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BULK

BIO SOLVE™ Safety Data Sheet

1. IDENTIFICATION

Product Name: BIO SOLVE™
Product Numbers: 31101, 31102, 31103, 31104, 31105
Product Type and Use: Bio-based Asphalt and Tar Remover
Manufacturer: U.S. Corrosion Technologies, LLC
2638 National Drive, Garland, TX 75041
Contact: Telephone: 972-271-7361 Fax: 972-278-9721
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2. HAZARDS IDENTIFICATION

Hazard Classification

Health Hazard(s)

Skin Irritation Category 2
Eye Irritation Category 2A
STOT-SE Category 3

Physical Hazard(s)

Flammable Liquids Category 4

Hazard(s) not otherwise classified

Aspiration Hazard Category 1

Labeling

Signal Word: DANGER
Pictograms: Exclamation Mark, Health Hazard

Statements of Hazard

Hazard Statements

Combustible liquid
Causes skin and serious eye irritation
May cause an allergic skin reaction
May cause drowsiness and dizziness
May be fatal if swallowed and enters airways

Precautionary Statements

Store in a well-ventilated place. Keep cool. Keep away from flames and hot surfaces – No smoking. In case of fire: Use carbon dioxide, dry chemical, or foam to extinguish. Use only outdoors or in a well-ventilated area. Avoid breathing mist and vapors. Wear eye protection and protective gloves. Wash hands thoroughly after handling. Take off contaminated clothing and wash it before reuse. Contaminated work clothing must not be allowed out of the workplace. Dispose of contents and container in accordance with applicable regulations. Store locked up.
If on skin: Wash with plenty of water. 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.
If inhaled: Remove person to fresh air and keep comfortable for breathing. Call a doctor if you feel unwell.
If swallowed: Rinse mouth. Do NOT induce vomiting. Immediately call a doctor or poison center.

3. COMPOSITION / INFORMATION ON INGREDIENTS

Chemical Name	CAS Number	Percent by Wt.
D-Limonene	5989-27-5	20-30*
Nonylphenol ethoxylate	9016-45-9	5-10*

* Exact percentage of composition has been withheld as a trade secret

4. FIRST AID MEASURES

General Advice: Causes skin and serious eye irritation. Avoid skin and eye contact. Aspiration hazard; do not swallow. May cause lung damage. Use with adequate ventilation. Avoid breathing mist or vapors. Prolonged or repeated inhalation may cause dizziness and drowsiness. Keep container closed.

Inhalation: Remove from exposure area. Remove to fresh air. Give artificial respiration if not breathing. Get medical attention.

Skin Contact: Wipe excess from skin; remove contaminated clothing. Wash with soap and water. Seek medical attention if irritation persists.

Eye Contact: Flush eyes with plenty of water for 15 minutes while holding eyelids open. Seek medical attention if irritation persists.

Ingestion: Rinse mouth. Do NOT induce vomiting. Immediately call a physician or poison control center.

5. FIRE FIGHTING MEASURES

Extinguishing Media: Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

Suitable: Carbon Dioxide, Dry Chemical, and Foam

Unsuitable: Alcohol, Alcohol based solutions, any other media not listed above.

Fire Fighting Procedures: As in any fire, wear self-contained breathing apparatus, pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

Unusual Fire and Explosion Hazards: Solvent vapors are heavier than air and may travel to distant, low lying sources of ignition and may ignite and explode. Soaked rags or spill absorbents (i.e. oil dry, polypropylene socks, etc.) can cause spontaneous combustion if stored near combustibles and not handled properly. Store soaked rags or spill absorbents in approved safety containers and dispose of properly. Soaked rags may be washed with soap and water and allowed to dry in well ventilated area.

Hazardous Combustion/ Decomposition Products: Oxides of carbon.

6. ACCIDENTAL RELEASE MEASURES

Personal Precautions / Protective Equipment / Emergency Procedures: Use caution as spills may be slippery. Ensure adequate ventilation. Use personal protective equipment. Remove all sources of ignition and take precautionary measures against static discharges.

Methods and materials for containment and cleaning up: Do not flush into surface water or sanitary sewer system. Dike and contain spillage. Soak up with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite). Use clean non-sparking tools to collect absorbed material and transfer to a properly labeled container for disposal according to applicable regulations.

7. HANDLING AND STORAGE

HANDLING

Precautions for Safe Handling: Avoid skin and eye contact. Use with adequate ventilation. Avoid breathing mist or vapors. Follow all SDS/label precautions even after container is empty due to residue.

STORAGE

Conditions to avoid: Store in a cool, dry, well-ventilated place in the original container. Keep container tightly closed when not in use. Avoid excess heating, high temperatures, sparks, hot surfaces, open flames, and all other sources of ignition.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

EXPOSURE LIMITS

D-Limonene: 30 ppm (8 hr TWA) AIHA Standard

Engineering Controls: Use outdoors or with local exhaust ventilation. Ensure adequate ventilation, especially in confined areas.

Personal Protection

Respiratory Protection: None required under normal use conditions. In case of insufficient ventilation and for exposures above occupational exposure limits wear a NIOSH approved air purifying respirator with organic vapor cartridge.

Hand / Skin Protection: Wear impermeable gloves such as neoprene or nitrile rubber gloves. Gauntlets and apron may be worn depending on the extent and duration of exposure.

Eye / Face Protection: Safety glasses with side-shields. An eyewash station should be available to the area of use.

General Hygiene Measures: Avoid skin and eye contact. Always wash hands and face before eating, drinking or smoking. Remove and wash contaminated clothing before re-use.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance:	Transparent	Autoignition Temperature:	261°C / 502°F
Physical State:	Non-viscous liquid	Percent Volatile by volume:	21
Odor:	Citrus	Vapor Density (Air=1) :	3.9
Color:	Brown	Evaporation Rate (BuAc=1) :	0.2
Viscosity, cSt @ 40°C:	Not established	Vapor Pressure, mmHg @23°C:	<2
cSt @ 104°C:	Not established	Solubility in water:	Emulsifiable
pH:	8.5	Octanol/Water Partition:	Not established
Boiling Point/ Range:	176°C / 349°F	VOC Content (%):	21
Melting Point:	Not established	Specific Gravity @ 22.2°C:	0.88
Flash Point:	43°C / 110°F	Pour Point:	Not established
Method:	Tag Closed Cup	Non-volatile by Volume (%):	75
Lower Explosive Limit, vol %:	0.7	Dielectric Strength (KV):	Not applicable
Upper Explosive Limit, vol %:	6.1		

10. STABILITY AND REACTIVITY

Stability: Stable at ambient temperatures.

Conditions to Avoid: Avoid high temperatures, sparks, open flame, and all other sources of ignition.

Hazardous Polymerization: Will not occur.

Materials to Avoid: Bases, acids, amines and oxidizing materials.

11. TOXICOLOGICAL INFORMATION

Acute Toxicity

Product Information: Not established

Ingredient Information

D-Limonene: Orl-Rat LD50 >5 g/kg, Skn-Rbt LD50 >5 g/kg

Nonylphenol Ethoxylate: Orl-Rat LD50 >5 g/kg, Skn-Rbt LD50 >2 g/kg

Acute Effects

Signs and Symptoms of Overexposure: Skin and Eye Irritation, Coughing/Sneezing, Dizziness, Drowsiness

Inhalation: Vapor and mist may cause respiratory irritation with nasal discomfort and discharge, coughing and sneezing. Prolonged and repeated inhalation may cause nausea, dizziness and drowsiness.

Skin Contact: May cause irritation seen as itching and redness. May cause allergic skin reaction.

Eye Contact: May cause stinging, tearing and redness.

Ingestion: May cause nausea, vomiting and diarrhea. Ingestion and subsequent vomiting may result in aspiration of the product into the lungs resulting in chemical pneumonitis, pneumonia, and pulmonary edema.

Primary Route(s) of Exposure: Eyes, Inhalation

Primary Route(s) of Entry: Inhalation, Ingestion

Target Organs: Eyes, skin, central nervous system, immune system, lungs, liver, and kidneys

Chronic Effects: Skin sensitization

Carcinogenicity: D-Limonene IARC Group 3, Not classifiable as to its carcinogenicity to humans

Medical Conditions Aggravated by Exposure: May aggravate existing skin, eye and respiratory conditions such as asthma and dermatitis.

12. ECOLOGICAL INFORMATION

Product Data: Not established

Ingredient Data

D-Limonene: Toxicity to Fish LC50 0.619 - 0.796 mg/L Pimephales promelas 96 h, LC50 = 35 mg/L Oncorhynchus mykiss 96 h

Nonylphenol Ethoxylate: Toxicity to Fish LC50 1.3 mg/L 96 hr

Elimination Information: The octanol-water partition coefficient (Kow) for d-limonene is 4.23.

13. DISPOSAL CONSIDERATIONS

Product: Dispose of in accordance with local regulations. Smaller quantities can be disposed of with household waste.
Container: Empty remaining contents. Empty containers should be taken for local recycling, recovery, or waste disposal. Empty containers may contain residues. Do not cut, weld or grind empty containers.

14. TRANSPORT INFORMATION

Road Transport

DOT Hazard Class: 3

Description: UN2052, Dipentene Solution, 3, PG III (<119 gal Combustible exception may be used)

UN-No.: UN2052

Proper Shipping Name: Dipentene Solution

Sea Transport

IMDG/GGV See Class: 3

UN-No.: UN2052

EmS: F-E, S-E

Packing Group: III

Proper Shipping Name: Dipentene

Subsidiary Shipping Hazard: P

Environmental Shipping Hazard: UN2052, Dipentene, 3 (P), PG III

Marine Pollutant: Marine Pollutant

Air Transport

ICAO/IATA Class: 3

UN-No.: UN2052

Packing Group: III

Shipping Name: Dipentene

Shipping Description: UN2052, Dipentene, 3(P), PG III

15. REGULATORY INFORMATION

U.S. Federal Regulations

Toxic Substances Control Act (TSCA): All components are included on the Inventory

Superfund Amendments and Reauthorization Act (SARA) Title III:

Immediate Hazard	Delayed Hazard	Fire Hazard	Pressure Hazard	Reactivity Hazard
X	X	X	-	-

16. OTHER INFORMATION

Prepared by: U.S. Corrosion Technologies, LLC Technical Services Department

Issue Date: 8/11/2015

Supersedes Date: 3/26/2015

Revision Indicator: Update to OSHA 2012 SDS

National Fire Protection Association (704)

Health: 1

Flammability: 2

Reactivity: 0

Other:

The information contained herein is, to the best of our knowledge and belief, accurate. However, since the conditions of handling and use are beyond our control, we make no guarantee of results and assume no liability for damage incurred by use of this material. All chemicals may present unknown health hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards which exist. Final determination of suitability of the chemical and application of such products is the sole responsibility of the user. No representations or warranties, either expressed or implied, of merchantability, fitness for a particular purpose or any other nature are made hereunder with respect to the information contained herein or the chemical to which the information refers. It is the sole responsibility of the user to comply with all applicable Federal, State and Local Laws and Regulations. Any questions with regards to information contained herein should be referred to: U. S. Corrosion Technologies, LLC (972) 271-7361.