

RECLAIMED
ASPHALT PAVEMENT

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SECTION 1: PRODUCT AND COMPANY IDENTIFICATION

Product identifier Reclaimed Asphalt Pavement

Chemical Name Mixture

CAS No. Mixture

Trade Name(s) RAP

Relevant identified uses of the substance or mixture and uses advised against

Identified Use(s) Recycle into road paving asphalt

Uses Advised Against None.

Details of the supplier of the safety data sheet

Company Identification Garcia Mining Company LLC,

6605 Garcia Drive, Clewiston FL 33440

Emergency telephone number 863-902-9777

Emergency Phone No. Not classified as dangerous for supply/use. Please contact the
supplier above during normal business hours.

SECTION 2: HAZARDS IDENTIFICATION

Classification of the substance or mixture

OSHA HCS (29 CFR

1910.1200) / GHS Classification Not classified as dangerous for supply/use.

Label elements

Hazard Symbol None

Signal Word(s) None

Hazard Statement(s) None

Precautionary Statement(s) None

Other hazards Mechanical disruption (e.g., milling, cutting, chipping) of cured asphalt pavement may release crystalline silica dust from the aggregate which:

Causes damage to organs: Lungs (silicosis) and May cause cancer:

Lungs

Additional Information Avoid breathing dust/fume/gas/mist/vapors/spray.

As necessary, Wear protective gloves/protective clothing/eye protection/face protection.

Wash hands and exposed skin after use.

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

Composition/information on ingredients % wt. CAS No.

Aggregate (crushed stone, sand, gravel, slag) 70 - 97 Various

Petroluem asphalt / bitumen^ 3 - 7 8052-42-4

Polymers and Natural Rubbers <

0.5 Various

^Contains: <0.05% of 3 - 7 ring Polycyclic Aromatic Hydrocarbons (PAHs).

Other Substances in the product which may present a health or environmental hazard, or which have been assigned occupational

exposure limits, are detailed below. Please see Section 8 of SDS for more details.

- Contains: <0.1% airborne crystalline silica (inherent in aggregate) and <0.1% hydrogen sulfide.

SAFETY DATA SHEET

OSHA HCS (29 CFR 1910.1200)

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- Heated product releases asphalt fume.

Additional Information - None

SECTION 4: FIRST AID MEASURES

Description of first aid measures

Inhalation Not normally required. Move person to fresh air. Apply artificial respiration if necessary. If symptoms persist, obtain medical attention.

Skin Contact Gently wash with plenty of soap and water. If irritation (redness, rash, blistering) develops, get medical attention.

Eye Contact Flush eyes with water for at least 15 minutes while holding eyelids open.

Remove contact lenses, if present and easy to do. Continue rinsing. If irritation

develops and persists, get medical attention.

Ingestion Not normally required. Do not induce vomiting. Do not give anything by mouth to an unconscious person. Get medical advice/attention if you feel unwell.

Most important symptoms and effects, both acute and delayed

None known

Indication of any immediate medical attention and special treatment needed

None known

SECTION 5: FIRE-FIGHTING MEASURES

Extinguishing Media

-Suitable Extinguishing Media Extinguish with carbon dioxide, dry chemical, foam or water spray.

-Unsuitable Extinguishing Media None anticipated.

Special hazards arising from the substance or mixture

Combustion causes toxic fumes. Combustion products: Carbon monoxide,

Carbon dioxide, Nitrogen oxides, Sulfur oxides

Advice for fire-fighters A self contained breathing apparatus and suitable protective clothing should

be worn in fire conditions.

SECTION 6: ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures Not normally required.

Environmental precautions Not normally required.

Methods and material for containment and cleaning up Not normally required.

Reference to other sections None

Additional Information None.

SECTION 7: HANDLING AND STORAGE

Precautions for safe handling Mechanical disruption (e.g., milling, cutting, chipping) of cured asphalt pavement may release crystalline silica dust from the aggregate.

Conditions for safe storage, including any incompatibilities

-Storage temperature Ambient temperatures.

-Incompatible materials Strong oxidizing agents.

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SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

Occupational Exposure Limits: Applicable only to heated product or milling, cutting, chipping of the product.

SUBSTANCE. CAS No.

(8hr TWA) (STEL)

Note: PEL (OSHA) * TLV (ACGIH) PEL (OSHA) TLV (ACGIH)

Asphalt fume ----- 0.5 mg/m³ (I) ----- See below

Crystalline Silica

(respirable particulate) ----- 10 mg/m³

%SiO₂ + 2 0.025 mg/m³ ^ ----- See below

(I) Inhalable benzene-soluble fraction; ^Suspected Human Carcinogen; *Refer to OSHA 29 CFR 1910.1000 & 29 CFR 1926.55; 8hr

TWA = 8 hour time-weighted average; STEL = Short Term Exposure Limit.

Recommended monitoring method NIOSH 5042 (Asphalt Fume), NIOSH 7500 (Crystalline Silica)

Exposure controls

Appropriate engineering controls Use only outdoors or in a well-ventilated area.

Personal protection equipment

Eye/face protection The following to be used as necessary: Safety Glasses

Skin protection (Hand protection/ Other) The following to be used as necessary: Leather or thick textile gloves.

Respiratory protection In case of heating the product or milling, cutting, chipping of the

product, respiratory protection may be needed if occupational

exposure limits are exceeded. Air-purifying respirator with combination

organic vapor cartridge / particulate filter may be sufficient. Check with

protective equipment
manufacturer's data.

Thermal hazards Use gloves with insulation for thermal protection, when needed.

Environmental Exposure Controls Not normally required.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

Appearance Solid

Color. Dark brown / Black

Odor Asphalt / Bitumen

Odor Threshold (ppm) Not available.

pH (Value) Not available.

Melting Point (°C) / Freezing Point (°C) Not available.

Boiling point/boiling range (°C): > 371 (>700 °F)

Flash Point (°C) > 232 (> 450 °F)

Evaporation Rate Not available.

Flammability (solid, gas) Not applicable.

Explosive Limit Ranges Not applicable.

Vapor pressure (Pascal) Not determined.

Vapor Density (Air=1) Not determined.

Density (g/ml) 2.2 - 2.7

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Solubility (Water) Negligible

Solubility (Other) Not known

Partition Coefficient (n-Octanol/water) Not available.

Auto Ignition Point (°C) Not available.

Decomposition Temperature (°C) Not available.

Kinematic Viscosity (cSt) @ 40°C Not available

Explosive properties Not explosive.

Oxidizing properties Not oxidizing.

Other information Not available.

SECTION 10: STABILITY AND REACTIVITY

Reactivity Stable under normal conditions.

Chemical stability Stable.

Possibility of hazardous reactions May react violently with: Strong oxidizing agents

Conditions to avoid Incompatible materials

Incompatible materials Oxidizers

Hazardous decomposition product(s) Combustion causes toxic fumes. Combustion products: Carbon monoxide,

Carbon dioxide, Nitrogen oxides,
Sulfur oxides

SECTION 11: TOXICOLOGICAL INFORMATION

Exposure routes: Inhalation, Skin Contact, Eye Contact

Information on toxicological effects

Reclaimed Asphalt Pavement:

Acute toxicity LD50 (rat): >5000 mg/kg bw

LD50 (dermal): >2000 mg/kg bw

LC50 (inhalation, fume): >94.4 mg/m³

Irritation/Corrosivity May cause irritation to skin, eyes and respiratory system.

Sensitization Not to be expected

Repeated dose toxicity NOAEL(rat): 28 mg/m³

LOAEL (rat): 149 mg/m³

Carcinogenicity Not to be expected at typical road paving temperatures.

NTP IARC ACGIH OSHA

No. Yes.* No. No.

Mutagenicity Not to be expected.

Reproductive toxicity Not to be expected.

Other information * IARC (2013, volume 103) identifies that “occupational exposures to straight-run bitumens and their

emissions during road paving are possibly carcinogenic to humans (Group 2B).” However, classification as a

carcinogen under OSHA 29 CFR 1910.1200 is not warranted given the absence of positive cancer findings

in human epidemiological studies and in cancer studies with laboratory animals when exposed dermally or

by inhalation to asphalt products or fume condensates that are typical of road paving applications. IARC (2013, volume 103) also identifies that “occupational exposures to oxidized bitumens and their emissions during roofing are probably carcinogenic to humans (Group 2A).” Roofing shingles, which are considered an

article under OSHA 29 CFR 1910.1200, are sometimes recycled into road paving asphalt mix. Emissions from oxidized bitumen, e.g., from shingles, at road paving temperatures are not expected to be qualitatively

different than emissions from straight-run bitumens, and therefore would not warrant a carcinogen classification under OSHA 29 CFR 1910.1200.

Crystalline Silica (quartz and cristobalite)

Acute toxicity LD50 (rat): >5000 mg/kg bw

LD50 (dermal): >2000 mg/kg bw

LC50 (inhalation, fume): >94.4 mg/m³ - Causes damage to organs: Lungs (silicosis)

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Irritation/Corrosivity Not to be expected

Sensitization Not to be expected

Repeated dose toxicity Causes damage to organs through prolonged or repeated exposure: Lungs (silicosis)

Carcinogenicity May cause cancer. Lungs

NTP IARC ACGIH OSHA

No. Yes. A2 Yes.

Mutagenicity Not to be expected.

Reproductive toxicity Not to be expected.

SECTION 12: ECOLOGICAL INFORMATION

Ecotoxicity

Short term LL50 (48 hour): >1000 mg/l (Fish)

LL50 (48 hour): >1000 mg/L (Aquatic Invertebrates)

EL50 (48 hour): >1000 mg/L (Aquatic Plants)

Long Term No data

Persistence and degradability The product is poorly biodegradable.

Bioaccumulative potential The product has low potential for bioaccumulation.

Mobility in soil The product has low mobility in soil.

Results of PBT and vPvB assessment Not classified as PBT or vPvB.

Other adverse effects None known.

SECTION 13: DISPOSAL CONSIDERATIONS

Waste treatment methods

Disposal should be in accordance with local, state or national

legislation. Consult an accredited waste disposal contractor or the local

authority for advice.

Additional Information None known.

SECTION 14: TRANSPORT INFORMATION

Ground or Water Domestic Voyage (DOT): Not regulated when transported below 240°C (464 °F).

SECTION 15: REGULATORY INFORMATION

Safety, health and environmental regulations/legislation specific for the substance or mixture:

TSCA (Toxic Substance Control Act) - Inventory Status: All components listed or polymer exempt.

RCRA Hazardous Waste Number (40 CFR 261.33): None

US RCRA Hazard Class: Not applicable.

Designated Hazardous Substances and Reportable Quantities (40 CFR 302.4):

Chemical Name CAS No. Typical %wt. RQ (Pounds)

None -----

SARA 311/312 - Hazard Categories: None

Fire Sudden Release Reactivity Immediate (acute) Chronic (delayed)

SARA 313 - Toxic Chemicals (40 CFR 372):

Chemical Name CAS No. Typical %wt.

None -----

SARA 302 - Extremely
Hazardous Substances(40 CFR 355):

Chemical Name CAS No. Typical %wt. TPQ (pounds)

None -----

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SECTION 16: OTHER INFORMATION

Additional Information

The following sections contain revisions or new statements: 1-16.

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