
Section 1: Product and Company Identification

Product Identifier: **Solar Flux Type B**
Product Use: Used with welding of stainless steel and alloy steels
Item Code: SFB
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: Golden Empire Corporation
Manufacturer Address: PO Box 2129
Morehead City, NC 28557
Manufacturer Web Address: www.solarflux.com
Manufacturer Phone: 252-808-3511
Emergency Phone: CHEMTREC (24-hour) 1-800-424-9300
Prepared By: Powerweld Inc.
Preparation Date: 1 January 2026

Section 2: Hazard Identification

<i>Classification:</i>	Reproductive toxicity	Category 2
<i>Symbols:</i>		
<i>Signal Word:</i>	WARNING!	
<i>Hazard Statements:</i>	H301 Toxic if swallowed. H302 Harmful if swallowed. H315 Causes skin irritation. H320 Causes eye irritation. H331 Toxic if inhaled. H332 Harmful if inhaled. H360 May damage fertility or the unborn child. H401 Toxic to aquatic life. H402 Harmful to aquatic life. H413 May cause long-lasting harmful effects to aquatic life.	
<i>Precautionary Statements:</i>	P102 Keep out of reach of children. P201 Obtain special instructions before use. P260 Do not breathe dust/fume/gas/mist/vapours/spray.	

P280	Wear protective gloves/protective clothing.
P309+	If exposed or if you feel unwell:
P313	Get medical advice/attention.
405	Store locked up.
<i>Other Hazards:</i>	Not available

Section 3: Composition/Information on Hazardous Ingredients

HAZARDOUS INGREDIENTS	CAS NUMBER	APPROXIMATE CONCENTRATION (%)
Quartz (SiO ₂)	14808-60-7	6 – 12
Calcium Silicate (CaSiO ₃)	10101-39-0	
Boric Acid (H ₃ BO ₃)	10043-35-3	
Calcium Fluoride (CaF ₂)	7789-75-5	
Titanium Oxide (TiO ₂)	73463-67-7	
Lithium Fluoride (LiF)	7789-24-4	
Manganese (MnO ₂)	7439-96-5	
Sodium Fluoride (NaF)	7681-49-4	
Sodium Chloride (NaCl)	7647-14-5	
Potassium Chloride (KCl)	7447-40-7	
Trisodium Hexafluoroaluminate (AlNa ₃ F ₆)		<i>Balance (trade secret, per 29 CFR 191.1200(i)(1) & Appendix D)</i>

Section 4: First-aid Measures

Inhalation: Free crystalline silica is primarily a nuisance dust; first aid procedures are only required if large quantities of dust are inhaled. In this event, 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: Treat symptomatically.

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

Section 5: Fire-fighting Measures

<i>Flammable:</i>	Non-flammable
<i>Means of Extinction:</i>	Water may be used
<i>Auto-ignition Temperature:</i>	Not applicable
<i>Hazardous Combustion Products:</i>	Not available
<i>Explosion Data Sensitivity to</i>	

<i>Mechanical Impact:</i>	Not applicable
<i>Explosion Data Sensitivity to Static Discharge:</i>	Not applicable
<i>Special Equipment:</i>	Not applicable
<i>Precautions for Fire Fighters:</i>	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

<i>Protective Equipment:</i>	See Section 8
<i>Emergency Procedures:</i>	Not applicable
<i>Leak or Spill Procedure:</i>	Avoid runoff to sewers or waterways. Dike area of spill to prevent spreading and pump liquid into salvage tank. Allow remaining liquid to solidify and then shovel/sweep into containers.

Section 7: Handling and Storage

<i>Handling Procedures and Equipment:</i>	Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Use personal protection recommended in Section 8. Wash thoroughly after handling. Use only in well-ventilated areas. Do not breathe dust/fume/gas/mist/vapour/spray.
<i>Storage Requirements:</i>	Keep containers tightly closed in a dry, cool and well-ventilated place. Store locked up.
<i>Incompatibilities:</i>	Acids

Section 8: Exposure Controls/Personal Protection

Exposure Limits:

HAZARDOUS INGREDIENTS	CAS NUMBER	ACGIH TLV (mg/m ³)	OSHA PEL
Quartz (SiO ₂)	14808-60-7	0.1	-

<i>Engineering Controls:</i>	Use enough ventilation and local exhaust at the flame site to keep the fumes below the exposure limits listed above. If exposure limits are exceeded or irritation is experienced, NIOSH/MSHA approved respiratory protection should be worn. Showers and/or eyewash stations are recommended.
<i>Personal Protective Equipment:</i>	<p><u>Eyes</u> - Safety glasses with side-shields. Where eye contact could occur, chemical splash proof goggles are recommended.</p> <p><u>Skin</u> - Wear impervious protective clothing, including boots, gloves, lab coat, apron or coveralls, as appropriate, to prevent skin contact.</p> <p><u>General Hygiene</u> - 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.</p>

Section 9: Physical and Chemical Properties

<i>Physical State:</i>	Solid
<i>Odour and Appearance:</i>	Odourless dark grey powder
<i>Odour Threshold (ppm):</i>	Not applicable
<i>pH:</i>	Not available
<i>Melting Point:</i>	Not available
<i>Freezing Point:</i>	Not available
<i>Boiling Point:</i>	3060°F
<i>Flashpoint:</i>	Not available
<i>Upper Flammable Limit (% by volume):</i>	Not available
<i>Lower Flammable Limit (% by volume):</i>	Not available

Section 10: Stability and Reactivity

<i>Chemical Stability:</i>	Stable
<i>Possible Hazardous Reactions:</i>	Toxic gases are emitted when in contact with acids
<i>Conditions to Avoid:</i>	Contact with acids
<i>Materials to Avoid (Incompatibilities):</i>	None known
<i>Conditions of Reactivity:</i>	None under normal storage conditions
<i>Hazardous Decomposition By-Products:</i>	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 welder's 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 an electrode is consumed, 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 Section 3, plus those from the base metal coating, etc., as noted above. Gaseous reaction products may include carbon monoxide and carbon dioxide. Ozone and nitrogen oxides may be formed by the radiation from the arc. Determine the composition and quantity of fumes and gases to which workers are exposed by taking an air sample from inside the welder's helmet if worn or in the worker's breathing zone. Improve ventilation if exposures are not below limits. See ANSI/AWS F1.1, F1.3

and F1.5, available from the American Welding Society, 550 N.W. LeJeune Road, Miami, FL 33126.

Hazardous Polymerization: Does not occur

Section 11: Toxicological Information

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

Skin Absorption: Not applicable

Eye Contact: Arc rays can injure eyes. Irritating to eyes.

Inhalation: Toxic if inhaled. Inhalation is the most likely route of exposure; refer to "Effects of Acute Exposure" and "Effects of Chronic Exposure" below.

Ingestion: Toxic 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: 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. Free crystalline silica is a fibrogenic material which can cause a disabling pulmonary fibrosis known as silicosis after prolonged inhalation of the dust.

Sensitization to Product: Not available

Carcinogenicity: Free crystalline silica as a component of silicon dioxide, a chemical known to the State of California to cause cancer.

Reproductive Effects: May damage fertility or the unborn child.

Respiratory Sensitization: Not available

Toxicological Data: Not available

Section 12: Ecological Information

Aquatic and Terrestrial Toxicity: Toxic to aquatic organisms.

Persistence and Degradability: Not available

Bio accumulative Potential: Not available

Soil Mobility: Not available

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: Avoid washing into watercourses. Collect in suitable containers and dispose of in accordance with all pertinent regulations. Product is not classified as toxic waste.

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 contains or produces a chemical(s) known to the State of California to cause cancer and birth defects (or other reproductive harm).

Section 16: Other Information

Preparation Date: 13 July 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.