

Ergon Armor **Revision Number:** 4.000
Issue Date: 01/17/2012

1. PRODUCT AND COMPANY IDENTIFICATION

Product name: PACMASTIC® 325 **ID(s):**

Product type: Asphalt cutback coating with inorganic mineral filler content. **Region:** United States

Company address: Ergon Armor
Corrosion Engineering
P.O. Box 1639
Jackson, MS 39215-1639

Contact information:
Telephone: 601.933.3540
Emergency: Call CHEMTREC at 800.424.9300
Internet: www.Ergon.com

2. HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW

Physical state: Liquid
Color: Black
Odor: Solvent

HMIS:

HEALTH: 2
FLAMMABILITY: 2
PHYSICAL HAZARD: 0
Personal Protection: See MSDS section 8

0=Minimal 1=Slight 2=Moderate 3=Serious 4=Severe
* = Chronic Health Hazard

WARNING! MAY CAUSE EYE AND SKIN IRRITATION. MAY CAUSE RESPIRATORY TRACT IRRITATION. PROLONGED EXPOSURE TO HIGH VAPOR CONCENTRATIONS CAN CAUSE CENTRAL NERVOUS SYSTEM DEPRESSION INCLUDING HEADACHE, DIZZINESS, WEAKNESS, CONFUSION, NAUSEA, AND LOSS OF CONSCIOUSNESS. MAY CAUSE ALLERGIC SKIN REACTION.

Relevant routes of exposure: Inhalation, skin and eye contact.

Potential Health Effects

Inhalation: Long term inhalation studies of Oxidized Bitumen, a component of this product, in animals have found bronchitis, pneumonitis, and emphysematous changes. Heating of this material may release highly toxic hydrogen sulfide gas, which may be lethal in poorly ventilated or enclosed work spaces.

Skin contact: Contact with hot solution may cause thermal burns. Brief contact with cool material is non-irritating, but prolonged contact may cause moderate skin irritation. Life-time skin application of Oxidized Bitumen resulted in skin tumors.

Eye contact: Exposure to fumes of heated material may be slightly irritating to the eyes, nose and throat.

Ingestion: Not a likely source of exposure.

Existing conditions aggravated by exposure: NE

This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).
See Section 11 for additional toxicological information.

3. COMPOSITION / INFORMATION ON INGREDIENTS

Hazardous components	CAS-No.	%
Oxidized Bitumen	64742-93-4	40 - 60
Stoddard Solvent	8052-41-3	20 - 40
Limestone	1317-65-3	5 - 15
Cellulose	9004-34-6	1 - 10
Fullers Earth	8031-18-3	1 - 10

4. FIRST AID MEASURES

- Inhalation:** Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention.
- Skin contact:** Immediately flush with plenty of water. Remove contaminated clothing and shoes. Get medical attention. Wash clothing before reuse. Thoroughly clean shoes before reuse.
- Eye contact:** Immediately flush with plenty of water. Get medical attention if irritation persists.
- Ingestion:** Induce vomiting as directed by medical personnel. Get medical attention. NEVER GIVE ANYTHING BY MOUTH TO AN UNCONSCIOUS PERSON.

5. FIRE FIGHTING MEASURES

- Flash point:** 105° F
- Autoignition temperature:** NE
- Flammable/Explosive limits - lower:** 0.9%
- Flammable/Explosive limits - upper:** 6.0%
- Extinguishing media:** Use water spray, carbon dioxide, foam or dry chemical.
- Special firefighting procedures:** *Fire fighters and others who may be exposed to products of combustion should wear full fire fighting turn out gear (full Bunker Gear) and self-contained breathing apparatus (pressure demand NIOSH approved or equivalent). Fire fighting equipment should be thoroughly decontaminated after use.*
- Unusual fire or explosion hazards:** Closed containers of this material may explode when subjected to heat from surrounding fire. Cool exposed containers with water. Avoid breathing fumes from fire exposed material.
- Hazardous combustion products:** Oxides of carbon.

6. ACCIDENTAL RELEASE MEASURES

Use personal protection recommended in Section 8, isolate the hazard area and deny entry to unnecessary and unprotected personnel.

- Environmental precautions:** Isolate hazard area and deny entry to unnecessary or unprotected personnel. Avoid runoff into storm sewers and ditches which lead to waterways.
- Clean-up methods:** Contain spilled liquid with sand or earth. Clean up spill immediately, observing precautions in the Personal Protection section of MSDS.
- Consult a regulatory specialist to determine appropriate state or local reporting requirements, for assistance in waste characterization and/or hazardous waste disposal and other requirements listed in pertinent environmental permits.*

7. HANDLING AND STORAGE

Handling: Do not get in eyes, on skin or clothing. Avoid breathing vapor or mist. Keep container closed. Use only with adequate ventilation. Wash thoroughly after handling. Empty container may contain hazardous residues.

Storage: Avoid excessive heat. Store out of direct sunlight in a cool, well-ventilated place.

For information on product shelf life, please review labels on container or check the Technical Data Sheet.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Employers should complete an assessment of all workplaces to determine the need for, and selection of, proper exposure controls and protective equipment for each task performed.

Hazardous components	ACGIH TLV	OSHA PEL	AIHA WEEL	OTHER
Oxidized Bitumen	NE	NE	NE	
Stoddard Solvent	100 ppm, 525 mg/m ³ TWA	500 ppm, 2900 mg/m ³	NE	NIOSH REL: 350 mg/m ³ TWA, 1800 mg/m ³ Ceiling (15 Minutes)
Limestone	10 mg/m ³ TWA	15 mg/m ³ TWA	NE	NIOSH REL: 10 mg/m ³ TWA
Cellulose	10 mg/m ³ TWA	15 mg/m ³ TWA	NE	NIOSH REL: 10 mg/m ³ TWA
Fullers Earth	NE	NE	NE	
Asphalt (Fumes)	0.5 mg/m ³ TWA	0	0	NIOSH REL: 5 mg/m ³ Ceiling (15 min)

Engineering controls: Investigate engineering techniques to reduce exposures below airborne exposure limits. Provide ventilation if necessary to control exposure levels below airborne exposure limits (listed above). If practical, use local mechanical exhaust ventilation at sources of air contamination such as open process equipment. Consult ACGIH ventilation manual or NFPA Standard 91 for design of exhaust systems.

Respiratory protection: Avoid vapor or mist. When airborne exposure limits are exceeded (see above), use NIOSH approved respiratory protection equipment appropriate to the material and/or its components. Consult respirator manufacturer to determine appropriate type equipment for given application. Observe respirator use limitations specified by NIOSH or the manufacturer. For emergency and other conditions where exposure limit may be significantly exceeded, use an approved full face positive-pressure, self contained breathing apparatus or positive-pressure airline with auxiliary self-contained air supply. Respiratory protection programs must comply with 29 CFR § 1910.134.

Eye/face protection: Where there is potential for eye contact, wear chemical goggles and have eye flushing equipment available.

Skin protection: Neoprene or Polyvinyl chloride gloves should be worn when handling this material. Wear face shield and chemical resistant clothing such as a rubber apron when splashing may occur. Wash contaminated clothing and clean protective equipment before reuse. Rinse contaminated skin promptly. Wash skin thoroughly after handling.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical state:	Liquid
Color:	Black
Odor:	Solvent
Odor threshold:	NE
pH:	NA
Vapor pressure:	2
Boiling point/range:	310-400° F
Melting point/ range:	NA
Specific gravity:	0.87 @ 25/25 Deg C
Vapor density:	4.5
Flash point:	105° F
Flammable/Explosive limits - lower:	0.9%
Flammable/Explosive limits - upper:	6.0%
Autoignition temperature:	NE
Evaporation rate:	NE
Solubility in water:	Insoluble
Partition coefficient (n-octanol/water):	NE
VOC content:	57%

10. STABILITY AND REACTIVITY

Stability:	This material is chemically stable under normal and anticipated storage and handling conditions.
Hazardous polymerization:	Hazardous polymerization is not known to occur.
Hazardous decomposition products:	Oxides of carbon.
Incompatibility:	Avoid contact with strong acids, strong oxidizers and alkalis which may cause a violent reaction. Contact with amine compounds in uncontrolled conditions results in an exothermic reaction.

11. TOXICOLOGICAL INFORMATION

Toxicological Information

Data available for this material and/or its components are summarized below:

General Product Information:

No information available for the product.

Component Data:

Oxidized Bitumen

LD50/LC50:

Single exposure (acute) studies indicate that this material is practically non-toxic to rats if swallowed (LD50 14,900 mg/kg), no more than slightly toxic to rabbits if absorbed through skin (LD50 >3,160 mg/kg) or rats if inhaled (no deaths with 6-hr exposure at >1.5 mg/l), moderately irritating to rabbit skin (3.0/8.0), and slightly irritating to rabbit eyes (4/110). Asphalt Workers exposed to heated fumes of this material have experienced coughing, burning of the throat, and runny nose. Deaths in workers have occurred following entry into an enclosed tank where high concentrations hydrogen sulfide released from this material were captured.

CHRONIC:

A health survey on workers with this material in refineries without coal tar exposure showed no adverse health effects after an average exposure of 15 years. Rats exposed acutely to aerosols of this material showed decreased lung weights. Long-term inhalation of fumes of this material in guinea pigs, rats, and mice resulted in lung effects including bronchitis, pneumonitis, and emphysematous changes.

MUTAGENICITY:

This material has shown the ability to cause genetic changes in standard bacterial cell assays. Subchronic feeding studies with this material in rats have not shown any adverse effects up to concentrations of 3% in the diet. Topical application of this material to the skin of mice has not produced an increase in skin tumors in several studies. This material has shown an ability to produce genetic changes in standard bacterial and mammalian cell assays. Increases in chromosomal aberrations have also been observed in mammalian cells in culture. Exposure of whole animals has not resulted in an increase in micronuclei in bone marrow cells or dominant lethal effects. Evaluation of cells from exposed workers has shown chromosomal aberrations in two studies, but a third study did not show this effect.

CARCINOGENICITY (see cancer lists below):

Inhalation studies with fumes of this material produced no lung tumors in rats or guinea pigs following exposure to for two years. Repeated application of this material to the skin of mice caused skin tumors at the site of application. However, in some skin painting studies, no increase in tumors was found. Therefore, this material is considered to have a weak carcinogenic potential in comparison to coal tar which has much higher levels of polycyclic aromatic hydrocarbons (PAHs) and has shown activity by both dermal and inhalation routes. The International Agency for Research (IARC) has concluded that there is sufficient evidence of carcinogenicity from animal studies for certain types of asphalt. IARC further concluded that there was inadequate evidence for the carcinogenicity of this material to humans. Human studies showing cancer increases have been found in occupations such as roofers where workers had exposure to fumes of this material, but were more likely due to exposure to coal tar and pitch.

In occupations where exposure was primarily to this material and coal tar exposure was limited such as asphalt refinery workers, trucking of this material, and road construction, no increase in skin or lung cancer was found.

DEVELOPMENTAL TOXICITY/TERATOGENICITY:

Oral administration of this material to pregnant rats and rabbits for the majority of gestation resulted in some maternal toxicity, but no increase in birth defects or toxicity to the fetuses. A single generation reproduction study was conducted by oral administration of this material and did not show adverse effects on fertility, mating or reproductive success or any adverse effects on the offspring.

Cancer Lists

Hazardous components	NTP Carcinogen	IARC Carcinogen	OSHA Carcinogen
Oxidized Bitumen	No	No	No
Stoddard Solvent	No	No	No
Limestone	No	No	No
Cellulose	No	No	No
Fullers Earth	No	No	No

Health Effects

Hazardous components	Health Effects / Target Organs
Oxidized Bitumen	(Asphalt) - Skin Irritant (HE16) / eyes; skin; respiratory system
Stoddard Solvent	Irritation - Eye, Nose, Throat, Skin---Moderate (HE15); Narcosis (HE 8); Explosive, Flammable (HE18) / Eyes, skin, respiratory system, CNS, kidneys
Limestone	Nuisance Particulates (HE19) / Eyes, skin, respiratory system
Cellulose	Nuisance particulate (HE19)Nuisance particulate (HE19) / Eyes, skin, respiratory system
Fullers Earth	NE

12. ECOLOGICAL INFORMATION

Ecotoxicological Information

Data available for this material and/or its components are summarized below:

General Product Information:

No information available for the product or its components.

13. DISPOSAL CONSIDERATIONS

Information provided is for unused product only.

Recommended method of disposal:

Disposal via incineration is recommended. Appropriate pretreatment and disposal in an authorized landfill is acceptable.

Recover, reclaim or recycle when practical. Dispose of in accordance with federal, state and local regulations. Empty containers retain product residue. Note: Chemical additions to, processing of, or otherwise altering this material may render information in this document to be incomplete, inaccurate or otherwise inappropriate for waste management purposes. Furthermore, state and local waste disposal requirements may be more restrictive or otherwise different from federal laws and regulations.

Disposal Regulatory

No EPA Waste Numbers are applicable for this products components.

It is the responsibility of the waste generator to determine if the waste meets the definition of a hazardous waste as promulgated at 40 CFR Part 261 subpart C.

14. TRANSPORT INFORMATION

U.S. Department of Transportation Ground (49 CFR)

Proper shipping name: Tars, Liquid
Hazard class or division: 3
Identification number: UN1999
Packing group: PGIII

15. REGULATORY INFORMATION

United States Regulatory Information

TSCA 8 (b) Inventory Status: All components are listed or are exempt from listing on the Toxic Substances Control Act Inventory.

SARA 311/312: Acute hazard

Applicable component data listed below:

TSCA 12(b) Export Notification	None listed
CERCLA/SARA Section 302 EHS	None listed
Section 304 EHS RQ	None listed
CLCRA RQ	None listed
Section 313	None listed
RCRA CODE	None listed
CAA 1129(r) TQ	None listed

State Regulations

State Lists (Components on one or more lists)	CA	NJ	PA	RI	NY	MA	MN
Oxidized Bitumen	No	Yes	No	No	No	?	No
Stoddard Solvent	Yes	Yes	Yes	Yes	No	?	Yes
Limestone	No	Yes	Yes	Yes	No	?	Yes
Cellulose	No	Yes	Yes	Yes	No	?	No
(Asphalt)	Yes	Yes	Yes	Yes	No	?	Yes

California Proposition 65

This product contains the following chemicals known to the State of California to cause cancer or reproductive toxicity:

None listed

Canada Regulatory Information

	WHMIS Status	Hazard class(s)
Oxidized Bitumen	Not listed	0
Stoddard Solvent	Disclosure (1%)	B3, D2B
Limestone	Disclosure (0.1%)	D2A
Cellulose	Uncontrolled	0
Fullers Earth	Not listed	0

16. OTHER INFORMATION

Revision Information

Revision Date: 11/29/2010
Supersedes Revision Dated: 8/19/2010
Revision Number: 4.000
Revision Summary: New format

Key: NE = Not Established, NA = Not Applicable

State Lists reviewed (Sec. 15):

CA Title 8, §339. The Hazardous Substances List
 NJ Right to Know Hazardous Substance List
 PA Chapter 323. Hazardous Substance List
 RI Rhode Island Hazardous Substance List
 NY Part 597: List of Hazardous Substances
 MA Massachusetts Oil and Hazardous Material List
 MN 5206.400 Hazardous Substances

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