Safety Data Sheet (SDS)

Section 1: Product and Company Identification

Product Identifier:	**Flux #30 – Cast Iron Flux**
Product Use:	Cast iron flux for use in torch brazing applications
Item Code:	301
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:	CHEMTREC (24-hour) 1-800-424-9300
Prepared By:	Powerweld Inc.
Preparation Date:	1 January 2026

Section 2: Hazard Identification

Classification:	Acute toxicity (oral)	Category 4
	Eye irritation	Category 2
	Acute toxicity (inhalation)	Category 4

Symbols:

Signal Word: WARNING!

Hazard Statements:

H302	Harmful if swallowed.
H319	Causes serious eye irritation.
H332	Harmful if inhaled.
H335	May cause respiratory irritation.
H336	May cause drowsiness or dizziness.
H361	Suspected of damaging fertility or the unborn child.

Precautionary Statements:

P202	Do not handle until all safety precautions have been read and understood.
P260	Do not breathe dust/fume/gas/mist/vapours/spray.
P261	Avoid breathing dust/fume/gas/mist/vapours/spray.
P264	Wash thoroughly after handling.

P270 Do not eat, drink or smoke when using this product.
P271 Use only outdoors or in a well-ventilated area.
P272 Contaminated work clothing should not be allowed out of the workplace.
P280 Wear protective gloves/protective clothing/eye protection /face protection.
P301+ IF SWALLOWED:
P312+ Call a POISON CENTER or doctor/physician if you feel unwell.
P330 Rinse mouth.
P302+ IF ON SKIN:
P352 Wash with plenty of soap and water.
P308+ IF EXPOSED OR CONCERNED:
Get medical advice/attention.
P305+ IF IN EYES:
P351+ Rinse cautiously with water for several minutes.
P338 Remove contact lenses, if present and easy to do. Continue rinsing.
P304+ IF INHALED:
P340 Remove person to fresh air and keep comfortable for breathing.
P314 Get medical advice and attention if you feel unwell.
P333+ If skin irritation or rash occurs:
P313 Get medical advice/attention.
P362 Take off contaminated clothing and wash before reuse.
P403+ Store in a well-ventilated place.
P233 Keep container tightly closed.
P405 Store locked up.
P501 Dispose of contents/container in accordance with local/ regional/national/international regulations.

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 (%)
Boric Acid	10043-35-3	70 – 75
Manganese Dioxide	1313-13-9	< 2.0
Sodium Tetraborate Decahydrate	1303-96-4	25 – 30

Section 4: First-aid Measures

Inhalation: Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Seek medical attention if symptoms persist or if unconscious.

Ingestion: Induce vomiting ONLY if the victim is fully conscious. Call a physician or poison control center immediately. Never give anything by mouth to an unconscious person.

Eye Contact:	Immediately flush with plenty of clean water for at least 15 minutes. Make sure to flush under the eyelids. 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:	May causes respiratory irritation. Causes eye irritation. Symptoms of accidental over-exposure to high doses of inorganic borate salts have been associated with ingestion or absorption through large areas of severely damaged skin. These may include nausea, vomiting and diarrhea, with delayed effects of skin redness and peeling (see Section 11).

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:	Non-flammable as shipped.
Means of Extinction:	Use extinguishing media suitable for surrounding fire. Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.
Auto-ignition Temperature:	Not available
Hazardous Combustion Products:	Manganese and manganese oxides will be released at elevated temperatures.
Explosion Data Sensitivity to Mechanical Impact:	Not available
Explosion Data Sensitivity to Static Discharge:	Not available
Special Equipment:	This product is a flame retardant. However, firefighters should wear full protective gear that is appropriate to the local circumstances and the surrounding environment.
Precautions for Fire Fighters:	Use standard firefighting procedures and consider the hazards of the involved materials.

Section 6: Accidental Release Measures

Protective Equipment:	See Section 8
Emergency Procedures:	If airborne dust and/or fume is present, use adequate engineering controls and, if needed, personal protection to prevent overexposure.
Leak or Spill Procedure:	Avoid release to the environment. This product is a water-soluble powder that may cause damage to trees or vegetation by root absorption. Avoid contamination of water bodies during clean up and disposal. Advise local water authority that none of the affected water should be used for irrigation or for the abstraction of potable water until natural dilution returns the boron value to its normal environmental background level or meets local water quality standards.

Clean up spills immediately, observing precautions in Section 8. Avoid generating dust. Prevent product from entering drains, sewers or other water sources. Refer to Section 13 for proper disposal. Attempt to reclaim the product if possible.

Section 7: Handling and Storage

Handling Procedures and Equipment: Avoid inhaling welding/brazing fumes. Keep formation of airborne dusts to a minimum. Provide appropriate exhaust ventilation at places where dust is formed.

Do not eat, drink or smoke when using this product. Always observe food personal hygiene measures, such as washing after handling the material and before eating, drinking or smoking. Cosmetics should not be applied in areas where exposure exists. Routinely wash clothing and PPE to remove contaminants.

Storage Requirements: Store in closed container in a dry place. Store away from incompatible materials. To maintain package integrity and to minimize caking or the product, cans should be handled on a first-in first-out basis.

Incompatibilities: Strong acids and strong reducing agents.

Section 8: Exposure Controls/Personal Protection

Exposure Limits:

HAZARDOUS INGREDIENTS	CAS NUMBER	ACGIH TLV (mg/m^3)	OSHAL PEL (mg/m^3)
Boric Acid	10043-35-3	2(inhal.) 2(inhal.) 15 min STEL	5(resp. dust) 15(total dust)
Manganese Dioxide	1313-13-9	0.2(inhal.)	0.2(total dust)
Sodium Tetraborate Decahydrate	1303-96-4	2(inhal.) 6(inhal) STEL	5(resp. dust) 15(total dust)

Engineering Controls: Use enough ventilation, local exhaust at the arc/flame, or both to keep the fumes and gases from the welder's breathing zone and the general area. Maintain exposures below the acceptable levels indicated above. Use industrial hygiene air monitoring to ensure that your use of these products does not create exposures that exceed the recommended levels. Always use exhaust ventilation in user operations such as high temperature cutting, grinding, welding and brazing. Train the welder to keep his head out of the fume plume. Confined spaces require adequate ventilation and/or air supplied respirators.

Personal Protective Equipment: Eyes/Face: Wear helmet or use face shield with filter lens of the appropriate shade number. Shield others by providing screens and flash goggles.

Skin/Hands: Wear suitable protective gloves recommended for welding.

Clothing: Wear appropriate head, hand and body protection to prevent injury from radiation, sparks and electrical shock. At a minimum, this includes welder's gloves and a protective face shield, and may include arm protectors, aprons, hats, shoulder protection, as well as dark substantial clothing. Wear dry gloves free of holes or split seems. Train

the welder not to permit electrically live parts or electrodes to contact skin, or clothing or gloves if they are wet. Insulate yourself from the work piece and ensure proper grounding.

Respirator: Keep your head out of fumes. An approved respirator should be used unless exposure assessments are below applicable exposure limits.

General Hygiene: Do not eat, drink or smoke when using this product. Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking and/or smoking.

Section 9: Physical and Chemical Properties

Physical State:	Solid
Odour and Appearance:	Odourless dark grey crystalline (powder)
Odour Threshold (ppm):	Not applicable
pH:	Not applicable
Melting Point:	116°C
Freezing Point:	Not applicable
Boiling Point:	Not applicable
Flashpoint:	Not applicable
Upper Flammable Limit (% by volume):	Not applicable
Lower Flammable Limit (% by volume):	Not applicable

Section 10: Stability and Reactivity

Chemical Stability:	Stable under normal conditions of use, storage and transport
Possible Hazardous Reactions:	Reaction with strong acids or strong reducing agents (ie./ metal hydrates or alkali metals) will generate hydrogen gas which could create and explosion hazard.
Conditions to Avoid:	Contact with incompatible materials (see below)
Materials to Avoid (Incompatibilities):	Strong acids and strong reducing agents
Conditions of Reactivity:	See above

Hazardous Decomposition By-Products: Welding fumes and gases cannot be classified simply. The composition and quantity of both are dependent upon the metal being welded, the process, procedure and welding consumables used. Other conditions which also influence the composition and quantity of the fumes and gases to which workers may be exposed include: coating on the metal being welded (i.e. paint, painting, galvanizing), the number of welders, the volume of the work area, the quality and the amount of ventilation, the position of the welders head with respect to the fume plume, as well as the presence of contaminants in the atmosphere (such as chlorinated hydrocarbon vapors from the cleaning and degreasing activities).

When this product is heated, the fume and gas decomposition products generated are different in percent and form from the ingredients listed in Section 3. Fume and gas decomposition, and not the ingredients in the

electrode, are important. The concentration of a given fume or gas component may decrease or increase by many times the original concentration. Also, new compounds not in the electrodes may form.

Decomposition products of normal operation include those originating from the volatilization, reaction or oxidation of the materials shown in Section3, plus those from the base metal coating, etc., as noted above.

See ANSI/AWS F1.1, F1.3 and F1.5, available from the American Welding Society, 550 N.W. LeJeune Road, Miami, FL 33126. See AWS publications: "Fumes & gases in the welding environment" & "Effects of welding on health"

Hazardous Polymerization: Does not occur

Section 11: Toxicological Information

Skin Contact: Arc rays can burn skin; skin cancer has been reported

Skin Absorption: Not applicable

Eye Contact: Arc rays can injure eyes

Inhalation: Inhalation is the most likely route of exposure; refer to *Effects of Acute Exposure* and *Effects of Chronic Exposure* below

Ingestion: Unlikely due to form of product; harmful if swallowed

Effects of Acute Exposure: Overexposure or inhalation of large amounts of welding fumes may cause symptoms such as metal fume fever, dizziness, nausea, dryness and irritation of your nose, throat or eyes as well as lung disease.

Effects of Chronic Exposure: Other overexposure or prolonged inhalation of large amounts of welding fumes symptoms may include damage to the central nervous system, respiratory system, skin and could affect organs such as pancreas and liver.

Chronic manganese poisoning primarily involves the central nervous system. Early symptoms include languor, sleepiness and weakness in the legs. A stolid mask-like appearance of the face, emotional disturbances such as uncontrollable laughter and spastic gait with tendency to fall during walking are findings in more advances cases. High incidence of pneumonia has been found in workers exposed to the dust or fume of some manganese compounds.

Irritancy of Product: Minor eye irritation

Sensitization to Product: Not applicable

Carcinogenicity: Not applicable

Reproductive Effects: Exposure to manganese is believed to lead to a decrease in male fertility. Components of this product are believed to be harmful to fertility or the unborn child.

Respiratory Sensitization: Not applicable

Toxicological Data: Human epidemiological studies show no increase in pulmonary disease in occupational populations with chronic exposures to boric acid and sodium borate dust. Human epidemiological studies show no effect on fertility in occupational populations with chronic exposures to borate dust and indicate no effect to a general population with high exposures to borates in the environment.

Section 12: Ecological Information

Aquatic and Terrestrial Toxicity:	Boron is an essential micronutrient for healthy growth of plants. It can be harmful to boron sensitive plants in higher quantities. Care should be taken to minimize the amount of borate product released to the environment.
Persistence and Degradability:	Not applicable
Bio accumulative Potential:	This product will undergo hydrolysis in water to for undissociated boric acid. Boric acid will not bio magnify through the food chain. Octanol/Water partition coefficient: Log Pow = -0.7570 @ 25°C
Soil Mobility:	This product is soluble in water and leachable through normal soil. Absorption to soils or sediments is insignificant.

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:	Prevent waste from contaminating surrounding environment. Discard any product, residue, disposable container or liner in an environmentally acceptable manner, in full compliance with local, regional and national regulations.

Section 14: Transportation Information

This material is not considered as a dangerous good per transportation regulations.

Section 15: Regulatory Information

California Proposition 65:	This product is not listed and does not contain items listed on the Proposition 65 list of carcinogens or reproductive toxicants.
SARA 313 Components:	Manganese dioxide

Section 16: Other Information

Preparation Date:	23 June 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.