

1. Identification

| | | |
|---|--|--|
| Product identifier | SYLVACOTE™ 4984 | |
| Other means of identification | | |
| SDS number | 13588 | |
| Product Code | 200000001528 | |
| Recommended use | Formulation [mixing] of preparations and/or re-packaging (excluding alloys). Industrial uses: Uses of substances as such or in preparations at industrial sites. | |
| 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 | Serious eye damage/eye irritation | Category 2B |
| | Sensitization, skin | Category 1B |
| OSHA defined hazards | Combustible dust | |

Label elements



| | | |
|-------------------------|--|--|
| Signal word | Warning | |
| Hazard statement | May cause an allergic skin reaction. Causes eye irritation. May form combustible dust concentrations in air. | |

Precautionary statement

| | |
|-------------------|---|
| Prevention | Avoid breathing dust/fume. Contaminated work clothing must not be allowed out of the workplace. Wear protective gloves. Wash thoroughly after handling. 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 | IF ON SKIN: Wash with plenty of soap and water. If skin irritation or rash occurs: Get medical advice/attention. Wash contaminated clothing before reuse. 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. |
| Storage | Store away from incompatible materials. |
| Disposal | Dispose of contents/container in accordance with local/regional/national/international regulations. |

| | |
|--|-------------|
| 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 | % |
|--|--------------------------|------------|--------|
| Rosin, maleated, polymer with glycerol | | 68038-41-5 | 99-100 |

4. First-aid measures

| | |
|---|--|
| Inhalation | Move to fresh air. Call a physician if symptoms develop or persist. |
| Skin contact | Remove contaminated clothing immediately and wash skin with soap and water. In case of eczema or other skin disorders: Seek medical attention and take along these instructions. |
| Eye contact | Do not rub eyes. Immediately flush eyes with plenty of water for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Get medical attention if irritation develops and persists. |
| Ingestion | Rinse mouth. Get medical attention if symptoms occur. |
| Most important symptoms/effects, acute and delayed | Irritation of eyes. Exposed individuals may experience eye tearing, redness, and discomfort. Dusts may irritate the respiratory tract, skin and eyes. May cause an allergic skin reaction. Dermatitis. Rash. |
| Indication of immediate medical attention and special treatment needed | Provide general supportive measures and treat symptomatically. Keep victim under observation. Symptoms may be delayed. |
| General information | Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves. Wash contaminated clothing before reuse. |

5. Fire-fighting measures

| | |
|--|---|
| 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

| | |
|--|---|
| 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. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. 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). Prevent product from entering drains. 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. Clean surface thoroughly to remove residual contamination.

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.

Environmental precautions

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. Avoid breathing dust/fume/gas/mist/vapors/spray. Avoid contact with eyes, skin, and clothing. 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 away from heat, sparks and open flame. 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

| 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. Provide eyewash station.

Individual protection measures, such as personal protective equipment

Eye/face protection

Face shield is recommended. 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 appropriate chemical resistant clothing. Use of an impervious apron is recommended.

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. Contaminated work clothing should not be allowed out of the workplace. Eye wash fountain and emergency showers are recommended.

9. Physical and chemical properties

| | |
|---|---|
| Appearance | Solid. |
| Physical state | Solid. |
| Form | Pastilles or Flakes. or Pellets. |
| Color | Amber. |
| 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 | > 201.2 °F (> 94.0 °C) Setaf flash Closed Cup |
| Evaporation rate | 0 approx.; (n-BuAc=1) |
| 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 | 1.09 at 25°C/25°C; (water=1) |
| Solubility(ies) | |
| Solubility (water) | < 0.1 % |
| Partition coefficient (n-octanol/water) | Not available. |
| Auto-ignition temperature | > 392 °F (> 200 °C) |
| Decomposition temperature | Not available. |
| Viscosity | 85 mPa·s Brookfield at 210°C |
| Other information | |
| Chemical family | Modified Rosin Ester |
| Density | 1090.00 kg/m ³ at 20°C |
| Percent volatile | 0 % estimated |
| Softening point | 221 °F (105 °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 May cause an allergic skin reaction.

Eye contact Causes eye irritation.

Rosin, maleated, polymer with glycerol

Irritation Corrosion - Eye, May cause eye irritation.; Data is for similar product.
Result: Positive
Species: New Zealand white rabbit
Organ: Eye
Test Duration: 4 hr
Observation Period: 72 hr
Notes: OECD 405

Ingestion Expected to be a low ingestion hazard.

Symptoms related to the physical, chemical and toxicological characteristics Irritation of eyes. Exposed individuals may experience eye tearing, redness, and discomfort. Dusts may irritate the respiratory tract, skin and eyes. May cause an allergic skin reaction. Dermatitis. Rash.

Information on toxicological effects

Acute toxicity May cause an allergic skin reaction.

| Components | Species | Test Results |
|---|--------------------|--|
| Rosin, maleated, polymer with glycerol (CAS 68038-41-5) | | |
| Acute | | |
| Oral | | |
| LD50 | Sprague-Dawley rat | > 5000 mg/kg, 15 days At this dose no death occurred. |
| Subchronic | | |
| Oral | | |
| NOAEL | Wistar rat | 300 mg/kg/day, 8 weeks Developmental; Data is for similar product. |
| NOEL | Wistar rat | 1000 mg/kg/day, 8 weeks Reproductive; Data is for similar product. |

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

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

Corrosivity

Rosin, maleated, polymer with glycerol

Irritation Corrosion - Skin, No skin irritation.
Result: Negative
Species: New Zealand white rabbit
Organ: Skin
Observation Period: 72 hr

Serious eye damage/eye irritation Causes eye irritation.

Eye Contact

Rosin, maleated, polymer with glycerol

Irritation Corrosion - Eye, May cause eye irritation.; Data is for similar product.
Result: Positive
Species: New Zealand white rabbit
Organ: Eye
Test Duration: 4 hr
Observation Period: 72 hr
Notes: OECD 405

Respiratory or skin sensitization

Respiratory sensitization Not a respiratory sensitizer.

Skin sensitization May cause an allergic skin reaction.

Skin sensitization

Rosin, maleated, polymer with glycerol

50 % w/w Local Lymph Node Assay; Lowest Concentration Producing Reaction, SI=4.24; May cause sensitization by skin contact.; Data is for similar product.
Result: Positive
Species: Mouse
Notes: OECD 429

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

Mutagenicity

Rosin, maleated, polymer with glycerol

Germ Cell Mutagenicity: Ames, Data is for similar product.

Result: Negative

Species: Salmonella typhimurium

Notes: OECD 471

Germ Cell Mutagenicity: Chromosome Abberation, Data is for similar product.

Result: Negative

Species: Human

Notes: OECD 473

In Vitro Mammalian Cell Gene Mutation Test, No data available to indicate product or any components present at greater than 0.1% are mutagenic or genotoxic.; Data is for similar product.

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 classified.

Specific target organ toxicity - repeated exposure

Not classified.

Aspiration hazard

Not an aspiration hazard.

12. Ecological information

Ecotoxicity

May cause long lasting harmful effects to aquatic life.

| Components | | Species | Test Results |
|---|------|---------------|--|
| Rosin, maleated, polymer with glycerol (CAS 68038-41-5) | | | |
| Aquatic | | | |
| Algae | EC0 | Algae | 1000 mg/l, 72 hr Data is for similar product.; OECD 201 |
| Crustacea | EL50 | Daphnia | > 100 mg/l, 48 hr Data is for similar product.; OECD 202 |
| | NOEL | Daphnia | 100 mg/l, 48 hr Data is for similar product.; OECD 202 |
| Fish | LC0 | Danio (Danio) | > 400 mg/l, 96 hr Data is for similar product.; OECD 203 |

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

Persistence and degradability

The product is not readily biodegradable.

Biodegradability

Percent degradation (Aerobic biodegradation)

Rosin, maleated, polymer with glycerol

5 %, Data is for similar product. Estimated

Result: Not readily biodegradable.

Species: Activated sewage sludge

Test Duration: 28 d

Bioaccumulative potential

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 available. |

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 - Yes 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 ratings | Health: 2 Flammability: 1 Instability: 0 |



16. Other information, including date of preparation or last revision

Issue date 11-07-2014

Revision date 12-05-2016

Version # 3.0

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.

The information relates only to the specific product designated as shipped, and may not be valid for such product used in combination with any other materials or products, or in any process, unless expressly specified in this document. Nothing set forth in this document shall be construed as a recommendation or license to use any product in conflict with, or as claimed by, any existing patents rights. The user alone must finally determine whether a contemplated use of a product will infringe any such patents. Regulatory requirements are subject to change and may differ between various locations. It is the buyer's/user's responsibility to ensure that his activities are in compliance with all Local, Federal and International Legislation and Local Permits.

We, for ourselves and on behalf of our affiliates, expressly disclaim any and all liability for any damages or injuries arising out of any activities relating in any way to the information set forth in this document. Due to the proliferation of sources for information, we are not and cannot be responsible for SDSs obtained from any other source other than ourselves. If you have obtained an SDS from another source or if you are not sure that the SDS you have is current, please contact us for the most current version.

*KRATON, the KRATON logo, ARIZONA CHEMICAL, the "Green Super Drop" logo, 1101, ABIETA, AQUATAC, CARIFLEX, CENTURY, CENWAX, ELEXAR, E-LEXAR, , IPD, NEXAR, SYLFAT, SYLVABLEND, SYLVACOTE, SYLVAFUEL, SYLVAGUM, SYLVALITE, SYLVAMIN, SYLVAPINE, SYLVAPRINT, SYLVARES, SYLVAROAD, SYLVAROS, SYLVASOL, SYLVATAC, SYLVATAL, SYLVATRAXX, UNICLEAR, UNIDYME, UNIFLEX, UNI-REZ, UNI-TAC, and ZONATAC are either trademarks or registered trademarks of Kraton Corporation, or its subsidiaries or affiliates, in one or more, but not all countries.

©2016 Kraton Corporation

Revision information

Composition / Information on Ingredients: Disclosure Overrides
 Composition/information on ingredients: Component information
 Regulatory Information: Hazard Symbol - Labeling
 Other information, including date of preparation or last revision: Disclaimer