

Safety Data Sheet

SD203

MSDS No. 16047.0

Date of Preparation: 4/14/09

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Section 1 - Chemical Product and Company Identification

Product/Chemical Name: SD2003

Synonyms: Charring agent.

General Use: Fire retardant.

Manufacturer: Marshall Additive Technologies

Division of The R. J. Marshall Company

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Section 2 - Hazards Identification

Classification of the chemical in accordance with paragraph (d) of 1910.1200:

Signal word: Danger



Symbol:

Hazard Statements:

May cause cancer by inhalation.

Precautionary statements:

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

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

If exposed or concerned: get medical advice/attention.

Store locked up.

Hazards not otherwise classified: None

Section 3 - Composition / Information on Ingredients

Ingredient Name	CAS Number	Percent by Weight
Antimony Oxide	1309-64-4	Max 23.0
Crystalline Silica	14808-60-7	Max 0.5
Zinc Compounds	-----	Max 15.0

There are no other ingredients which are classified as health hazards in accordance with paragraph (d) of 1910.1200.

Section 4 - First Aid Measures

Description of necessary measures, subdivided according to the different routes of exposure:

Inhalation: If overcome by high dust concentrations, remove to a ventilated area. Seek medical attention for any symptoms that may develop.

Eye Contact: Flush eyes thoroughly taking care to rinse under eyelids. Do not scrub. Abrasion may cause irritation. If discomfort continues, continue to wash with water. If irritation persists, consult a physician.

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

Ingestion: If person is conscious, give large quantities of milk or water, and then induce vomiting. Consult a physician.

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

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

HMIS
H 2
F 0
R 0
PPE† E
†Sec. 8

Section 5 - Fire-Fighting Measures

Suitable Extinguishing Media: Water spray, carbon dioxide, or other dry chemical.

Unsuitable Extinguishing Media: None

Unusual Fire or Explosion Hazards: None known.

Hazardous Combustion Products: None known.

Fire-Fighting Instructions: Do not release runoff from fire control methods to sewers or waterways.

Fire-Fighting Equipment: Because fire may produce toxic thermal decomposition products, wear a self-contained breathing apparatus (SCBA) with a full face-piece operated in pressure-demand or positive-pressure mode.

S41: In case of fire and/or explosion do not breathe fumes.

Section 6 - Accidental Release Measures

Personal precautions, protective equipment, and emergency procedures: Avoid 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.

Environmental precautions: It is advised that in the event of an accidental release the product should be prevented from reaching the sewage system or any water course and penetrating the soil. Dispose of spilled material in accordance with the relevant regulations.

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, eye-baths and self-contained breathing apparatus nearby.

Advice on general occupational hygiene: Avoid inhalation or ingestion. General occupational hygiene measures are required to ensure a safe handling of the substance. These measures involved 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 end of 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 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 formation of dust where possible. Any deposit of dust which 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.

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

Respiratory Protection: Use NIOSH/MSHA approved dust respirator.

Protective Clothing/Equipment:

Gloves: 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 manufacturer's instructions.

Other: Long-sleeves, closed footwear, and safety glasses 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 mg/m ³	None established	0.5 mg/m ³	None established
Crystalline Silica	12 mg/m ³ total 4 mg/m ³ respirable	None established	0.25 mg/m ³ respirable	None established

Section 9 - Physical and Chemical Properties

Appearance and Odor: white powder

Odor: odorless

Odor Threshold: not applicable

pH: not established

Freezing/Melting Point: not applicable

Boiling Point: not applicable

Flash Point: not applicable

Flash Point Method: not applicable

Evaporation Rate: not applicable

Flammability Classification: Non-flammable.

Upper/lower flammability or explosive limits: not applicable

Vapor Pressure: not applicable

Vapor Density (Air=1): not applicable

Relative density: 3.3-3.6

Water Solubility: Very slight.

Other Solubilities: not available

Partition coefficient: n-octanol/water; not applicable

Auto-ignition Temperature: not applicable

Decomposition temperature: not determined

Viscosity: not applicable

Section 10 - Stability and Reactivity

Reactivity: Not applicable.

Chemical Stability: 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_3). 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.

Section 11- Toxicological Information

Information on the likely routes of exposure:

Inhalation: Inhalation of high concentrations of products containing antimony oxide can result in irritation of the respiratory tract, pneumoconiosis, and possibly adverse cardiac effects.

Eye: May cause irritation through mechanical abrasion.

Skin: May cause irritation through mechanical abrasion. May cause skin rashes with itching.

Ingestion: May cause irritation of the gastrointestinal tract.

Symptoms related to the physical, chemical, and toxicological characteristics: May result in irritation.

Delayed and immediate effects and also chronic effects from short- and long-term exposure: Inhalation of high concentrations of products containing antimony oxide can result in irritation of the respiratory tract, pneumoconiosis, and possibly adverse cardiac effects.

Numerical measures of toxicity: No data available.

Carcinogenicity: This product contains antimony trioxide which is listed as a class 2 carcinogen by ACGIH. OSHA, IARC, and NTP do not classify antimony trioxide as a carcinogen. This product contains crystalline silica which is listed as a class 1 carcinogen by IARC, NTP and a class 2 carcinogen by ACGIH. Crystalline silica is not listed as a carcinogen by OSHA.

Section 12 - Ecological Information

Ecotoxicity: non-toxic

Persistence and degradability: not applicable

Bioaccumulative potential: not applicable

Mobility in soil: not applicable

Results of PBT and vPvB assessment: not applicable

Section 13 - Disposal Considerations

Disposal: Dispose of container and unused contents in accordance with federal, state, and local requirements. The used packaging is only meant for packing this product. After usage, empty the packaging completely.

Section 14 - Transport Information**DOT Transportation Data (49 CFR 172.101):**

Antimony trioxide which does not contain more than 0.5% arsenic is considered not dangerous and does not need to be classified for transportation, therefore this product is not classified as dangerous.

RID/ADR: not restricted ADN/AND: not restricted IATA/ICAO: not restricted
IMO/IMDG: not restricted

UN Number: Not applicable

UN proper shipping name: Not applicable

Transport hazard class: Not applicable

Packaging group: Not applicable

Environmental hazards: No environmental hazard

Special precautions for user: Not available

Transport in bulk according to Annex II or MARPOL72/78 and the IBC code: Not available

Harmonized Tariff Code: 3824.90.39

Section 15 - Regulatory Information**EPA Regulations:**

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

RCRA Hazardous Waste Classification: Not classified

CERCLA Hazardous Substance (40 CFR 302.4) Antimony Oxide is listed with a RQ of 1000#

SARA Toxic Chemical (40 CFR 372.65): Not listed

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

Zinc or Zinc compounds and Antimony Oxide are 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.

Antimony Oxide is subject to the reporting requirements of California's Safe Drinking Water and Toxic Enforcement Act of 1986 ("Proposition 65").

OSHA Regulations:

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

TSCA

This substance or all of its components are 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.

INTERNATIONAL REGULATIONS-This product or all of its components are listed on the following inventories:

Australia AICS

Canadian DSL

China IECSC

European Union EINECS

Japan ENCS

Korea ECL

New Zealand NZIoC

Philippines PICCS

Taiwan NECI

Section 16 - Other Information

Prepared By: Stephanie Nichols

Revision Notes: 4/2/15

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

SD203

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