MATERIAL SAFETY DATA SHEET

MATERIAL SAFETY DATA SHEET - Complies with ANSI Z400.1 Draft Standard for the Preparation of Material Safety Data Sheets, Copyright 1991, Chemical Manufacturers Association. May be used to comply with U.S. Department of Labor OSHA's Hazard Communication Standard, 29 CFR 1910.1200. Standards must be consulted for specific requirements.

Date : 07/09/2001

EcoShell, Inc. / Crain of California
Ground Walnut Shell Abrasive Media

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME: Walnut shell media, crushed or ground walnut shells

CHEMICAL NAME: N/A

CHEMICAL FAMILY: N/A

COMPANY IDENTIFICATION

EcoShell, Inc. / Crain of California
5230 Grange Road
Corning, CA 96021

EMERGENCY / TECHNICAL NUMBERS

(530) 824-8794
(530) 824-8798 Fax
CHEMTREC:
(800) 424-9300

PRODUCT INFORMATION: MSDS Requests and Product Information: (530) 824-8794

SPECIAL NOTES:

2. COMPOSITION / INFORMATION ON INGREDIENTS

COMPONENTS	CAS No.	OSHA Exposure Limits (PEL)	ACGIH Recommended Limits (TLV)	Percent by Weight
Walnut Shell (as nuisance dust)	N/A	N/A	10 mg/m^3	N/A

COMPOSITION COMMENTS:

GSA Specification: AA-1722, Type 2. Military Specification: MIL-G-5634, Type 3.
Chemical Analysis: Carbon: 50.0, Oxygen: 43.5, Nitrogen: 0.10/0.20; Cellulose: 40/60, Lignin: 20/30, Toluene Solubility: 0.5/1.0, Methoxyl: 6.5, Chlorine: 0.10, Ash: 1.5, Cutin: 1.0.

3. HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW: Not on NTP, IARC or OSHA lists. Do not use near heat, sparks, or open flame.

POTENTIAL HEALTH EFFECTS

PRIMARY ROUTE OF ENTRY: Nose, throat & lungs.

EYE: Local irritation.

SKIN: N/A

INGESTION: Unknown.

INHALATION: Nuisance dust, possible allergen.

CHRONIC EFFECTS: Existing disorder increases risk of discomfort and injury.

4. FIRST AID MEASURES

SIGNS AND SYMPTOMS OF EXPOSURE

EYE: Redness, watering

SKIN: N/A

INGESTION: Unknown

INHALATION: Coughing, shortness of breath

FIRST AID PROCEDURES

EYE: Flush thoroughly with cool running water. If irritation persists contact a physician.

SKIN: Flush thoroughly with cool running water.

INGESTION: Contact a physician.

INHALATION: Follow procedures appropriate to dust inhalation.

5. FIRE FIGHTING MEASURES

FLAMMABLE PROPERTIES: Slightly flammable

FLASH POINT / METHOD USED: 380ºC / closed cup method

AUTOIGNITION: 540ºC

FLAMMABILITY LIMITS (% by volume in air): LEL: 0.07 oz/ft^3 UEL: N/A

EXTINGUISHING MEDIA: Water.

NFPA RATINGS: N/A

FIRE FIGHTING INSTRUCTIONS: Follow standard procedures.

UNUSUAL FIRE AND EXPLOSIVE HAZARDS: Severe explosion hazard if suspended dust (0.07 oz/ft^3 minimum explosive concentration) is exposed to an open flame.

SPECIAL FIRE FIGHTING PROCEDURES: Wear full protective equipment including self-contained breathing apparatus. Spontaneous heating/combustion possible, if stored in hot, humid area, or in contact with drying oils. Ignition temperature 540ºC.

COMBUSTION PRODUCTS: N/A

6. ACCIDENTAL RELEASE MEASURES

PERSONAL PRECAUTIONS: Avoid inhalation of dust. Do not use near heat, sparks, or open flame. Respiratory protection: NIOSH-approved respiratory equipment for abrasive blast environments. Personal protection: NIOSH-approved garments and head gear during blasting operations.

CLEANUP MEASURES: Normal housekeeping measures, flush with water to keep dust levels low.

7. HANDLING AND STORAGE

NORMAL STORAGE: Store in cool, dry area, separate from drying oils and oxidizing materials.

HANDLING: Use with adequate ventilation. Use approved respiratory protection and clothing in abrasive blast environments.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

ENGINEERING CONTROLS: Provide sufficient mechanical (general and/or local exhaust) ventilation to maintain exposures below TLV (10 mg/m^3). Special exhaust may be appropriate during normal abrasive blasting operations.

RESPIRATORY PROTECTION: Use NIOSH/MSHA approved respirators if dust concentration exceeds TLV.

EYE AND FACE PROTECTION: Wear goggles.

SKIN AND HAND PROTECTION: Normal duty work gloves as desired by user.

9. PHYSICAL AND CHEMICAL PROPERTIES

PHYSICAL DESCRIPTION: Crushed nut shells
ODOR: Slightly nutty odor if any
VAPOR PRESSURE (mm Hg): N/A
BOILING POINT: N/A
MELTING POINT: N/A
SPECIFIC GRAVITY (H_2O = 1): 1.10-1.35
FREE MOISTURE (80ºC for 15 hours): 3-10%
FLASH POINT (Closed Cup): 380ºF
VAPOR DENSITY (AIR = 1): N/A
EVAPORATION RATE (BUTYL ACETATE = 1): N/A
SOLUBILITY: Insoluble in water
pH (@ 25ºC in H_2O): 4-6

10. STABILITY AND REACTIVITY

CHEMICAL STABILITY: Stable.
CONDITIONS TO AVOID: Slight fire hazard when exposed to heat or flame.
INCOMPATIBILITY WITH OTHER MATERIALS: Oxidizing materials.
HAZARDOUS DECOMPOSITION PRODUCTS: None.
HAZARDOUS POLYMERIZATION: Polymerization will not occur.

11. TOXICOLOGICAL INFORMATION

CARCINOGENICITY: Not on NTP, IARC or OSHA lists.

12. ECOLOGICAL INFORMATION

Not toxic to mammals or aquatic environments. Not persistent in the environment. Biodegradeable.

13. DISPOSAL CONSIDERATIONS

If the grit remains uncontaminated per the Resource Conservation and Recovery Act (RCRA), then the material meets the definition of a solid waste and may be disposed of per local, state and federal regulations.

If the spent grit contains contaminates at levels above those specified under RCRA, then the waste is defined as hazardous and must be managed per federal or state regulations governing hazardous waste.

14. TRANSPORTATION INFORMATION

NAME OF CONTENTS: Walnut shells
CONSTITUENTS: No hazardous substances at regulated levels
UN/NA NUMBER: N/A
EMERGENCY RESPONSE NUMBER: (530) 824-8794
REPORTABLE QUANTITY: None
HAZARD CLASS: Not hazardous
POISON INHALATION HAZARD: N/A

15. REGULATORY INFORMATION

Not on the SARA or CERCLA lists. The ingredients are on the TSCA inventory.

Originally prepared by: EcoShell, Inc. (a sister company of Crain of California).