

BIO-NATURAL PLUS

SECTION 1. IDENTIFICATION

Product Identifier	BIO-NATURAL PLUS
Other Means of Identification	BIO-NATURAL PLUS -2,-3
Other Identification	Liquid
Product Family	Solvent
Recommended Use	Citrus Based Solvent Degreaser.
Restrictions on Use	For Industrial Use Only. KEEP AWAY FROM CHILDREN.
Manufacturer/Supplier Identifier	Velocity Chemicals Ltd., Unit #1- 9515 190th Street, Surrey, B.C. CANADA, V4N3S1, 604-881-4700, www.velocitychemicals.com
Emergency Phone No.	Velocity Chemicals Ltd., 604-881-4700, M-F 7:00am to 2:30pm CANUTEC, 613-996-6666 , 24 hours/7 Days
SDS No.	0045
Date of Preparation	August 23, 2019

SECTION 2. HAZARD IDENTIFICATION

Classification

Flammable liquid - Category 3; Skin irritation - Category 2; Eye irritation - Category 2A; Skin sensitization - Category 1; Specific target organ toxicity (single exposure) - Category 3

Label Elements



Warning

Flammable liquid and vapour.
 Causes skin irritation.
 May cause an allergic skin reaction.
 May cause serious eye irritation or possible injury to eyes.
 May cause respiratory irritation.
 May cause drowsiness or dizziness.

Prevention:

Keep away from heat/sparks/open flames/hot surfaces. – No smoking.
 Use proper grounding procedures when handling.

Use only in a well-ventilated area.

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

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

Wear a NIOSH approved air-purifying respirator with an organic vapour cartridge and a particulate N95, R95, or P95 filter if mists/vapours/fumes are present.

Wash hands and skin thoroughly after handling.

Response:

Take off contaminated clothing and wash it before reuse.

IF ON SKIN: Wash with plenty of water for 15-20 minutes.

If skin irritation 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 for 15-20 minutes.

If eye irritation persists: Get medical advice/attention.

IF INHALED: If breathing is difficult, remove person to fresh air and keep comfortable for breathing.

Get medical advice/attention if you feel unwell.

Storage:

Store in a cool, dry place away from incompatibles. Do not mix with any other chemicals. Keep container closed when not in use. Keep from freezing. Keep temperatures > 4 ° C and < 30 ° C.

Disposal:

Dispose of contents and container in accordance with local, regional, national and international regulations.

Other Hazards

Repeated exposure may cause skin dryness or cracking.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Name	CAS No.	%	Other Identifiers	Other Names
d-Limonene	5989-27-5	30-60	Not applicable	
Alcohols, C9-11, ethoxylated, liquids	68439-46-3	10-30	Not applicable	
SODIUM DODECYLBENZENESULFONATE	25155-30-0	5-10	Not applicable	

Notes

Concentrations are expressed in % weight/weight.

SECTION 4. FIRST-AID MEASURES

First-aid Measures

Inhalation

Move victim to fresh air. Apply artificial respiration if necessary. Get medical advice or attention if you feel unwell or are concerned.

Skin Contact

Immediately rinse with lukewarm, gently flowing water for 15-20 minutes. If skin irritation occurs, get medical advice or attention.

Eye Contact

Immediately rinse the contaminated eye(s) with lukewarm, gently flowing water for 15-20 minutes, while holding the eyelid(s) open. If eye irritation persists, get medical advice or attention.

Ingestion

Give large amounts of water if conscious. Do not induce vomiting. Get medical advice or attention if you feel unwell or are concerned.

Most Important Symptoms and Effects, Acute and Delayed

At high concentrations if on skin: may cause moderate to severe irritation. If in eyes: causes moderate to severe irritation. Symptoms include sore, red eyes, and tearing. If inhaled: can irritate the nose and throat. Symptoms may

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include coughing, shortness of breath, difficult breathing and tightness in the chest. May cause CNS (Central Nervous System) effects. Symptoms may include headache, nausea, dizziness, drowsiness and confusion.

Immediate Medical Attention and Special Treatment

Target Organs

Skin, eyes, respiratory system.

Special Instructions

Not applicable.

Medical Conditions Aggravated by Exposure

Asthma, dermatitis, skin allergies.

SECTION 5. FIRE-FIGHTING MEASURES

Extinguishing Media

Suitable Extinguishing Media

Flammable. Use extinguishing agent suitable for surrounding fire. Use water to keep non-leaking, fire-exposed containers cool.

Unsuitable Extinguishing Media

None known.

Specific Hazards Arising from the Product

Not sensitive to static discharge.

In a fire, the following hazardous materials may be generated: very toxic carbon monoxide, carbon dioxide; corrosive sulfur oxides. other toxic vapours.

Special Protective Equipment and Precautions for Fire-fighters

Wear NIOSH/OSHA approved, self contained breathing apparatus for fire fighting situations. Use water spray to cool all nearby fire exposed surfaces.

Chemical protective clothing (e.g. chemical splash suit) and positive pressure SCBA may be necessary.

SECTION 6. ACCIDENTAL RELEASE MEASURES

Personal Precautions, Protective Equipment, and Emergency Procedures

Do not touch damaged containers or spilled product unless wearing appropriate protective equipment. Use the personal protective equipment recommended in Section 8 of this safety data sheet. Remove or isolate incompatible materials as well as other hazardous materials.

Environmental Precautions

Concentrated product: it is good practice to prevent releases into the environment.

Methods and Materials for Containment and Cleaning Up

Review Section 7 (Handling) of this safety data sheet before proceeding with clean-up. Large spills or leaks: dike spilled product to prevent runoff. Recover material by vacuum or pump into a suitable waste container. Small spills or leaks: stop or reduce leak if safe to do so. Contain and soak up spill with absorbent that does not react with spilled product. Place used absorbent into suitable, covered, labelled containers for disposal.

Reuse material if possible, or otherwise dispose in accordance with local regulations.

Other Information

Contact supplier, local fire and emergency services for help. Report spills to local health, safety and environmental authorities, as required.

SECTION 7. HANDLING AND STORAGE

Precautions for Safe Handling

Use good hygiene practices. It is good practice to: avoid breathing product; avoid skin and eye contact and wash hands after handling.

Only use where there is adequate ventilation. Wear personal protective equipment to avoid direct contact with this

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chemical. Do not get in eyes, on skin or on clothing. Avoid repeated or prolonged skin contact. Avoid generating vapours or mists. Eliminate heat and ignition sources such as sparks, open flames, hot surfaces and static discharge. Post "No Smoking" signs. Do not weld, cut or perform hot work on empty container until all traces of product have been removed. Use proper grounding procedures when handling.

Conditions for Safe Storage

Store in an area that is: cool, ventilated, separate from incompatible materials (see Section 10: Stability and Reactivity). Keep temperatures > 4 ° C and < 30 ° C. Empty containers may contain hazardous residue. Store separately. Keep closed. Follow all precautions given on this safety data sheet. Comply with all applicable health and safety regulations, fire and building codes.

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control Parameters

Chemical Name	ACGIH TLV®		OSHA PEL		AIHA WEEL	
	TWA	STEL	TWA	Ceiling	8-hrTWA	TWA
d-Limonene	Not established	Not established	Not established	Not established	30 ppm	Not established
Alcohols, C9-11, ethoxylated, liquids	Not established	Not established	Not established	Not established	Not available	Not available
SODIUM DODECYLBENZENESULFONATE	Not established		Not established		Not established	

ACGIH® = American Conference of Governmental Industrial Hygienists. TLV® = Threshold Limit Value. PEL = Permissible Exposure Limits. OSHA = Les États-Unis sécurité professionnelle et administration de santé. AIHA® = AIHA® Guideline Foundation. WEEL® = Workplace Environmental Exposure Limit. Short-term TWA = Time-Weighted Average with specified time limit. TWA = Time-Weighted Average.

Appropriate Engineering Controls

Use local exhaust ventilation, if general ventilation is not adequate to control amount in the air. Provide eyewash and safety shower if contact or splash hazard exists.

Individual Protection Measures

Eye/Face Protection

Wear chemical safety goggles and face shield when contact is possible.

Skin Protection

Wear chemical protective clothing e.g. gloves, aprons, boots.

Suitable materials are: butyl rubber, natural rubber, nitrile rubber, neoprene rubber.

Respiratory Protection

Wear a NIOSH approved air-purifying respirator with an organic vapour cartridge and a particulate N95, R95, or P95 filter if mists/vapours/fumes are present.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Basic Physical and Chemical Properties

Appearance	Clear yellow liquid.
Odour	Citrus
Odour Threshold	Not available
pH	Not applicable
Melting Point/Freezing Point	Not available (melting); Not available (freezing)
Initial Boiling Point/Range	Not available
Flash Point	53 °C (closed cup)
Evaporation Rate	Not available
Flammability (solid, gas)	Not applicable

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Upper/Lower Flammability or Explosive Limit	Not applicable (upper); Not applicable (lower)
Vapour Pressure	Not available
Vapour Density (air = 1)	Not available
Relative Density (water = 1)	0.85 - 0.90 at 20 °C
Solubility	Dispersible in water; Not available (in other liquids)
Partition Coefficient, n-Octanol/Water(Log Kow)	Not available
Auto-ignition Temperature	Not applicable
Decomposition Temperature	Not available
Viscosity	Not available (kinematic); Not available (dynamic)

SECTION 10. STABILITY AND REACTIVITY

Reactivity

None known.

Chemical Stability

Normally stable.

Possibility of Hazardous Reactions

None expected under normal conditions of storage and use.

Conditions to Avoid

Open flames, sparks, static discharge, heat and other ignition sources.

Incompatible Materials

Reacts with or incompatible with: strong oxidizing agents (e.g. perchloric acid), oxidizing agents (e.g. peroxides), strong acids (e.g. hydrochloric acid).

Not corrosive to metals.

Hazardous Decomposition Products

Very toxic carbon monoxide, carbon dioxide; corrosive sulfur oxides.

SECTION 11. TOXICOLOGICAL INFORMATION

Information presented below is for the entire product, unless otherwise specified.

Likely Routes of Exposure

Skin contact; eye contact; inhalation.

Acute Toxicity

Chemical Name	LC50	LD50 (oral)	LD50 (dermal)
d-Limonene	Not available	4400 mg/kg (rat)	> 5000 mg/kg (rabbit)
Alcohols, C9-11, ethoxylated, liquids	Not available	> 2000 mg/kg (rat)	> 2000 mg/kg (rabbit)
SODIUM DODECYLBENZENESULFONATE	Not available	438 mg/kg (rat)	Not available

Skin Corrosion/Irritation

Human experience and animal tests show moderate or severe irritation. Symptoms include pain, redness, and swelling.

Serious Eye Damage/Irritation

May cause serious eye irritation or possible injury to eyes. Symptoms include sore, red eyes, and tearing.

STOT (Specific Target Organ Toxicity) –Single Exposure

Inhalation

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At high concentrations may cause nose and throat irritation. Symptoms may include coughing, shortness of breath, difficult breathing and tightness in the chest. Depression of the central nervous system. Symptoms may include headache, nausea, dizziness, drowsiness and confusion.

Aspiration Hazard

(d-Limonene) aspiration hazard possible if swallowed- can enter lungs and cause damage.

STOT (Specific Target Organ Toxicity) –Repeated Exposure

May cause dermatitis. Symptoms may include dry, red, cracked skin (dermatitis).

Respiratory and/orSkin Sensitization

Not a respiratory sensitizer. (d-Limonene) human experience shows allergic skin reactions (skin sensitization) in a substantial proportion of people exposed at work. In sensitized people, contact with a very small amount of product can cause an allergic reaction. Symptoms include redness, rash, itching and swelling. This reaction can spread from the hands or arms to the face and body. Repeated exposure will make the reaction worse.

Carcinogenicity

Chemical Name	IARC	ACGIH®	NTP	OSHA
d-Limonene	Group 3	Not Listed	Not Listed	Not Listed
Alcohols, C9-11, ethoxylated, liquids	Not Listed	Not designated	Not Listed	Not Listed
SODIUM DODECYLBENZENESULFONATE	Not Listed	Not designated	Not Listed	Not Listed

Key to Abbreviations

IARC = International Agency for Research on Cancer. NTP = National Toxicology Program. OSHA = US Occupational Safety and Health Administration. ACGIH® = American Conference of Governmental Industrial Hygienists. Group 3 = Not classifiable as to its carcinogenicity to humans.

Reproductive Toxicity

Development of Offspring

Not known to harm the unborn child.

Sexual Function and Fertility

Not known to cause effects on sexual function or fertility.

Germ Cell Mutagenicity

Not known to be a mutagen.

No information was located for: Effects on or via Lactation, Interactive Effects

SECTION 12. ECOLOGICAL INFORMATION

Ecotoxicity

(d-Limonene) Very toxic, with long lasting effects to aquatic life, based on acute toxicity tests.

Acute Aquatic Toxicity

Chemical Name	LC50 Fish	EC50 Crustacea	ErC50 Aquatic Plants	ErC50 Algae
d-Limonene	0.702 mg/L (Pimephales promelas (fathead minnow); 96-hour; flow-through)	0.421 mg/L (Daphnia magna (water flea); 48-hour; flow-through)		
Alcohols, C9-11, ethoxylated, liquids	5-10 mg/L (96-hour)	5-10 mg/L (48-hour)		10-100 mg/L (72-hour)

SODIUM DODECYLBENZENESUL FONATE	3.2-5.6 mg/L (Oncorhynchus mykiss (rainbow trout); 96-hour)			
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Persistence and Degradability

No ingredient of this product or its degradation products is known to be highly persistent.

Bioaccumulative Potential

This product and its degradation products are not expected to bioaccumulate.

Mobility in Soil

Studies are not available.

Other Adverse Effects

There is no information available.

SECTION 13. DISPOSAL CONSIDERATIONS

Disposal Methods

Recycle and reuse product, if possible. Recommended disposal methods are for the product, as sold. (Used material may contain other hazardous contaminants). The required hazard evaluation of the waste and compliance with the applicable hazardous waste laws are the responsibility of the user.

SECTION 14. TRANSPORT INFORMATION

Not regulated under Canadian TDG regulations. Not regulated under US DOT Regulations.

Environmental Hazards Marine Pollutant (d-Limonene)

Special Precautions Not applicable

Transport in Bulk According to Annex II of MARPOL 73/78 and the IBC Code

Transport in Bulk Canadian TDG / US DOT : UN 1993, Flammable Liquid, N.O.S. (d-Limonene Mixture), Class 3, P.G. III (Bulk > 450L).

SECTION 15. REGULATORY INFORMATION

Safety, Health and Environmental Regulations

Canada

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and the SDS contains all of the information required by the Controlled Products Regulations.

Domestic Substances List (DSL) / Non-Domestic Substances List (NDSL)

All ingredients are listed on the DSL/NDSL.

USA

Toxic Substances Control Act (TSCA) Section 8(b)

All ingredients are listed on the TSCA Inventory.

SECTION 16. OTHER INFORMATION

SDS Prepared By Technical Department

Phone No. 604-881-4700

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Disclaimer The information in the Material Safety Data Sheet is offered for your consideration and guidance when exposed to this product. Velocity Chemicals Ltd. expressly disclaims all expressed or implied warranties and assumes no responsibilities for the accuracy or

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completeness of the data contained herein. The data in this MSDS does not apply to use with any other product or in any other process.

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