral, rat – 5628 mg/kg (LD50) Dermal, rabbit – 15 800 mg/kg (LD50) Inhalation, rat – 83.2 mg/L, 4hr (LC50); 64 000 ppm, 4hr (LC50)

Section 12: Ecological Information

Aquatic and Terrestrial Toxicity:	Harmful to aquatic life with long lasting effects.
Persistence and Degradability:	Not determined
Bio accumulative Potential:	Not determined
Soil Mobility:	Acetone: -0.24 (partition coefficient) Methanol: -0.77 (partition coefficient)

Section 13: Disposal Considerations

NOTE: Always dispose of waste in accordance with local, provincial and federal regulations.

Safe Handling:	See Section 7
Methods of Disposal:	Disposal should be in accordance with applicable regional, national and local laws and regulations**.**

Section 14: Transportation Information

UN Identification Number:	UN1993
Proper Shipping Name:	Flammable liquids, n.o.s. (Contains Trimethylborate, Acetone and Methanol)
Hazardous Class or Division:	3
Packing Group:	II

Section 15: Regulatory Information

California Proposition 65:	This product contains the following Proposition 65 chemicals: Methanol
U.S. State Right to Know:	Trimethylborate New Jersey, Massachusetts, Pennsylvania Acetone

New Jersey, Massachusetts, Pennsylvania

Methanol

New Jersey, Massachusetts, Pennsylvania

CERCLA: Acetone – 5000 lbs reportable quantity

Methanol – 5000 lbs reportable quantity

Section 16: Other Information

Preparation Date: 20 September 2016

Date of Last Revision: 1 January 2026

This SDS format is in accordance with GHS. Powerweld Inc. provides the information contained herein in good faith but makes no representation as to its comprehensiveness or accuracy. This document is intended only as a guide to the appropriate precautionary handling of the material by a properly trained person using this product. Product use and conditions of use are beyond the control of Powerweld. Warranty of materials is limited to test results of product performance as detailed in certificates of compliance. Interpretation of test results is the responsibility of end-user. No other warranties, expressed or implied, are made.