

MATERIAL SAFETY DATA SHEET

07/24/01 as of 07/24/01

Page 1

INTERNATIONAL MULCH COMPANY 1 MULCH LANE

ST. LOUIS, MO 63044

EMERGENCY TELEPHONE: (314) 336-1030

EVENINGS/WEEKENDS (314) 336-1030

SECTION 1: IDENTIFICATION OF PRODUCT

PRODUCT NAME: RUBBERIZED MULCH
LAST REV. DATE: 07/24/01

SECTION 2: HAZARDOUS INGREDIENTS

INGREDIENT	CA8#	%WEIGHT	OSHA PEL	(ACGIHTLY)
VULCANIZED RUBBER COMPOUND		-98%	N/A	N/A
CHROMIUM GREEN OXIDE	1308-38-9	-1-2%	0.5MG/M ³	0.5
PERSONAL PROTECTION:	HMIS			
QUARTZ	14808-60-7	.0002-.002%	10	0.1 (RESP)
CALCIUM CARBONATE	471-34-1	.02-.06%	15	10

NA= Not Available ND= No Data

SECTION 3: PHYSICAL DATA

BOILING RANGE: N/A
EVAPORATION RATE: N/A
WEIGHT PER GALLON:
VAPOR DENSITY: N/A
VOLATILE BY WEIGHT: None
VOLATILE BY VOLUME: None
SPECIFIC GRAVITY: 0.95 to 1.40
VOC: None
PHOTOCHEMICAL REACTIVITY:
APPEARANCE: Shredded Rubber
ODOR: Slight smell of vulcanized rubber
SOLUBILITY IN WATER: Insoluble

SECTION 4: FIRE AND EXPLOSION HAZARD DATA

FLAMMABILITY CLASSIFICATION

OSHA:

FLASH POINT: Ignition temperature of dust cloud (approx. 320°C (608°F))
LOWER EXPLOSIVE LIMIT (LEL): 0.25 oz/cu.ft.
UPPER EXPLOSIVE LIMIT (UEL): N/A
EXTINGUISHING MEDIA: Water, foam, dry powder (do not use high pressure water)

MATERIAL SAFETY DATA SHEET

07/24/01 as of 07/24/01

24009 I.O. Red, I.O. Yellow, Earthtone

Page 2

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UNUSUAL FIRE AND EXPLOSION HAZARDS: Dust may be explosive if mixed with air in critical proportions and in the presence of an ignition source. The hazard is similar to that of many organic solids.

SPECIAL FIRE-FIGHTING PROCEDURES: Noxious gases may be formed under fire conditions, Wear NIOSH approved self-contained breathing apparatus.

Estimates based on data for 200 mesh synthetic and crude hard rubber dust,
Information contained in the NFPA Fire Protection Handbook

SECTION 5: HEALTH HAZARD DATA

PRIMARY ROUTE (S) OF ENTRY: Inhalation

SIGNS AND SYMPTOMS OF OVEREXPOSURE: Itching of skin, irritation of mucous membranes, sneezing and coughing, irritation of eyes.

CARCINOGENICITY: Rubber is not listed as a carcinogen.

MEDICAL CONDITIONS GENERALLY AGGRAVATED BY OVEREXPOSURE:
Not known; however, could potentially aggravate allergies due to dust exposure/Inhalation.

EMERGENCY AND FIRST AIR PROCEDURES: Normal washing of skin with soap and water. Ordinary means of personal hygiene are adequate.

SECTION 6: REACTIVITY DATA

STABILITY: Yes

CONDITIONS TO AVOID: Conditions that will cause burning.

INCOMPATIBILITY (MATERIALS TO AVOID): Avoid strong oxidizing agents.

HAZARDOUS DECOMPOSITION OR BY PRODUCTS: Thermal decomposition may produce carbon monoxide, carbon dioxide, zinc oxide fume/dust, sulfur dioxide, liquid and gaseous hydrocarbons.

HAZARDOUS POLYMERIZATION: Will not occur.

MATERIAL SAFETY DATA SHEET

07/24/01 as of 07/24/01 24009 I.O. Red, I.O. Yellow, Earthtone Page 3
INTERNATIONAL MULCH COMPANY 1 MULCH LANE ST. LOUIS, MO 63044
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SECTION 7: SPILL OR LEAK PROCEDURES

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED:

Sweep or vacuum into disposal containers.

WASTE DISPOSAL METHOD:

Product not defined as hazardous waste. Dispose of in accordance with federal, state and local regulations.

SECTION 8: SPECIAL PROTECTION INFORMATION

RESPIRATORY PROTECTION:

Use any dust and mist respirator for up to 10mg/m³

VENTILATION:

Yes

LOCAL EXHAUST:

Yes, if dusty conditions occur.

MECHANICAL:

(General) Dust collectors and exhaust fans.

PROTECTIVE GLOVES:

Recommended

EYE PROTECTION:

Use safety goggles to prevent dust entry.

OTHER PROTECTIVE CLOTHING OR EQUIPMENT:

Enough fresh air should flow past the user to prevent exposure to airborne fibers and particles.

WORK/HYGIENE PRACTICES:

Good personal hygiene, frequent washing with soap and water of exposed areas, remove and clean soiled clothing.

SECTION 9: SPECIAL PRECAUTIONS

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORAGE:

Do not store near flame or ignition source. Do not store hot material in tube or containers where spontaneous combustion could occur.

OTHER PRECAUTIONS:

If material burns, oil will be released. These must be disposed of in accordance with federal, state, and local regulations.

MATERIAL SAFETY DATA SHEET

07/24/01 as of 07/24/01

24009 I.O. Red, I.O. Yellow, Earthtone

Page 4

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SECTION 10: REGULATORY INFORMATION

TOXIC SUBSTANCES CONTROL ACT (TSCA) STATUS: Ingredients are on the TSCA list.

SARA SECTION 312 Hazard CATEGORIES: N/A

SARA SECTION 313 STATUS: N/A

D.O.T. HAZARD CLASS: N/A

The information contained herein is based on data available to us and is believed to be correct. However, International Mulch Company makes no warranty, express or implied. Consult International Mulch Company for further information.

Hydrated Alumina

Hydrated alumina, also known as alumina trihydrate (ATH), or simply hydrate, is more accurately chemically designated as aluminum trihydroxide, $\text{Al}(\text{OH})_3$. On heating to 400°F (200°C), hydrated alumina decomposes into 66% alumina and 34% water. This irreversible process is, in part, what makes ATH an effective flame retardant. It is a non-abrasive powder with a Mohs' hardness index of 2.5 - 3.5 and a specific gravity of 2.42.

Alcoa produces a number of different types of hydrated aluminas:

Bayer Hydrates	Coarse hydrates produced at Alcoa's alumina refineries. They vary from beige to near white in colour. Mainly used to make aluminum chemicals and for some other filler applications.
White Hydrates	Products for applications where very low impurities and high whiteness is required.
Ground Hydrates	Coarse hydrates that have been milled to give a particle size distribution suitable for use in different applications. Median particle sizes range from 1.5 to 25 microns.
Fine Precipitated Hydrates	Specially precipitated hydrates produced to give products with an extremely fine particle size (median particle size less than 2 microns) and tight particle size distribution.

Click [here](#) for a summary sheet of all hydrated aluminas produced at Bauxite, Arkansas USA.

Alcoa's hydrated aluminas are used in a wide variety of different applications:

- a raw material in the production of aluminum chemicals. Major products include alum (aluminum sulfate), poly aluminum chloride (PAC), sodium aluminate, zeolites, aluminum fluoride.
- a raw material in the manufacture of glass, glazes and frits
- a raw material in catalyst production
- a flame retardant and smoke suppressant filler in plastics (for example: cables, rubber products and carpet backing).
- a raw material for fertilizers, and fibre cement board products.
- an extender and bodying agent in paper, solvent- and water-borne paints, UV curable coatings, inks, and adhesives.
- a polishing and cleansing agent, mould wash and separating agent
- a filler of cast polymer products such as onyx and solid surfaces.



TESTING SERVICES, INC.
 817 SHOWALTER AVE. • P.O. BOX 2041
 DALTON, GEORGIA 30722-2041
 PHONE: (706) 226-1400 • FAX: (706) 226-6118

TEST REPORT

CLIENT:	International Mulch Company 3585 Tree Court Industrial Blvd. St. Louis, MO 63122	REPORT #:	26312
		TEST #:	1481-7758
		DATE:	January 13, 2004

DISCUSSION: Testing Services Inc was instructed by the client, Mr. Tim Miller of International Mulch Company, to perform a modified test of *ASTM D 2859 Standard Test Method for Flammability of Finished Textile Floor Covering Material*.

TEST PROCEDURE: Eight specimens of 2" depth mulch was prepared in a containing box and placed in a laboratory fume hood. A steel frame, 9" X 9" with an 8" diameter hole cut in the center, was placed on top of the mulch. An unfiltered Pall Mall cigarette was lit and centrally placed on top of the mulch specimen. The cigarette was allowed to burn itself out, consequently, testing the flammability of the underlying mulch. After extinguishments, each specimen is measured and has passed the test if the charred portion of the tested specimen did not extend to within 1.0 inch of the edge of the hole in the steel frame at any point. Six of eight specimens must pass to meet the acceptance criteria for the test method.

TEST RESULT:

Sample Identification	Specimen #	Uncharred Area
<i>Rubberific Mulch Red Label</i>	01	1.5 in.
	02	1.5 in
	03	1.5 in
	04	1.5 in
	05	1.5 in
	06	1.5 in
	07	1.5 in
	08	1.5 in

This product meets the acceptance criteria for ASTM D 2859 (Modified).

Erle Miles, JR. VP
 Testing Services Inc

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