	SAFETY DATA SHEET Avenger Boric Acid Roach Tablets Avenger Products, LLC		
	Version: 2.0	Revision Date: 14 April 2021	Effective Date: 14 April 2021

1. PRODUCT AND COMPANY IDENTIFICATION

1.1. Product identifier

PRODUCT NAME	**:**	Avenger Boric Acid Roach Tablets (Product contains 40% Boric acid)
CHEMICAL NAME/SYNONYM	**:**	Boric acid/orthoboric acid
EPA REGISTRATION NUMBER	**:**	62577-4

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

DESCRIPTION	:	White odorless powder
RECOMMENDED USE	:	Insecticide

1.3. Details of the supplier

SUPPLIER NAME	:	Avenger Products, LLC
SUPPLIER ADDRESS	:	3057 Summer Oak Place Buford, GA 30518
SUPPLIER PHONE NUMBER	:	(678)-546-5009
EMERGENCY PHONE NUMBER	:	Info Trac Chemical Response System 1-800-535-5053 (USA/Canada-24 hours) 1-352-323-3500 (International)

2. HAZARDS IDENTIFICATION

2.1. Classification

This material is considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200)

Carcinogenicity	**:**	Category 1A
Reproductive Toxicity	**:**	Category 1B
Specific Target Organ Toxicity – Repeated exposure	**:**	Category 2, targeted organ – lungs

2.2. Label elements

HAZARD PICTOGRAMS **:**

SIGNAL WORD	**:**	**Danger**
HAZARDOUS INGREDIENTS	**:**	Boric acid and Talc are considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200)
HAZARD STATEMENTS	**:**	**H350** – May cause cancer **H360FD** – May damage fertility; may damage the unborn child **H373** – Causes damage to organs through prolonged or repeated exposure.
PRECAUTIONARY STATEMENTS	**:**	**P201** – Obtain special instructions before use. **P202** – Do not handle until all safety precautions have been read and understood.

RESPONSE	:	**P260** – Do not breathe dust/fume/gas/mist/vapors/spray. **P281** – Use personal protective equipment as required. **P308 + P313** – If exposed or concerned: Get medical advice/attention. **P314 –** Get medical advice/attention if you feel unwell.
STORAGE	:	**P401** – Store in a closed container and in accordance with product label.
DISPOSAL	:	**P501** – Dispose of contents and/or container to an approved disposal plant.

2.3. Other hazards

OTHER HAZARDS NOT CONTRIBUTING TO THE CLASSIFICATION	:	No information available

3. COMPOSITION/INFORMATION ON INGREDIENTS

3.1. Mixtures

This product is a mixture.

Component name	Identifier (CAS-no.)	%
Boric acid	10043-35-3	40
Talc	14807-96-6	3
Inert ingredients	-	to 100%

Disclaimer: Exact identities and/or concentrations of proprietary, non-hazardous ingredients have been withheld as a trade secret

4. FIRST AID MEASURES

4.1. Description of first aid measures

GENERAL	:	Take hazard and precautionary statements into account
IF IN EYES	:	Use eye wash fountain or fresh water to cleanse eyes. If irritation persists for more than 30 minutes, seek medical attention.
IF ON SKIN	:	Wash off immediately with plenty of water for at least 15 minutes. Get medical attention if symptoms occur.
IF INHALED	:	Remove to fresh air. Give 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 if symptoms occur. If not breathing, give artificial respiration. Prolonged exposure to dust levels in excess of regulatory limits should always be avoided.
IF SWALLOWED	:	Swallowing less than one teaspoon will cause no harm to healthy adult. If larger amounts are swallowed, drink two cups of water and seek medical attention.

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

No information available

4.3. Notes to Physician

Observation only is required for adult ingestion of a few grams of boric acid. For ingestion of larger amounts, maintain adequate kidney function and force fluids. Gastic lavage is recommended for symptomatic patients only. Hemodialysis should be reserved for massive acute ingestion or patients with renal failure. Boron analyses of urine or blood are only useful for documenting exposure and should not be used to evaluate severity of poisoning or to guide treatment.

5. FIRE-FIGHTING MEASURES

5.1. Extinguishing media

SUITABLE EXTINGUISING MEDIA	:	Any suitable media may be used on nearby flames.
UNSUITABLE EXTINGUISHING MEDIA	:	No information available.

5.2. Special hazards arising from the substance or mixture

SPECIFIC HAZARDS FOR FIREFIGHTING	:	No information available.
HAZARDOUS DECOMPOSITION PRODUCTS	:	Oxides of Boron, Carbon monoxide (CO), Carbon dioxide (CO_2)

5.3. Advice for firefighters

GENERAL HAZARDS	:	Material is non-flammable.
PROTECTION DURING FIREFIGHTING	:	Wear positive-pressure self-contained breathing apparatus (SCBA) and protective fire-fighting clothing (includes fire-fighting helmet, coat, trousers, boots, and gloves). If protective equipment is not available or not used, fight fire from a protected location or safe distance.

6. ACCIDENTAL RELEASE MEASURES

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

PERSONAL PRECAUTIONS	:	Avoid inhalation and contact with skin and eyes. A self-contained breathing apparatus is recommended in case of a major spill.

6.2. Environmental precautions

GENERAL	:	Boric acid is a water soluble powder that may cause damage to trees or vegetation by root absorption. (Refer to Ecological Information, Section 12 for specific information). Boric acid is non-hazardous waste when spilled or disposed of, as defined in the Resource conservation and Recovery Act (RCRA) regulations 40 CFR 261.
LAND SPILL	:	Vacuum, shovel or sweet up boric acid and place in containers for disposal in accordance with applicable local regulations. Avoid contamination of water bodies during clean up disposal.
WATER SPILL	:	Boric acid will cause localized contamination of surrounding waters depending on the quantity dissolved in these waters. At high concentrations, some damage to local vegetation, fish and other aquatic life may be expected.

7. HANDLING AND STORAGE

7.1. Conditions for safe storage, including any incompatibilities

STORAGE CONDITIONS	:	Store at ambient temperatures, away from moisture (caking will occur).
INCOMPATIBLE MATERIALS	:	Strong reducing agents, such as metal halides.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1. Control parameters

CONTROL PARAMETERS	:	If exposure limits exist, they are listed below. If no exposure limits are displayed, then no values are applicable.

8.2. Exposure controls

ENGINEERING CONTROLS	:	Use local exhaust ventilation to keep airborne concentrations of boric acid dust below permissible exposure levels.
PERSONAL PROTECTION	:	Where airborne concentrations are expected to exceed exposure limits, NIOSH/MSHA certified respirators must

be used. Eye goggles are gloves maybe warranted if environment excessively dusty.

8.3. Occupational Exposure limits

Boric acid is listed/regulated by OSHA, Cal OSHA and ACGIH as "Particulate Not Otherwise Classified" or "Nuisance Dust". Below are the Exposure Guidelines for boric acid.

Chemical name	OSHA PEL	ACGIH TLV	Cal OSHA PEL
Boric acid (CAS 10043-35-3)	15 mg/m^3 total dust and 5 mg/m^3 respirable dust	10 mg/m^3	10 mg/m^3
Talc (14807-96-6)	2 mg/m^3 Respirable Fraction	0.025 mg/m^3 Respirable fraction	-

PEL = Permissible Exposure Limit
TLV = Threshold Limit Value

9. PHYSICAL AND CHEMICAL PROPERTIES

9.1. Information on basic physical and chemical properties

APPEARANCE	:	White, odorless powder
BOILING POINT	:	Not applicable
VAPOR PRESSURE	:	Negligible at 20°C
pH	:	4.8 (2.0% solution) at 25°C
MELTING POINT	:	171°C
FLASH POINT	:	None
SPECIFIC GRAVITY	:	1.51
WATER SOLUBLE	:	Yes

10. STABILITY AND REACTIVITY

10.1. Reactivity, stability and hazards

REACTIVITY	:	No information available
CHEMICAL STABILITY	:	Boric acid is a stable product, but when heated it loses water, first forming metaboric acid (HBO_2) and on further heating it is converted to Boric oxide ($B2O_3$).
POSSIBILITY OF HAZARDOUS REACTIONS	:	No information available
INCOMPATIBLE MATERIALS	:	Boric acid reacts as a weak acid which may cause corrosion of base metals.
HAZARDOUS DECOMPOSITION	:	None

11. TOXICOLOGICAL INFORMATION

11.1. Information on toxicological effects

ACUTE TOXICITY

Acute toxicity data on hazardous components >1.0% total concentration is given below:

Component	Acute Oral Toxicity	Acute Dermal Toxicity	Acute Inhalation Toxicity
Boric acid	LD50, Rat, 3500 mg/kg	LD50, rabbit, >2000 mg/kg	No information available
Talc	No data available	No data available	No data available

SKIN CORROSION/IRRITATION

Skin corrosion/irritation data on hazardous components >1.0% total concentration is given below:

Component	Skin Corrosion/Irritation
Boric acid	Boric acid is not corrosive or an irritant

Talc	No data available

SERIOUS EYE DAMAGE/IRRITATION

Eye damage/irritation data on hazardous components >1.0% total concentration is given below:

Component	Eye Damage/Irritation
Boric acid	Draize test in rabbits produced mild eye irritation effects.
Talc	May cause eye irritation

RESPIRATORY OR SKIN SENSITIZATION

Respiratory and skin sensitization data on hazardous components >0.10% total concentration is given below:

Component	Respiratory and Skin Sensitization
Boric acid	Human epidemiological studies show no increase in pulmonary disease in occupational populations with chronic exposure to boric acid dust and sodium borate dust.
Talc	No data available

MUTAGENICITY

Mutagenicity data on hazardous components >1.0% total concentration is given below:

Component	Mutagenicity
Boric acid	No information available
Talc	No information available

CARCINOGENICITY

Carcinogenicity data on hazardous components >0.1% total concentration is given below:

Component	Carcinogenicity
Boric acid	A technical report issued by the National Toxicology Program showed “no evidence of carcinogenicity” from a full 2 year bioassay on boric acid in mice at feed doses of 2500 and 5000 ppm in the diet. No mutagenic acidity was observed for boric acid in recent battery of our short term mutagenicity assays.
Talc	May cause cancer (inhalation)

REPRODUCTIVE TOXICITY

Reproductive toxicity data on hazardous components >0.1% total concentration is given below:

Component	Reproductive toxicity
Boric acid	Animal studies indicate boric acid reduces or inhibits sperm production, causes testicular atrophy and when given to pregnant animals during gestation may cause developmental changes. These feed studies were conducted under chronic exposure conditions leading to doses many times more than those that could occur through inhalation of dust in occupational settings. Dietary boric acid levels of 6700 ppm in chronic feeding studies in rats and dogs produced testicular atrophy, while dogs and rats receiving 2000 ppm did not develop these symptoms. (1. Weir, Fisher 1972). In chronic feeding studies of mice on diets containing 5000 ppm (550 mg/kg per day) boric acid testicular atrophy was present, while mice fed 2500 ppm (275 mg/kg per day) boric acid showed no significant increase in symptoms (2. NTP, 1987). In another chronic study, in mice given 4500 ppm (636 mg/kg per day), degeneration of seminiferous tubules was present together with a reduction of germ cells, while at 1000 ppm (152 mg/kg per day) no effect

	was seen (3. Fail et al. 1991). In a reproduction study on rats, 2000 ppm of dietary boric acid had no adverse effect on lactation, litter size, weight and appearance. In a continuous breeding study in mice, there was reduction in fertility rates for males receiving 4500 ppm (636 mg/kg per day) boric acid but not for females. 1. Weir, R.J. and Fisher, R.S., Toxicol Appl Pharmacol., 23:251-364 (1974)) 2. (National Toxicology Program (NTP)-Technical Report Series No, TR324, NIH Publication NO. 88-2580 (1987(, PB88-213475/XAB) 3. (Fail et al., Fund. Appl. Toxicol. 17, 225-239 (1991)) 4. (Heindel et al., Fund Appl. Toxicol. 18, 266-277 (1992))
Talc	No information available

STOT – SINGLE EXPOSURE

STOT – Single exposure data on hazardous components >1.0% total concentration is given below:

Component	STOT – Single exposure
Boric acid	No information available
Talc	Respiratory system

STOT – REPEATED EXPOSURE - Repeated exposure data on hazardous components >1.0% total concentration is given below:

Component	STOT – Repeated exposure
Boric acid	No information available
Talc	Lungs

ASPIRATION HAZARD

Aspiration hazard data on hazardous components >10.0% total concentration is given below:

Component	Aspiration Hazard
Boric acid	No information available
Talc	No information available

12. ECOLOGICAL INFORMATION

12.1. Toxicity
GENERAL ECOLOGICAL TOXICITY

Ecological toxicity data on hazardous components >1.0% total concentration is given below:

Component	Freshwater Algae	Freshwater Fish	Microorganisms	Invertebrates
Boric acid	No data available	Rainbow trout (S. gairdneri) 24-day LC50 = 150 mb B/L 36-day NOEC-LOEC = 0.75-1 mg B/L Goldfish (Carassius auratus) 7-day NOEC-LOEC = 26.5 mg B/L 3-day LC50 = 178 mg B/L	No data available	Daphnids (Daphnia magna Straus) 48-hour LC50 = 133 mg B/L
Talc	No data available	LC50: > 100 g/L, 96h semi-static (Brachydanio rerio)	No data available	No data available

PERSISTANCE AND BIODEGRADABILITY

Persistence and biodegradability data on hazardous components >1.0% total concentration is given below:

Component	Biodegradability
Boric acid	Boron and boron containing compounds, such as boric acid are naturally occurring and ubiquitous in the environment. In the presence of water, boric acid disassociates into boron and natural borates.
Talc	No information available

BIOACCUMALATIVE POTENTIAL

Data on bioaccumulate potential for hazardous components >1.0% total concentration is given below:

Component	Bio accumulative Potential
Boric acid	No information available
Talc	No information available

MOBILITY IN SOIL

Data on soil mobility for hazardous components >1.0% total concentration is given below:

Component	Mobility in Soil
Boric acid	The product is water soluble and is leachable through normal soil.
Talc	No information available

OTHER ADVERSE AFFECTS

Additional data on adverse effects for hazardous components >1.0% total concentration is given below:

Component	Other Adverse Effects
Boric acid	No data available
Talc	No information available

13. DISPOSAL CONSIDERATIONS

13.1. Waste treatment methods

DISPOSAL GUIDELINES : Small quantities of boric acid can usually be disposed of at Municipal Landfill sites. No special disposal treatment is required, but fere to state and local regulations for applicable site-specific requirements. Tonnage quantities of product are not recommended to be sent to landfills. Such products should, if possible, be reused for appropriate application.

RCRA (40 CRF 261) : Boric acid is not listed under any sections of the Federal Resource Conservation and Recovery Act (RCRA).

CALIFORNIA HAZARDOUS WASTE DESIGNATION : California identifies substances with acute LD50's less than 5000 mg/kg as "hazardous wastes". Boric acid is therefore a "hazardous waste" if spilled in California and should be handled in accordance with applicable state regulations. Refer to Section 15.

14. TRANSPORT INFORMATION

14.1. Transport information

DOT HAZARDOUS MATERIAL CLASSIFICATION : Boric acid is not a US Department of Transportation (DOT) hazardous material.

DOT HAZARDOUS SUBSTANCE CLASSIFICATION : Boric acid is not a DOT hazardous substance

INTERNATIONAL TRANSPORT : Boric acid has no UN Number and is not regulated under international rail, highway, water or air transport regulations.

15. REGULATORY INFORMATION

15.1 Regulatory information

TSCA NO.	:	Boric acid does not appear on the EPA TSCA inventory list.
RCRA	:	Boric acid is not listed as a hazardous waste under any section of Resource Conservation and Recory Act of regulations 40 CFR 261 et seq.
SUPERFUND	:	CERCLA/SARA. Boric acid is not listed under the Comprehensive Environmental Response Compensation and Liability Act or its 1986 amendments, including substances listed under section 313 of SARA, Toxic Chemicals, 42 USC 11023, 40 CFR 372.65; Section 302 of SARAH, extremely hazard substances, 42 USC 11002, 40 CFR 355; or the CERCLA Hazardous Substances list, 42 USC 9604, 40 CFR 302.
SAFE DRINKING WATER ACT	:	Boric acid is not regulated under Safe Drinking Water Act, 42 USC 300 g – 1, 40 CFR 141 et seq. Consult state and local regulations for possible water quality advisories regarding boron.
CLEAN WATER ACT (FEDERAL WATER POLLUTION CONTROL ACT)	:	Boric acid is not itself a discharge covered by any quality criteria of Section 304 of the CWA, 33USC1314 It is not on the Section 307 List of Priority Pollutants, 33 USC 1317, 40 CFR 129 It is not on the Section 311 List of Hazardous Substances, 33 USC 1321, 40 CFR 116.
OSHA/ Cal OSHA	:	This SDS document meets the requirements of both OSHA (29 CFR 1910, 1200) and Cal OSHA (title 8 CCR 5194 9g)) hazard communication standards.
IARC	:	The International Agency for Research on Cancer does not list or categorize boric acid as a carcinogen.
NTP ANNUAL REPORT ON CARCINOGENS	:	Boric acid is not listed.
OSHA CARINOGEN	:	Boric acid is not listed.
CALIFORNIA PROPOSITION 65	:	Boric acid is not listed on any Proposition 65 list of carcinogens or reproductive toxicants.

16 OTHER INFORMATION

16.1. Prepared by

SDS PREPARED BY	:	Avenger Products, LLC 3057 Summer Oak Place Buford, GA 30518 Phone: (678) 546-5009

16.2. Revision date

REVISION DATE	:	April 14 2021
REVISION COMMENT	:	Updated from MSDS to SDS in accordance with GHS requirements.

16.3 Disclaimer

DISCLAIMER:
The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

END OF SAFEY DATA SHEET