SAFETY DATA SHEET
BABBITT

1. Identification

Product identifier

Product name BABBITT

Product number 5029

Details of the supplier of the safety data sheet

Supplier

SIFCO Applied Surface Concepts
5708 E. Schaaf Road
Independence, Ohio 44131
U.S.A.
Tel.: +1 216-524-0099
Fax: +1 216-524-6331
E-Mail: info@sifcoasc.com

Emergency telephone number

Emergency telephone CHEMTREC (United States) (800) 424-9300; CHEMTREC (International) +1 703-527-3887

2. Hazard(s) identification

Classification of the substance or mixture

Physical hazards Not Classified

Health hazards Skin Corr. 1B - H314 Eye Dam. 1 - H318 Resp. Sens. 1 - H334 Skin Sens. 1 - H317 Muta. 2 - H341 STOT RE 2 - H373

Environmental hazards Aquatic Acute 1 - H400 Aquatic Chronic 1 - H410

Label elements

Pictogram

Signal word Danger

Hazard statements

H314 Causes severe skin burns and eye damage.
H317 May cause an allergic skin reaction.
H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.
H341 Suspected of causing genetic defects.
H373 May cause damage to organs through prolonged or repeated exposure.
H410 Very toxic to aquatic life with long lasting effects.

BABBITT

Precautionary statements

P264 Wash contaminated skin thoroughly after handling.
P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.
P284 [In case of inadequate ventilation] wear respiratory protection.
P302+P352 If on skin: Wash with plenty of water.
P304+P340 If inhaled: Remove person to fresh air and keep comfortable for breathing.
P305+P351+P338 If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P501 Dispose of contents/ container in accordance with national regulations.
P301+P310 If swallowed: Immediately call a poison center/ doctor.
P403+P233 Store in a well-ventilated place. Keep container tightly closed.
P260 Do not breathe vapors.
P270 Do not eat, drink or smoke when using this product.

Contains TIN(II) SULPHATE, DIETHYLENETRIAMINE, ETHYLENEDIAMINE

3. Composition/information on ingredients

Mixtures

TIN(II) SULPHATE **10-15%**

CAS number: 7488-55-3

M factor (Acute) = 1 M factor (Chronic) = 1

Classification
Acute Tox. 4 - H332
Skin Irrit. 2 - H315
Eye Irrit. 2 - H319
Skin Sens. 1 - H317
Muta. 2 - H341
STOT SE 3 - H335
STOT RE 2 - H373
Aquatic Acute 1 - H400
Aquatic Chronic 1 - H410

AMMONIUM TARTRATE **10-15%**

CAS number: 14307-43-8

Classification
Not Classified

DIETHYLENETRIAMINE **5-10%**

CAS number: 111-40-0

Classification
Acute Tox. 4 - H302
Acute Tox. 4 - H312
Skin Corr. 1B - H314
Eye Dam. 1 - H318
Skin Sens. 1 - H317

BABBITT

DIAMMONIUM TARTRATE **5-10%**

CAS number: 3164-29-2

Classification
Not Classified

COPPER SULPHATE **1-5%**

CAS number: 7758-98-7

M factor (Acute) = 10 M factor (Chronic) = 10

Classification
Acute Tox. 4 - H302
Skin Irrit. 2 - H315
Eye Irrit. 2 - H319
Aquatic Acute 1 - H400
Aquatic Chronic 1 - H410

ETHYLENEDIAMINE **1-5%**

CAS number: 107-15-3

Classification
Flam. Liq. 3 - H226
Acute Tox. 4 - H302
Acute Tox. 4 - H312
Skin Corr. 1B - H314
Eye Dam. 1 - H318
Resp. Sens. 1 - H334
Skin Sens. 1 - H317

AMMONIUM SULPHATE **<1%**

CAS number: 7783-20-2

Classification
Not Classified

The full text for all hazard statements is displayed in Section 16.

4. First-aid measures

Description of first aid measures

Inhalation Move affected person to fresh air at once. Get medical attention.

Ingestion Get medical attention immediately. Do not induce vomiting.

Skin Contact Remove contaminated clothing immediately and wash skin with soap and water. Continue to rinse for at least 15 minutes and get medical attention.

Eye contact It is recommended that suitable facilities for quick drenching or flushing of the eyes and body be provided within the work area for immediate emergency use. Remove affected person from source of contamination. Make sure to remove any contact lenses from the eyes before rinsing. Rinse immediately with plenty of water. Continue to rinse for at least 15 minutes and get medical attention.

BABBITT

Most important symptoms and effects, both acute and delayed

Inhalation Coughing, chest tightness, feeling of chest pressure.

Ingestion May cause chemical burns in mouth and throat. May cause stomach pain or vomiting.

Skin contact May cause serious chemical burns to the skin.

Eye contact Causes severe burns. May cause serious eye damage.

Indication of immediate medical attention and special treatment needed

Notes for the doctor No specific recommendations.

5. Fire-fighting measures

Extinguishing media

Suitable extinguishing media The product is not flammable. Use fire-extinguishing media suitable for the surrounding fire.

Special hazards arising from the substance or mixture

Specific hazards Corrosive gases or vapors.

Advice for firefighters

Protective actions during firefighting Wear positive-pressure self-contained breathing apparatus (SCBA) and appropriate protective clothing.

Special protective equipment for firefighters Use protective equipment appropriate for surrounding materials.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

Personal precautions Follow precautions for safe handling described in this safety data sheet. Avoid inhalation of spray mist and contact with skin and eyes. Provide adequate general and local exhaust ventilation.

Environmental precautions

Environmental precautions Do not discharge into drains or watercourses or onto the ground. Inform the relevant authorities if environmental pollution occurs (sewers, waterways, soil or air).

Methods and material for containment and cleaning up

Methods for cleaning up Wear suitable protective equipment, including gloves, goggles/face shield, respirator, boots, clothing or apron, as appropriate. Stop leak if possible without risk. DO NOT touch spilled material! Flush contaminated area with plenty of water. Avoid the spillage or runoff entering drains, sewers or watercourses. Contain spillage with sand, earth or other suitable non-combustible material. Collect and dispose of spillage as indicated in Section 13. Wash thoroughly after dealing with a spillage.

Reference to other sections Wear protective clothing as described in Section 8 of this safety data sheet. See Section 11 for additional information on health hazards. See Section 12 for additional information on ecological hazards. For waste disposal, see Section 13.

7. Handling and storage

Precautions for safe handling

Usage precautions Avoid spilling. Avoid contact with skin and eyes. Avoid inhalation of vapors and spray/mists. Provide adequate general and local exhaust ventilation.

Conditions for safe storage, including any incompatibilities

BABBITT

Storage precautions Store in tightly-closed, original container in a dry, cool and well-ventilated place. Protect from freezing and direct sunlight.

Storage class Corrosive storage.

Specific end uses(s)

Specific end use(s) The identified uses for this product are detailed in Section 1.

8. Exposure Controls/personal protection

Control parameters

Occupational exposure limits

DIETHYLENETRIAMINE

Long-term exposure limit (8-hour TWA): ACGIH 1 ppm 4.2 mg/m³
Sk

ETHYLENEDIAMINE

Long-term exposure limit (8-hour TWA): OSHA 10 ppm 25 mg/m³

ACGIH = American Conference of Governmental Industrial Hygienists.
OSHA = Occupational Safety and Health Administration.
Sk = Danger of cutaneous absorption.

Exposure controls

Protective equipment

Appropriate engineering controls As this product contains ingredients with exposure limits, process enclosures, local exhaust ventilation or other engineering controls should be used to keep worker exposure below any statutory or recommended limits, if use generates dust, fumes, gas, vapor or mist.

Eye/face protection Tight-fitting safety glasses.

Hand protection It is recommended that chemical-resistant, impervious gloves are worn. Considering the data specified by the glove manufacturer, check during use that the gloves are retaining their protective properties and change them as soon as any deterioration is detected. It is recommended that gloves are made of the following material: Nitrile rubber.

Other skin and body protection Appropriate footwear and additional protective clothing complying with an approved standard should be worn if a risk assessment indicates skin contamination is possible.

Hygiene measures Do not eat, drink or smoke when using this product. Wash at the end of each work shift and before eating, smoking and using the toilet.

Respiratory protection If ventilation is inadequate, suitable respiratory protection must be worn. Respiratory protection must be used if the airborne contamination exceeds the recommended occupational exposure limit.

9. Physical and Chemical Properties

Information on basic physical and chemical properties

Appearance Liquid.

Color Yellowish.

Odor Musty (mouldy).

pH pH (concentrated solution): 7.0-8.0

BABBITT

Initial boiling point and range	>100°C/212°F @
Relative density	1.17-1.20

10. Stability and reactivity

Reactivity	There are no known reactivity hazards associated with this product.
Stability	Stable at normal ambient temperatures and when used as recommended.
Possibility of hazardous reactions	Not determined.
Conditions to avoid	Avoid excessive heat for prolonged periods of time.
Materials to avoid	Strong acids.
Hazardous decomposition products	None at ambient temperatures.

11. Toxicological information

Information on toxicological effects

Acute toxicity - oral

ATE oral (mg/kg)	4,019.29

Acute toxicity - dermal

ATE dermal (mg/kg)	10,669.25

Acute toxicity - inhalation

ATE inhalation (dusts/mists mg/l)	10.79

Inhalation	Vapours irritate the respiratory system, and may cause coughing and difficulties in breathing.
Ingestion	Causes severe burns. May cause chemical burns in mouth, esophagus and stomach.
Skin Contact	May cause serious chemical burns to the skin.
Eye contact	Causes serious eye damage. Immediate first aid is imperative.
Acute and chronic health hazards	May cause burns in mucous membranes, throat, esophagus and stomach.
Route of entry	Ingestion Inhalation Skin and/or eye contact

Toxicological information on ingredients.

TIN(II) SULPHATE

Acute toxicity - oral

Acute toxicity oral (LD_{50} mg/kg)	2.207
Species	Rat

Acute toxicity - inhalation

ATE inhalation (dusts/mists mg/l)	1.5

BABBITT

DIETHYLENETRIAMINE

Acute toxicity - oral

Acute toxicity oral (LD_{50} mg/kg)	1,080.0
Species	Rat
ATE oral (mg/kg)	500.0

Acute toxicity - dermal

Acute toxicity dermal (LD_{50} mg/kg)	1,090.0
Species	Rabbit
ATE dermal (mg/kg)	1,100.0

COPPER SULPHATE

Acute toxicity - oral

Acute toxicity oral (LD_{50} mg/kg)	482.0
Species	Rat
ATE oral (mg/kg)	500.0

Acute toxicity - dermal

Acute toxicity dermal (LD_{50} mg/kg)	2,000.0
Species	Rat
ATE dermal (mg/kg)	2,000.0

ETHYLENEDIAMINE

Acute toxicity - oral

Acute toxicity oral (LD_{50} mg/kg)	1,200.0
Species	Rat
ATE oral (mg/kg)	500.0

Acute toxicity - dermal

Acute toxicity dermal (LD_{50} mg/kg)	560.0
Species	Rabbit
ATE dermal (mg/kg)	1,100.0

Acute toxicity - inhalation

Acute toxicity inhalation (LC_{50} dust/mist mg/l)	14.7
Species	Rat

BABBITT

ATE inhalation (vapours mg/l)	11.0

AMMONIUM SULPHATE

Acute toxicity - oral

Acute toxicity oral (LD_{50} mg/kg)	4,250.0
Species	Rat

Acute toxicity - dermal

Acute toxicity dermal (LD_{50} mg/kg)	2,000.0
Species	Rat

12. Ecological Information

Ecotoxicity Dangerous for the environment: May cause long-term adverse effects in the aquatic environment.

Toxicity No data available.

Ecological information on ingredients.

TIN(II) SULPHATE

Acute aquatic toxicity

$LE(C)_{50}$	0.1 < L(E)C50 ≤ 1
M factor (Acute)	1
Acute toxicity - fish	LC_{50}, 48 hour: 99.5 mg/l, Daphnia magna

Chronic aquatic toxicity

M factor (Chronic)	1

DIETHYLENETRIAMINE

Acute toxicity - fish	LC_{50}, 96 hour: 1014 mg/l, Poecilia reticulata (Guppy)

COPPER SULPHATE

Acute aquatic toxicity

$LE(C)_{50}$	0.01 < L(E)C50 ≤ 0.1
M factor (Acute)	10
Acute toxicity - fish	LC_{50}, 96 hours: <1(copper ions) mg/l, Fish EC_{50}, 48 hour: 0.024 mg/l, Daphnia magna

Chronic aquatic toxicity

M factor (Chronic)	10

ETHYLENEDIAMINE

Acute toxicity - fish	, 96 hour: 115.7 mg/l, Pimephales promelas (Fat-head Minnow)

BABBITT

Acute toxicity - aquatic invertebrates	, 48 hour: 3 mg/l, Daphnia magna
Acute toxicity - aquatic plants	, 96 hour: 151 mg/l, Pseudokirchneriella subcapitata

AMMONIUM SULPHATE

Acute toxicity - fish	LC_{50}, 53 hours: mg/l, Fish EC_{50}, 122-129 hours: 48 mg/l, Daphnia magna

Persistence and degradability

Persistence and degradability No data available.

Ecological information on ingredients.

ETHYLENEDIAMINE

Biodegradation	- 94: ~ 28 days

Bioaccumulative potential

Bio-Accumulative Potential The product does not contain any substances expected to be bioaccumulating.

Mobility in soil

Mobility The product is soluble in water.

Other adverse effects

Other adverse effects Not determined.

13. Disposal considerations

Waste treatment methods

General information Disposal of this product, process solutions, residues and by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any local authority requirements.

Disposal methods Dispose of waste and residues in accordance with local authority requirements.

14. Transport information

UN Number

UN No. (TDG) 3266

UN No. (IMDG) 3266

UN No. (ICAO) 3266

UN No. (DOT) 3266

UN proper shipping name

Proper shipping name (TDG) CORROSIVE LIQUID, BASIC, INORGANIC, N.O.S. (TIN(II)SULPHATE,ETHYLENEDIAMINE, COPPER SULPHATE)

Proper shipping name (IMDG) CORROSIVE LIQUID, BASIC, INORGANIC, N.O.S. (TIN (II)SULPHATE,ETHYLENEDIAMINE, COPPER SULPHATE)

Proper shipping name (ICAO) CORROSIVE LIQUID, BASIC, INORGANIC, N.O.S. (TIN(II)SULPHATE,ETHYLENEDIAMINE, COPPER SULPHATE)

BABBITT

Proper shipping name (DOT) CORROSIVE LIQUID, BASIC, INORGANIC, N.O.S. (TIN(II)SULPHATE,ETHYLENEDIAMINE, COPPER SULPHATE)

Transport hazard class(es)

TDG class 8

TDG label(s) 8

IMDG Class 8

ICAO class/division 8

Transport labels

Packing group

TDG Packing Group II

IMDG packing group II

ICAO packing group II

DOT packing group II

Environmental hazards

Environmentally Hazardous Substance

Special precautions for user

EmS F-A, S-B

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

15. Regulatory information

US Federal Regulations

SARA Section 302 Extremely Hazardous Substances Tier II Threshold Planning Quantities

Ethylenediamine
10,000 lbs

CERCLA/Superfund, Hazardous Substances/Reportable Quantities (EPA)

Ammonium Tartrate
Final CERCLA RQ: 5,000 lbs
Copper Sulphate
Final CERCLA RQ: 10 lbs
Diammonium Tartrate
Final CERCLA RQ: 5,000 lbs
Ethylenediamine
Final CERCLA RQ: 5,000 lbs

SARA Extremely Hazardous Substances EPCRA Reportable Quantities

Ethylenediamine
EPCRA RQ: 5,000 lbs

BABBITT

SARA 313 Emission Reporting

Copper Sulphate

CAA Accidental Release Prevention

Ethylenediamine
Threshold Quantity: 20,000 lbs

SARA (311/312) Hazard Categories

Acute
Chronic

OSHA Highly Hazardous Chemicals

Exempt.

US State Regulations

California Proposition 65 Carcinogens and Reproductive Toxins

Exempt.

California Directors List of Hazardous Substances

Copper Sulphate
Ethylenediamine

Inventories

US - TSCA

All ingredients are present.

16. Other information

Revision date	4/4/2018
Revision	1
Hazard statements in full	H226 Flammable liquid and vapor. H302 Harmful if swallowed. H312 Harmful in contact with skin. H314 Causes severe skin burns and eye damage. H315 Causes skin irritation. H317 May cause an allergic skin reaction. H318 Causes serious eye damage. H319 Causes serious eye irritation. H332 Harmful if inhaled. H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled. H335 May cause respiratory irritation. H341 Suspected of causing genetic defects. H373 May cause damage to organs through prolonged or repeated exposure. H400 Very toxic to aquatic life. H410 Very toxic to aquatic life with long lasting effects.
NFPA - instability hazard	Normally stable. (0)
NFPA - health hazard	Temporary incapacitation, injury. (2)
NFPA - flammability hazard	Will not burn. (0)

The Information in this data sheet is believed to be correct but neither we nor our employees or agents give any warranty or make any representation to the accuracy thereof and accept no liability for any loss, injury or damage which may result in it's use. The sole purpose of this data sheet is to provide guidance on the safe handling and use of the products to which it relates. It does not form part of any product specification nor part of any contract. It is not practical for the guidance and information in this data sheet to cover every conceivable application of a product and as we may not be aware of the use to which the products covered by this data sheet are to be put it remains the responsibility of the user to conduct it's own tests and to satisy itself as to the suitability of the product.