



SAFETY DATA SHEET

1. Identification

Product identifier BRIDGIT® WATER SOLUBLE PASTE FLUX

Other means of identification

SDS number 0018WS

Chemical Class Inorganic Chloride

Recommended use Metal soldering operations.

Recommended restrictions None known.

Manufacturer/Importer/Supplier/Distributor information

Manufacturer/Supplier Harris Products Group
4501 Quality Place
Mason, Ohio 45040 US
custservmason@jwharris.com

Telephone number 513-754-2000

Emergency Telephone Numbers 1-888-609-1762 (US, Canada, Mexico only)

Please quote 333988

2. Hazard(s) identification

Physical hazards Not classified.

Health hazards

Acute toxicity, oral	Category 4
Acute toxicity, inhalation	Category 4
Skin corrosion/irritation	Category 1B
Serious eye damage/eye irritation	Category 1
Specific target organ toxicity, single exposure	Category 3 respiratory tract irritation

OSHA defined hazards Not classified.

Label elements



Signal word Danger

Hazard statement Harmful if swallowed. Harmful if inhaled. Causes severe skin burns and eye damage. May cause respiratory irritation.

Precautionary statement

Prevention Do not breathe mist or vapor. Use only outdoors or in a well-ventilated area. Do not eat, drink or smoke when using this product. Wear protective gloves/protective clothing/eye protection/face protection. Wash thoroughly after handling.

Response If swallowed: Rinse mouth. Do NOT induce vomiting. If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower. If inhaled: Remove person to fresh air and keep comfortable for breathing. If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a poison center/doctor. Wash contaminated clothing before reuse.

Storage Store locked up. Store in a well-ventilated place. Keep container tightly closed.

Disposal Dispose of contents/container in accordance with local/regional/national/international regulations.

Hazard(s) not otherwise classified (HNOC) None known.

3. Composition/information on ingredients

Mixtures

BRIDGIT® WATER SOLUBLE PASTE FLUX

924589 Version #: 01 Revision date: - Issue date: 06-July-2015

SDS US

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Chemical name	CAS number	%
Ammonium chloride	12125-02-9	Proprietary
Parrafinic Hydrocarbons	N/A	N/A
Surfactant Blend	N/A	N/A

Composition comments All concentrations are in percent by weight unless ingredient is a gas. Gas concentrations are in percent by volume.

The specific chemical identity and/or exact percentage of component(s) have been withheld as a trade secret.

4. First-aid measures

Inhalation	Move to fresh air immediately. Oxygen or artificial respiration if needed. Do not use mouth-to-mouth method if victim inhaled the substance. Induce artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device. Get medical attention immediately.
Skin contact	Take off immediately all contaminated clothing. Rinse skin with water/shower. Get medical attention immediately. Wash clothing separately before reuse.
Eye contact	Immediately flush eyes with plenty of water for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Get medical attention immediately.
Ingestion	Call a physician immediately. Rinse mouth thoroughly. Never give anything by mouth to a victim who is unconscious or is having convulsions. Do NOT induce vomiting. Do not use mouth-to-mouth method if victim ingested the substance. Induce artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device. If vomiting occurs, keep head low so that stomach content doesn't get into the lungs.
Most important symptoms/effects, acute and delayed	Burning pain and severe corrosive skin damage. Dermatitis. Rash. Severe eye irritation. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. Permanent eye damage including blindness could result. Upper respiratory tract irritation. Coughing. Difficulty in breathing. Headache. Dizziness. Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea.
Indication of immediate medical attention and special treatment needed	Provide general supportive measures and treat symptomatically. Keep victim warm. Keep victim under observation. Symptoms may be delayed.
General information	Immediate medical attention is required. Show this safety data sheet to the doctor in attendance. Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves.

5. Fire-fighting measures

Suitable extinguishing media	Water fog. Foam. Dry chemical powder. Carbon dioxide (CO2). Halons.
Unsuitable extinguishing media	None known.
Specific hazards arising from the chemical	Irritating and toxic gases or fumes may be released during a fire. Product may produce a floating fire. Ammonia. Hydrogen Chloride (HCl). Various organic fumes.
Special protective equipment and precautions for firefighters	Self-contained breathing apparatus and full protective clothing must be worn in case of fire.
Fire fighting equipment/instructions	Move containers from fire area if you can do so without risk.
Specific methods	Use standard firefighting procedures and consider the hazards of other involved materials.
General fire hazards	This product must be substantially preheated before ignition can occur. If involved in a fire, this product may decompose to produce irritating vapors and toxic gases, including hydrogen chloride and ammonia.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures	Ensure adequate ventilation. Keep unnecessary personnel away. Keep people away from and upwind of spill/leak. Keep out of low areas. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Wear appropriate protective equipment and clothing during clean-up. Local authorities should be advised if significant spillages cannot be contained. For personal protection, see section 8 of the SDS.
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Methods and materials for containment and cleaning up

This product is miscible in water.

Large Spills: Stop the flow of material, if this is without risk. Use water spray to reduce vapors or divert vapor cloud drift. Dike the spilled material, where this is possible. Cover with plastic sheet to prevent spreading. Absorb in vermiculite, dry sand or earth and place into containers. Prevent entry into waterways, sewer, basements or confined areas. Following product recovery, flush area with water.

Small Spills: Wipe up with absorbent material (e.g. cloth, fleece). Clean surface thoroughly to remove residual contamination.

Never return spills to original containers for re-use. For waste disposal, see section 13 of the SDS. Avoid discharge into drains, water courses or onto the ground.

Environmental precautions**7. Handling and storage****Precautions for safe handling**

Provide adequate ventilation. Do not ingest. Do not breathe mist or vapor. Do not get this material in contact with eyes. Do not get this material in contact with skin. Do not get this material on clothing. When using do not eat or drink. Avoid prolonged exposure. Wear appropriate personal protective equipment. Wash thoroughly after handling. Wash contaminated clothing before reuse. Avoid release to the environment. Observe good industrial hygiene practices.

Conditions for safe storage, including any incompatibilities

Store locked up. Store in corrosive resistant container with a resistant inner liner. Keep container tightly closed. Store in a well-ventilated place. Keep in cool, dry location far from heat source and flame. Keep out of the reach of children. Store away from incompatible materials (see Section 10 of the SDS).

8. Exposure controls/personal protection**Occupational exposure limits****US. ACGIH Threshold Limit Values**

Components	Type	Value	Form
Ammonium chloride (CAS 12125-02-9)	STEL	20 mg/m3	Fume.
	TWA	10 mg/m3	Fume.

US. NIOSH: Pocket Guide to Chemical Hazards

Components	Type	Value	Form
Ammonium chloride (CAS 12125-02-9)	STEL	20 mg/m3	Fume.
	TWA	10 mg/m3	Fume.

Biological limit values

No biological exposure limits noted for the ingredient(s).

Appropriate engineering controls

Good general ventilation (typically 10 air changes per hour) should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level. Ensure that eyewash stations and safety showers are proximal to the work-station location.

Individual protection measures, such as personal protective equipment**Eye/face protection**

Wear safety glasses with side shields (or goggles). When these products are used in conjunction with soldering, it is recommended that safety glasses, goggles, or face-shield with filter lens of appropriate shade number (per ANSI Z49.1-1988, "Safety in Welding and Cutting") be worn.

Skin protection**Hand protection**

Wear nitrile or neoprene gloves for routine industrial use. Use triple gloves for spill response.

Other

Wear suitable protective clothing. When these products are used in conjunction with soldering, wear protective clothing that protects from sparks and flame (per ANSI Z49.1-1988, "Safety in Welding and Cutting").

Respiratory protection

Monitor oxygen level in the presence of this mixture. If oxygen level is 19.5% or less, a SCBA or airline respirator with escape bottle is required.

Thermal hazards

Wear appropriate thermal protective clothing, when necessary.

General hygiene considerations

Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants.

9. Physical and chemical properties**Appearance**

Yellow paste.

Physical state	Liquid.
Form	Paste.
Color	Yellow.
Odor	Petroleum odor.
Odor threshold	Not available.
pH	Not applicable.
Melting point/freezing point	Not available.
Initial boiling point and boiling range	140 °F (60 °C) (Decomposes).
Flash point	482.0 °F (250.0 °C)
Evaporation rate	< 1 (butyl acetate=1)
Flammability (solid, gas)	Not available.
Upper/lower flammability or explosive limits	
Flammability limit - lower (%)	Not available.
Flammability limit - upper (%)	Not available.
Explosive limit - lower (%)	Not available.
Explosive limit - upper (%)	Not available.
Vapor pressure	< 1 mm Hg
Vapor density	Not available.
Relative density	0.98
Solubility(ies)	
Solubility (water)	Nearly complete.
Partition coefficient (n-octanol/water)	Not available.
Auto-ignition temperature	Not available.
Decomposition temperature	Not available.
Viscosity	Not available.
Other information	
VOC (Weight %)	0.3 g/l

10. Stability and reactivity

Reactivity	The product is stable and non-reactive under normal conditions of use, storage and transport.
Chemical stability	Material is stable under normal conditions.
Possibility of hazardous reactions	Hazardous polymerization will not occur.
Conditions to avoid	Uncontrolled exposure to extreme temperatures, incompatible materials.
Incompatible materials	Strong acids. Strong bases. Strong oxidizing agents. Sulfides. Halogens.
Hazardous decomposition products	Ammonia. Hydrogen chloride. Chlorine. Hydrocarbons.

11. Toxicological information

Information on likely routes of exposure

Inhalation	Harmful if inhaled. May cause respiratory tract irritation. Prolonged inhalation may be harmful.
Skin contact	Causes severe skin burns. Prolonged skin contact may cause dermatitis.
Eye contact	Causes serious eye damage.
Ingestion	Harmful if swallowed. This product is not intended to be ingested or eaten. If gastric disturbance occurs, call physician.

Symptoms related to the physical, chemical and toxicological characteristics	Burning pain and severe corrosive skin damage. Dermatitis. Rash. Severe eye irritation. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. Permanent eye damage including blindness could result. Respiratory tract irritation. Coughing. Difficulty in breathing. Headache. Dizziness. Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea.
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Information on toxicological effects

Acute toxicity Harmful if swallowed. Harmful if inhaled. Causes severe skin burns and eye damage.

Components	Species	Test Results
Ammonium chloride (CAS 12125-02-9)		
Acute		
Oral		
LD50	Rat	1650 mg/kg
Skin corrosion/irritation	Causes severe skin burns. Prolonged skin contact may cause dermatitis.	
Serious eye damage/eye irritation	Causes serious eye damage.	
Respiratory or skin sensitization		
Respiratory sensitization	Not a respiratory sensitizer.	
Skin sensitization	This product is not expected to cause skin sensitization.	
Germ cell mutagenicity	No data available to indicate product or any components present at greater than 0.1% are mutagenic or genotoxic.	
Carcinogenicity	This product is not considered to be a carcinogen by IARC, ACGIH, NTP, or OSHA.	
OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)		
Not listed.		
Reproductive toxicity	This product is not expected to cause reproductive or developmental effects.	
Specific target organ toxicity - single exposure	May cause irritation of respiratory tract.	
Specific target organ toxicity - repeated exposure	Not classified.	
Aspiration hazard	Not an aspiration hazard.	
Chronic effects	Prolonged inhalation may be harmful. Liver and kidney effects are only expected to occur if exposure concentrations are very high.	

12. Ecological information

Ecotoxicity	No ecotoxicity data noted for the ingredient(s).
Persistence and degradability	No data is available on the degradability of this product.
Bioaccumulative potential	No data available.
Mobility in soil	No data available.
Other adverse effects	No other adverse environmental effects (e.g. ozone depletion, photochemical ozone creation potential, endocrine disruption, global warming potential) are expected from this component.

13. Disposal considerations

Disposal instructions	Collect and reclaim or dispose in sealed containers at licensed waste disposal site. Dispose of contents/container in accordance with local/regional/national/international regulations.
Local disposal regulations	Dispose in accordance with all applicable regulations.
Hazardous waste code	The waste code should be assigned in discussion between the user, the producer and the waste disposal company.
Waste from residues / unused products	Dispose of in accordance with local regulations. Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe manner (see: Disposal instructions).
Contaminated packaging	Empty containers should be taken to an approved waste handling site for recycling or disposal. Since emptied containers may retain product residue, follow label warnings even after container is emptied.

14. Transport information

DOT	Not regulated as dangerous goods.
IATA	Not regulated as dangerous goods.
IMDG	Not regulated as dangerous goods.

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code Not established.

15. Regulatory information

US federal regulations All components are on the U.S. EPA TSCA Inventory List.
This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)

Not regulated.

OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)

Not listed.

CERCLA Hazardous Substance List (40 CFR 302.4)

Ammonium chloride (CAS 12125-02-9) LISTED

Superfund Amendments and Reauthorization Act of 1986 (SARA)

Hazard categories Immediate Hazard - Yes
Delayed Hazard - No
Fire Hazard - No
Pressure Hazard - No
Reactivity Hazard - No

SARA 302 Extremely hazardous substance

Not listed.

SARA 311/312 Hazardous chemical Yes

SARA 313 (TRI reporting)

Chemical name	CAS number	% by wt.
Ammonium chloride	12125-02-9	Proprietary

Other federal regulations

Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs) List

Not regulated.

Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130)

Not regulated.

Safe Drinking Water Act (SDWA) Not regulated.

US state regulations

US. Massachusetts RTK - Substance List

Ammonium chloride (CAS 12125-02-9)

US. New Jersey Worker and Community Right-to-Know Act

Ammonium chloride (CAS 12125-02-9)

US. Pennsylvania Worker and Community Right-to-Know Law

Ammonium chloride (CAS 12125-02-9)

US. Rhode Island RTK

Ammonium chloride (CAS 12125-02-9)

US. California Proposition 65

WARNING: This product contains chemicals known to the State of California to cause cancer and birth defects or other reproductive harm.

International Inventories

Country(s) or region	Inventory name	On inventory (yes/no)*
Canada	Domestic Substances List (DSL)	Yes
Canada	Non-Domestic Substances List (NDSL)	No
United States & Puerto Rico	Toxic Substances Control Act (TSCA) Inventory	Yes

*A "Yes" indicates this product complies with the inventory requirements administered by the governing country(s).

A "No" indicates that one or more components of the product are not listed or exempt from listing on the inventory administered by the governing country(s).

16. Other information, including date of preparation or last revision

Issue date 06-July-2015
Revision date -
Version # 01
NFPA ratings



Disclaimer

Harris Products Group cannot anticipate all conditions under which this information and its product, or the products of other manufacturers in combination with its product, may be used. It is the user's responsibility to ensure safe conditions for use, handling, storage and disposal of the product, and to assume liability for loss, injury, damage or expense due to improper use. The information in the sheet was written based on the best knowledge and experience currently available. The information in the sheet was written based on the best knowledge and experience currently available.