



BioBased Spray Systems, LLC
2506 Fair Rd
Sidney, OH, USA, 45365-7523
Telephone: (937) 498 9803

RoofRestor™ Rejuvenator
SDS Preparation Date (mm/dd/yyyy): 03/25/2024

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SAFETY DATA SHEET

SECTION 1. IDENTIFICATION

Product identifier used on the label

: **RoofRestor™ Rejuvenator**

Other means of identification : Not available.

Recommended use of the chemical and restrictions on use

: Asphalt rejuvenator
Professional use only
See manufacturers specifications

Chemical family

: Terpene/oleo polymer blend

Name, address, and telephone number of the supplier:

BioBased Spray Systems, LLC

2506 Fair Rd
Sidney, OH, USA
45365-7523

Supplier's Telephone # : (937) 498 9803 (8 a.m. - 5 p.m. EST)
www.roofrestor.com

24 Hr. Emergency Tel # : Chemtrec: 1-800-424-9300 (Within Continental U.S.); 703-527-3887.

Name, address, and telephone number of the manufacturer:

Refer to supplier

SECTION 2. HAZARDS IDENTIFICATION

Classification of the chemical

Clear,colorless to pale yellow liquid.

This material is classified as hazardous under U.S. OSHA regulations (29CFR 1910.1200) (Hazcom 2012) and Canadian WHMIS regulations (Hazardous Products Regulations) (WHMIS 2015).

Classification

Skin Irritation - Category 2
Skin sensitization - Category 1A
Serious eye damage/eye irritation - Category 2A

Label elements

Hazard pictogram(s)



Signal Word

Warning!

Hazard statement(s)

Causes skin irritation.
May cause an allergic skin reaction.
Causes serious eye irritation.



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Precautionary statement(s)

Avoid breathing fumes, mists or vapors.
Wash hands and face thoroughly after handling.
Contaminated work clothing must not be allowed out of the workplace.
Wear protective gloves/eye protection/face protection.
IF ON SKIN: Wash with plenty of soap and water.
Take off contaminated clothing and wash before re-use.
If skin irritation or rash occurs: Get medical advice/attention.
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do.
Continue rinsing.
If eye irritation persists: get medical advice/attention.
Dispose of in accordance with local regulations.

Other hazards

Other hazards which do not result in classification: Burning produces obnoxious and toxic fumes. Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea.
Environmental precautions: Avoid release to the environment. See ECOLOGICAL INFORMATION, Section 12.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Mixture

<u>Chemical name</u>	<u>Common name and synonyms</u>	<u>CAS #</u>	<u>Concentration (% by weight)</u>
Dipentene	Not available.	138-86-3	5.0-10.0
Surfactant	Proprietary	Proprietary	Proprietary

The exact concentrations of the above listed chemicals are being withheld as a trade secret.

SECTION 4. FIRST-AID MEASURES

Description of first aid measures

Ingestion : IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician. Rinse mouth. Do NOT induce vomiting. Never give anything by mouth to an unconscious person. If vomiting occurs spontaneously, keep victim's head lowered (forward) to reduce the risk of aspiration.

Inhalation : If inhaled: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER or doctor/physician if you feel unwell.

Skin contact : IF ON SKIN: Wash with plenty of soap and water. Take off contaminated clothing and wash before re-use. If skin irritation or rash occurs: Get medical advice/attention.

Eye contact : IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: get medical advice/attention.

Most important symptoms and effects, both acute and delayed

: Causes skin irritation. Symptoms may include redness, blistering, pain and swelling.
Causes serious eye irritation. Symptoms may include tearing, redness and discomfort.
May cause an allergic skin reaction (e.g. swelling, rash and eczema).

Indication of any immediate medical attention and special treatment needed

: Treat symptomatically.

SECTION 5. FIRE-FIGHTING MEASURES

Extinguishing media

Suitable extinguishing media

: Dry chemical, foam, carbon dioxide and water fog.



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Unsuitable extinguishing media

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

Special hazards arising from the substance or mixture / Conditions of flammability

- : Closed containers may build up pressure when exposed to heat and flame.

Flammability classification (OSHA 29 CFR 1910.106)

- : Not flammable.

Hazardous combustion products

- : Carbon monoxide, carbon dioxide, reactive hydrocarbons, aldehydes and other irritant gases, which may include toxic constituents.

Special protective equipment and precautions for firefighters

Protective equipment for fire-fighters

- : Firefighters must use standard protective equipment including flame retardant coat, helmet with face shield, gloves, rubber boots, and in enclosed spaces, SCBA. Firefighters should wear proper protective equipment and self-contained breathing apparatus with full face piece operated in positive pressure mode.

Special fire-fighting procedures

- : Move containers from fire area if safe to do so. Cool closed containers exposed to fire with water spray. Prevent runoff from fire control or dilution from entering sewers, drains, drinking water supply or any natural waterway. Dike for water control.

SECTION 6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

- : Evacuate personnel to safe areas. Keep all other personnel upwind and away from the spill/release. All persons dealing with clean-up should wear the appropriate protective equipment including self-contained breathing apparatus. Restrict access to area until completion of clean-up. Refer to protective measures listed in sections 7 and 8.

Environmental precautions : Ensure spilled product does not enter drains, sewers, waterways, or confined spaces. If necessary, dike well ahead of the spill to prevent runoff into drains, sewers, or any natural waterway or drinking supply.

Methods and material for containment and cleaning up

- : Ventilate the area. Remove all sources of ignition. Prevent further leakage or spillage if safe to do so. Use only non-sparking tools. Bond and ground transfer containers and equipment to avoid static accumulation. For spilled liquids: absorb spill with inert, non-combustible material such as sand, then place into suitable containers. Do not use combustible absorbents, such as sawdust. Pick up and transfer to properly labeled containers. Contaminated absorbent material may pose the same hazards as the spilled product. Contact the proper local authorities.

Special spill response procedures

- : If a spill/release in excess of the EPA reportable quantity is made into the environment, immediately notify the National Response Center in the United States (phone: 1-800-424-8802).

SECTION 7. HANDLING AND STORAGE

Precautions for safe handling

- : Use only outdoors or in a well-ventilated area. Keep away from flames and hot surfaces. - No smoking. Wear protective gloves/clothing and eye/face protection. Avoid breathing fumes, mists or vapors. Do not eat, drink or smoke when using this product. Do not ingest. Avoid contact with skin, eyes and clothing. Wash thoroughly after handling. Avoid contact with incompatible materials.

Conditions for safe storage : Store in a well ventilated place. Keep cool. Keep container tightly closed. Store locked up. Store away from incompatibles and out of direct sunlight. Storage area should be clearly identified, clear of obstruction and accessible only to trained and authorized personnel. Inspect periodically for damage or leaks. No smoking in the area.



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Incompatible materials : Strong oxidizing agents; Acids

SECTION 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

<u>Exposure Limits:</u>				
<u>Chemical Name</u>	<u>ACGIH TLV</u>		<u>OSHA PEL</u>	
	<u>TWA</u>	<u>STEL</u>	<u>PEL</u>	<u>STEL</u>
Dipentene	N/Av	N/Av	N/Av	N/Av
Surfactant	N/Av	N/Av	N/Av	N/Av

Exposure controls

Ventilation and engineering measures

: Use only outdoors or in a well-ventilated area. Apply technical measures to comply with the occupational exposure limits. Where reasonably practicable this should be achieved by the use of local exhaust ventilation and good general extraction. Use non-sparking equipment. In case of insufficient ventilation wear suitable respiratory equipment.

Respiratory protection

: If engineering controls and work practices are not effective in controlling exposure to this material, then wear suitable approved respiratory protection. If the TLV is exceeded, a NIOSH/MSHA-approved respirator is advised. Respirators should be selected based on the form and concentration of contaminants in air, and in accordance with OSHA (29 CFR 1910.134) or CSA Z94.4-02.

Skin protection

: Wear protective gloves. Where extensive exposure to product is possible, use resistant coveralls, apron and boots to prevent contact. The suitability for a specific workplace should be discussed with the producers of the protective gloves.

Eye / face protection

: Wear eye/face protection. Wear safety glasses with side shields (or goggles).

Other protective equipment

: Ensure that eyewash stations and safety showers are close to the workstation location. Other equipment may be required depending on workplace standards.

General hygiene considerations

: Avoid breathing fumes, mists or vapors. Avoid contact with skin, eyes and clothing. Do not eat, drink, smoke or use cosmetics while working with this product. Upon completion of work, wash hands before eating, drinking, smoking or use of toilet facilities. Remove and wash contaminated clothing before re-use. Handle in accordance with good industrial hygiene and safety practice.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance : Clear colorless to pale yellow liquid.

Odour : Characteristic odor.

Odour threshold : N/Av

pH : N/Av

Melting Point/Freezing point : 7.2°C

Initial boiling point and boiling range : 100°C

Flash point : 119°C

Flashpoint (Method) : Tag closed cup

Evaporation rate (BuAe = 1) : <1

Flammability (solid, gas) : N/Av



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Lower flammable limit (% by vol.)
: N/Av

Upper flammable limit (% by vol.)
: N/Av

Oxidizing properties : None.

Explosive properties : Not explosive

Vapour pressure : N/Av

Vapour density : N/Av

Relative density / Specific gravity
: 7.1-7.3 lbs/gal

Solubility in water : N/Av

Other solubility(ies) : N/Av

Partition coefficient: n-octanol/water or Coefficient of water/oil distribution
: N/Av

Auto-ignition temperature : N/Av

Decomposition temperature : N/Av

Viscosity : N/Av

Volatiles (% by weight) : >10%

Volatile organic Compounds (VOC's)
: N/Av

Absolute pressure of container
: N/Av

Flame projection length : N/Av

Other physical/chemical comments
: None reported by the manufacturer.

SECTION 10. STABILITY AND REACTIVITY

Reactivity : Not normally reactive.

Chemical stability : Stable under normal conditions.

Possibility of hazardous reactions
: No dangerous reaction known under conditions of normal use.

Conditions to avoid : Avoid heat and open flame. Keep away from direct sunlight. Ensure adequate ventilation, especially in confined areas. Avoid contact with incompatible materials.

Incompatible materials : Strong oxidizing agents, Acids

Hazardous decomposition products
: Carbon oxides

SECTION 11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure:

Routes of entry inhalation : YES

Routes of entry skin & eye : YES

Routes of entry Ingestion : YES

Routes of exposure skin absorption
: NO



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Potential Health Effects:

Signs and symptoms of short-term (acute) exposure

Sign and symptoms Inhalation

: Mild respiratory irritant

Sign and symptoms ingestion

: Ingestion may irritate digestive tract and cause nausea, vomiting and diarrhea.

Sign and symptoms skin

: Causes skin irritation. Symptoms may include redness, blistering, pain and swelling.

Sign and symptoms eyes

: Causes serious eye irritation. Symptoms may include tearing, redness and discomfort.

Potential Chronic Health Effects

: None known or reported by the manufacturer.

Mutagenicity

: Not expected to be mutagenic in humans.

Carcinogenicity

: Not classifiable as a human carcinogen.

Reproductive effects & Teratogenicity

: Not expected to cause reproductive effects.

Sensitization to material

: Not expected to be a skin sensitizer.
Not expected to be a respiratory sensitizer.

Specific target organ effects : According to the classification criteria of U.S. OSHA regulations (29CFR 1910.1200) (Hazcom 2012) and Canadian WHMIS regulations (Hazardous Products Regulations) (WHMIS 2015), this product is not expected to cause target organ toxicity through single or repeated exposures.

Medical conditions aggravated by overexposure

: Pre-existing skin, eye, respiratory and central nervous system disorders.

Synergistic materials

: None reported by the manufacturer.

Toxicological data

: There is no available data for the product itself, only for the ingredients. See below for individual ingredient acute toxicity data.

The calculated ATE values for this mixture are:

ATE oral = >5000mg/kg

ATE dermal = >5000mg/kg

ATE inhalation (vapours) =>50 mg/L

See below for individual ingredient acute toxicity data.

<u>Chemical name</u>	<u>LC₅₀(4hr)</u>	<u>LD₅₀</u>	
	<u>inh, rat</u>	<u>(Oral, rat)</u>	<u>(Rabbit, dermal)</u>
Dipentene	N/Av	5300 mg/kg	N/Av
Surfactant	Not available.	1378mg/kg	>2000mg/kg

Other important toxicological hazards

: None known or reported by the manufacturer.

SECTION 12. ECOLOGICAL INFORMATION

Ecotoxicity

: Not expected to be harmful to aquatic organisms. See the following tables for individual ingredient ecotoxicity data.



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Ecotoxicity data:

<u>Ingredients</u>	CAS #	Toxicity to Fish		
		LC50 / 96h	NOEC / 21 day	M Factor
Dipentene	138-86-3	80 mg/L	N/Av	None.
Surfactant	Proprietary	8.5mg/L	Not available.	Not available.

<u>Ingredients</u>	CAS #	Toxicity to Daphnia		
		EC50 / 48h	NOEC / 21 day	M Factor
Dipentene	138-86-3	17 mg/L	N/Av	None.
Surfactant	Proprietary	5.3mg/L	Not available.	Not available.

<u>Ingredients</u>	CAS #	Toxicity to Algae		
		EC50 / 96h or 72h	NOEC / 96h or 72h	M Factor
Dipentene	138-86-3	N/Av	N/Av	None.
Surfactant	Proprietary	Not available.	Not available.	Not available.

Persistence and degradability

: No data is available on the product itself.

Bioaccumulation potential

: No data is available on the product itself. See the following data for ingredient information.

<u>Components</u>	<u>Partition coefficient n-octanol/water (log Kow)</u>	<u>Bioconcentration factor (BCF)</u>
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Mobility in soil

: No data is available on the product itself.

Other Adverse Environmental effects

: The ecological characteristics of this product have not been fully investigated.

SECTION 13. DISPOSAL CONSIDERATIONS

Handling for Disposal

: Handle in accordance with good industrial hygiene and safety practice. Refer to protective measures listed in sections 7 and 8.

Methods of Disposal

: Dispose in accordance with all applicable federal, state, provincial and local regulations.

RCRA





: If this product, as supplied, becomes a waste in the United States, it may meet the criteria of a hazardous waste as defined under RCRA, Title 40 CFR 261. It is the responsibility of the waste generator to determine the proper waste identification and disposal method.



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SECTION 14. TRANSPORT INFORMATION

Regulatory Information	UN Number	UN proper shipping name	Transport hazard class(es)	Packing Group	Label
49CFR/DOT	None.	Not regulated.	not regulated	none	
49CFR/DOT Additional information	None.				
TDG	None	Not regulated.	not regulated	none	
TDG Additional information	This product meets the criteria for an environmentally hazardous material according to the IMDG Code.				
IMDG	None.	Not regulated.	not regulated	none	
IMDG Additional information	None.				
ICAO/IATA	None.	Not regulated.	not regulated	none	
ICAO/IATA Additional information	None.				

Special precautions for user : Keep away from flames and hot surfaces. - No smoking.

Environmental hazards : This product does not meet the criteria for an environmentally hazardous mixture, according to the IMDG Code. See ECOLOGICAL INFORMATION, Section 12.

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

: Not available.

SECTION 15 - REGULATORY INFORMATION

US Federal Information:

Components listed below are present on the following U.S. Federal chemical lists:

<u>Ingredients</u>	CAS #	TSCA Inventory	CERCLA Reportable Quantity(RQ) (40 CFR 117.302):	SARA TITLE III: Sec. 302, Extremely Hazardous Substance, 40 CFR 355:	SARA TITLE III: Sec. 313, 40 CFR 372, Specific Toxic Chemical	
					Toxic Chemical	de minimus Concentration
Dipentene	138-86-3	Yes	N/Ap	N/Av	No	N/Ap
Surfactant	Proprietary	Yes	None.	None.	No	N/Ap

SARA TITLE III: Sec. 311 and 312, SDS Requirements, 40 CFR 370 Hazard Classes: Flammable; Skin sensitization; Skin irritation ; Eye irritation;



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US State Right to Know Laws:

The following chemicals are specifically listed by individual States:

<u>Ingredients</u>	CAS #	California Proposition 65		State "Right to Know" Lists					
		Listed	Type of Toxicity	CA	MA	MN	NJ	PA	RI
Dipentene	138-86-3	No	N/Ap	No	No	No	Yes	No	No
Surfactant	Proprietary	No	N/Ap	No	No	No	No	No	No

California Proposition 65: Methanol

Canadian Information:

Canadian Environmental Protection Act (CEPA) information: All ingredients listed appear on the Domestic Substances List (DSL).

International Information:

Components listed below are present on the following International Inventory list:

<u>Ingredients</u>	CAS #	European EINECS	Australia AICS	Philippines PICCS	Japan ENCS	Korea KECI/KECL	China IECSC	NewZealand IOC
Dipentene	138-86-3	205-341-0	Present	Present	(7)-988; (3)-2245; (3)-2226	KE-24396	Present	HSR001142
Surfactant	Proprietary	Present	Present	Present	Present	Present	Present	Present

SECTION 16. OTHER INFORMATION

Legend

- : ACGIH: American Conference of Governmental Industrial Hygienists
- AICS: Australian Inventory of Chemical Substances
- CAS: Chemical Abstract Services
- CERCLA: Comprehensive Environmental Response, Compensation, and Liability Act of 1980
- CSA: Canadian Standards Association
- DOT: Department of Transportation
- EC50: Effective Concentration 50%
- ENCS: Existing and New Chemical Substances
- EPA: Environmental Protection Agency
- IARC: International Agency for Research on Cancer
- IMDG: International Maritime Dangerous Goods
- KECI: Korean Existing Chemicals Inventory
- KECL: Korean Existing Chemicals List
- LC: Lethal Concentration /LD: Lethal Dose
- N/Ap: Not Applicable / N/Av: Not Available
- NIOSH: National Institute of Occupational Safety and Health
- NTP: National Toxicology Program
- NOEC: No observable effect concentration
- NTP: National Toxicology Program
- OECD: Organisation for Economic Co-operation and Development
- OSHA: Occupational Safety and Health Administration
- PEL: Permissible exposure limit
- PICCS: Philippine Inventory of Chemicals and Chemical Substances
- SARA: Superfund Amendments and Reauthorization Act



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STEL: Short Term Exposure Limit
 TDG: Canadian Transportation of Dangerous Goods Act & Regulations
 TLV: Threshold Limit Values
 TPQ: Threshold Planning Quantity
 TSCA: Toxic Substance Control Act
 TWA: Time Weighted Average

- References** :
1. ACGIH, Threshold Limit Values for Chemical Substances and Physical Agents & Biological Exposure Indices
 2. ECHA - European Chemical Agency
 3. Canadian Centre for Occupational Health and Safety, CCInfoWeb databases
 4. Safety Data Sheets from manufacturer.
 5. US EPA Title III List of Lists
 6. California Proposition 65 List
 7. OECD - The Global Portal to Information on Chemical Substances - eChemPortal

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Other special considerations for handling
 : Provide adequate information, instruction and training for operators.

<p><u>Prepared for:</u> BioBased Spray Systems, LLC 2506 Fair Rd Sidney, OH 45365-7523 (937) 498 9803</p>	
<p><u>Prepared by:</u> ICC The Compliance Center Inc. Telephone: (888) 442-9628 (U.S.); (888) 977-4834 (Canada) http://www.thecompliancecenter.com</p>	

DISCLAIMER

The information in the Safety Data Sheet is offered for your consideration and guidance when exposed to this product. BioBased Spray Systems, LLC, Inc expressly disclaim all expressed or implied warranties and assume no responsibilities for the accuracy or completeness of the data contained herein. The data in this SDS does not apply to use with any other product or in any other process. This Safety Data Sheet may not be changed, or altered in any way without the expressed knowledge and permission of BioBased Spray Systems, LLC

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