

### SECTION 1: Identification

#### 1.1. Identification

Product form : Mixture  
 Product name : Aerospray TB Reagent B: Brilliant Green Concentrate  
 Product code : SS-161BBG

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

Use of the substance/mixture : Laboratory chemical

#### 1.3. Details of the supplier of the safety data sheet

ELITechGroup Inc.  
 370 West 1700 South  
 Logan, UT 84321 - USA  
 T +1 (435) 752-6011 - F +1 (435) 752-4127  
[qara\\_ebs@elitechgroup.com](mailto:qara_ebs@elitechgroup.com) - [www.elitechgroup.com](http://www.elitechgroup.com)

#### 1.4. Emergency telephone number

Emergency number : Contact your distributor or poison control center in your country.  
 InfoTrac Emergency Response: Calls within the USA, phone: 1-800-535-5053. Calls outside the USA, phone: +1 352-323-3500 (call collect)  
 Customer ID: #90104 (NOTE: this number is required when a customer calls into either phone number above).

### SECTION 2: Hazard(s) identification

#### 2.1. Classification of the substance or mixture

##### GHS US classification

Flam. Liq. 3 H226 - Flammable liquid and vapor  
 Eye Dam. 1 H318 - Causes serious eye damage  
 Skin Sens. 1 H317 - May cause an allergic skin reaction  
 Aquatic Chronic 1 H410 - Very toxic to aquatic life with long lasting effects

Full text of H statements : see section 16

#### 2.2. Label elements

##### GHS US labeling

Hazard pictograms (GHS US) :



Signal word (GHS US) :

Danger

Hazard statements (GHS US) :

H226 - Flammable liquid and vapor  
 H317 - May cause an allergic skin reaction  
 H318 - Causes serious eye damage  
 H410 - Very toxic to aquatic life with long lasting effects

Precautionary statements (GHS US) :

P210 - Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.  
 P233 - Keep container tightly closed.  
 P243 - Take precautionary measures against static discharge.  
 P261 - Avoid breathing mist, spray, vapors.  
 P273 - Avoid release to the environment.  
 P280 - Wear protective gloves, protective clothing, eye protection.  
 P302+P352 - If on skin: Wash with plenty of soap and water.  
 P303+P361+P353 - If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.  
 P305+P351+P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.  
 P333+P313 - If skin irritation or rash occurs: Get medical advice/attention.  
 P362+P364 - Take off contaminated clothing and wash it before reuse.

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P370+P378 - In case of fire: Use ABC-powder, alcohol resistant foam, BC-powder, carbon dioxide (CO<sub>2</sub>), D-powder to extinguish.  
P391 - Collect spillage.  
P403+P235 - Store in a well-ventilated place. Keep cool.  
P501 - Dispose of contents/container to hazardous or special waste collection point, in accordance with local, regional, national and/or international regulation.

### 2.3. Other hazards

No additional information available

### 2.4. Unknown acute toxicity (GHS US)

Not applicable

## SECTION 3: Composition/Information on ingredients

### 3.1. Substances

Not applicable

### 3.2. Mixtures

Name	Product identifier	%	GHS US classification
malic acid, D/L-	(CAS-No.) 617-48-1	0.5 – 5	Acute Tox. 4 (Inhalation:dust,mist), H332 Eye Irrit. 2, H319
Brilliant Green	(CAS-No.) 633-03-4	1 – 5	Acute Tox. 4 (Oral), H302 Skin Irrit. 2, H315 Eye Dam. 1, H318 Skin Sens. 1, H317

Full text of H- and EUH-statements: see section 16

## SECTION 4: First aid measures

### 4.1. Description of first aid measures

First-aid measures general : Never give anything by mouth to an unconscious person. If you feel unwell, seek medical advice (show the label where possible).  
First-aid measures after inhalation : Remove person to fresh air and keep comfortable for breathing.  
First-aid measures after skin contact : Rinse skin with water/shower. Remove/Take off immediately all contaminated clothing. If skin irritation or rash occurs: Get medical advice/attention.  
First-aid measures after eye contact : Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Call a physician immediately.  
First-aid measures after ingestion : Call a poison center/doctor/physician if you feel unwell.

### 4.2. Most important symptoms and effects, both acute and delayed

Symptoms/effects after inhalation : May cause an allergic skin reaction.  
Symptoms/effects after skin contact : May cause an allergic skin reaction.  
Symptoms/effects after eye contact : Causes serious eye damage. Serious damage to eyes.

### 4.3. Indication of any immediate medical attention and special treatment needed

Treat symptomatically.

## SECTION 5: Firefighting measures

### 5.1. Extinguishing media

Suitable extinguishing media : ABC powder. Alcohol-resistant foam. BC powder. Carbon dioxide. Dry powder. Foam. Water spray.  
Unsuitable extinguishing media : Do not use a heavy water stream.

### 5.2. Special hazards arising from the substance or mixture

Fire hazard : Flammable liquid and vapor.  
Explosion hazard : May form flammable/explosive vapor-air mixture.  
Reactivity : Flammable liquid and vapor.

### 5.3. Advice for firefighters

Firefighting instructions : Use water spray or fog for cooling exposed containers. Exercise caution when fighting any chemical fire. Prevent fire-fighting water from entering environment.

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Protection during firefighting : Do not attempt to take action without suitable protective equipment. Self-contained breathing apparatus. Complete protective clothing.

### SECTION 6: Accidental release measures

#### 6.1. Personal precautions, protective equipment and emergency procedures

General measures : Remove ignition sources. Use special care to avoid static electric charges. No open flames. No smoking.

#### 6.1.1. For non-emergency personnel

Emergency procedures : Ventilate spillage area. No open flames, no sparks, and no smoking. Avoid contact with skin and eyes. Avoid breathing dust/fume/gas/mist/vapors/spray.

#### 6.1.2. For emergency responders

Protective equipment : Do not attempt to take action without suitable protective equipment. For further information refer to section 8: "Exposure controls/personal protection".

Emergency procedures : Ventilate area.

#### 6.2. Environmental precautions

Avoid release to the environment.

#### 6.3. Methods and material for containment and cleaning up

For containment : Collect spillage.

Methods for cleaning up : Take up liquid spill into absorbent material. Notify authorities if product enters sewers or public waters.

Other information : Dispose of materials or solid residues at an authorized site.

#### 6.4. Reference to other sections

For further information refer to section 13.

### SECTION 7: Handling and storage

#### 7.1. Precautions for safe handling

Additional hazards when processed : Handle empty containers with care because residual vapors are flammable.

Precautions for safe handling : Ensure good ventilation of the work station. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Ground/bond container and receiving equipment. Use only non-sparking tools. Take precautionary measures against static discharge. Flammable vapors may accumulate in the container. Use explosion-proof equipment. Wear personal protective equipment. Avoid contact with skin and eyes. Avoid breathing dust/fume/gas/mist/vapors/spray.

Hygiene measures : Do not eat, drink or smoke when using this product. Always wash hands after handling the product. Contaminated work clothing should not be allowed out of the workplace. Wash contaminated clothing before reuse.

#### 7.2. Conditions for safe storage, including any incompatibilities

Technical measures : Ground/bond container and receiving equipment.

Storage conditions : Store in a well-ventilated place. Keep cool. Keep container tightly closed.

Incompatible products : Strong bases. Strong acids.

Incompatible materials : Sources of ignition. Direct sunlight. Heat sources.

### SECTION 8: Exposure controls/personal protection

#### 8.1. Control parameters

No additional information available

#### 8.2. Exposure controls

Appropriate engineering controls : Ensure good ventilation of the work station.

Personal protective equipment : Avoid all unnecessary exposure.

Hand protection : Wear protective gloves. Suitable gloves should be tested to EN 374. The glove material has to be impermeable and resistant to the product/the substance/the preparation. As the product is a preparation of several substances, the resistance and penetration time/breakthrough time of the glove material cannot be calculated/observed in advance and, therefore, has to be checked prior to the application. The following are recommended: materials - natural latex or nitrile; thickness - 4 to 6 mils (0.1 mm - 0.15 mm); minimum breakthrough time - 60 minutes.

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Eye protection	: Safety glasses.
Skin and body protection	: Wear suitable protective clothing.
Respiratory protection	: In case of insufficient ventilation, wear suitable respiratory equipment.
Environmental exposure controls	: Avoid release to the environment.
Other information	: Do not eat, drink or smoke during use.

### SECTION 9: Physical and chemical properties

#### 9.1. Information on basic physical and chemical properties

Physical state	: Liquid
Color	: Dark green
Odor	: Characteristic
Odor threshold	: No data available
pH	: 3.85 (3.7 – 4)
Melting point	: Not applicable
Freezing point	: No data available
Boiling point	: No data available
Flash point	: 52.2 °C
Relative evaporation rate (butyl acetate=1)	: No data available
Flammability (solid, gas)	: No data available
Explosion limits	: No data available
Explosive properties	: No data available
Oxidizing properties	: No data available
Vapor pressure	: No data available
Relative density	: No data available
Relative vapor density at 20 °C	: No data available
Solubility	: Water: No data available
Partition coefficient n-octanol/water (Log Pow)	: No data available
Auto-ignition temperature	: No data available
Decomposition temperature	: No data available
Viscosity	: No data available
Viscosity, kinematic	: No data available
Viscosity, dynamic	: No data available

#### 9.2. Other information

No additional information available

### SECTION 10: Stability and reactivity

#### 10.1. Reactivity

Flammable liquid and vapor.

#### 10.2. Chemical stability

Stable under normal conditions.

#### 10.3. Possibility of hazardous reactions

No dangerous reactions known under normal conditions of use.

#### 10.4. Conditions to avoid

Avoid contact with hot surfaces. Heat. No flames, no sparks. Eliminate all sources of ignition.

#### 10.5. Incompatible materials

Strong acids. Strong bases.

#### 10.6. Hazardous decomposition products

Under normal conditions of storage and use, hazardous decomposition products should not be produced.

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### SECTION 11: Toxicological information

#### 11.1. Information on toxicological effects

Acute toxicity : Not classified

<b>malic acid, D/L- (617-48-1)</b>	
LD50 oral rat	9300 mg/kg body weight (Equivalent or similar to OECD 401, Rat, Female, Experimental value, Oral, 14 day(s))
LC50 Inhalation - Rat	> 1.306 mg/l (OECD 403: Acute Inhalation Toxicity, 4 h, Rat, Male / female, Experimental value, (maximum achievable concentration), Inhalation (dust), 14 day(s))
ATE US (oral)	9300 mg/kg body weight
ATE US (dust, mist)	1.5 mg/l/4h

  

<b>Brilliant Green (633-03-4)</b>	
LD50 oral rat	674 mg/kg body weight (Equivalent or similar to OECD 423, Rat, Male / female, Read-across, Oral, 14 day(s))
LD50 dermal rat	> 2000 mg/kg body weight (Rat, Read-across, Dermal, 14 day(s))
ATE US (oral)	674 mg/kg body weight

Skin corrosion/irritation : Not classified  
pH: 3.85 (3.7 – 4)

Serious eye damage/irritation : Causes serious eye damage.  
pH: 3.85 (3.7 – 4)

Respiratory or skin sensitization : May cause an allergic skin reaction.

Germ cell mutagenicity : Not classified  
Based on available data, the classification criteria are not met

Carcinogenicity : Not classified

Reproductive toxicity : Not classified  
Based on available data, the classification criteria are not met

STOT-single exposure : Not classified

STOT-repeated exposure : Not classified

Aspiration hazard : Not classified

Potential Adverse human health effects and symptoms : Based on available data, the classification criteria are not met.

Symptoms/effects after inhalation : May cause an allergic skin reaction.

Symptoms/effects after skin contact : May cause an allergic skin reaction.

Symptoms/effects after eye contact : Causes serious eye damage. Serious damage to eyes.

### SECTION 12: Ecological information

#### 12.1. Toxicity

Ecology - general : Very toxic to aquatic life with long lasting effects.

<b>malic acid, D/L- (617-48-1)</b>	
LC50 fish 1	> 100 mg/l (OECD 203: Fish, Acute Toxicity Test, 96 h, Danio rerio, Semi-static system, Fresh water, Read-across, GLP)
ErC50 (algae)	> 100 mg/l (OECD 201: Alga, Growth Inhibition Test, 72 h, Pseudokirchneriella subcapitata, Static system, Fresh water, Read-across, GLP)

  

<b>Brilliant Green (633-03-4)</b>	
LC50 fish 1	0.0305 mg/l (96 h, Lepomis macrochirus, Fresh water)
EC50 Daphnia 1	0.079 mg/l (96 h, Invertebrata, Fresh water)
ErC50 (algae)	1.7913 mg/l (7 day(s), Lemna gibba, Nominal concentration)

#### 12.2. Persistence and degradability

<b>Aerospray TB Reagent B: Brilliant Green Concentrate</b>	
Persistence and degradability	May cause long-term adverse effects in the environment.

  

<b>malic acid, D/L- (617-48-1)</b>	
Persistence and degradability	Readily biodegradable in water. Not established.

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malic acid, D/L- (617-48-1)	
ThOD	0.718 g O <sub>2</sub> /g substance
BOD (% of ThOD)	0.65

Brilliant Green (633-03-4)	
Persistence and degradability	Not readily biodegradable in water.

### 12.3. Bioaccumulative potential

Aerospray TB Reagent B: Brilliant Green Concentrate	
Bioaccumulative potential	Not established.

malic acid, D/L- (617-48-1)	
Partition coefficient n-octanol/water (Log Pow)	-1.27 (Experimental value, OECD 107: Partition Coefficient (n-octanol/water): Shake Flask Method, 24 °C)
Bioaccumulative potential	Not bioaccumulative. Not established.

Brilliant Green (633-03-4)	
Partition coefficient n-octanol/water (Log Pow)	0.7647 (Experimental value, OECD 107: Partition Coefficient (n-octanol/water): Shake Flask Method, 20 °C)
Bioaccumulative potential	Low potential for bioaccumulation (Log Kow < 4).

### 12.4. Mobility in soil

malic acid, D/L- (617-48-1)	
Ecology - soil	Highly mobile in soil.

Brilliant Green (633-03-4)	
Surface tension	No data available in the literature
Ecology - soil	No (test) data on mobility of the substance available.

### 12.5. Other adverse effects

Other information : Avoid release to the environment.

## SECTION 13: Disposal considerations

### 13.1. Waste treatment methods

Waste treatment methods : Dispose of contents/container in accordance with licensed collector's sorting instructions.

Product/Packaging disposal recommendations : Dispose in a safe manner in accordance with local/national regulations. Dispose of contents/container to hazardous or special waste collection point, in accordance with local, regional, national and/or international regulation.

Additional information : Flammable vapors may accumulate in the container.

Ecology - waste materials : Avoid release to the environment.

## SECTION 14: Transport information

### Department of Transportation (DOT)

In accordance with DOT

Transport document description : UN1170 Ethyl alcohol solutions, 3, III

UN-No.(DOT) : UN1170

Proper Shipping Name (DOT) : Ethyl alcohol solutions

Class (DOT) : 3 - Class 3 - Flammable and combustible liquid 49 CFR 173.120

Hazard labels (DOT) : 3 - Flammable liquid



Packing group (DOT) : III - Minor Danger

Dangerous for the environment : Yes

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Marine pollutant

: Yes



DOT Packaging Non Bulk (49 CFR 173.xxx)

: 203

DOT Packaging Bulk (49 CFR 173.xxx)

: 242

DOT Special Provisions (49 CFR 172.102)

: 24 - Alcoholic beverages containing more than 70 percent alcohol by volume must be transported as materials in Packing Group II. Alcoholic beverages containing more than 24 percent but not more than 70 percent alcohol by volume must be transported as materials in Packing Group III.  
B1 - If the material has a flash point at or above 38 C (100 F) and below 93 C (200 F), then the bulk packaging requirements of 173.241 of this subchapter are applicable. If the material has a flash point of less than 38 C (100 F), then the bulk packaging requirements of 173.242 of this subchapter are applicable.  
IB3 - Authorized IBCs: Metal (31A, 31B and 31N); Rigid plastics (31H1 and 31H2); Composite (31HZ1 and 31HA2, 31HB2, 31HN2, 31HD2 and 31HH2). Additional Requirement: Only liquids with a vapor pressure less than or equal to 110 kPa at 50 C (1.1 bar at 122 F), or 130 kPa at 55 C (1.3 bar at 131 F) are authorized, except for UN2672 (also see Special Provision IP8 in Table 2 for UN2672).  
T2 - 1.5 178.274(d)(2) Normal..... 178.275(d)(3)  
TP1 - The maximum degree of filling must not exceed the degree of filling determined by the following:  
Degree of filling =  $97 / 1 + a (tr - tf)$  Where: tr is the maximum mean bulk temperature during transport, and tf is the temperature in degrees celsius of the liquid during filling.

DOT Packaging Exceptions (49 CFR 173.xxx)

: 4b, 150

DOT Quantity Limitations Passenger aircraft/rail (49 CFR 173.27)

: 60 L

DOT Quantity Limitations Cargo aircraft only (49 CFR 175.75)

: 220 L

DOT Vessel Stowage Location

: A - The material may be stowed "on deck" or "under deck" on a cargo vessel and on a passenger vessel.

Emergency Response Guide (ERG) Number

: 127

Other information

: No supplementary information available.

### Transportation of Dangerous Goods

No additional information available

### Transport by sea

UN-No. (IMDG)

: 1170

Proper Shipping Name (IMDG)

: ETHANOL SOLUTION (ETHYL ALCOHOL SOLUTION)

Class (IMDG)

: 3 - Flammable liquids

Packing group (IMDG)

: III - substances presenting low danger

### Air transport

UN-No. (IATA)

: 1170

Proper Shipping Name (IATA)

: Ethanol solution

Class (IATA)

: 3 - Flammable Liquids

Packing group (IATA)

: III - Minor Danger

## SECTION 15: Regulatory information

### 15.1. US Federal regulations

<b>malic acid, D/L- (617-48-1)</b>
Not listed on the United States TSCA (Toxic Substances Control Act) inventory
<b>Brilliant Green (633-03-4)</b>
Listed on the United States TSCA (Toxic Substances Control Act) inventory

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### 15.2. International regulations

#### CANADA

<b>malic acid, D/L- (617-48-1)</b>
Listed on the Canadian DSL (Domestic Substances List)
<b>Brilliant Green (633-03-4)</b>
Listed on the Canadian DSL (Domestic Substances List)

#### EU-Regulations

No additional information available

#### National regulations

No additional information available

### 15.3. US State regulations

California Proposition 65 - This product does not contain any substances known to the state of California to cause cancer, developmental and/or reproductive harm

<b>Brilliant Green (633-03-4)</b>
U.S. - Massachusetts - Right To Know List

## SECTION 16: Other information

Other information : None.

Full text of H-phrases:

H226	Flammable liquid and vapor
H302	Harmful if swallowed
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
H410	Very toxic to aquatic life with long lasting effects

SDS US Custom - EBS

*This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product.*

Reason For Change: updated to latest GHS format and classifications to meet compliance. Added Prop 65 information to Section 15.