BLUE CARDINAL
• CHEMICAL •

SAFETY DATA SHEET

Issue Date 12/19/2014 **Version** 1

1. PRODUCT AND COMPANY IDENTIFICATION

Product Identifier

Product Name Citra Solv II

Other means of identification

Product Code 1667

Details of the supplier of the safety data sheet

Company Name Blue Cardinal Chemical, LLC
3670 Scarlet Oak Blvd.
St. Louis, MO 63122
800-325-3312

Emergency telephone number

Emergency Telephone CHEMTEL 1-800-255-3924

2. HAZARDS IDENTIFICATION

Classification

Flammable liquids (Category 3)	H226
Skin irritation (Category 2)	H315
Skin sensitization (Category 1)	H317
Aspiration hazard (Category 1)	H304

Label elements

Emergency Overview

DANGER

Hazard statements

Flammable liquid and vapor
Causes skin irritation.
May cause an allergic skin reaction
May be fatal if swallowed and enters airways

Appearance: Clear **Physical state:** Liquid **Odor:** Citrus-like

Precautionary Statements - Prevention

Avoid breathing mist/vapors/spray. Contaminated work clothing must not be allowed out of the workplace. Ground/bond container and receiving equipment. Keep away from heat/sparks/open flames/hot surfaces-no smoking. Keep container tightly closed. Take precautionary measure against static discharge. Use only non-sparking tools. Wash thoroughly after handling. Wear protective gloves/eye protection/ face protection

Precautionary Statements - Response

Do NOT induce vomiting. If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water shower. If on skin: Wash with plenty of water. If skin irritation or rash occurs: Get medical advice/attention. If swallowed: Immediately call a poison center/doctor. In case of fire: Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide to extinguish. Take off contaminated clothing and wash it before reuse. Wash contaminated clothing before reuse.

Precautionary Statements - Storage

Store in a well-ventilated place. Keep cool. Store locked up.

Precautionary Statements - Disposal

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

3. COMPOSITION/INFORMATION ON INGREDIENTS

CHEMICAL NAME	CAS NO.	WEIGHT - %	TRADE SECRET
D-limonene	5989-27-5	60-100	*
Benzenesulfonic acid, dodecyl branched, compd. With 2-propanamine	90218-35-2	1-20	*

***The exact percentage (concentration) of composition has been withheld as a trade secret.**

4. FIRST AID MEASURES

First aid measures

Skin Contact Wash off with soap and plenty of water. Consult a physician.

Eye Contact Flush eyes with water as a precaution.

Inhalation If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician.

Ingestion Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

5. FIRE-FIGHTING MEASURES

Flash Point (Limonene, D) 48.88°C (120°F) Pensky Martens closed cup
LEL (Limonene, D) 0.7% (V)
UEL (Limonene, D) 6.1% (V)
Auto Ignition Temperature 458°F / 237°C

Suitable extinguishing media

Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

Protective equipment and precautions for firefighters

Wear self-contained breathing apparatus for firefighting if necessary.

Hazard Combustion Products

Carbon oxides.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

Personal precautions Use personal protective equipment. Avoid breathing vapors, mist or gas. Ensure adequate ventilation. Remove all sources of ignition. Evacuate personnel to safe areas. Beware of vapors accumulating to form explosive concentrations. Vapors can accumulate in low areas.

Environmental precautions

Environmental precautions Prevent further leakage or spillage if safe to do so. Do not let product enter drains. Discharge into the environment must be avoided.

Methods and material for containment and cleaning up

Methods for containment & cleaning up Absorb spilled liquid in suitable non-flammable inert material such as clay, vermiculite or diatomaceous earth. Use clean non-sparking tools to collect absorbed material. Dike large spills and place materials in salvage containers.

7. HANDLING AND STORAGE

Precautions for safe handling

Advice on safe handling Avoid contact with skin and eyes. Avoid inhalation of vapor or mist. Keep away from sources of ignition - No smoking. Take measures to prevent the build-up of electrostatic charge.

Conditions for safe storage, including any incompatibilities

Storage Conditions Keep container tightly closed in a dry and well-ventilated place. Containers which are opened must be carefully resealed and kept upright to prevent leakage.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

CHEMICAL NAME	OSHA		ACGIH	
	TWA	STEL	TWA	STEL
D-Limonene (CAS #5989-27-5)	Not avail	Not avail	20 ppm	Not avail
Benzenesulfonic acid, dodecyl-, branched, compd. With 2-propanamine (CAS #90218-35-2)	Not avail	Not avail	Not avail	Not avail

Appropriate engineering controls

Engineering Controls Provide exhaust ventilation or other engineering controls to keep the airborne concentrations of vapors below their respective threshold limit value. Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.

Individual protection measures, such as personal protective equipment

Eye/face protection Face shield and safety glasses. Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).

Skin and body protection When skin contact is possible, protective clothing including apron, sleeves, boots, head and face protection should be worn.

Hand Protection Wear chemical-resistant gloves such as nitrile rubber.

Respiratory protection	A respiratory protection program that meets OSHA's 29CFR 1910.134 or ANSI Z88.2 requirements must be followed whenever workplace conditions warrant respirator use.
General Hygiene	Facilities storing or utilizing this material should be equipped with eyewash and/or shower facilities.

9. PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

Physical State	Liquid
Appearance	Clear Liquid
Color	Colorless
Odor	Citrus-like
Odor Threshold	Not Available

Property	**Values**
pH	Not Available
Vapor Density	Not Available
Boiling Point	(Limonene, D) 347.9 - 349°C@101.72kPa
Vapor Pressure	(Limonene, D) 0.192 kPa @ 77°F/25°C
Melting Point/freezing point	(Limonene, D) -101.83°F / -74.35°C
Flash Point	(See Section 5)
Flammability Properties	(See Section 5)
Solubility (in water)	Insoluble
Density	(Limonene, D): (+/- 0.01) 0.8405 g/cm³ @ 77.00°F / 25.00°C
Evaporation Rate	(Limonene, D) (>) 1 Ethyl Ether
Octanol/Water partition coefficient (Kow)	Not Available
Auto-ignition temperature	(See Section 5)
Decomposition temperature	Not Available
Viscosity	Not Available

10. STABILITY AND REACTIVITY

Chemical Stability
This material is considered stable at ambient temperatures 70ºC (21ºC).

Possibility Of Hazardous Reactions
This product will not undergo polymerization.

Conditions to Avoid
Heat, flames, and sparks.

Incompatible Materials
Strong oxidizing agents.

Hazardous Decomposition Products
Carbon dioxide and carbon monoxide may form when heated to decomposition.

11. TOXICOLOGICAL INFORMATION

ACUTE EFFECTS

Component Analysis LD50

Limonene-D (5989-27-5)
Oral LD50 Rat 4400 mg/kg;
Dermal LD50 Rabbit >2000 mg/kg

CHRONIC EFFECTS

Component

Limonene-D (5989-27-5)

Carcinogenic Effects	IARC: 3 - Group 3: Not classifiable as to its carcinogenicity to humans (D-Limonene)
Mutagenic Effects	Not Available.
Teratogenic Effects	Not Available
Developmental Toxicity	This component has been shown to cause harm to the fetus in laboratory animal studies. Harm to the fetus occurs only at exposure levels that harm the pregnant animal. The relevance of these findings to humans is uncertain.
Target Organs	Exposure to this component has been found to cause kidney damage in male rats. The mechanism by which this toxicity occurs specific to the male rat and the kidney effects are not expected to occur in humans. Overexposure to this component has been suggested as a cause of the following effects in laboratory animals: mild, reversible liver effects, mild, reversible, kidney effects.

Information on likely routes of exposure

Skin Contact	May cause mild skin irritation. Prolonged or repeated contact may dry the skin. Symptoms may include redness, burning, drying and cracking of skin, and skin burns. Additional symptoms of skin contact may include: allergic skin reaction (delayed skin rash which may be followed by blistering, scaling, and other skin effects.) Passage of this material into the body through the skin is possible, but it unlikely that this would result in harmful effects during safe handling and use.
Eye Contact	May cause mild eye irritation. Symptoms include stinging, tearing, and redness.
Inhalation	Breathing of vapor or mist is possible. Breathing small amounts of this material during normal handling is not likely to cause harmful effects. Breathing large amounts may be harmful. Symptoms are not expected at air concentrations below the recommended exposure limits, if applicable.
Ingestion	Swallowing small amounts of this material during normal handling is not likely to cause harmful effects. Swallowing large amounts may be harmful.

Information on toxicological effects

Symptoms	Aggravated Medical Condition: Preexisting disorders of the following organs (or organ systems) may be aggravated by exposure to this material:, Skin, lung (for example, asthma-like conditions). Symptoms: Signs and symptoms of exposure to this material through breathing, swallowing, and/or passage of the material through the skin may include: stomach or intestinal upset (nausea, vomiting, diarrhea) irritation (nose, throat, airways).

Benzenesulfonic acid, dodecyl-, branched, compd. With 2-propanamine (90218-35-2)

Carcinogenic Effects	Not Available.
Mutagenic Effects	Not Available.
Teratogenic Effects	Not Available
Developmental Toxicity	Not Available.
Target Organs	Severely irritating to the eyes, severely irritating to the skin.

12. ECOLOGICAL INFORMATION

Ecotoxicity

Limonene-D (CAS#5989-27-5)
96 Hr LC50 Pimephales promelas: 0.619-0.796 mg/L [flow-through];
96 Hr LC50 Oncorhynchus mykiss: 35 mg/L

13. DISPOSAL CONSIDERATIONS

Waste treatment methods

Disposal of Wastes	Dispose of in accordance with local, state, and federal regulations.

14. TRANSPORT INFORMATION

The basic description below is specific to the container size. This information is provided for at a glance DOT information. Please refer to the container and/or shipping papers for the appropriate shipping description before tendering this material for shipment. For additional information, please contact the distributor listed in section 1 of this SDS.

DOT

UN/ID No.	*UN1993*
Proper Shipping Name	*Flammable Liquids, n.o.s. (contains Dipentene) Marine Pollutant*
Hazard Class	*3*
Packing Group	*III*
Placard	*Flammable*

15. REGULATORY INFORMATION

TSCA Inventory This product and/or its components are listed on the Toxic Substances Control Act (TSCA) inventory.

SARA 302/304 The Superfund Amendments and Reauthorization Act of 1986 (SARA) Title III requires facilities subject to Subparts 302 and 304 to submit emergency planning and notification information based on Threshold Planning Quantities (TPQs) and Reportable Quantities (RQs) for “Extremely Hazardous Substances” listed in 40 CFR 302.4 and 40 CFR 355. No components were identified.

SARA 313 No components were identified.

CERCLA The Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA) requires notification of the National Response Center concerning release of quantities of “hazardous substances” equal to or greater than the reportable quantities (RQ’s) listed in 40 CFR 302.4. As defined by CERCLA, the term ”hazardous substance” does not include petroleum, including crude oil or any fraction thereof which is not otherwise specifically designated in 40 CFR 302.4. Chemical substances present in this product or refinery stream that may be subject to this statute are: No components were identified.

SARA 311/312 Hazard The Superfund Amendments and Reauthorization Act of 1986 (SARA) Title III requires facilities subject to this subpart to submit aggregate information on chemicals by “Hazard Category” as defined in 40 CFR 370.2. This material would be classified under the following hazard categories: Acute, Chronic, Fire

California Prop 65 No components were identified.

16. OTHER INFORMATION

NFPA	**Health hazards**	1	**Flammability**	2	**Reactivity**	0	**Other**	ND
HMIS	**Health hazards**	1	**Flammability**	2	**Reactivity**	0	**Personal protection**	ND

Issue Date 12/19/2014
Revision Date
Revision Note

N/A = Not Applicable; N/D = Not Determined

Disclaimer
The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

End of Safety Data Sheet