# Safety Data Sheet

### Flame Defense Antimony Oxide

### MSDS No. 9680.17

Date of Preparation: 3/3/97

#### Revision: 9/21/23

Section 1 - Chemical	<b>Product and</b>	Company	Identification
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Product/Chemical Name: Flame Defense Antimony Oxide Synonyms: Antimony white, Antimony Trioxide General Use: Flame retardant Restrictions on use: None Manufacturer: Marshall Additive Technologies Division of the R. J. Marshall Company 26776 W. 12 Mile Road Southfield, MI 48034-7807 Phone: (248) 353-4100, Fax: (248) 948-6460

<b>Emergency Phone:</b> (800) 424-9300
Date Revised: 9/21/23
Prepared by: Stephanie Nichols

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### Section 2 - Hazards Identification

Classification of the chemical under paragraph (d) of 1910.1200: Carcinogenicity Category 2

Classification according to Regulation (EC) No. 1272/2008 (CLP): Carcinogen Category 2

**Classification according to Directive 67/548/EEC:** Harmful; Xn; Carcinogen Category 3; R40: Limited evidence of a carcinogenic effect.

Signal word: Warning



Pictogram: V Hazard Statement:

Suspected of causing cancer by inhalation.

#### **Precautionary Statements:**

Obtain special instructions before use.

Do not handle until all safety precautions have been read and understood.

Wear protective gloves/protective clothing/eye protection/face protection.

IF exposed or concerned: Get medical advice/attention.

Store locked up.

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

**Hazards not otherwise classified:** This substance does not meet the criteria for a PBT or vPvB substance. No environmental or obysic-chemical hazards have been identified.

Section 3 - Cor	nposition / Information on Iı	ngredients
Ingredient Name	CAS Number	% By wt
(di)antimony trioxide	1309-64-4	=100%</td
Lead	7439-92-1	<0.1%
arsenic	7440-38-2	<0.1%
Sec	tion 4 - First Aid Measures	
Description of necessary measures subdivide	d according to the different routes of ex	posure:
General advice:		
If exposed or concerned: Get medical advice/at	tention.	
Take off all contaminated clothing.		
First responders should wear suitable personal p contact.	protective equipment in case of insufficient	ventilation or possible skin or eye
<b>Inhalation:</b> If overcome by high dust concentra may develop.	tions, remove to a ventilated area. Seek m	edical attention for any symptoms that
<b>Eve Contact:</b> Flush eyes thoroughly with wate	r taking care to rinse under evelids Const	ilt a physician

Skin Contact: Wash skin thoroughly with soap and water. Consult a physician.

**Ingestion:** Rinse mouth with water.

Most important symptoms and effects, both acute and delayed: None anticipated.

Indication of any immediate medical attention and special treatment needed: None anticipated.

### **Section 5 - Fire-Fighting Measures**

**Suitable Extinguishing Media:** Use water spray, alcohol-resistant foam, dry chemicals, or carbon dioxide. **Unsuitable Extinguishing Media:** None.

Special hazards arising from the substance or mixture: (Di)antimony trioxide dust.

Advice for firefighters: Wear a self-contained breathing apparatus (SCBA) and a full protective suit and gloves. Dispose of fire debris and contaminated fire-fighting media in accordance with official regulations.

### Section 6 - Accidental Release Measures

#### Personal precautions, protective equipment, and emergency procedures:

Avoid the formation and inhalation of dust. Ensure adequate ventilation. Keep unprotected persons away. Although the substance has no acute toxicity, it is advised to avoid contact with skin, eyes, and clothing-wear suitable PPE. Avoid inhalation of dust-wear suitable protective equipment.

**Environmental precautions:** Prevent further leakage or spillage if safe to do so. Do not let the product enter drains. Discharge into the environment must be avoided.

**Methods and materials for containment and cleaning up:** Avoid dust formation. Sweep up all spilled material or use an appropriate industrial vacuum cleaner. Collect spilled material in suitable containers or closed plastic bags for recovery or disposal.

### **Section 7 - Handling and Storage**

#### **Precautions for safe handling:**

**Protective measures:** Do not handle until all safety precautions have been read and understood. As a precautionary measure, the wearing of chemical-resistant gloves, long-sleeved overalls, and closed footwear designed to minimize skin contact is suggested. Use PPE as required. Provide showers, eyebaths, and self-contained breathing apparatus nearby.

Advice on general occupation hygiene: Avoid inhalation or ingestion. General occupational hygiene measures are required to ensure the safe handling of the substance. These measures involve good personal and housekeeping practices (i.e., regular cleaning with suitable cleaning devices), no eating, drinking, or smoking at the workplace, and wearing standard working clothes and shoes unless otherwise stated. Wash hands after use. Remove contaminated clothing and protective equipment before entering eating areas. Shower and change clothes at the end of the work shift. Do not wear contaminated clothing at home. Do not blow dust off with compressed air.

**Conditions for safe storage, including any incompatibilities:** Store in a well-ventilated dry area. Do not store in open inadequate mislabeled packaging.

# Section 8 - Exposure Controls / Personal Protection

#### **Engineering Controls:**

**Ventilation:** Provide general or local exhaust ventilation systems to maintain airborne concentrations below OSHA PELs (Sec. 2). Local exhaust ventilation is preferred because it prevents contaminant dispersion into the work area by controlling it at its source.

#### Administrative Controls:

Prevent the formation of dust where possible. Any deposit of dust that cannot be avoided must be regularly removed using preferably appropriate industrial vacuum cleaners or central vacuum systems.

Waste air is to be released into the atmosphere only when it has passed through suitable dust separators.

Wastewater generated during the production process or cleaning operations should be collected and should preferably be treated in an on-site wastewater treatment plant which ensures efficient removal of antimony.

**Respiratory Protection:** Use NIOSH/MSHA-approved dust respirator.

#### **Protective Clothing/Equipment:**

Skin protection: Any dust-tight material (e.g., rubber-dipped cotton/rubber/nitrile/leather) suitable for the type of work could be used as material for gloves protecting against ATO exposure (non-corrosive inorganic substance). Breakthrough times are not relevant because corrosion and diffusion are excluded by the nature of the substance. Change gloves when damaged or according to the manufacturer's instructions.

Eye protection: Safety goggles or safety glasses with side shields conforming to EN166 (EU) or ANSI Z87.1 (US).

Other: Long-sleeves and closed footwear are recommended.

**Contaminated Equipment:** Separate contaminated work clothes from street clothes. Launder before reuse. Remove this material from your shoes and clean personal protective equipment.

**Comments:** Never eat, drink, or smoke in work areas. Practice good personal hygiene after using this material, especially before eating, drinking, smoking, using the toilet, or applying cosmetics.

Ingredient	OSHA PEL		ACGIH TLV	
	TWA	STEL	TWA	STEL
Antimony Oxide	$0.5 \text{ mg/m}^3 \text{ Sb}$	None established	$0.5 \text{ mg/m}^3 \text{ Sb}$	None established
Lead	0.05 mg/m <sup>3</sup> Pb	None established	0.05 mg/m <sup>3</sup> Pb	None established
Arsenic	$0.01 \text{ mg/m}^3 \text{ As}$	None established	$0.01 \text{ mg/m}^3 \text{ As}$	None established

# **Section 9 - Physical and Chemical Properties**

Appearance: Crystalline white powder Odor: odorless Odor threshold: Odorless pH: not applicable to powders Melting point/freezing point: 1213°F (656°C) @ 1013 hPa Initial boiling point and range: 2597°F (1425°C) @ 1013 hPa Flashpoint: not applicable to powders Evaporation rate: not applicable to powders Flammability: Non-flammable Upper/lower flammability or explosive limits: nonexplosive Vapor pressure: ~133 Pa at 1065°F (574°C)
Vapor density: not applicable to powders
Relative density: 5.897 @ 68°F (20°C)
Solubility: 2.76 mg/l (T° 22.2°C-ISO 6341 medium – loading 100 mg Sb<sub>2</sub>O<sub>3</sub>/l-pH8)
Partition coefficient n-octanol/water: not applicable to inorganic substances
Auto-ignition Temperature: Not applicable.
Decomposition Temperature: does not decompose
Viscosity: not applicable

# Section 10 - Stability and Reactivity

**Reactivity:** Not applicable.

**Chemical Stability:** Antimony oxide is stable at room temperature in closed containers under normal storage and handling conditions.

**Possibility of hazardous reactions:** Reaction with H-equivalents releases antimony hydride (stibine, SbH<sub>3</sub>). Hazardous polymerization will not occur.

Conditions to Avoid: Avoid dust formation.

Incompatible materials: Strong acids, strong bases, reducing agents.

Hazardous Decomposition Products: Does not decompose if used as intended. May produce arsenic oxides, and lead oxides.

# Section 11- Toxicological Information

### Information on the likely routes of exposure:

Inhalation: Inhalation of vapors in high concentrations may cause irritation.

Eye: May cause irritation through mechanical abrasion.

Skin: May cause irritation through mechanical abrasion.

Ingestion: May cause irritation to mucous membranes.

Toxicity Endpoints	Description of Effects	
Absorption	Oral = 0.05-0.3%	
	Dermal = 0.01-0.1% (negligible)	
	Inhalation = $<1\%$	
Acute Toxicity	Based on the available data, the classification criteria for acute toxicity are not met. Oral: $LD_{50}$ rat >20,000 mg/kg bw (Fleming, 1938; Gross et al, 1955; Weil et al, 1978) Dermal: $LD_{50}$ rabbit > 8300 mg/kg bw (Gross et al, 1955) Inhalation: $LC_{50}$ rat > 5200 mg/m <sup>3</sup> (Leuschner, 2006)	
Skin Corrosion/Irritation	Based on available data, the classification criteria as skin irritants are not met. However, under conditions of substantial heat and sweating, high levels of dermal dust exposure may cause mechanical/physical blocking of sweat glands in the absence of any intrinsic substantial primary skin irritating potential of the substance and in consideration of the poor solubility of ATO. The Committee for Risk Assessment (RAC) decided in July 2009 that a harmonized skin irritation classification was not supported (ECHA/PR/09/09, 2009). ATO is not a corrosive agent.	
Serious eye damage/irritation	Based on available data, the classification criteria for eye irritation are not met (Leuschner, 2005).	
Respiratory or skin sensitization	Based on available data, the classification for skin sensitization (Chevalier, 2005; Moore, G.E, 1994) and irritation to the respiratory system (Leuschner, 2006) are not met.	
Germ Cell Mutagenicity	ATO does not cause systemic mutagenicity in vivo after oral administration. Negative in vivo results on chromosome aberrations and micronuclei were obtained in two different species via oral application-mouse (Elliot et al., 1998) and rat (Whitwell, 2006), (Kirkland et al., 2007). An in vivo UDS assay in rats was also negative (Elliot et al., 1998). Based on available data, the classification criteria according to regulation (EC) 1272/2008 as germ cell mutagen are not met.	
Reproductive Toxicity	Based on the available long-term toxicity studies in rodents (Omura et al, 2002) and the relevant information on the toxicokinetic behavior in rats, it is concluded that the classification criteria for reproductive toxicity are not met because of the lack of absorption and systemic distribution, and a correspondingly negligible exposure of reproductive organs in male and female mammalian species to ATO. The reference Schroeder R.E. (2003) was identified as a key study for developmental toxicity and will be used for classification and labeling. This study suggests that the NOAEC for developmental toxicity is >6.3 mg ATO/m <sup>3</sup> . Thus, based on available data, the classification criteria as developmental toxicant according to regulation (EC) 1272/2008 are not met.	
STOT-single exposure	Based on available data, the classification criteria as STOT-single exposure, oral, and inhalation are not met since no reversible or irreversible adverse health effects were observed immediately or delayed after exposure.	
STOT-repeated exposure	<ul> <li>NOAEC<sub>inhalation</sub> = 0.51 mg/m<sup>3</sup> (Newton et al, 1994)</li> <li>NOAEL<sub>oral</sub> = 1686 mg/kg/d (Hext et al, 1999)</li> <li>The NOAEC was determined in a study with a high background incidence of lung inflammation in controls, therefore there is considerable uncertainty regarding the reliability of this numerical value. The NOAEC is based on impaired lung clearance that was observed at 4.50 mg/m<sup>3</sup>.</li> <li>Based on available data, the classification criteria as STOT-repeated exposure, oral is not met since no reversible or irreversible adverse health effects were observed immediately or delayed after exposure (NOAEL is above the guidance value).</li> <li>Based on available data, the classification criteria as STOT-repeated exposure, and inhalation is not met since there is an absence of consistent identifiable toxic effects other than the non-specific PSP overload, which is an adaptive response not triggering an STOT classification.</li> </ul>	

Carcinogenicity       IARC classifies antimony trioxide as 2B possible carcinogenic to humans. ACGIH, OSHA, and NTP do not classify antimony trioxide as a carcinogen. German MAK Commission classified antimony trioxide as MAK-2 carcinogenic to humans.         ACGIH, OSHA, IARC, and NTP all classify arsenic as a carcinogen: ACGIH: TLV-AI confirmed human carcinogen. OSHA: Ca         IARC-1 Carcinogenic to humans         NTP-K known to be a human carcinogen         German MAK Commission classified arsenic as an MAK-1 confirmed human carcinogen.         ACGIH and OSHA do not classify lead as a carcinogen.         IARC-2A Probably carcinogenic to humans.         NTP-R: Reasonably anticipated to be carcinogenic to humans.         German MAK-2 considered to be carcinogenic         (Di)antimony trioxide is classified as inhalation carcinogen category 2 (according to Regulation (EC) 1272/2008).         Three chronic inhalation studies in rats are available for the carcinogenicity assessment of (di)antimony trioxide (Watt, 1983; Groth et al., 1986a, Newton et al., 1994). The exposure duration in all three animal studies is 12 months and thus all studies deviate from the OECD guideline on chronic toxicity/carcinogenicity, which prescribes an exposure period of 24 months for rats. The study by Newton et al., (1994) showed no (di)antimony trioxide related lung tumors, neither in males nor females, at any dose level up to 4.5 mg/m <sup>3</sup> . The study shows that (di)antimony trioxide related lung tumory oreload, subsequently followed by an inflammatory response, epithelial cell hypertrophy and/or hyperplasia, and squamous metaplasia. The persistence of lung tumors (Hext, 1994).	Toxicity Endpoints	Description of Effects
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Due to the deviations from the OECD guidelines and the critical shortcomings in all		Due to the deviations from the OECD guidelines and the critical shortcomings in all
three studies, the US NTP (National Toxicology Program) has embarked on a testing		three studies, the US NTP (National Toxicology Program) has embarked on a testing
expected in 2014-2015.		expected in 2014-2015.
The overall expert judgment by TC NES was that the most likely mechanism for		The overall expert judgment by TC NES was that the most likely mechanism for
carcinogenicity appears to be impaired lung clearance and particle overload followe		carcinogenicity appears to be impaired lung clearance and particle overload followed
by an inflammatory response, fibrosis, and tumors. Consequently, (di)antimony		by an inflammatory response, fibrosis, and tumors. Consequently, (di)antimony
trioxide can be regarded as a threshold carcinogen and as a starting point for a		trioxide can be regarded as a threshold carcinogen and as a starting point for a
quantitative risk characterization, the NOAEC of 0.51 mg/m <sup>3</sup> derived for local		quantitative risk characterization, the NOAEC of 0.51 mg/m <sup>3</sup> derived for local
questionable whether the effects caused by pulmonary overload in the rat are also		questionable whether the effects caused by pulmonary overload in the rat are also
relevant for humans.		relevant for humans.
Aspiration hazards ATO as an inorganic metal oxide is void of a low surface tension effect and as a sol	niration hazards	ATO as an inorganic metal oxide is void of a low surface tension effect and as a solid
does have a very high viscosity, i.e., an aspiration hazard can safely be excluded.	phanon nazaras	does have a very high viscosity, i.e., an aspiration hazard can safely be excluded.
Based on available data, the classification criteria are not met.		Based on available data, the classification criteria are not met.

### **Section 12 - Ecological Information**

Acute aquatic toxicity test results:		
Marine fish (Pagrus major)	96 hr LC <sub>50</sub>	6.9 mg Sb/L (Takayanagi, 2001)
Freshwater fish (Pimephales promelas)	96 hr LC <sub>50</sub>	14.4 mg Sb/L (Brooke et al, 1986)
Invertebrates (Chlorohydra viridissimus)	96 hr LC <sub>50</sub>	1.77 mg SB/L (TAI, 1990)
Algae (Pseudokirchneriella subcapitata)	72 hr $ErC_{50}$ (growth rate)	>36.6 mg Sb/L (Heijerick et al, 2004)
Plants (Lemna minor)	4 d EC <sub>50</sub>	>25.5 mg Sb/L (Brooke et al, 1986)
Chronic aquatic toxicity test results:		
Freshwater fish (Pimephales promelas)	28 d NOEC/LOEC (growth;	1.13/2.31 mg Sb/L (Kimball, 1978)
	length)	
Invertebrates (Daphnia magna)	21 d NOEC/LOEC (reproduction)	1.74/3.13 mg Sb/L (Heijerick et al, 2003)
Algae (Pseudokirchneriella subcapitata)	72 h NOEC/LOEC (growth rate)	2.11/4.00 mg Sb/L (Heijerick et al, 2004)
Chronic sediment toxicity test results:		
Midge (Chironomus riparius)	14 d NOEC (growth)	78 mg Sb/kg ww (Heijerick et al, 2005)
Chronic terrestrial toxicity test results (values	were determined in a soil spiked with S	Sb <sub>2</sub> O <sub>3</sub> and aged for 31 weeks before
testing):		
Soil invertebrates	NOEC	999 mg Sb/kg dw (Moser, 2007)
Plants	NOEC	999 mg Sb/kg dw (Smolders et al., 2007)
Soil microorganisms	NOEC	2930 mg Sb/kg dw (Smolders et al.,
		2007)
Toxicity tests for microorganisms (for STP)		
Aquatic microorganisms	NOEC	2.55 mg Sb/L (EPAS, 2005)
Inhibition of nitrification	EC <sub>50</sub>	27 mg Sb/L (EPAS, 2005)

**Persistence and degradability:** Whereas antimony formally meets the criterion for persistence based on the absence of any degradation, this criterion is considered not to apply to inorganic elements. In addition, under conditions of a standard EUSES lake and the median partition coefficient for suspended matter, antimony meets the criteria for rapid removal from the water column.

**Bioaccumulative potential:** Antimony does not meet the criteria for bioaccumulation: a BCF for aquatic organisms of 40 and a BSAF of 1 for earthworms are derived and are all much lower than the threshold of 2,000 l/kg. Also, there is evidence to support hat antimony does not biomagnify in the food chain. Therefore, antimony is not considered bioaccumulative (B) or very pioaccumulative (vB) based on the definitive criteria.

Mobility in soil: A log Kp of 2.07 has been determined for soil.

**Results of PBT and vPvB assessment:** The PBT and vPvB criteria of Annex XIII to the Regulation do not apply to inorganic substances, such as antimony and its inorganic compounds. However, the available data have been compared to the criteria: Antimony trioxide does not meet the criteria for PBT and vPvB. For (T): Chronic NOEC values are available for fish, invertebrates, and algae. The lowest NOEC is 1.13 mg Sb/L for fish (Kimball, 1978). Antimony and antimony compounds do not meet any of the toxicity criteria based on carcinogenicity, mutagenicity, or reprotoxicity (See Section 11) and there is no evidence of other chronic concerns. Therefore, antimony is not considered toxic (T) based on the definitive criteria.

Antimony, and therefore (di)antimony trioxide is not PBT or vPvB.

Other adverse effects: (Di)antimony trioxide is not expected to contribute to ozone depletion, ozone formation, global warming, or acidification.

## **Section 13 - Disposal Considerations**

**Waste treatment methods:** Whatever cannot be saved for recovery or recycling should be managed in an appropriate and approved waste disposal facility. If the percentage of ATO in waste is greater than 1%, then the waste must be treated as hazardous under Directive 91/689/EEC. If the concentration is below 1%, then ATO-containing waste shall be handled as non-hazardous waste. All waste should be removed by a licensed waste removal company, incinerated, or recycled. If only the total antimony concentration in waste is known, then waste with greater than 1% antimony should be treated as hazardous under Directive 91/689/EEC. Processing, use, or contamination of this product may change the waste management options. State and local disposal regulations may differ from federal disposal regulations. Dispose of container and unused contents following federal, state, and local requirements. The used packaging is only meant for packing this product. After usage, empty the packaging completely.

Suitable disposal of hazardous waste for manufacturing and industrial use: Keep separate and dispose of to either

-Hazardous waste incineration operated according to Council Directive 2008/98/EC on waste, Directive 2000/76/EC on the incineration of waste, and the Reference Document on the Best Available Techniques for Waste Incineration of August 2006. -Hazardous landfill operated under Directive 1999/31/EC.

Suitable disposal of non-hazardous waste for manufacturing and industrial use: Disposal of wastes is possible via incineration (operated according to Directive 2000/76/EC on the incineration of waste) or landfilling (operated according to Reference Document on the Best Available Techniques for Waste Industries of August 2006 and Council Directive 1999/31/EC and Council Decision 19 December 2002).

Suitable disposal of waste for professional use: Waste from end-of-life articles can be disposed of as municipal waste, except when they are separately regulated, like electronic devices, batteries, vehicles, etc. Disposal of wastes is possible via incineration (operated according to Directive 2000/76/EC on the incineration of waste) or landfilling (operated according to Reference Document on the Best Available Techniques for Waste Industries of August 2006 and Council Directive 1999/31/EC and Council Decision 19 December 2002).

## **Section 14 - Transport Information**

### **DOT Transportation Data (49 CFR 172.101):**

UN1549, Class 6, Division 6.1, PG III antimony compounds inorganic, solid, n.o.s. (Antimony trioxide) **does not** apply due to special provision 35 (49CFR172.102) which states that "Antimony sulfides and oxides which do not contain more than 0.5% of arsenic calculated on the total mass do not meet the definition of Division 6.1."

However, Antimony Trioxide is listed on Appendix A of 49CFR172.101 for hazardous substances and reportable quantities. RQ = 1000 lbs. (454kg). Because antimony trioxide is listed in Appendix A it falls under the proper shipping name:

Hazardous substances, liquid or solid, n.o.s. which directs you to see: Environmentally hazardous substances, solid, n.o.s.

RID/ADR: not restricted	
IMO/IMDG: not restricted	

ADNR/AND: not restricted IATA/I

IATA/ICAO: not restricted

For packages 1000# or greater
Basic Description: RQ, UN3077, Environmentally
hazardous substance solid, n.o.s. (Antimony Trioxide), 9,
111.
UN Number: UN3077
UN proper shipping name: Environmentally hazardous
substance solid, n.o.s. (Antimony Trioxide)
Packaging group: III
Environmental hazards: No environmental hazard
Special precautions for user: Not available
<b>Transport in bulk according to Annex II or</b> <b>MARPOL72/78 and the IBC Code:</b> Not available
Marine Pollutant: No

Flame Defense Antimony Oxide Section 15 - Regulatory Information

#### **EPA Regulations:**

RCRA Hazardous Waste Number: Not listed (40 CFR 261.33)

RCRA Hazardous Waste Classification (40 CFR 261.??): Not classified

CERCLA Hazardous Substance (40 CFR 302.4) Antimony Trioxide =1000lbs final RQ; Arsenic = 1lb, Lead = 10lbs

SARA 311/312 Hazard: Carcinogenicity

SARA EHS (Extremely Hazardous Substance) (40 CFR 355): Not listed

Antimony Oxide is subject to the reporting requirements of Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 and 40 CFR 372.0 (de minimis concentration = 1%)

Arsenic is subject to the reporting requirement of Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 and 40 CFR372.0. (de minimis concentration = 0.1%)

CWA (Clean Water Act) Hazardous Substances (40 CFR116.4): Present; 1000lb RQ.

**Prop 65:** This product can expose you to chemicals including arsenic and antimony oxide which are known to the State of California to cause cancer.

#### **OSHA Regulations:**

Air Contaminant (29 CFR 1910.1000, Table Z-1, Z-1-A): Not listed

#### TSCA

This substance is listed on the Chemical Substances Inventory of the Toxic Substance Control Act (TSCA Inventory [USA]). Please note that this product is not subject to any legal reporting requirements under these acts. **FDA**-Indirect Food Additives: 21CFR175.105.

### UNITED STATES REGULATIONS

California: 22CCR Presumed Hazardous Wastes List: Present

California: 8 CCR Section 339 Directors List of Hazardous Substances: Present

California: Air Toxics Hot Spots Act Chronic Reference Exposure Levels (RELs): 0.2 ug/m3 REL (inhalation).

California: Air Toxics Hot Spots Act-Emission Inventory Criteria & Guidelines: known or potential carcinogen: 9/90; ADOA 1.0 lbs/yr.

California: Toxic Air Contaminant List (AB 1807, AB2728): Category IIa.

Connecticut: Hazardous Air Pollutants- HLVs (30 min): 25 ug/m3 HLV (handling use and production as Sb);

HLVs (8hr): 5ug/m3 HLV (handling use and production as Sb).

Delaware: Pollutant Discharge Requirements: 1000lb RQ.

Massachusetts: Oil and Hazardous Material List: 50lb RQ.

Michigan: Polluting Materials List: 100lb TRQ.

Minnesota: Hazardous Substance List: Carcinogen (handling and use as Sb production).

New Jersey: Discharge Prevention List of Hazardous Substances: Present.

New York: Reporting of Releases Part 597-List of Hazardous Substances: 1000lb RQ (air); 100lb RQ (land/water).

Pennsylvania: RTK Environmental Hazard List: Present.

Rhode Island: Hazardous Substance List: Toxic.

Texas: Effect Screening Levels-Long Term: 0.5ug/m3 ESL. Effect Screening Levels-Short Term: 5ug/m3 ESL.

#### INTERNATIONAL REGULATIONS

Canada: Listed on the DSL.

Canada: WHMIS: Classification of Substances: D2A. Ingredient Disclosure List 1%.

European Community: This product is listed on EINECS, the European Inventory of Existing Commercial Chemical Substances # 215-175-0.

EU Dangerous Substances Directive: Carc. Cat. 3; R-40, Labels Xn; R-40 Safety Phrases: S-2, S-22, S-36.

Australia: This product is listed on the List of Designated Hazardous Substances-Carc. Cat.3; R-40.

Australia: This product is listed on the Inventory of Chemical Substances (AICS).

Bahrain: This product is listed on the Restricted Chemicals List (production).

Belgium: This product is listed on the Limits on Substances and Preparations list.

China: This product is listed on the Chinese Inventory.

Denmark: This product is listed on the List of Undesirable Substances.

Germany Water Classification (VwVwS): Water Hazard Class-hazard Class1, hazard to waters.

Japan: This product is listed on the Existing and New Chemical Substances list- #1-543 and on the Deleterious Substances List. Italy: Listed as a Category 3 Carcinogen.

Korea: This product is listed on the Existing and Evaluated Chemical Substances List # KE-09846.

#### revision date 9/21/23

### Flame Defense Antimony Oxide

New Zealand: This product is listed on the HSNO Composite List of Single Component Substances Considered for Transfer. Philippines: This product is listed on the Inventory of Chemicals and Chemical Substances (PICCS) List. Switzerland: This product is listed on the Toxic Substances Classification List: Class 4. Taiwan: Listed on NECI.

United Kingdom: This product is listed on the Dangerous Substances CHIP Approved Supply List; Classification: Xn; R-40, Labels: Xn, Safety Phrases: S-2, S-22, S-36.

(Di)antimony trioxide is not a SEVESO substance, not an ozone-depleting substance, and not a persistent organic pollutant.

## **Section 16 - Other Information**

**Prepared By:** Stephanie Nichols **Revision Notes:** 

Product Grades Available from the R. J. Marshall Company (this list may be incomplete):

FDAO

**Disclaimer:** Information contained herein is presented in good faith and is based on data believed to be accurate. However, no warranty is expressed or implied regarding this information, or the results obtained from the use of this Safety Data Sheet, whether it originates with The R. J. Marshall Company or others. This Safety Data Sheet relates only to the specific material designated herein. It does not relate to use with other materials or processes. This information is supplied with the condition that the user will make an appropriate determination as to its suitability for their purpose prior to using it.