

Revision date: 14 March 2016

Version: 01

SECTION 1: Identification

1.1. Product identifier

Trade name/designation: Flux, Au/Ag Bullion
Other means of identification: 088-717-05

1.2. Relevant identified uses of the substance or mixture and uses advised against

Relevant identified uses: For laboratory use only. Not for drug, food or household use.

1.3. Details of the supplier of the safety datasheet

USA

Company: VWR International, LLC
 100 Matsonford Road
 Building One, Suite 200
 Radnor, PA 19087
 Telephone: 610.386.1700

CANADA

Company: VWR International, Co
 2360 Argentia Road
 Mississauga, Ontario L5N 5Z7
 Telephone: 800.932.5000

1.4. Emergency Telephone number

(US) CHEMTREC 800.424.9300
 (CAN) CANUTEC 613.996.6666

SECTION 2: Hazard identification

2.1. Classification of the substance or mixture

GHS Classification in accordance with 29 CFR 1910 (OSHA HCS) and HPR

For the full text of the H-Statement(s) and P-Phrases mentioned in this Section, see Section 16.

Hazard statements	Hazard classes and categories
H302	Acute toxicity, oral (category 4)
H319	Serious eye damage/eye irritation (category 2A)
H332	Acute toxicity, inhalation (category 4)
H351	Carcinogenicity, oral (Category 2)
H360	Reproductive toxicity (category 1A)
H373	Specific target organ toxicity, repeated exposure (category 2)
H400	Acute aquatic toxicity (Category 1)
H410	Hazardous to the aquatic environment- long term (chronic)

	hazard (Category 1)
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2.2. GHS Label elements, including precautionary statements

Pictograms:



Signal word: Danger

Hazard statements	
H302 + H332	Harmful if swallowed or inhaled
H319	Causes serious eye irritation
H351	Suspected of causing cancer
H360	May damage fertility or the unborn child
H373	Causes damage to organs through prolonged or repeated exposure
H410	Very toxic to aquatic life with long lasting effects
Precautionary statements	
P201	Obtain special instructions before use.
P202	Do not handle until all safety precautions have been read and understood.
P260	Do not breathe dust/fume/gas/mist/vapors/spray.
P264	Wash hands thoroughly after handling.
P270	Do not eat, drink or smoke when using this product.
P271	Use only outdoors or in a well-ventilated area.
P273	Avoid release to the environment
P280	Wear protective gloves/protective clothing/eye protection/face protection.
P391	Collect spillage
P405	Store locked up.
P501	Dispose of contents/container to proper disposal facility
P301+P310+P330	IF SWALLOWED: Immediately call a POISON CENTER or doctor/ physician. Rinse mouth.
P304+P340+P312	IF INHALED: Remove victim to fresh air and keep comfortable for breathing. Call a POISON CENTER or doctor/physician 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.
P308+P313	If exposed or concerned: Get medical advice/attention
P337+P313	IF eye irritation persists: Get medical advice/attention.

2.3. Hazards not otherwise classified (HNOC): None

SECTION 3: Composition/information on ingredients

3.1. Hazardous Components

Chemical name	Formula	Molecular weight	CAS#	Weight%

Soda Ash, light	Na ₂ CO ₃	105.99 g/mol	497-19-8	40-42
Borax, anhydrous	Na ₂ B ₄ O ₇	201.22 g/mol	1330-43-4	40-43
Silica sand	SiO ₂	60.08 g/mol	7631-86-9	8-10
Sodium Nitrate	AgNO ₃	169.87 g/mo	7761-88-8	7-9

SECTION 4: First aid measures

4.1. General information

In case of inhalation: If breathed in, move person into fresh air. If not breathing, give artificial respiration. If breathing is difficult administer approved oxygen supply. Seek immediate medical attention.

In case of skin contact: Wash off with soap and plenty of water. Consult a physician.

In case of eye contact: Sodium carbonate can cause serious eye damage based on animal information and pH (11.5-11.6 for a 5% solution). It is capable of producing severe eye burns and permanent injury, including blindness, depending on the concentration of the solution and duration of contact. No human information has been obtained.

In case of ingestion: If conscious, wash out mouth with water. Have conscious person drink several glasses of water to dilute. Induce vomiting. Consult physician after ingestion or exposure to high concentrations of dust.

4.2. Most important symptoms and effects, both acute and delayed: Causes eye irritation. May cause skin and respiratory system irritation. May impair reproductive system of both men and women. Damage may also be caused to the unborn fetus.

4.3. Indication of any immediate medical attention and special treatment needed: No data available

SECTION 5: Firefighting measures

5.1. Extinguishing media: Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

5.2. Special hazards arising from the substance or mixture: No data available

5.3. Special protective equipment for firefighters: Wear self-contained breathing apparatus for firefighting if necessary.

5.4. Hazardous combustion products: Toxic fumes of various oxides of potassium, sodium and boron. In addition, carbon monoxide and carbon dioxide can be generated.

5.5. Advice for firefighters: Wear self-contained breathing apparatus for firefighting if necessary.

5.6. Additional information: Use water spray to cool unopened containers

SECTION 6: Accidental release measures

- 6.1. Personal precautions:** protective equipment and emergency procedures: Use personal protective equipment. Avoid breathing dust or fumes. Ensure adequate ventilation. Remove all sources of ignition. Evacuate personnel to safe areas. For personal protection see section 8.
- 6.2. Environmental precautions:** Prevent further leakage or spillage if safe to do so. Do not let product enter drains. Discharge into the environment must be avoided.
- 6.3. Methods and material for containment and cleaning up:** Contain spillage, and then collect with an electrically protected vacuum cleaner or by wet-brushing and place in container for disposal according to local regulations (see section 13).
- 6.4. Additional information:** For disposal see section 13.

SECTION 7: Handling and storage

- 7.1. Precautions for safe handling:** Use proper personal protective equipment.
- 7.2. Conditions for safe storage, including any incompatibilities:** Keep containers tightly closed in a cool, well-ventilated place.
- 7.3. Specific end use(s):** No data available

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

United States			
Chemical Name	Limit value type & Country of Origin	Exposure Limit value	Source
Borax, anhydrous	TWA-U.S.	0.05 mg/m ³	ACGIH (TLV)
	TWA-U.S.	0.05 mg/m ³	ACGIH (TLV)
	PEL-U.S.	0.05 mg/m ³	OSHA
Canada			
Chemical Name	Limit value type & Country of Origin	Exposure Limit value	Source
Borax, anhydrous	TWA-Canada	0.05 mg/m ³	Canada-OEL
	TWAEV-Canada	0.05 mg/m ³	Québec-OHS
	TWA-Canada	0.05 mg/m ³	British Columbia OEL

8.2. Exposure controls

Appropriate engineering controls: Use in a chemical fume hood to keep airborne levels below recommended exposure limits. Do not use in unventilated spaces. Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.

Personal protection equipment

Eye/face protection: Face shield and safety glasses Use equipment for eye protection Tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).

Skin protection: Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.

Respiratory protection: Where risk assessment shows air-purifying respirators are appropriate use a full-face respirator with multipurpose combination (US) or type ABEK (EN 14387) respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

SECTION 9: Physical and Chemical Properties

9.1. Information on basic physical and chemical properties

- a) Appearance:
Physical state: powder or crystals
Color: No data available
- b) Odor: No data available
- c) Odor Threshold: Not applicable
- d) pH: No data available
- e) Melting point/freezing point: No data available
Initial boiling point: No data available
- f) boiling range: Not applicable
- g) Flash point: No data available
- h) Evaporation rate: No data available
- i) Flammability (solid, gas): No data available
- j) Upper/lower flammability: Not applicable
explosive limits:Not applicable
- k) Vapor pressure: No data available
- l) Vapor density: No data available
- m) Relative density: No data available
- n) Solubilities: No data available
- o) Partition coefficient (n-Octanol/Water): No data available
- p) Auto-ignition temperature: Not applicable
- q) Decomposition temperature: No data available
- r) Viscosity: Not applicable
- s) Explosive properties: Not applicable
- t) Oxidizing properties: No data available

9.2. **Other information:** No data available

SECTION 10: Stability and Reactivity

10.1. **Reactivity:** Stable under recommended storage conditions

10.2. **Chemical stability:** No data available

10.3. **Possibility of hazardous reactions:** No data available

10.4. **Conditions to avoid:** No data available

10.5. **Incompatible materials:** No data available

10.6. **Hazardous decomposition products:** No data available

SECTION 11: Toxicology

11.1. Information on toxicological effects

Acute toxicity

Intraperitoneal LD₅₀: No data available

Inhalation LC₅₀: No data available

Dermal LD₅₀: No data available

Other information on acute toxicity: No data available

Skin corrosion/irritation: No data available

Eye damage irritation: No data available

Respiratory or skin sensitization: No data available

Germ cell mutagenicity: No data available

Carcinogenicity: IARC: No data available

NTP: No data available

OSHA: No data available

Reproductive toxicity: Large doses have been shown to cause adverse reproductive effects.

Specific target organ toxicity (STOT)-single exposure: No data available

Specific target organ toxicity (STOT)-repeated exposure: No data available

Aspiration hazard: No data available

Additional information: No data available

SECTION 12: Ecological information

12.1. Ecotoxicity: No data available

12.2. Persistence and degradability: No data available

12.3. Bioaccumulative potential: No data available

12.4. Mobility in soil: No data available

12.5. Results of PBT and vPvB assessment: No data available

12.6. Other adverse effects: No data available

SECTION 13: Disposal considerations

13.1. Waste treatment methods: This material, as supplied, is not a hazardous waste according to Federal regulations (40 CFR 261). This material could become a hazardous waste if it is mixed with or otherwise comes in contact with a hazardous waste, if chemical additions are made to this material, or if the material is processed or otherwise altered. Consult 40 CFR 261 to determine whether the altered material is a hazardous waste. Consult the appropriate state, regional, or local regulations for additional requirements.

Contaminated packaging: Dispose of as unused product.

SECTION 14: Transport information

Land Transport DOT (U.S.)

Classified as non-dangerous goods

Sea Transport IMDG

Classified as non-dangerous goods

Transportation of Dangerous Goods (TDG)

Classified as non-dangerous goods

Air Transport IATA

Classified as non-dangerous goods

SECTION 15: Regulatory information

SARA 302 Extremely Hazardous Substances: No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.

SARA 313 (TRI reporting): No chemicals reported

SARA 311/312 Hazardous Chemicals: Acute health hazard, Chronic Health Hazard

Massachusetts Right-To-Know Substance List: No chemicals reported

Pennsylvania Right-To-Know Hazardous substances: No chemicals reported

New Jersey Worker and Community Right-To-Know Components: No chemicals reported

California Proposition 65: This product contains chemicals known to State of California to cause cancer, birth defects, or any other reproductive harm.

CANADA

Chemical name	CAS#	DSL
Soda Ash	497-19-8	The substance is listed on Domestic Substances List
Borax	1330-43-4	The substance is listed on Domestic Substances List
Silica	7631-86-9	The substance is listed on Domestic Substances List
Silver Nitrate	7761-88-8	The substance is listed on Domestic Substances List

SECTION 16: Other information

Full text of H-Statement(s) and P-phrase(s):

H302 + H332	Harmful if swallowed or inhaled
H319	Causes serious eye irritation
H351	Suspected of causing cancer
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P308+P313	If exposed or concerned: Get medical advice/attention
P337+P313	IF eye irritation persists: Get medical advice/attention.

HMIS Rating:

Health: 2

Flammability: 0

Physical Hazard: 0

Reactivity: 0

NFPA Rating:

Health: 2

Flammability: 0

Reactivity: 0

Special Hazard: N/A

Toxic! Carcinogen! Teratogen! Embryotoxic and/or foetotoxic! Reproductive toxin! Irritant!
Possible risks of irreversible effects. Danger of cumulative effects. Do not breathe dust. Avoid all contact with the product. Avoid prolonged or repeated exposure. Use in a chemical fume hood. Handle and open container with care. Container should be opened only by a technically qualified person. Danger of serious damage to health by prolonged exposure to lead dust; May affect blood, kidney, liver, heart, nervous, digestive and reproductive systems.
RTECS NO: ED4588000 (Borax).

DISCLAIMER

The above information is believed to be correct but does not purport to be all-inclusive and shall be used only as a guide. The information in this document is based on the present state of our knowledge and is applicable to the product with regard to appropriate safety precautions. It does not represent any guarantee of the properties of the product. VWR International, LLC and its affiliates shall not be held liable for any damage resulting from handling.