

Molecule[®] [JSS]

PAVER JOINT STABILIZER & SEALER

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FEATURES & BENEFITS:

Molecule [JSS] Joint Stabilizer & Sealer from TechniSoil represents next-generation water-based sealer technology specifically designed for paver applications. Its hybrid formula provides robust stain resistance without leaving a film and locks paver joint sand in place. Molecule [JSS] is VOC-free, ready-to-use out of the bottle, and easy to apply using a common handheld pump sprayer and squeegee. One single application reduces staining from vehicle tires, debris, and most liquids while limiting freeze-thaw damage in harsh, cold weather climates.

- Next-Generation sealer technology
- Penetrating surface protectant
- Hybrid stabilizing polymer for paver sand joints up to ¼" wide
- Tire tracking & stain resistance
- Diamond clarity matte finish
- Reduces freeze-thaw damage
- Breathable stain repellency
- Ready-to-Use out of the bottle
- Easy pump sprayer application
- Quick drying action limits downtime
- For use on residential & commercial paver driveways, walkways, & patios

COVERAGE RATES:

Porous pavers, bricks, & natural stone (up to ¼" joints) - 150 Ft² / Gallon

Dense pavers, bricks, & natural stone (up to ¼" joints) - 250 Ft² / Gallon

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Innovation For Modern Landscapes

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TechniSoil Global Inc. encourages and expects you to read and understand the entire (M)SDS, as there is important information throughout the document. We expect you to follow the precautions identified in this document unless your use conditions would necessitate other appropriate methods or actions.

1. IDENTIFICATION

Product name: Molecule [JSS] Joint Stabilizer & Sealer

Recommended use of the chemical and restrictions on use

Identified uses: Coatings product

COMPANY IDENTIFICATION

TechniSoil Global, Inc.
5660 Westside Road
Redding, CA, USA 96001

Customer Information Number

Toll Free: 877-356-2250

EMERGENCY TELEPHONE NUMBER

24-Hour Emergency Contact: 800-424-9300
Local Emergency Contact: 800-424-9300

2. HAZARD IDENTIFICATION

Hazard classification

This material is hazardous under the criteria of the Federal OSHA Hazard Communication Standard 29CFR 1910.1200.

Skin sensitisation - Category 1

Carcinogenicity - Category 2

Label elements

Hazard pictograms



Signal word: **WARNING!**

Hazards

May cause an allergic skin reaction.

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Suspected of causing cancer.

Precautionary statements**Prevention**

Obtain special instructions before use.

Do not handle until all safety precautions have been read and understood.

Avoid breathing dust/ fume/ gas/ mist/ vapours/ spray.

Contaminated work clothing should not be allowed out of the workplace.

Wear protective gloves/ protective clothing/ eye protection/ face protection.

Response

IF ON SKIN: Wash with plenty of soap and water.

IF exposed or concerned: Get medical advice/ attention.

If skin irritation or rash occurs: Get medical advice/ attention.

Wash contaminated clothing before reuse.

Storage

Store locked up.

Disposal

Dispose of contents/ container to an approved waste disposal plant.

Other hazards

No data available

3. COMPOSITION / INFORMATION ON INGREDIENTS**Chemical nature:** Polymers, water based. This product is a mixture

Proprietary Polymer Blend	4 - 16%
Proprietary Polymer Blend	4 - 16%
Water	68 - 92%

4. FIRST AID MEASURES**Description of first aid measures**

General advice: First Aid responders should pay attention to self-protection and use the recommended protective clothing (chemical resistant gloves, splash protection). If potential for exposure exists refer to Section 8 for specific personal protective equipment.

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Inhalation: Move person to fresh air; if effects occur, consult a physician.

Skin contact: Remove material from skin immediately by washing with soap and plenty of water. Remove contaminated clothing and shoes while washing. Seek medical attention if irritation persists. Wash clothing before reuse. Discard items which cannot be decontaminated, including leather articles such as shoes, belts and watchbands.

Eye contact: Flush eyes thoroughly with water for several minutes. Remove contact lenses after the initial 1-2 minutes and continue flushing for several additional minutes. If effects occur, consult a physician, preferably an ophthalmologist.

Ingestion: Rinse mouth with water. Do not induce vomiting. Consult a doctor in case of complaints.

Most important symptoms and effects, both acute and delayed: Aside from the information found under Description of first aid measures (above) and Indication of immediate medical attention and special treatment needed (below), any additional important symptoms and effects are described in Section 11: Toxicology Information.

Indication of any immediate medical attention and special treatment needed

Notes to physician: No specific antidote. Treatment of exposure should be directed at the control of symptoms and the clinical condition of the patient.

5. **FIREFIGHTING MEASURES**

Suitable extinguishing media: Use extinguishing media appropriate for surrounding fire.

Unsuitable extinguishing media: No data available

Special hazards arising from the substance or mixture

Hazardous combustion products: Formation of toxic gases is possible during heating or in case of fire.

Unusual Fire and Explosion Hazards: Material can splatter above 100C/212F. Dried product can burn.

Advice for firefighters

Fire Fighting Procedures: No data available.

Special protective equipment for firefighters: Wear self-contained breathing apparatus and protective suit

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6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures: Use personal protective equipment. Keep people away from and upwind of spill/leak. Material can create slippery conditions. Keep out unauthorized persons. Avoid contact with eyes and skin.

Environmental precautions: CAUTION: Keep spills and cleaning runoff out of municipal sewers and open bodies of water.

Methods and materials for containment and cleaning up: Contain spills immediately with inert materials (e.g., sand, earth). Transfer liquids and solid diking material to separate suitable containers for recovery or disposal.

7. HANDLING AND STORAGE

Precautions for safe handling: Avoid contact with eyes, skin and clothing. Wash thoroughly after handling. Keep container tightly closed. Do not breathe vapors, mist or gas. Keep ignition sources away- Do not smoke.

Conditions for safe storage: Keep from freezing - product stability may be affected. STIR WELL BEFORE USE.

Storage stability

Storage temperature: 1 - 49 °C (34 - 120 °F)

Other data: Monomer vapors can be evolved when material is heated during processing operations. See SECTION 8, for types of ventilation required. Protect from heat and direct sunlight.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Control parameters

Exposure limits are listed below, if they exist.

Component	Regulation	Type of listing	Value Notation
Aqua Ammonia	DOW IHG	TWA	10 ppm
	DOW IHG	STEL	30ppm

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	OSHA Z-1	TWA	35 mg/m3 50ppm
	ACGIH	TWA	25ppm, Ammonia
	ACGIH	STEL	35ppm, Ammonia
	CAL PEL	PEL	18 mg/m3 25ppm
	CAL PEL	STEL	27 mg/m3 35ppm
Diphenyl Ketone	DOW IHG	TWA	5 mg/m3
	DOW IHG	STEL	10 mg/m3
	US WEEL	TWA	0.5 mg/m3
1,2-Benzisothiazolin-3-one	DOW IHG	TWA	0.06 mg/m3
	DOW IHG	STEL	0.1 mg/m3

Exposure controls

Engineering controls: Use local exhaust ventilation, or other engineering controls to maintain airborne levels below exposure limit requirements or guidelines. If there are no applicable exposure limit requirements or guidelines, general ventilation should be sufficient for most operations. Local exhaust ventilation may be necessary for some operations.

Individual protection measures

Eye/face protection: Use safety glasses (with side shields).

Skin protection

Hand protection: Use gloves chemically resistant to this material. Examples of preferred glove barrier materials include: Chlorinated polyethylene. Polyethylene. Ethyl vinyl alcohol laminate ("EVAL"). Styrene/butadiene rubber. Examples of acceptable glove barrier materials include: Butyl rubber. Natural rubber ("latex"). Nitrile/butadiene rubber ("nitrile" or "NBR"). Polyvinyl chloride ("PVC" or "vinyl"). Viton. Avoid gloves made of: Neoprene. Polyvinyl alcohol ("PVA"). NOTICE: The selection of a specific glove for a particular application and duration of use in a workplace should also take into account all relevant workplace factors such as, but not limited to: Other chemicals which may be handled, physical requirements (cut/puncture protection, dexterity, thermal protection), potential body reactions to glove materials, as well as the instructions/specifications provided by the glove supplier.

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Other protection: Use protective clothing chemically resistant to this material. Selection of specific items such as face shield, boots, apron, or full body suit will depend on the task.

Respiratory protection: Respiratory protection should be worn when there is a potential to exceed the exposure limit requirements or guidelines. If there are no applicable exposure limit requirements or guidelines, wear respiratory protection when adverse effects, such as respiratory irritation or discomfort have been experienced, or where indicated by your risk assessment process. For most conditions, no respiratory protection should be needed; however, if material is heated or sprayed, use an approved air-purifying respirator. The following should be effective types of air-purifying respirators: Organic vapor cartridge with a particulate pre-filter.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	
Physical state	Liquid
Color	Milky white
Odor	Sweet Ammonia
Odor Threshold	No data available
pH	7.2
Melting point/range	0 °C (32 °F) Water
Freezing point	No data available
Boiling point (760 mmHg)	100 °C (212 °F) Water
Flash point	Noncombustable
Evaporation Rate (Butyl Acetate = 1)	<1 Water
Flammability (solid, gas)	Not Applicable
Lower explosion limit	Not Applicable
Upper explosion limit	Not Applicable
Vapor Pressure	17 mmHg at 20 °C (68 °F) Water

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Relative Vapor Density (air = 1)	<1 Water
Relative Density (water = 1)	1.0 - 1.2
Water solubility	Dilutable
Partition coefficient: n- octanol/water	No data available
Auto-ignition temperature	Not applicable
Decomposition temperature	No data available
Dynamic Viscosity	5 - 125 mPa.s
Kinematic Viscosity	No data available
Explosive properties	No data available
Oxidizing properties	No data available
Molecular weight	No data available
Percent volatility	54 - 56 % Water

NOTE: The physical data presented above are typical values and should not be construed as a specification.

10. STABILITY AND REACTIVITY

Reactivity: No data available

Chemical stability: Stable

Possibility of hazardous reactions: Product will not undergo polymerization.

Conditions to avoid: Keep away from heat, sparks, flame, high temperature

Incompatible materials: There are no known materials which are incompatible with this product.

Hazardous decomposition products: Thermal decomposition may yield acrylic monomers. Danger of toxic fluorine based pyrolysis products

11. TOXICOLOGICAL INFORMATION

Acute toxicity

Acute oral toxicity

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Very low toxicity if swallowed. Harmful effects not anticipated from swallowing small amounts.

For this family of materials:

LD50, Rat, > 5,000 mg/kg

Acute dermal toxicity

Prolonged skin contact is unlikely to result in absorption of harmful amounts.

For this family of materials:

LD50, Rat, > 2,000 mg/kg No deaths occurred at this concentration.

Acute inhalation toxicity

With good ventilation, single exposure is not expected to cause adverse effects. If material is heated or areas are poorly ventilated, vapor/mist may accumulate and cause respiratory irritation and symptoms such as headache and nausea.

For this family of materials: The LC50 has not been determined.

Skin corrosion/irritation

Brief contact is essentially nonirritating to skin.

Serious eye damage/eye irritation

Essentially nonirritating to eyes. Corneal injury is unlikely.

Sensitization

Based on information for component(s):

Skin contact may cause an allergic skin reaction.

For respiratory sensitization: No relevant data found.

Specific Target Organ Systemic Toxicity (Single Exposure)

Evaluation of available data suggests that this material is not an STOT-SE toxicant.

Specific Target Organ Systemic Toxicity (Repeated Exposure)

No relevant data found.

Carcinogenicity

Contains component(s) which have caused cancer in laboratory animals.

Teratogenicity

No relevant data found.

Reproductive toxicity

No relevant data found.

Mutagenicity

For this family of materials: In vitro genetic toxicity studies were negative.

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Aspiration Hazard

Based on physical properties, not likely to be an aspiration hazard.

COMPONENTS INFLUENCING TOXICOLOGY:

Acrylic polymer(s)

Acute inhalation toxicity

The LC50 has not been determined.

Residual monomers

Acute inhalation toxicity

The LC50 has not been determined.

Aqua ammonia

Acute inhalation toxicity

LC50, Rat, male, 1 Hour, dust/mist, 9.850 mg/l

Diphenyl Ketone

Acute inhalation toxicity

The LC50 has not been determined.

1,2-Benzisothiazolin-3-one

Acute inhalation toxicity

The LC50 has not been determined.

Carcinogenicity

Component

List

Classification

Diphenyl Ketone

IARC

Group 2B: Possibly carcinogenic to humans

12. ECOLOGICAL INFORMATION

Toxicity

Acute toxicity to fish

For this family of materials:

Material is practically non-toxic to aquatic organisms on an acute basis (LC50/EC50/EL50/LL50 >100 mg/L in the most sensitive species tested). Based on information for component(s):

May cause long-term adverse effects in the aquatic environment.

For this family of materials:

LC50, Oncorhynchus mykiss (rainbow trout), 96 Hour, > 1,000 mg/l

Acute toxicity to aquatic invertebrates

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For this family of materials:

EC50, Daphnia magna (Water flea), 48 Hour, > 1,000 mg/l

Persistence and degradability

Biodegradability: Although the polymers are not biodegradable, they would likely be removed in biological wastewater treatment plants by adsorption to biosolids.

Bioaccumulative potential

Bioaccumulation: No bioconcentration of the polymeric component is expected because of its high molecular weight. Polymeric dispersions will color water a milky white.

Mobility in soil

No relevant data found.

13. DISPOSAL CONSIDERATIONS

Disposal methods: Coagulate the emulsion by the stepwise addition of ferric chloride and lime. Remove the clear supernatant and flush to a chemical sewer. For disposal, incinerate or landfill at a permitted facility in accordance with local, state, and federal regulations.

14. TRANSPORT INFORMATION

DOT: Not regulated for transport

Classification for SEA transport (IMO-IMDG): Not regulated for transport

Consult IMO regulations before transporting ocean bulk

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

Classification for AIR transport (IATA/ICAO): Not regulated for transport

This information is not intended to convey all specific regulatory or operational requirements/information relating to this product. Transportation classifications may vary by container volume and may be influenced by regional or country variations in regulations. Additional transportation system information can be obtained through an authorized sales or customer service representative. It is the responsibility of the transporting organization to follow all applicable laws, regulations and rules relating to the transportation of the material.

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This product is considered hazardous under the OSHA Hazard Communication Standard (29 CFR 1910.1200).

Superfund Amendments and Reauthorization Act of 1986 Title III (Emergency Planning and Community Right-to-Know Act of 1986) Sections 311 and 312

Chronic Health Hazard

Superfund Amendments and Reauthorization Act of 1986 Title III (Emergency Planning and Community Right-to-Know Act of 1986) Section 313

This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA) Section 103

Calculated RQ exceeds reasonably attainable upper limit.

Components	CASRN	RQ (RCRA Code)
Aqua ammonia	1336-21-6	100 lbs RQ

Pennsylvania

Any material listed as "Not Hazardous" in the CAS REG NO. column of SECTION 2, Composition/Information On Ingredients, of this MSDS is a trade secret under the provisions of the Pennsylvania Worker and Community Right-to-Know Act.

California (Proposition 65)

This product contains a component or components known to the state of California to cause cancer:

Components	CASRN
Diphenyl Ketone	119-61-9

California (Proposition 65)

This product contains trace levels of a component or components known to the state of California to cause cancer:

Components	CASRN
Acrylonitrile	107-13-1

United States TSCA Inventory (TSCA)

All components of this product are produced in compliance with the requirements of the U.S. Toxic Substances Control Act (TSCA) and are either listed on or are exempt from listing on the Inventory. For certain polymeric substances, the Polymer Exemption cited at 40 CFR723.250 may apply.

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*Chronic Effects (See Hazards Identifier)

Legend:

DOW IHG	Dow Industrial Hygiene Guideline
ACGIH	USA. ACGIH Threshold Limit Values (TLV)
OSHA Z-1	USA. Occupational Exposure Limits (OSHA) - Table Z-1 Limits for Air Contaminants
PEL	Permissible Exposure Limit
STEL	Short Term Exposure Limit
TWAL	Time Weighted Average
US WEEL	USA Workplace Environmental Exposure Levels

The product is for the industrial use only. We do not guarantee the safety in case the product is used for the other purposes. When using the product for healthcare application or food/feed application, consult us in advance.

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

TechniSoil Global Inc. urges each customer or recipient of this (M)SDS to study it carefully and consult appropriate expertise, as necessary or appropriate, to become aware of and understand the data contained in this (M)SDS and any hazards associated with the product. The information herein is provided in good faith and believed to be accurate as of the effective date shown above. However, no warranty, express or implied, is given. Regulatory requirements are subject to change and may differ between various locations. It is the buyer's/user's responsibility to ensure that his activities comply with all federal, state, provincial or local laws. The information presented here pertains only to the product as shipped. Since conditions for use of the product are not under the control of the manufacturer, it is the

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buyer's/user's duty to determine the conditions necessary for the safe use of this product. Due to the proliferation of sources for information such as manufacturer- specific (M)SDSs, we are not and cannot be responsible for (M)SDSs obtained from any source other than ourselves. If you have obtained an (M)SDS from another source or if you are not sure that the (M)SDS you have is current, please contact us for the most current version.