1. Identification

Product identifier: SYLVATAL™ D30LR

Other means of identification:
- SDS number: 9149
- Product Code: 200000000771

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, Jacksonville, FL, 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: Not classified.

Label elements:
- Hazard symbol: None.
- Signal word: None.
- Hazard statement: The mixture does not meet the criteria for classification.

Precautionary statement:
- Prevention: Observe good industrial hygiene practices.
- Response: Wash hands after handling.
- Storage: Store away from incompatible materials.
- Disposal: Dispose of waste and residues in accordance with local authority requirements.

Hazard(s) not otherwise classified (HNOC): After prolonged contact with highly porous materials, this product may spontaneously combust.

Supplemental information: None.

3. Composition/information on ingredients

Mixtures

<table>
<thead>
<tr>
<th>Chemical name</th>
<th>Common name and synonyms</th>
<th>CAS number</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tall oil (DTO)</td>
<td></td>
<td>8002-26-4</td>
<td>100</td>
</tr>
</tbody>
</table>

Material name: SYLVATAL™ D30LR

Version #: 3.0  Revision date: 01-06-2017  Print date: 01-06-2017
4. First-aid measures

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: 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: Direct contact with eyes may cause temporary irritation.

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

Suitable extinguishing media: Water fog. Water spray, dry chemical, carbon dioxide.

Unsuitable extinguishing media: Do not use water jet as an extinguisher, as this will spread the fire.

Specific hazards arising from the chemical: 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: 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: Porous material such as rags, paper, insulation, or organic clay may spontaneously combust when wetted with this material.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures: Keep unnecessary personnel away. For personal protection, see section 8 of the SDS.

Methods and materials for containment and cleaning up: Large Spills: Stop the flow of material, if this is without risk. Dike the spilled material, where this is possible. Cover with plastic sheet to prevent spreading. Use a non-combustible material like vermiculite, sand or earth to soak up the product and place into a container for later disposal. Prevent entry into waterways, sewer, basements or confined areas. Following product recovery, flush area with water.

Small Spills: Absorb in vermiculite, dry sand or earth and place into containers. Clean surface thoroughly to remove residual contamination.

Environmental precautions: Never return spills to original containers for re-use. For waste disposal, see section 13 of the SDS.

7. Handling and storage

Precautions for safe handling: Porous material such as rags, paper, insulation, or organic clay may spontaneously combust when wetted with this material. May auto-oxidize with sufficient heat generation to ignite if spread (as a thin film) or absorbed on porous or fibrous material. Contaminated rags and cloths must be put in fireproof containers for disposal. Avoid prolonged exposure. 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: Do not store in direct sunlight. Store in original tightly closed container. Keep containers closed when not in use. 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**

<table>
<thead>
<tr>
<th>Components</th>
<th>Type</th>
<th>Value</th>
<th>Form</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tall oil (DTO) (CAS 8002-26-4)</td>
<td>TWA</td>
<td>5 mg/m³</td>
<td>Oil Mist; Respirable</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Components</th>
<th>Type</th>
<th>Value</th>
<th>Form</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tall oil (DTO) (CAS 8002-26-4)</td>
<td>STEL</td>
<td>10 mg/m³</td>
<td>Oil Mist; Respirable</td>
</tr>
<tr>
<td></td>
<td>TWA</td>
<td>5 mg/m³</td>
<td>Oil Mist; Respirable</td>
</tr>
</tbody>
</table>

**Biological limit values**

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

**Appropriate engineering controls**

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.
  - **Other**
    Wear suitable protective clothing.

- **Respiratory protection**
  In case of insufficient ventilation, wear suitable respiratory equipment.

- **Thermal hazards**
  Wear appropriate thermal protective clothing, when necessary.

**General hygiene considerations**

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**
  Liquid.

- **Physical state**
  Liquid.

- **Form**
  Liquid.

- **Color**
  Amber.

- **Odor**
  Mild.

- **Odor threshold**
  Not available.

- **pH**
  Not available.

- **Melting point/freezing point**
  35.6 °F (2 °C)

- **Initial boiling point and boiling range**
  > 392 °F (> 200 °C)

- **Flash point**
  399.2 °F (204.0 °C) Cleveland Open Cup

- **Evaporation rate**
  0 (n-BuAc=1) estimated

- **Flammability (solid, gas)**
  Not applicable.

- **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 0.94 at 25°C/25°C; (water=1)
Solubility(ies)
  Solubility (water) 9 mg/L at 20°C; Data is for similar product.
Partition coefficient (n-octanol/water) 4.9 - 7.7 at 30°C; Data is for similar product.
Auto-ignition temperature > 392 °F (> 200 °C)
Decomposition temperature Not available.
Viscosity 110 cP at 25°C
Other information
  Chemical family Tall Oil Fraction
  Density 940.00 kg/m³ at 20°C
  Percent volatile 0 % estimated
  Specific gravity 0.95 estimated

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. Porous material such as rags, paper, insulation, or organic clay may spontaneously combust when wetted with this material. Contact with incompatible materials.
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 Prolonged inhalation may be harmful.
  Skin contact No adverse effects due to skin contact are expected.
  Eye contact Direct contact with eyes may cause temporary irritation.
Tall oil (DTO) Irritation Corrosion - Eye, No eye irritation.; Data is for similar product.
  Result: Negative
  Species: New Zealand white rabbit
  Organ: Eye
  Observation Period: 72 hr
  Notes: OECD 405

Ingestion Expected to be a low ingestion hazard.
Symptoms related to the physical, chemical and toxicological characteristics Exposure may cause temporary irritation, redness, or discomfort.

Information on toxicological effects
Acute toxicity Based on available data, the classification criteria are not met.
Components Test Results
Tall oil (DTO) (CAS 8002-26-4)
  Acute
  Dermal
  LD50 Sprague-Dawley rat > 2000 mg/kg, 14 days At this dose no death occurred.; Data is for similar product.; OECD 402
  Oral
  LD50 Charles River rat > 2000 mg/kg, 14 days At this dose no death occurred.; Data is for similar product.; OECD 423
<table>
<thead>
<tr>
<th>Components</th>
<th>Species</th>
<th>Test Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>Subacute</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Oral</td>
<td>Sprague-Dawley rat</td>
<td>1000 ppm OECD 422</td>
</tr>
</tbody>
</table>

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

**Skin corrosion/irritation**

Prolonged skin contact may cause temporary irritation.

<table>
<thead>
<tr>
<th>Corrosivity</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Tall oil (DTO)</td>
<td></td>
<td>Irritation Corrosion - Skin, No skin irritation.; Data is for similar product.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Result: Negative</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Species: New Zealand white rabbit</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Organ: Skin</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Test Duration: 4 hr</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Observation Period: 72 hr</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Notes: OECD 404</td>
</tr>
</tbody>
</table>

**Serious eye damage/eye irritation**

Direct contact with eyes may cause temporary irritation.

<table>
<thead>
<tr>
<th>Eye Contact</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Tall oil (DTO)</td>
<td></td>
<td>Irritation Corrosion - Eye, No eye irritation.; Data is for similar product.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Result: Negative</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Species: New Zealand white rabbit</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Organ: Eye</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Observation Period: 72 hr</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Notes: OECD 405</td>
</tr>
</tbody>
</table>

**Respiratory or skin sensitization**

Not available.

**Skin sensitization**

This product is not expected to cause skin sensitization.

<table>
<thead>
<tr>
<th>Skin sensitization</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Tall oil (DTO)</td>
<td></td>
<td>Maximisation Assay (Magnusson and Kligman), Not a skin sensitizer.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Result: Negative</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Species: Guinea pig</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Organ: Skin</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Notes: OECD 406</td>
</tr>
</tbody>
</table>

**Germ cell mutagenicity**

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

<table>
<thead>
<tr>
<th>Mutagenicity</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Tall oil (DTO)</td>
<td></td>
<td>Germ Cell Mutagenicity: Ames, No data available to indicate product or any components present at greater than 0.1% are mutagenic or genotoxic.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Result: Negative</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Species: Salmonella typhimurium</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Notes: OECD 471</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Germ Cell Mutagenicity: Chromosome Abberation, This material is considered to be non-clastogenic to human lymphocytes in vitro.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Result: Negative</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Species: Hamster</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Organ: Ovary cells</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Notes: OECD 473</td>
</tr>
<tr>
<td></td>
<td></td>
<td>In vitro gene mutation study in mammalian cells, No data available to indicate product or any components present at greater than 0.1% are mutagenic or genotoxic.; Data is for similar product.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Result: Negative</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Species: Mouse</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Notes: OECD 476</td>
</tr>
</tbody>
</table>

**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 available.

Chronic effects
Prolonged inhalation may be harmful.

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.

<table>
<thead>
<tr>
<th>Components</th>
<th>Species</th>
<th>Test Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tall oil (DTO) (CAS 8002-26-4)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>EL50</td>
<td>Green algae (Desmodesmus subspicatus)</td>
<td>&gt; 2000 mg/l, 72 hr OECD 201</td>
</tr>
<tr>
<td>NOEL</td>
<td>Green algae (Desmodesmus subspicatus)</td>
<td>300 mg/l, 72 hr OECD 201</td>
</tr>
</tbody>
</table>

Aquatic

Crustacea

<table>
<thead>
<tr>
<th>Species</th>
<th>Test Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>EL50</td>
<td>Daphnia</td>
</tr>
<tr>
<td>NOEL</td>
<td>Daphnia</td>
</tr>
</tbody>
</table>

Fish

<table>
<thead>
<tr>
<th>Species</th>
<th>Test Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>LL50</td>
<td>Fish</td>
</tr>
<tr>
<td>NOEL</td>
<td>Fish</td>
</tr>
</tbody>
</table>

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

Persistence and degradability
The product is biodegradable.

Biodegradability
Percent degradation (Aerobic biodegradation)
Tall oil (DTO)
73.2 % Manometric respirometry test, OECD 301F
Result: Readily biodegradable.
Species: Activated sewage sludge
Test Duration: 28 days

Bioaccumulative potential

Partition coefficient n-octanol / water (log Kow)
SYLVATAL™ D30LR
4.9 - 7.7 Log Kow, at 30ºC; Data is for similar product.

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.

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

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 established.

15. Regulatory information

US federal regulations  
All components are on the U.S. EPA TSCA Inventory List.  
This product is not known to be a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

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)  
Immediate Hazard - No  
Delayed Hazard - No  
Fire Hazard - No  
Pressure Hazard - No  
Reactivity Hazard - No

SARA 302 Extremely hazardous substance  
Not listed.

SARA 311/312 Hazardous chemical  
No

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)  
Health: 1  
Flammability: 1  
Instability: 0

NFPA ratings

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

Issue date  
03-06-2015

Revision date  
01-06-2017

Version #  
3.0
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, SYLVAMITE, SYLVAMIN, SYLVAPINE, SYLVAPRINT, SYLVARATES, 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
This document has undergone significant changes and should be reviewed in its entirety.