

1. Identification

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| Product identifier | SYLVALITE™ RE 100L |
| Other means of identification | |
| SDS number | 13537 |
| Product Code | 200000001470 |
| Recommended use | Industrial uses: Uses of substances as such or in preparations at industrial sites. Formulation [mixing] of preparations and/or re-packaging (excluding alloys). |
| Recommended restrictions | None known. |
| Manufacturer/Importer/Supplier/Distributor information | |
| Company | Arizona Chemical Company LLC |
| Address | Building 100 4600 Touchton Road East, Suite 1200 |
| City/State | Jacksonville, FL |
| Zip | 32246 |
| Country | USA |
| Phone Number | 904-928-8700 |
| Alternate Phone Number | 800-526-5294 |
| Fax Number | 904-928-8780 |
| Emergency-US | CHEMTREC 800-424-9300 |

2. Hazard(s) identification

| | |
|--|---|
| Physical hazards | Not classified. |
| Health hazards | Not classified. |
| OSHA defined hazards | Combustible dust |
| Label elements | |
| Hazard symbol | None. |
| Signal word | Warning |
| Hazard statement | May form combustible dust concentrations in air. |
| Precautionary statement | |
| Prevention | Keep away from heat/sparks/open flames/hot surfaces. - No smoking. Keep container tightly closed. Ground/bond container and receiving equipment. Prevent dust accumulation to minimize explosion hazard. Observe good industrial hygiene practices. |
| Response | Take off contaminated clothing and wash before reuse. In case of fire: Use appropriate media to extinguish. |
| Storage | Store away from incompatible materials. |
| Disposal | Dispose of waste and residues in accordance with local authority requirements. |
| Hazard(s) not otherwise classified (HNOC) | None known. |
| Supplemental information | None. |

3. Composition/information on ingredients

Substances

| Chemical name | Common name and synonyms | CAS number | % |
|--|--------------------------|------------|--------|
| Resin acids and Rosin acids, esters with pentaerythritol | | 8050-26-8 | 99-100 |

4. First-aid measures

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| Inhalation | Move to fresh air. Call a physician if symptoms develop or persist. |
| Skin contact | Wash off with soap and water. Get medical attention if irritation develops and persists. |
| Eye contact | Do not rub eyes. Rinse with water. Get medical attention if irritation develops and persists. |
| Ingestion | Rinse mouth. Get medical attention if symptoms occur. |
| Most important symptoms/effects, acute and delayed | Dusts may irritate the respiratory tract, skin and eyes. |
| Indication of immediate medical attention and special treatment needed | Treat symptomatically. |
| General information | Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves. |

5. Fire-fighting measures

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| Suitable extinguishing media | Water fog. Foam. Dry chemical powder. Carbon dioxide (CO ₂). Apply extinguishing media carefully to avoid creating airborne dust. |
| Unsuitable extinguishing media | Do not use water jet as an extinguisher, as this will spread the fire. |
| Specific hazards arising from the chemical | High concentration of airborne dust may form explosive mixture with air. Static charges generated by emptying package in or near flammable vapor may cause flash fire. During fire, gases hazardous to health may be formed. Upon decomposition, this product emits carbon monoxide, carbon dioxide and/or low molecular weight hydrocarbons. |
| Special protective equipment and precautions for firefighters | Self-contained breathing apparatus and full protective clothing must be worn in case of fire. |
| Fire fighting equipment/instructions | In case of fire and/or explosion do not breathe fumes. Wear suitable protective equipment. Move containers from fire area if you can do so without risk. |
| Specific methods | Use standard firefighting procedures and consider the hazards of other involved materials. |
| General fire hazards | May form combustible dust concentrations in air. |

6. Accidental release measures

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| Personal precautions, protective equipment and emergency procedures | Keep unnecessary personnel away. Keep people away from and upwind of spill/leak. Use only non-sparking tools. Dust deposits should not be allowed to accumulate on surfaces, as these may form an explosive mixture if they are released into the atmosphere in sufficient concentration. Wear appropriate protective equipment and clothing during clean-up. Ensure adequate ventilation. Local authorities should be advised if significant spillages cannot be contained. For personal protection, see section 8 of the SDS. |
| Methods and materials for containment and cleaning up | Eliminate all ignition sources (no smoking, flares, sparks, or flames in immediate area). Take precautionary measures against static discharge. Use only non-sparking tools. Avoid dispersal of dust in the air (i.e., clearing dust surfaces with compressed air). Stop the flow of material, if this is without risk. Large Spills: Wet down with water and dike for later disposal. Shovel the material into waste container. Following product recovery, flush area with water. Small Spills: Sweep up or vacuum up spillage and collect in suitable container for disposal. |
| Environmental precautions | Never return spills to original containers for re-use. For waste disposal, see section 13 of the SDS. Avoid discharge into drains, water courses or onto the ground. |

7. Handling and storage

Precautions for safe handling

Minimize dust generation and accumulation. Avoid significant deposits of material, especially on horizontal surfaces, which may become airborne and form combustible dust clouds and may contribute to secondary explosions. Routine housekeeping should be instituted to ensure that dusts do not accumulate on surfaces. Dry powders can build static electricity charges when subjected to the friction of transfer and mixing operations. Provide adequate precautions, such as electrical grounding and bonding, or inert atmospheres. Keep away from heat/sparks/open flames/hot surfaces. - No smoking. Explosion-proof general and local exhaust ventilation. Wear appropriate personal protective equipment. Avoid release to the environment. Observe good industrial hygiene practices. Follow all SDS/label precautions even after container is emptied because they may retain product residues.

Conditions for safe storage, including any incompatibilities

Keep containers tightly closed in a dry, cool and well-ventilated place. Store at ambient temperature and atmospheric pressure. Store away from incompatible materials (see Section 10 of the SDS).

8. Exposure controls/personal protection

Occupational exposure limits

US. OSHA Table Z-3 (29 CFR 1910.1000)

Additional components

| | Type | Value | Form |
|------|------|----------------------|----------------------|
| Dust | TWA | 5 mg/m ³ | Respirable fraction. |
| | | 15 mg/m ³ | Total dust. |

Biological limit values

No biological exposure limits noted for the ingredient(s).

Appropriate engineering controls

Explosion-proof general and local exhaust ventilation. Good general ventilation (typically 10 air changes per hour) should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level.

Individual protection measures, such as personal protective equipment

Eye/face protection

Wear safety glasses with side shields (or goggles).

Skin protection

Hand protection

Wear appropriate chemical resistant gloves. Suitable gloves can be recommended by the glove supplier.

Other

Wear suitable protective clothing.

Respiratory protection

If engineering controls do not maintain airborne concentrations below recommended exposure limits (where applicable) or to an acceptable level (in countries where exposure limits have not been established), an approved respirator must be worn.

Thermal hazards

Wear appropriate thermal protective clothing, when necessary.



General hygiene considerations

When using, do not eat, drink or smoke. Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants. Eye wash fountain and emergency showers are recommended.

9. Physical and chemical properties

Appearance

Solid.

Physical state

Solid.

Form

Pastilles or Pellets. or Flakes.

Color

Light yellow

Odor

Mild.

Odor threshold

Not available.

pH

Not available.

Melting point/freezing point

Not available.

Initial boiling point and boiling range

Not available.

Flash point 500.0 °F (260.0 °C) Setaflash Closed Cup

Evaporation rate 0 (n-BuAc=1) estimated

Flammability (solid, gas) Not available.

Upper/lower flammability or explosive limits

Flammability limit - lower (%) Not available.

Flammability limit - upper (%) Not available.

Explosive limit - lower (%) Not available.

Explosive limit - upper (%) Not available.

Vapor pressure < 0.001 mm Hg at 20°C

Vapor density Not available.

Relative density 1.07 OECD 105 at 25°C/25°C; (water=1)

Solubility(ies)

Solubility (water) 0.38 mg/l at 20°C; Data is for similar product.

Partition coefficient (n-octanol/water) 3.6 at 20°C

Auto-ignition temperature 750.2 °F (399 °C)

Decomposition temperature Not available.

Viscosity 11800 cP Brookfield at 125°C

Other information

Chemical family Rosin Ester

Density 1070.00 kg/m³ at 25°C

Percent volatile < 0.5 % EPA Method 24

Pounds per gallon 9 lb/gal at 25°C

Softening point 204.8 - 215.6 °F (96 - 102 °C) Ring & Ball

Weighted solids 100 %

10. Stability and reactivity

Reactivity The product is stable and non-reactive under normal conditions of use, storage and transport.

Chemical stability Material is stable under normal conditions.

Possibility of hazardous reactions No dangerous reaction known under conditions of normal use.

Conditions to avoid Strong oxidizing agents. Keep away from heat, sparks and open flame. Contact with incompatible materials. Minimize dust generation and accumulation.

Incompatible materials Strong oxidizing agents.

Hazardous decomposition products Upon decomposition this product emits acrid dense smoke with carbon dioxide, carbon monoxide, water and other products of combustion.

11. Toxicological information

Information on likely routes of exposure

Inhalation Dust may irritate respiratory system.

Skin contact No adverse effects due to skin contact are expected.

Eye contact Direct contact with eyes may cause temporary irritation.

Resin acids and Rosin acids, esters with pentaerythritol
Irritation Corrosion - Eye, No eye irritation.
Result: Negative
Species: New Zealand white rabbit
Organ: Eye
Test Duration: 72 hr
Observation Period: 7 days
Notes: OECD 405

Ingestion Expected to be a low ingestion hazard.

Symptoms related to the physical, chemical and toxicological characteristics Dusts may irritate the respiratory tract, skin and eyes.

Information on toxicological effects

Acute toxicity Based on available data, the classification criteria are not met.

| Components | Species | Test Results |
|--|--------------------------|--|
| Resin acids and Rosin acids, esters with pentaerythritol (CAS 8050-26-8) | | |
| Acute | | |
| Dermal | | |
| LD50 | New Zealand white rabbit | > 2000 mg/kg, 14 days At this dose no death occurred.; OECD 402. |
| Oral | | |
| LD50 | Sprague-Dawley rat | > 2000 mg/kg, 14 days At this dose no death occurred.; OECD 425 |

* Estimates for product may be based on additional component data not shown.

Skin corrosion/irritation Prolonged skin contact may cause temporary irritation.

Corrosivity

| | |
|--|---|
| Resin acids and Rosin acids, esters with pentaerythritol | Irritation Corrosion - Skin, No skin irritation. Result: Negative Species: New Zealand white rabbit Organ: Skin Test Duration: 4 hr Observation Period: 72 hr Notes: OECD 404 |
|--|---|

Serious eye damage/eye irritation Direct contact with eyes may cause temporary irritation.

Eye Contact

| | |
|--|--|
| Resin acids and Rosin acids, esters with pentaerythritol | Irritation Corrosion - Eye, No eye irritation. Result: Negative Species: New Zealand white rabbit Organ: Eye Test Duration: 72 hr Observation Period: 7 days Notes: OECD 405 |
|--|--|

Respiratory or skin sensitization

Respiratory sensitization Not available.

Skin sensitization This product is not expected to cause skin sensitization.

Skin sensitization

| | |
|--|---|
| Resin acids and Rosin acids, esters with pentaerythritol | Local Lymph Node Assay - Lowest Concentration Producing Reaction, Not a skin sensitizer. Result: Negative Species: Mouse Organ: Skin Notes: OECD 429 Maximisation Assay (Magnusson and Kligman), Not a skin sensitizer. Result: Negative Species: Guinea pig Organ: Skin Notes: OECD 406 |
|--|---|

Germ cell mutagenicity No data available to indicate product or any components present at greater than 0.1% are mutagenic or genotoxic.

Mutagenicity

| | |
|--|--|
| Resin acids and Rosin acids, esters with pentaerythritol | Germ Cell Mutagenicity: Ames, No data available to indicate product or any components present at greater than 0.1% are mutagenic or genotoxic. Result: Negative Species: Salmonella typhimurium Notes: OECD 471 |
|--|--|

Mutagenicity

Resin acids and Rosin acids, esters with pentaerythritol

Germ Cell Mutagenicity: Chromosome Abberation, This material is considered to be non-clastogenic to human lymphocytes in vitro.

Result: Negative

Species: Human

Notes: OECD 473

In vitro gene mutation study in mammalian cells

Result: Negative

Species: Mouse

Notes: OECD 476

Carcinogenicity

This product is not considered to be a carcinogen by IARC, ACGIH, NTP, or OSHA.

IARC Monographs. Overall Evaluation of Carcinogenicity

Not listed.

OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)

Not regulated.

US. National Toxicology Program (NTP) Report on Carcinogens

Not listed.

Reproductive toxicity

This product is not expected to cause reproductive or developmental effects.

Specific target organ toxicity - single exposure

Not available.

Specific target organ toxicity - repeated exposure

Not available.

Aspiration hazard

Not available.

Further information

Resin acids and Rosin acids, esters with pentaerythritol

Cytotoxicity - in Vitro, Not cytotoxic

Result: Negative

Species: Human

Organ: Fibroblasts cells

Notes: BS 30993-5

Cytotoxicity - in Vitro, Not cytotoxic

Result: Negative

Species: Human

Organ: Lung cell tissue

Notes: BS 5736

Cytotoxicity - in Vitro, Not cytotoxic

Result: Negative

Species: Mouse

Organ: Fibroblasts cells

Test Duration: 72 hr

Observation Period: 24 hr

Notes: BS 5736

12. Ecological information**Ecotoxicity**

The product is not classified as environmentally hazardous. However, this does not exclude the possibility that large or frequent spills can have a harmful or damaging effect on the environment.

| Components | Species | | Test Results |
|--|---------|---|-----------------------------|
| Resin acids and Rosin acids, esters with pentaerythritol (CAS 8050-26-8) | | | |
| Aquatic | | | |
| Algae | EL50 | Green algae (Selenastrum capricornutum) | > 1000 mg/l, 72 hr OECD 201 |
| | NOEL | Green algae (Selenastrum capricornutum) | 1000 mg/l, 72 hr OECD 201 |
| Crustacea | EL50 | Water flea (Daphnia magna) | > 1000 mg/l, 48 hr OECD 202 |
| | NOEC | Water flea (Daphnia magna) | 1000 mg/l, 48 hr OECD 202 |
| Fish | LL50 | Fathead minnow (Pimephales promelas) | > 1000 mg/l, 96 hr OECD 203 |
| | NOEL | Fathead minnow (Pimephales promelas) | 1000 mg/l, 96 hr OECD 203 |

* Estimates for product may be based on additional component data not shown.

Persistence and degradability

Not readily degradable.

Biodegradability

Percent degradation (Aerobic biodegradation)

Resin acids and Rosin acids, esters with pentaerythritol 0 % OECD 301B
Result: Not readily biodegradable.
Species: Activated sewage sludge
Test Duration: 28 days

Bioaccumulative potential Not available.

Partition coefficient n-octanol / water (log Kow)

SYLVALITE™ RE 100L 3.6, at 20°C

Mobility in soil No data available.

Other adverse effects No other adverse environmental effects (e.g. ozone depletion, photochemical ozone creation potential, endocrine disruption, global warming potential) are expected from this component.

13. Disposal considerations

Disposal instructions Collect and reclaim or dispose in sealed containers at licensed waste disposal site. Dispose of contents/container in accordance with local/regional/national/international regulations.

Local disposal regulations Dispose in accordance with all applicable regulations.

Hazardous waste code The waste code should be assigned in discussion between the user, the producer and the waste disposal company.

Waste from residues / unused products Dispose of in accordance with local regulations. Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe manner (see: Disposal instructions).

Contaminated packaging Since emptied containers may retain product residue, follow label warnings even after container is emptied. Empty containers should be taken to an approved waste handling site for recycling or disposal.

14. Transport information

DOT

Not regulated as dangerous goods.

IATA

Not regulated as dangerous goods.

IMDG

Not regulated as dangerous goods.

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code Not applicable.

15. Regulatory information

US federal regulations This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.
All components are on the U.S. EPA TSCA Inventory List.

TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)

Not regulated.

CERCLA Hazardous Substance List (40 CFR 302.4)

Not listed.

SARA 304 Emergency release notification

Not regulated.

OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)

Not regulated.

Superfund Amendments and Reauthorization Act of 1986 (SARA)

Hazard categories Immediate Hazard - No
Delayed Hazard - No
Fire Hazard - Yes
Pressure Hazard - No
Reactivity Hazard - No

SARA 302 Extremely hazardous substance

Not listed.

SARA 311/312 Hazardous chemical Yes

SARA 313 (TRI reporting)

Not regulated.

Other federal regulations**Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs) List**

Not regulated.

Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130)

Not regulated.

Safe Drinking Water Act (SDWA)

Not regulated.

NFPA ratingsHealth: 1
Flammability: 1
Instability: 0**NFPA ratings****16. Other information, including date of preparation or last revision****Issue date** 10-20-2014**Revision date** 12-05-2016**Version #** 2.0**Further information** Refer to NFPA 654, Standard for the Prevention of Fire and Dust Explosions from the Manufacturing, Processing, and Handling of Combustible Particulate Solids, for safe handling.**Disclaimer** KRATON CORPORATION urges each customer or recipient of this SDS to study it carefully and consult appropriate expertise, as necessary or appropriate, to become aware of and understand the data contained in this SDS and any hazards associated with the product. The information set forth in this document, as of the date of this document, is based on present knowledge, obtained from reliable sources and made to our reasonable ability and in good faith. Such information is made without any warranty or guarantee whatsoever, and shall establish no legal duty or responsibility on the part of the author(s), their employer or its affiliates. The information given is designed only as guidance and its completeness is not guaranteed. The information is not a guarantee of any specific product properties, features, qualities or specifications.

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Revision information

This document has undergone significant changes and should be reviewed in its entirety.