

Section 1. Chemical Product and Company Identification

Product/Trade Name	SYLVABLEND® FR-2235	Code	Not available.
		MSDS#	7215
Supplier / Manufacturer	Arizona Chemical P.O. Box 550850 Jacksonville, FL 32255-0850 USA (800) 526-5294 / (904) 928-8700	Validation Date	12/27/2007
		Print Date	12/27/2007
Chemical Name	Tall Oil Fractions	EMERGENCY PHONE CHEMTREC: 1-800-424-9300 (transportation and medical)	

Section 2. Composition and Information on Ingredients

Name	CAS #	% by Weight
1) Tall Oil Fractions	Proprietary, NJTSRN-7215	100

See Section 8 for Exposure Controls/ Exposure Limits/ Personal Protection information.

Section 3. Hazards Identification

EMERGENCY OVERVIEW

Product is a dark, fluid liquid with a fatty odor. Product is not considered to be combustible. However, after prolonged contact with highly porous materials, this product may spontaneously combust. May cause eye and skin irritation. If heated product contacts the eye and/or skin, thermal burns may result. Inhalation of mists/vapors/fumes generated by heating this product may cause respiratory irritation with throat discomfort, coughing or difficulty breathing. Aspiration into lungs may cause chemical pneumonitis and pulmonary edema.

HMIS

HEALTH: 1

FIRE: 1

REACTIVITY: 0

PPE: see Section 8 of this MSDS.

0=Minimal; 1=Slight; 2=Moderate;
3=Serious; 4=Severe;
(*)=Chronic health hazard.

Potential Health Effects

Eye Contact	Product may cause eye irritation. If heated product contacts the eye, thermal burns may result.
Skin Contact	Product may cause skin irritation. When it is heated, this product may cause thermal burns.
Inhalation	Exposure to oil mists/vapors/fumes may cause respiratory tract irritation. Heating this product may release harmful vapors. Inhalation of mists/vapors/fumes generated by heating this product may cause respiratory tract irritation with throat discomfort, coughing and difficulty breathing.
Ingestion	Ingestion of large quantities may result in gastrointestinal disturbances including irritation, nausea, and diarrhea. Aspiration into lungs may cause severe damage, including chemical pneumonitis and pulmonary edema.

Section 4. First Aid Measures

Eye Contact	Immediately flush eyes with flooding amounts of cool, low pressure water for at least 15 minutes. If irritation persists, get medical attention. If hot product contacts eye, flush with water for at least 15 minutes and seek medical attention immediately.
Skin Contact	In case of skin contact, wash immediately with soap and water. If irritation develops or persists, get medical attention. If hot product contacts skin, cool under running water and get medical attention. Launder contaminated clothing before reuse.
Inhalation	Move person to non-contaminated air. If affected person is not breathing, apply artificial respiration. Seek medical attention.
Ingestion	If swallowed, contact a physician or poison control center immediately. DO NOT induce vomiting unless directed to do so by medical personnel.
Notes to Physician	Provide general supportive measures and treat symptomatically. In case of ingestion, the decision of whether or not to induce vomiting should be made by the attending physician. If burn is present, treat as any thermal burn.

If victims of chemical over-exposure are taken for medical attention, give a copy of the label or MSDS to the physician/health professional.

Section 5. Fire and Explosion Data

Flammability of the Product Nonflammable.

Auto-Ignition Temperature Not available.

Flash Point >201°F, (Setaflash)

Flammable Limits Not available.

NFPA 704



This information is for people trained in the National Fire Protection Association's (NFPA 704) Identification of the Fire Hazards of Materials.

General Fire Hazards Product is not considered combustible. If heated above its flash point in the presence of air, product can support combustion. Porous material such as rags, paper, insulation, or organic clay may spontaneously combust when wetted with this material. If mist is generated, minimum flash point may be reduced.

Hazardous Decomposition Products Smoke, carbon monoxide, carbon dioxide, water, trace quantities of sulfur oxides, and other normal products of combustion.

Extinguishing Media Carbon dioxide, dry chemical or water. Avoid using a direct stream of water.

Fire Fighting Equipment and Instructions Wear full protective clothing, including self-contained positive pressure/pressure demand breathing apparatus, helmet, and protective clothing. Use water spray to cool fire-exposed containers and to protect personnel.

Section 6. Accidental Release Measures

Containment Contain the discharged material. Do not allow product to enter sewer or waterways. Check with local and state environmental agencies for guidance.

Clean-up Procedures Spills may present a slipping (physical) hazard. Wear appropriate protective equipment and clothing during clean-up. Avoid skin and eye contact. Absorb spill with inert material. Shovel material into appropriate container for disposal. Thoroughly wash spill area with water after clean-up. WATER SPILL: product is regulated as an oil under the Clean Water Act. Follow all applicable regulations. Follow all Local, State, Federal and Provincial regulations for disposal.

Evacuation Procedures Isolate area. Keep unnecessary personnel away. In case of large spills, follow all facility emergency response procedures.

Special Instructions Remove soiled clothing and launder before reuse (see Section 7 - Storage). Avoid excessive skin contact with spilled material. Wear appropriate personal protective equipment.

Section 7. Handling and Storage

Handling Avoid prolonged or repeated skin contact with this material. Wash thoroughly after handling. Avoid inhalation of mists/vapors/fumes. Keep this product from heat, sparks, or open flame. Do not use air pressure or apply heat with open flame to remove contents of drum. After emptied, drum may retain solid, liquid and/or vapor residues. Continue to observe all precautions on label as if drum were full. Do not cut, puncture, torch or weld on or near the emptied drum. Do not use for other purposes. Never eat, drink, or smoke in work areas. Practice good personal hygiene after using this material, especially before eating, drinking, smoking, using the toilet or applying cosmetics.

Storage Store at ambient temperature and atmospheric pressure. Porous material such as clothing, rags, paper, insulation, or organic clay may spontaneously combust when wetted with this material.

Section 8. Exposure Controls/Personal Protection

Engineering Controls Provide local exhaust and general ventilation systems to maintain airborne concentrations below OSHA, ACGIH, and manufacturer recommended exposure limits. Local exhaust ventilation is preferred because it prevents contaminant dispersion into work areas by controlling it at its source. Local exhaust ventilation is recommended when generating excessive levels of vapors from handling or thermal processing. Use local and general exhaust ventilation to effectively remove and prevent buildup of mists/vapors/fumes generated from the handling of this product.

Personal Protection

Eye/Face: Wear chemical goggles and face shield if splashing is possible. Ensure compliance with OSHA's personal protective equipment (PPE) standard for eye and face protection, 29 CFR 1910.133.

Skin:	Use impervious gloves. Work clothing sufficient to prevent all skin contact should be worn, such as coveralls and long sleeves. For heated/molten product, use any type thermal insulating gloves and other clothing as necessary to protect from thermal burns. Ensure compliance with OSHA's personal protective equipment (PPE) standard, 29 CFR 1910.132 (general) and 138 (hand protection).
Respiratory:	GAS/VAPOR: Respirators should be selected by and used under the direction of a trained health and safety professional following requirements found in OSHA's respirator standard (29 CFR 1910.134) and ANSI's standard for respiratory protection (Z88.2-1992). A written respiratory protection program, including provisions for medical certification, training, fit-testing, exposure assessments, maintenance, inspection, cleaning, and convenient, sanitary storage, must be implemented. For concentrations above the TLV and/or PEL but less than 10 times these limits, a NIOSH approved half-facepiece respirator equipped with appropriate chemical cartridges may be used. For concentrations greater than 10 times the TLV and/or PEL, consult the NIOSH respirator decision logic found in Publication No. 87-116 or ANSI Z88.2-1992. Warning! Air-purifying respirators do not protect workers in oxygen-deficient atmospheres.
General:	Eye wash fountains and emergency showers are recommended. Launder contaminated clothing before reuse. Use good industrial hygiene practices in handling this material. Observe exposure limits for Oil Mist (NOC): ACGIH TWA: 5 mg/m ³ Respirable; STEL 10 mg/m ³ Respirable; OSHA TWA: 5 mg/m ³ Respirable.

Chemical Name or Product Name	CAS #	OSHA PEL	ACGIH TLV
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1) Tall Oil Fractions

Proprietary,
NJTSRN-7215

NOTE: The 1989 OSHA PELs were vacated in 1993 and are not currently enforceable by Federal OSHA. However, some state OSHA programs may still enforce the 1989 limits.

Section 9. Physical and Chemical Properties

Physical state and appearance	Liquid. (Fluid liquid.)	Vapor Density	Not available.
Odor	Fatty.	Percent Volatile (EPA Method 24)	Not available.
Color	Dark.	Solubility (water)	Negligible
Molecular Weight	Not applicable.	Density (vs. water)	Lighter than Water.
Specific Gravity	<1 (Water = 1)	Flash Point	>201°F, (Setaflash)
Boiling Point	Not determined	R/B Softening Point	Not applicable.
pH	Not applicable.	Acid No. (per ASTM D-465)	Not determined

Section 10. Stability and Reactivity Data

Chemical Stability	The product is stable.
Conditions to avoid	Avoid strong oxidizing agents. Avoid prolonged contact with porous materials.
Incompatibility	This product may react with strong oxidizing agents.
Hazardous Decomposition Products	None, except extreme high temperatures may lead to decomposition, releasing fumes containing carbon monoxide, carbon dioxide, water, trace sulfur oxides, and/or hydrocarbons of varying molecular weights.
Hazardous Polymerization	Hazardous polymerization will not occur.

Section 11. Toxicological Information

Toxicity to Animals	No toxicological information is available for this product, however, it may contain some or all of the following: Tall Oil Rosin ORAL, rat, LD50 = 7600 mg/kg; ORAL, mouse, LD50 = 4600 mg/kg; ORAL, guinea pig, LD50 = 4600 mg/kg; DERMAL, rabbit: LD50 = > 2500 mg/kg. Tall Oil Fatty Acids: ORAL, rat, LD50 = > 10,000 mg/kg.
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DERMAL, rabbit, LD50 = > 2000 mg/kg.

Tall oil fatty acids were not found to be an eye or skin irritant in rabbits. No alteration of reproductive physiology was found in rats at feeding levels of 5% and 10% of their diet. Tall oil fatty acids were non-mutagenic in the Ames Salmonella Assay. Some tall oil fatty acids were found to cause skin sensitization in 50% of exposed guinea pigs.

Tall Oil Heads:

ORAL, rat, LD50 = > 9000 mg/kg.

Toxicity to Humans

Contact may cause skin or eye irritation. Exposure to oil mists/fumes/vapors may cause respiratory tract irritation with throat discomfort, coughing, and difficulty breathing.

A similar product was not found to be a skin sensitizer in adult males following prolonged or repeated skin contact.

CARCINOGENIC EFFECTS: None of this product's components are listed as carcinogens by ACGIH, IARC, NIOSH, NTP or OSHA. **MUTAGENIC EFFECTS:** Not available. **TERATOGENIC EFFECTS:** Not available. No information available on the toxicity of this product to the reproductive system.

Section 12. Ecological Information

Ecotoxicity

When spilled, this product may act as an oil, causing a film, sheen, emulsion, or sludge at or beneath the surface of a body of water. Oils of any kind can cause: (a) drowning of waterfowl due to lack of buoyancy, loss of insulating capacity of feathers, starvation and vulnerability to predators due to lack of mobility; (b) lethal effects on fish by coating gill surfaces, preventing respiration; (c) potential fish kills resulting from alteration in biochemical oxygen demand; (d) asphyxiation of benthic life forms when floating masses become engaged with surface debris and settle on the bottom; and (e) adverse aesthetic effects of fouled shoreline and beaches.

No toxicological information is available for this product, however, it may contain some or all of the following:

Tall Oil Fatty Acid:

Growth Inhibition Test, OECD 201 (Alga):	AUC, 72-hr EL ₅₀ = 854.90 mg/l ⁻¹ with NOELr = 500 mg/l ⁻¹ ; Average Specific Growth Rate, 72-hr EL ₅₀ = >1000 mg/l ⁻¹ , NOELr = 500 mg/l ⁻¹ at 0 - 48-hr & 750 mg/l ⁻¹ at 0 -72-hr;
Acute toxicity, OECD 202 (Daphnia):	48-hr EL ₅₀ = >1000mg/l ⁻¹ , NOELr = 1000 mg/l ⁻¹ ;
Acute Toxicity, OECD 203 (Fathead Minnows):	96-hr LL ₅₀ = >1000mg/l ⁻¹ , NOELr = 1000 mg/l ⁻¹ ;
Ready Biodegradation (modified Sturm test):	74% after 28 days;
Partition coefficient (HPLC):	log 10 Pow 4.89 to 5.98;

EL₅₀ = Median Effective Loading under static conditions to solutions prepared as Water Accommodated Fractions (WAF) at different loading rates.

AUC = Area Under Growth Curve.

LL₅₀ = Median Lethal Loading under static conditions to solutions prepared as Water Accommodated Fractions (WAF) at different loading rates.

NOELr = The No Observed Effect Loading Rate under the conditions of the test.

Tall Oil:

Growth Inhibition Test, OECD 201 (Alga):	Average Specific Growth Rate, 72-hr EL ₅₀ = >1000 mg/l ⁻¹ ,
Acute toxicity, OECD 202 (Daphnia):	48-hr EL ₅₀ = >1000mg/l ⁻¹ ;
Acute Toxicity, OECD 203 (Fathead Minnows):	96-hr LL ₅₀ = >1000mg/l ⁻¹ ;
Ready Biodegradation (modified Sturm test):	73% after 28 days.

Environmental Fate

Biodegradability studies showed tall oil fatty acids to be readily biodegradable.

Section 13. Disposal Considerations

Waste Disposal

Wastes must be tested using methods described in 40 CFR 261 to determine if it meets applicable definitions of hazardous waste. No EPA Waste Numbers are applicable for this product's components. Dispose of waste material according to Local, State, Federal, and Provincial Environmental Regulations. Write to the address listed in Section 1 for information on heavy metals analysis and other disposal information.

Section 14. Transport Information

DOT Classification	Not a DOT controlled material (United States).
Proper Shipping Name	None.
DOT Identification Number	None.
Packing Group	None.
Hazardous Substances Reportable Quantity	Not available.
Special Provisions for Transport	IF SHIPPED OVER 100°C (but less than product flash point): DOT Shipping Name: Elevated temperature liquid, n.o.s.; Hazard Class: 9; UN/NA Number: UN3257; Packing group III (bulk shipping requires "HOT" placard).
Additional Shipping Information	Not Determined
International Transportation Regulations	Not Determined

Section 15. Regulatory Information

Federal and State Regulations	<p>OSHA: Not hazardous by definition of Hazard Communication Standard (29 CFR 1910.1200).</p> <p>SARA TITLE III: SARA Section 302 (40 CFR 355 Appendix A): None of this product's components are listed SARA Section 311/312 (40 CFR 370.2): None; SARA Section 313 (40 CFR 372.65): None of this product's components are listed CERCLA (40 CFR 302.4): None of this product's components are listed</p> <p>EPA, Clean Water Act: Regulated as a non-petroleum based oil. Spills of this material to navigable waters in quantities sufficient to produce "sheen" are reportable.</p> <p>TSCA Inventory: All of this product's components are listed.</p> <p>International Inventory Status: This product is either listed or exempt from listing on the following inventories: Canada DSL, Europe EINECS, Korea ECL, Australia AICS and China IECS.</p> <p>State Lists: None of this product's components are listed in CA, FL, MA, MN, NJ, or PA.</p>
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Section 16. Other Information

Key/Legend	ACGIH = American Conference of Governmental Industrial Hygienists. ANSI = American National Standards Institute. ASTM = American Society for Testing and Materials. CERCLA = Comprehensive Environmental Response, Compensation and Liability Act. DOT = Department of Transportation. EPA = Environmental Protection Agency. IARC = International Agency for Research on Cancer. LD = Lethal Dose. NIOSH = National Institute of Occupational Health and Safety. NTP = National Toxicology Program. OSHA = Occupational Safety and Health Administration. PEL = Permissible Exposure Limit. SARA = Superfund Amendments and Reauthorization Act. TLV = Threshold Limit Value. TSCA = Toxic Substance Control Act.	
Validated by Lidia Krzywanska on 12/27/2007.	Verified by Product Regulatory Affairs.	
	Printed 12/27/2007.	
Supersedes Date	01/23/07	Reason for Revision Updated Section 15.

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