

SAFETY DATA SHEET

Preparation Date: 5/30/2017

Revision Date: 5/30/2017

Revision Number: G1

1. IDENTIFICATION

Product identifier

Product code: S2014
Product Name: SAFROLE

Other means of identification

Synonyms: 1,2-Methylenedioxy-4-allylbenzene
 1,3-Benzodioxole, 5-allyl-
 1-Allyl-3,4-methylenedioxybenzene
 4-Allyl-1,2-methylenedioxybenzene
 4-Allylpyrocatechol formaldehyde acetal
 5-(2-Propenyl)-1,3-benzodioxole
 5-Allyl-1,3-benzodioxole
 Allylcatechol methylene ether
 Allyldioxybenzene methylene ether
 Allylpyrocatechol methylene ether
 Benzene, 1,2-methylenedioxy-4-allyl-
 m-Allylpyrocatechin methylene ether
 Rhyuno oil
 Safrol
 Shikimole
 Shikomol
CAS #: 94-59-7
RTECS # CY2800000
CI#: Not available

Recommended use of the chemical and restrictions on use

Recommended use: No information available.
Uses advised against No information available

Supplier: Spectrum Chemical Mfg. Corp
 14422 South San Pedro St.
 Gardena, CA 90248
 (310) 516-8000.

Order Online At: <https://www.spectrumchemical.com>

Emergency telephone number Chemtrec 1-800-424-9300

Contact Person: Martin LaBenz (West Coast)

Contact Person: Ibad Tirmiz (East Coast)

2. HAZARDS IDENTIFICATION

Classification

This chemical is considered hazardous according to the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200)

Considered a dangerous substance or mixture according to the Globally Harmonized System (GHS)

Acute toxicity - Oral	Category 4
Skin corrosion/irritation	Category 2

Germ cell mutagenicity	Category 2
Carcinogenicity	Category 2

Label elements

Warning

Hazard statements

Harmful if swallowed
 Causes skin irritation
 Suspected of causing genetic defects
 Suspected of causing cancer



Hazards not otherwise classified (HNOC)

Not Applicable

Other hazards

Not available

Precautionary Statements - Prevention

Obtain special instructions before use
 Do not handle until all safety precautions have been read and understood
 Wear protective gloves/protective clothing/eye protection/face protection
 Wash face, hands and any exposed skin thoroughly after handling
 Do not eat, drink or smoke when using this product

Precautionary Statements - Response

IF exposed or concerned: Get medical advice/attention
 IF ON SKIN: Wash with plenty of water
 If skin irritation occurs: Get medical advice/attention
 Take off contaminated clothing and wash it before reuse
 IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell
 Rinse mouth

Precautionary Statements - Storage

Store locked up

Precautionary Statements - Disposal

Dispose of contents/container to an approved waste disposal plant

3. COMPOSITION/INFORMATION ON INGREDIENTS

Components	CAS-No.	Weight %
Safrole	94-59-7	100

4. FIRST AID MEASURES

First aid measures

General Advice:

National Capital Poison Center in the United States can provide assistance if you have a poison emergency and need to talk to a poison specialist. Call 1-800-222-1222.

Skin Contact: Wash off immediately with soap and plenty of water removing all contaminated clothing and shoes. Get medical attention. If skin irritation persists, call a physician.

Eye Contact: Flush eyes with water for 15 minutes. Get medical attention.

Inhalation: Move to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention.

Ingestion: Do not induce vomiting without medical advice. Never give anything by mouth to an unconscious person. Obtain medical attention.

Most important symptoms and effects, both acute and delayed

Symptoms Contact causes skin irritation. Moderate skin irritation. Central nervous system effects. It may affect the kidneys. May affect the cardiovascular system. Ingestion may cause nausea, vomiting, and diarrhea. May affect the liver.

Indication of any immediate medical attention and special treatment needed

Notes to Physician: Treat symptomatically.

Protection of first-aiders

First-Aid Providers: Avoid exposure to blood or body fluids. Wear gloves and other necessary protective clothing. Dispose of contaminated clothing and equipment as bio-hazardous waste.

5. FIRE-FIGHTING MEASURES

Extinguishing Media

Suitable Extinguishing Media: Carbon dioxide (CO2). Dry chemical. Water spray mist or foam.

Unsuitable Extinguishing Media: Do not use water jet.

Specific hazards arising from the chemical

Hazardous Combustion Products: Carbon Dioxide, Carbon Monoxide.

Specific hazards: May be combustible at high temperatures. May be ignited by heat, sparks or flames.

Special Protective Actions for Firefighters

Specific Methods: No information available.

Special Protective Equipment for Firefighters: As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

Personal Precautions: Ensure adequate ventilation. Use personal protective equipment. Avoid contact with skin, eyes and clothing. Remove all sources of ignition.

Environmental precautions Prevent further leakage or spillage if safe to do so. Prevent product from entering drains. Prevent entry into waterways, sewers, basements or confined areas.

Methods and material for containment and cleaning up

Methods for containment Stop leak if you can do it without risk. Absorb spill with inert material (e.g. vermiculite, dry sand or earth). In case of large spill, dike if needed. Dike far ahead of liquid spill for later disposal.

Methods for cleaning up Use appropriate tools to put the spilled material in a suitable chemical waste disposal container. Clean contaminated surface thoroughly.

7. HANDLING AND STORAGE

Precautions for safe handling

Technical Measures/Precautions:

Provide sufficient air exchange and/or exhaust in work rooms. Keep away from incompatible materials.

Safe Handling Advice

Wear personal protective equipment. Avoid contact with skin, eyes and clothing. Keep away from heat and sources of ignition. Do not breathe vapors or spray mist. Do not ingest. Handle in accordance with good industrial hygiene and safety practice.

Conditions for safe storage, including any incompatibilities

Technical Measures/Storage Conditions:

Keep container tightly closed in a dry and well-ventilated place. Store at room temperature in the original container. Store away from incompatible materials.

Incompatible Materials:

Oxidizing agents

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

National occupational exposure limits

United States

Components	CAS-No.	OSHA	NIOSH	ACGIH	AIHA WHEEL
Safrole	94-59-7	None	None	None	None

Canada

Components	CAS-No.	Canada - Alberta	Canada - British Columbia	Canada - Ontario	Canada - Quebec
Safrole	94-59-7	None	None	None	None

Australia and Mexico

Components	CAS-No.	Australia	Mexico
Safrole	94-59-7	None	None

Appropriate engineering controls

Engineering measures to reduce exposure:

Ensure adequate ventilation. Provide exhaust ventilation or other engineering controls to keep the airborne concentrations of vapors and mist below their respective threshold limit value.

Individual protection measures, such as personal protective equipment

Personal Protective Equipment

Eye protection:	Goggles
Skin and body protection:	Chemical resistant apron Long sleeved clothing Gloves
Respiratory protection:	Vapor respirator. Be sure to use an approved/certified respirator or equivalent.
Hygiene measures:	Avoid contact with skin, eyes and clothing. Wash hands before breaks and immediately after handling the product. When using, do not eat, drink or smoke.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical state: Liquid	Appearance: No information available.	Color: Colorless. Light yellow.
Odor: No information available.	Taste No information available.	Formula: C10-H10-O2
Molecular/Formula weight: 162.19	Flammability: No information available	Flashpoint (°C/°F): 100 °C/212 °F
Flash Point Tested according to: Closed cup	Autoignition Temperature (°C/°F): No information available	Lower Explosion Limit (%): No information available
Upper Explosion Limit (%): No information available	Melting point/range(°C/°F): 11.2 °C/52.2 °F	Decomposition temperature(°C/°F): No information available
Boiling point/range(°C/°F): 232-234 °C/450-453 °F	Bulk density: No information available	Density (g/cm3): 1.095 @ 25 °C
Specific gravity: No information available	pH: No information available	Vapor pressure @ 20°C (kPa): No information available
Evaporation rate: No information available	Vapor density: No information available	VOC content (g/L): No information available
Odor threshold (ppm): No information available	Partition coefficient (n-octanol/water): log Kow = 3.45	Viscosity: No information available
Miscibility: Miscible with Ether Miscible with Chloroform	Solubility: Soluble in Alcohol Slightly soluble in Propylene glycol Insoluble in water	

10. STABILITY AND REACTIVITY

Reactivity

No information available

Chemical stability

Stability: Stable under recommended storage conditions.

Possibility of Hazardous Reactions: Hazardous polymerization does not occur

Conditions to avoid: Heat. Ignition sources. Incompatible materials.

Incompatible Materials: Oxidizing agents

Hazardous decomposition products: Carbon monoxide. Carbon dioxide. When heated to decomposition it emits acrid smoke and irritating fumes.

Other Information

Corrosivity: No information available

Special Remarks on Corrosivity: No information available

11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure

Principal Routes of Exposure:

Ingestion. Inhalation. Skin. Eyes.

Acute Toxicity

Component Information

Safrole

CAS-No. 94-59-7

LD50/oral/rat = 1950 mg/kg Oral LD50 Rat

LD50/oral/mouse = 2350 mg/kg

LD50/dermal/rabbit = > 5 g/kg

LD50/dermal/rat = No information available

LC50/inhalation/rat = No information available

LC50/inhalation/mouse = No information available

Other LD50 or LC50 information = No information available

Product Information

LD50/oral/rat =

VALUE- Acute Tox Oral = 1950 mg/kg

LD50/oral/mouse =

Value - Acute Tox Oral = 2350 mg/kg

LD50/dermal/rabbit

VALUE-Acute Tox Dermal = > 5000 mg/kg

LD50/dermal/rat

VALUE -Acute Tox Dermal = No information available

LC50/inhalation/rat

VALUE-Vapor = No information available

VALUE-Gas = No information available

VALUE-Dust/Mist = No information available

LC50/Inhalation/mouse

VALUE-Vapor = No information available

VALUE - Gas = No information available

VALUE - Dust/Mist = No information available

Symptoms**Skin Contact:** Causes skin irritation. Moderately irritating to the skin. It may be absorbed through the skin.**Eye Contact:** May cause eye irritation.**Inhalation** May cause irritation of respiratory tract.**Ingestion** Harmful if swallowed. Causes digestive (gastrointestinal) tract irritation. Ingestion may cause nausea, vomiting, diarrhea. May affect urinary system (kidneys). May affect the cardiovascular system (hypotension). May affect the cardiovascular system (change in heart rate). May affect the cardiovascular system (tachycardia). It may affect behavior/central nervous system (convulsions, excitement). May affect behavior/central nervous system (dizziness, headache). May affect behavior/central nervous system (somnolence, ataxia). It may affect behavior/central nervous system (drowsiness).**Aspiration hazard** No information available.**Delayed and immediate effects as well as chronic effects from short and long-term exposure****Chronic Toxicity** Prolonged or repeated ingestion may affect the liver.**Sensitization:** No information available.**Mutagenic Effects:** Suspected of causing genetic defects
Mutagenic effects in mammalian somatic cells
Cytogenic analysis - hamster ovary
DNA damage - hamster ovary
Mutations in microorganisms
Experiments with bacteria and/or yeast have shown mutagenic effects**Carcinogenic effects:** Showed carcinogenic effects in animal experiments. Suspected of causing cancer. Possibly carcinogenic to humans.

Components	CAS-No.	IARC	ACGIH - Carcinogens	NTP	OSHA HCS - Carcinogens	Australia - Notifiable Carcinogenic Substances	Australia - Prohibited Carcinogenic Substances
Safrole	94-59-7	Group 2B - Possibly Carcinogenic to Humans - Supplement 7 [1987] Monograph 10 [1976]	Not listed	Reasonably Anticipated To Be A Human Carcinogen	Present	Not listed	Not listed

ACGIH (American Conference of Governmental Industrial Hygienists)

IARC (International Agency for Research on Cancer)

NTP (National Toxicology Program)

OSHA (Occupational Safety and Health Administration of the US Department of Labor)

Reproductive toxicity No data is available
Reproductive Effects: No information available
Developmental Effects: No information available
Teratogenic Effects: No information available

Specific Target Organ Toxicity

STOT - single exposure No information available.
STOT - repeated exposure No information available.
Target Organs: Liver.

12. ECOLOGICAL INFORMATION

Ecotoxicity

Ecotoxicity effects: No data available.
Persistence and degradability: No information available
Bioaccumulative potential: No information available.
Mobility: No information available.

13. DISPOSAL CONSIDERATIONS

Disposal Methods

Waste from residues / unused products:
Waste must be disposed of in accordance with Federal, State and Local regulation.

Contaminated packaging:
Empty containers should be taken for local recycling, recovery or waste disposal

Components	CAS-No.	RCRA - F Series Wastes	RCRA - K Series Wastes	RCRA - P Series Wastes	RCRA - U Series Wastes
Safrole	94-59-7	None	None	None	U203

14. TRANSPORT INFORMATION

DOT
UN-No: Not Regulated
Proper Shipping Name: No information available
Hazard Class: No information available
Subsidiary Class No information available
Packing group: No information available
Emergency Response Guide Number No information available
Marine Pollutant No data available
DOT RQ (lbs): No information available

Special Provisions No Information available
Symbol(s): No information available
Description: No information available

TDG (Canada)
UN-No: Not regulated
Proper Shipping Name: No information available
Hazard Class: No information available
Subsidiary Risk: No information available
Packing Group: No information available
Marine Pollutant Description: No Information available
 No information available

ADR
UN-No: Not regulated
Proper Shipping Name: No information available
Hazard Class: No information available
Packing Group: No information available
Subsidiary Risk: No information available

IMO / IMDG
UN-No: Not regulated
Proper Shipping Name: No information available
Hazard Class: No information available
Subsidiary Risk: No information available
Packing Group: No information available
Marine Pollutant No information available

RID
UN-No: Not regulated
Proper Shipping Name: No information available
Hazard Class: No information available
Subsidiary Risk: No information available
Packing Group: No information available

ICAO
UN-No: Not regulated
Proper Shipping Name: No information available
Hazard Class: No information available
Subsidiary Risk: No information available
Packing Group: No information available

IATA
UN-No: Not regulated
Proper Shipping Name: No information available
Hazard Class: No information available
Subsidiary Risk: No information available
Packing Group: No information available
ERG Code: No information available
Special Provisions No information available

15. REGULATORY INFORMATION

International Inventories

Components	CAS-No.	U.S. TSCA	KOREA KECL	Philippines (PICCS)	Japan ENCS	CHINA	Australia (AICS)	EINECS-No.
Safrole	94-59-7	Present	Present KE-29738	Present	Present (5)-3561	Present	Present	Present 202-345-4

U.S. Regulations

Safrole

Massachusetts RTK: Present

New Jersey RTK Hazardous Substance List: 1642

New Jersey (EHS) List: Present (SN 1642 TPQ: 500 lb)

New Jersey - Discharge Prevention - List of Hazardous Substances: Present

Pennsylvania RTK: Environmental hazard

Special hazardous substance

Pennsylvania RTK - Environmental Hazard List Present

Pennsylvania RTK - Special Hazardous Substances Present

Minnesota - Hazardous Substance List: Present

New York Release Reporting - List of Hazardous Substances:

100 lb RQ ((air)

1 lb RQ (land/water)


Louisiana Reportable Quantity List for Pollutants: Listed

California Directors List of Hazardous Substances: Present

FDA - 21 CFR - Total Food Additives 189.180 (prohibited)

California Prop. 65: Safe Drinking Water and Toxic Enforcement Act of 1986.

Chemicals Known to the State of California to Cause Cancer:

 WARNING: This product can expose you to chemicals including (see table below) which is (are) known to the State of California to cause cancer. For more information go to www.p65warnings.ca.gov.

Chemicals Known to the State of California to Cause Reproductive Toxicity:

This product does not contain a chemical requiring a warning under California Prop. 65. (See table below)

Components	CAS-No.	Carcinogen	Developmental Toxicity	Male Reproductive Toxicity	Female Reproductive Toxicity:
Safrole	94-59-7	carcinogen	Not Listed	Not Listed	Not Listed

CERCLA/SARA

Components	CAS-No.	CERCLA - Hazardous Substances and their Reportable Quantities	Section 302 Extremely Hazardous Substances and TPQs	Section 302 Extremely Hazardous Substances and RQs	Section 313 - Chemical Category	Section 313 - Reporting de minimis
Safrole	94-59-7	100 lb final RQ 45.4 kg final RQ	None	None	None	0.1 % de minimis concentration

U.S. TSCA

Components	CAS-No.	TSCA Section 5(a)2 - Chemicals With Significant New Use Rules (SNURS)	TSCA 8(d) -Health and Safety Reporting
Safrole	94-59-7	Not Applicable	Not Applicable

Canada

WHMIS 2015 - GHS Classifications

WHMIS 2015 Hazard Classification Information:

The WHMIS 2015 classification of this product has not been validated or reviewed yet.

Canada Hazardous Products Regulation This product has been classified according to the hazard criteria of the HPR (Hazardous Products Regulation) and the SDS contains all of the information required by the HPR

WHMIS 1988 Hazard Class

D2A Very toxic materials

D2B Toxic materials

Canada Controlled Products Regulation:

This product has been classified according to the hazard criteria of the CPR (Controlled Products Regulation) and the MSDS contains all of the information required by the CPR.

Components	WHMIS Ingredient Disclosure List -
Safrole	1 %

Inventory

Components	CAS-No.	Canada (DSL)	Canada (NDSL)
Safrole	94-59-7	Not Listed	Present

Components	CAS-No.	CEPA Schedule I - Toxic Substances
Safrole	94-59-7	Not listed
Components	CAS-No.	CEPA - 2010 Greenhouse Gases Subject to Mandatory Reporting
Safrole	94-59-7	Not listed

EU Classification**EU GHS - SV - CLP 172/2008**

Components	CAS-No.	EU GHS - SV - CLP (172/2008)
Safrole	94-59-7	Acute toxicity - Oral - Acute Tox. 4: H302 Harmful if swallowed. (Minimum classification); Germ cell mutagenicity - Muta. 2: H341 Suspected of causing genetic defects.; Carcinogenicity - Carc. 1B: H350 May cause cancer.605-020-00-9

EU - CLP (1272/2008)**R-phrase(s)**

R22 - Harmful if swallowed.

R45 - May cause cancer.

R68 - Possible risk of irreversible effects.

S -phrase(s)

S53 - Avoid exposure - obtain special instructions before use.

S45 - In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).

Components	CAS-No.	Classification	Concentration Limits:	Safety Phrases
Safrole	94-59-7	Xn; R22 Carc.Cat.2; R45 Muta.Cat.3; R68	No information	S53 S45

The product is classified in accordance with Annex VI to Directive 67/548/EEC

Indication of danger:

Xn - Harmful.

Xn



16. OTHER INFORMATION

Preparation Date: 5/30/2017
Revision Date: 5/30/2017
Prepared by: Sonia Owen

Disclaimer: All chemicals may pose unknown hazards and should be used with caution. This Safety Data Sheet (SDS) applies only to the material as packaged. If this product is combined with other materials, deteriorates, or becomes contaminated, it may pose hazards not mentioned in this SDS. The physical properties reported in this SDS are obtained from the literature and do not constitute product specifications. Information contained herein does not constitute a warranty, whether expressed or implied, as to the safety, merchantability or fitness of the goods for a particular purpose. Spectrum Chemicals & Laboratory Products, Inc. assumes no responsibility for results obtained or for incidental or consequential damages, including lost profits, arising from the use of these data. No warranty against infringement of any patent, copyright or trademark is made or implied. It shall be the user's responsibility to develop proper methods of handling and personal protection based on the actual conditions of use. While this SDS is based on technical data judged to be reliable, Spectrum assumes no responsibility for the completeness or accuracy of the information contained herein.

End of Safety Data Sheet