

SAFETY DATA SHEET


Manufacturer/
Supplier: Liberty Tire Recycling, LLC
600 River Ave, 3rd Floor
Pittsburgh, PA
15212

Emergency Telephone Number:
(813) 681-2160

SECTION 1 – IDENTIFICATION

Product name	SmartMIX – Reprocessed Ground Rubber (Pre-swelled)		
Brand	Liberty Tire Recycling		
Product uses	Various Uses		
Supplier	Liberty Tire Recycling, LLC 600 River Ave, 3 rd Floor Pittsburgh, PA 15212	Manufacturer	Liberty Tire Recycling, LLC 600 River Ave, 3 rd Floor Pittsburgh, PA 15212
Telephone	412-562-1700		
Emergency phone #	813-681-2160		

SECTION 2 – HAZARD(S) IDENTIFICATION

Emergency Overview	
GHS Classification	Skin corrosion/irritation – Category 2 Eye damage/irritation – Category 2A Carcinogenicity – Category 1B Germ cell mutagenicity – Category 1B Reproductive toxicity – Category 2 Specific target organ toxicity, repeated exposure – Category 1 (adrenals, bone marrow, liver, lymph nodes, kidney, stomach, thymus) Hazardous to the aquatic environment, acute hazard – Category 3 Hazardous to the aquatic environment long-term hazard – Category 2
OSHA Hazards	Not classified
GHS Label elements, Including Precautionary Statements	
Label elements	
Signal Word	Danger
Hazard statement(s)	H315: Harmful in contact with skin H319: Causes serious eye irritation H351: Suspected cancer causing H361: Suspected of damaging fertility or the unborn child H373: May cause damage to organs through prolonged or repeated exposure H411: Toxic to aquatic life with long-lasting effects
Precautionary statement(s)	P260: Do not breathe dust/fumes/gas/mist/vapours/spray P270: Do not eat, drink or smoke when using this product P273: Avoid release to the environment P281: Use personal protective equipment as required (see Section 8) P501: Dispose of contents/container in accordance with local/regional/national/international regulations
HMIS Classification	
Health hazard	1
Flammability	1
Physical hazards	1
Potential Health effects	
Inhalation	Odor/vapors may be cause irritation in some individuals. In some individuals, short term exposure of material may produce mild and temporary discomfort to the respiratory tract resulting in wheezing, tightness in the chest, shortness of breath and coughing. Although they may be present in low amounts, dust, oils, and small pieces of material may aggravate bronchitis, asthma, and emphysema if inhaled.
Skin	Although fine material, particulate matter, vapors and dust may be present in low quantities, contact with such items may result in irritation (redness/itching) or other effects. Direct contact with oil will result in skin irritation.
Eyes	Material is abrasive if it enters the eye, which can cause irritation to severe damage if left untreated. Oil in material will cause serious eye irritation.
Ingestion	Irritation of mucus membranes of mouth, throat, esophagus and stomach along with nausea may occur. Abrasion to the mouth, esophagus, stomach and intestinal tract may occur.
Repeated exposure	Repeated exposure to material may result in sensitization in susceptible individuals.

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SECTION 3 – COMPOSITION/INFORMATION ON INGREDIENTS

Material	CAS-No.	EC-No.	Index-No.	Concentration (%wt)
Natural rubber	9006-04-6	232-689-0	N/AV	15 – 40
Synthetic rubber	9003-55-8	N/AV	N/AV	15 – 40
Carbon black	1333-86-4	215-609-9	N/AV	25 – 35
Zinc oxide	1314-13-2	215-222-5	030-013-00-7	1 – 5
Sulfur	7704-34-9	231-722-6	016-094-00-1	1 – 3
Stearic acid	57-11-4	200-313-4	N/AV	1 – 3
Lubricating oils, used	70514-12-4	N/AV	N/AV	10 – 30
Fillers, accelerators, anti-ozonants	N/AP	N/AP	N/AP	5 – 10

Note: Compositional data is from an analyzed representative sample provided May 2019. Any other metals contained are at trace levels, below reportable limits.

SECTION 4 – FIRST-AID MEASURES

General advice

If negative symptoms develop while handling the product, move out of the area to prevent further exposure. Consult a physician as a precautionary measure if symptoms develop after being subjected to unprotected exposure of the material. Show this safety data sheet to the doctor in attendance.

If inhaled

In emergency situations, use proper respiratory protection and immediately remove the affected person from exposure to fresh air. Keep at rest. Administer artificial respiration if breathing has stopped. Seek medical attention, if needed.

In case of skin contact

Wash exposed skin thoroughly with soap and water. If irritation develops and is prolonged and/or sore, consult a physician. Remove clothing and shoes if contaminated.

In case of eye contact

Flush eyes with plenty of water for at least 15 minutes. Avoid rubbing the eye. If experiencing prolonged irritation or soreness, seek medical attention.

If swallowed

Do not induce vomiting. Rinse mouth well with water. Never give anything by mouth to an unconscious person. Seek medical attention.

SECTION 5 – FIRE-FIGHTING MEASURES

Conditions of flammability

Non-flammable under standard use conditions. Material must be heated above 203°F (95°C) and an ignition source introduced before burning will occur.

Suitable extinguishing media

Fire extinguishing substances: dirt, sand, dry chemical, CO₂, alcohol-resistant foam, or F500 encapsulating agent.

If safe to do so, smothering the fire with large quantities of dirt or sand is usually the best option for extinguishing fires.

Do not use a solid water stream as it may scatter and spread fire.

The material will be extremely hot if in liquid form. Be sure to keep distance between personnel and the fire.

If the fire is small and localized, CO₂ or foam are acceptable extinguishing substances. Due to the potential of pyrolytic oil being produced during uncontrolled burning, use of water may result in highly contaminated run-off that will require containment.

For large fires, trained firefighting personnel should be placed in charge of firefighting measures.

Special protective equipment for firefighters

Respiratory and eye protection are required for firefighting personnel.

A self-contained breathing apparatus (SCBA) meeting NFPA standards should be used for any significant indoor or outdoor fires.

For small outdoor fires, which may easily be extinguished with a portable fire extinguisher, use of a SCBA may not be required.

Contact with the smoke and fumes should be avoided. With burning or high heating, the material may melt, resulting in a sticky, molten material.

Hazardous combustion products

Thick, black, acrid smoke. Oxides of carbon, nitrogen and sulfur.

Uncontrolled burning may result in products of incomplete combustion including polynuclear aromatic hydrocarbons (naphthalene, anthracene, etc); aromatic hydrocarbons including benzene, toluene, xylene, styrene, etc; paraffinic oils; particulate and ash residues.

Explosion data – sensitivity to mechanical

Not explosive on impact

Explosion data – sensitivity to static discharge

Not explosive when subject to static discharge

SECTION 6 – ACCIDENTAL RELEASE MEASURES

SmartMIX – Reprocessed Ground Rubber (Pre-swelled)

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Personal precautions

Ensure adequate ventilation to keep material component levels below workplace exposure limits. Avoid excessive dust or mist formation and accumulation. Avoid prolonged exposure to vapors/odors and dusts created by material. Clean surface thoroughly to remove residual contamination.

Environmental precautions

Precautionary measures to prevent large quantities of the product from entering and/or accumulating in drains should be implemented. In case of emergency, prevent further leakage or spillage if safe to do so. Retain all contaminated water for removal and treatment.

Methods and material for containment and cleaning up

LAND SPILL : Sweep or vacuum material to prevent slip hazard. Wipe surfaces if residues are left behind. Try not to create dust. Collect for reuse if possible.
WATER SPILL : Material floats initially. Attempt to contain floating material and remove it from the surface by skimming first. Contain area and, if material sinks, try to recover material as best possible without disturbing surroundings. Prevent entry into waterways, sewer, basements or confined areas. Do not allow material to contaminate ground water system. Reporting of releases to appropriate regulatory agencies may be required.

SECTION 7 – HANDLING AND STORAGE

Precautions for safe handling

For any application, use in a well-ventilated area or set engineering controls (ventilation) to keep airborne concentrations below the workplace exposure limits and prevent the build-up of dust and vapors. Do not handle or store near an open flame or sources of heat. Be aware of potential for surfaces to become slippery. Keep away from heat, spark, open flames and other sources of ignition.

Conditions for safe storage

Store in a dry place. Keep away from incompatible materials, open flames and high temperatures. Material should be kept in a closed system and in a well-ventilated location to keep airborne concentrations below the workplace exposure limits.

SECTION 8 – EXPOSURE CONTROLS/PERSONAL PROTECTION

Component	CAS #	Value	Control Parameters	Basis
Natural rubber	9006-04-6	TWA	0.0001 mg/m ³ 35 mg/m ³	USA. ACGIH (inhalable proteins) USA. ACGIH Threshold Limit Values (TLV)
Synthetic rubber	9003-55-8	N/AV	N/AV	No occupational exposure limits set for material
Carbon black	1333-86-4	TWA	3.5 mg/m ³ 3.5 mg/m ³	Canada. British Columbia OEL USA. ACGIH Threshold Limit Values (TLV)
Zinc oxide	1314-13-2	TWA	2 mg/m ³ 10 mg/m ³ 2 mg/m ³	Canada. British Columbia OEL Canada. Alberta OEL USA. ACGIH Threshold Limit Values (TLV)
Sulfur	7704-34-9	TWA	10 mg/m ³	Canada. Alberta OEL
Stearic acid	57-11-4	TWA	10 mg/m ³	USA. ACGIH Threshold Limit Values (TLV)
Lubricating oils, used	64742-04-7	PEL TWA	5 mg/m ³ 5 mg/m ³	USA. ACGIH Threshold Limit Values (TLV) US. NIOSH
Fillers, accelerators, anti-ozonants	N/AP	N/AP	N/AP	No occupational exposure limits set for material

Remarks: If multiple exposure limits exist for a substance, the limits from the State(s), Province(s) or Territory with the highest and lowest values in the country are reported.

Personal Protection Equipment

Respiratory protection

Respiratory protection is typically not required. Where protection from nuisance levels of dust are desired, use of a dust mask is recommended. Typical certified dusts masks types are N95 (US) or P1 (EN 143).

Hand protection

Chemical/oil resistant gloves are required. Be aware that the liquid may penetrate the gloves with repeated use. If gloves are disposable, dispose of contaminated gloves after use in accordance with applicable laws and work place practices. If gloves are re-usable, wash periodically to avoid build-up of material matter. Wash and dry hands.

Eye protection

Although they may be present in low concentrations, if dust or fines are likely to become airborne, safety glasses with side shields or goggles should be worn. When using eye protection, equipment should be tested and approved under appropriate government standards such as NIOSH (US) or EN 166 (EU).

Skin and body protection

Long sleeved clothing and full length pants should be worn if repeated or prolonged direct contact is likely to occur.

Hygiene measures

Handle in accordance with good industrial and commercial hygiene and safety practices. Wash hands before breaks and at the end of the work day.

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Specific engineering controls

Use in a well-ventilated area or set engineering controls to keep airborne concentrations below the exposure limits.

SECTION 9 – PHYSICAL AND CHEMICAL PROPERTIES

Appearance

Form Solid - small (less than ~15 mm diameter) irregularly shaped granules of rubber based material with small fibres
Color Black

Safety data

Odor Rubber, oily hydrocarbon-like odor
Odor threshold No data available
pH Not applicable
Melting/freezing point No data available
Boiling point No data available
Flash point > 374°F; > 190°C (ASTM D3828)
Evaporation rate Does not evaporate
Flammability No data available
Lower explosion limit No data available
Upper explosion limit No data available
Vapor pressure No data available
Vapor Density No data available
Density 1.00-1.07 g/mL
Water solubility Not soluble
Partition coefficient No data available
Autoignition temperature > 450°F; >232°C
Decomposition Temperature No data available

SECTION 10 – STABILITY AND REACTIVITY

Chemical stability

Stable under recommended storage conditions, use, and transport.

Possibility of hazardous reactions

No data available

Conditions to avoid

Material may slowly degrade on storage, especially in the presence of iron particles and combined with heat or pressure, subsequently releasing carbon monoxide and carbon dioxide. Heat, ignition sources, and oxidizing agents should be avoided. Although typically present in small amounts, dust and mists may be explosive under certain conditions (i.e. high airborne concentrations) in the presence of an ignition source.

Materials to avoid

Acids, alkalis, oxidizing agents, iron particles, nitrates, chlorates, reactive metals, reactive halogens, excess moisture

Hazardous decomposition products

Oxides of carbon, nitrogen, sulfur and metals under fire or oxidative conditions

SECTION 11 – TOXICOLOGICAL INFORMATION

Acute toxicity

Oral LD50

No data available

Inhalation LC50

No data available

Dermal LD50

No data available

Other information on acute toxicity

No data available

Skin corrosion/irritation

Causes skin irritation

Serious eye damage/eye irritation

Causes serious eye irritation

Respiratory or skin sensitization

No data available

Germ cell mutagenicity

No data available

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Carcinogenicity

This product contains a component (when isolated) that has been reported to be possibly carcinogenic (specifically when inhaled) based on its IARC, ACGIH, NTP or EPA classification. Limited evidence to carcinogenicity in animal studies. IARC: 2B – Group 2B: Possibly carcinogenic to humans (Carbon black).

This product contains a component (when isolated) that has been reported to be carcinogenic (specifically when skin contact) based on its IARC, ACGIH, NTP or EPA classification. Evidence to carcinogenicity in animal studies with prolonged and repeated skin contact when mildly treated or untreated. IARC: 1B – Group 1B: Presumed carcinogenic to humans (Process oil).

Reproductive toxicity

Contains a material that is suspected of damaging an unborn child (process oil)

Specific target organ toxicity – single exposure (Globally Harmonized System)

No data available

Specific target organ toxicity – repeated exposure (Globally Harmonized System)

May cause damage to organs (adrenals, bone marrow, liver, lymph nodes, kidney, stomach, thymus) through prolonged or repeated exposure.

Aspiration hazard

No data available

Potential health effects

- Inhalation** Odor/vapors may cause irritation in some individuals. In some individuals, short term exposure of material may produce mild and temporary discomfort to the respiratory tract resulting in wheezing, tightness in the chest, shortness of breath and coughing. Although they may be present in low amounts, dust, oils, and small pieces of material may aggravate bronchitis, asthma, and emphysema if inhaled.
- Skin** Although fine material, particulate matter, vapors and dust may be present in low quantities, contact with such items may result in irritation (redness/itching) or other effects. Direct contact with oil will result in skin irritation.
- Eyes** Material is abrasive if it enters the eye, which can cause irritation to severe damage if left untreated. Oil in material will cause serious eye irritation.
- Ingestion** Irritation of mucus membranes of mouth, throat, esophagus and stomach along with nausea may occur. Abrasion to the mouth, esophagus, stomach and intestinal tract may occur.

Signs and symptoms of exposure

To the best of our knowledge, the chemical, physical and toxicological properties have not been thoroughly investigated.

Synergistic effects

No data available

Additional information

None

SECTION 12 – ECOLOGICAL INFORMATION (non-mandatory)

Toxicity

Contains a component that is toxic to aquatic life with long lasting effects (process oil)

Persistence and degradability

No data available

Bioaccumulative potential

No data available

Mobility in soil

No data available

PBT and vPvB

No data available

Other adverse effects

Extensive ecological testing has not been performed on the product. Standard good environmental workplace practices should be implemented when handling material in a workplace or external setting.

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SECTION 13 – DISPOSAL CONSIDERATIONS (non-mandatory)

Product

The product is not characteristic nor is listed as hazardous waste. Product materials that are no longer usable or that may have become contaminated should be placed in disposable containers and such materials should be managed and disposed of in compliance with applicable federal, state, provincial, and local regulations.

Contaminated packaging

Packaging that is no longer usable or may have become contaminated should be placed in disposable containers and managed, recycled, or disposed of in compliance with applicable federal, state, provincial, and local regulations.

SECTION 14 – TRANSPORT INFORMATION (non-mandatory)

DOT (US)

Not regulated as dangerous goods

IMDG

Not regulated as dangerous goods

IATA

Not regulated as dangerous goods

SECTION 15 – REGULATORY INFORMATION (non-mandatory)

OSHA hazards

Not listed

Other federal regulations

Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs) List: Polycyclic aromatic compounds

Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130): Not regulated

Safe Drinking Water Act (SDWA): Not regulated

US state regulations

US. Massachusetts RTK - Substance List: Oil mist, mineral; Carbon black.

US. New Jersey Worker and Community Right-to-Know Act: Mineral oil, untreated or mildly refined; Polycyclic aromatic compounds; Carbon black; Stearic acid.

US. Pennsylvania Worker and Community Right-to-Know Law: Oil mist, mineral; Polycyclic aromatic compounds; Carbon black; Stearic acid.

US. Rhode Island RTK: Polycyclic aromatic compounds; Carbon black.

US. California Proposition 65: WARNING: This product contains chemicals known to the State of California to cause cancer and birth defects or other reproductive harm.

US - California Proposition 65 - Carcinogens & Reproductive Toxicity (CRT): Listed substance: Mineral oil, untreated or mildly refined; Polycyclic aromatic compounds; Carbon black.

SECTION 16 – OTHER INFORMATION

Further information

Prepared August 20, 2019. The information, recommendations and suggestions in the Safety Data Sheet have been compiled from tests and data believed to be reliable. The above information is believed to be correct, but is not under guarantee or warranty to be all inclusive and shall be used only as a guide. The information contained herein is based on the present state of our knowledge and is only applicable to the product or material set forth in Section 1. The information provided may not be applicable or complete if such product or material is used in combination with any other product or material, or in any process. The information provided on the product or material is with regard to appropriate safety precautions and does not represent any guarantee of the properties of the product. It is the user's obligation to determine the safety, toxicity and suitability for their own use of the product described herein and to comply with all applicable laws and regulations. Liberty Tire Recycling, LLC and its affiliates shall not be held liable for any damage resulting from handling or from contact with the above product.