

SAFETY DATA SHEET

1. Identification

Product identifier	Kovar Ampio DR		
Other means of identification	None.		
Recommended use	Ag Product - Adjuvant		
Recommended restrictions	None known.		
Manufacturer/Importer/Supplier/	Distributor information		
Manufacturer			
Company name Address	Nachurs Alpine Solutions 421 Leader Street Marion, OH 43302 United States		
Telephone	Telephone	(740) 382-5701 ext. 221	
E-mail	Not available.	(222) 101 0000	
Emergency phone number	Chemtrec	(800) 424-9300	
2. Hazard(s) identification			
Physical hazards	Not classified.		
Health hazards	Sensitization, skin	Category 1	
Environmental hazards	Not classified.		
OSHA defined hazards	Not classified.		
Label elements			
Signal word	Warning		
Hazard statement	May cause an allergic skin reaction.		
Precautionary statement			
Prevention	Avoid breathing mist/vapors. Contaminated work clothing must not be allowed out of the workplace. Wear protective gloves.		
Response	If on skin: Wash with plenty of water. If skin irritation or rash occurs: Get medical advice/attention. Wash contaminated clothing before reuse.		
Storage	Not applicable.		
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

Mixtures

Chemical name	Common name and synonyms	CAS number	%
Amine salts of organic acids		Trade Secret	Trade Secret
Methylated Seed Oil		Trade Secret	Trade Secret
Proprietary organic acids		Trade Secret	Trade Secret

* Percentage ranges of composition to protect confidentiality or due to batch variation.

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	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	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 (CO2).		
Unsuitable extinguishing media	Do not use water jet as an extinguisher, as this will spread the fire.		
Specific hazards arising from the chemical	During fire, gases hazardous to health may be formed.		
Special protective equipment	Self-contained breathing apparatus and full protective clothing must be worn in case of fire.		

and precautions for firefightersFire fightingMove containers from fire area if you can do so without risk.equipment/instructionsUse standard firefighting procedures and consider the hazards of other involved materials.

General fire hazards

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures	Keep unnecessary personnel away. Keep people away from and upwind of spill/leak. Wear appropriate protective equipment and clothing during clean-up. Avoid breathing mist/vapors. 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	The product is immiscible with water and will spread on the water surface.
containment and cleaning up	Large Spills: Stop the flow of material, if this is without risk. Dike the spilled material, where this is possible. Absorb in vermiculite, dry sand or earth and place into containers. Following product recovery, flush area with water.
	Small Spills: Wipe up with absorbent material (e.g. cloth, fleece). 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. Avoid discharge into drains, water courses or onto the ground.
7. Handling and storage	
Precautions for safe handling	Avoid breathing mist/vapors. Avoid contact with eyes, skin, and clothing. Avoid prolonged exposure. Provide adequate ventilation. Wear appropriate personal protective equipment. Observe good industrial hygiene practices.
• ••• • • •	Others in tighthy along the sector of the sector in a sector tight we should be a set of the

No unusual fire or explosion hazards noted.

Conditions for safe storage,
including any incompatibilitiesStore in tightly closed container. Store away from incompatible materials (see Section 10 of the
SDS).

8. Exposure controls/personal protection

Occupational exposure limits

The following constituents are the only constituents of the product which have a PEL, TLV or other recommended exposure limit. At this time, the other constituents have no known exposure limits.

U.S OSHA Components	Туре	Value	
Methylated Seed Oil	PEL	15 mg/m3	
	TWA	5 mg/m3	

ACGIH Components	Туре	Value	
Methylated Seed Oil	TWA	10 mg/m3	
Biological limit values	No biological exposure limits noted f	or the ingredient(s).	
Appropriate engineering controls	Good general ventilation 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 measure	s, such as personal protective equipn	nent	
Eye/face protection	Wear safety glasses with side shields (or goggles). Face shield is recommended.		
Skin protection			
Hand protection	Wear appropriate chemical resistant gloves.		
Other	Wear appropriate chemical resistant clothing. Use of an impervious apron is recommended.		
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. Contaminated work clothing should not be allowed out of the workplace.		

9. Physical and chemical properties

Physical stateLiquid.FormLiquid.ColorAmberOdorMild.Odor thresholdNot available.pHNot available.Initial point/freezing pointNot available.Initial boiling point and boiling rarge> 201.0 °F (> 93.9 °C)Flash point> 201.0 °F (> 93.9 °C)Flayporation rateNot available.Evaporation rateNot available.Ipper/lower flammability or experimeImitial boiling > Not available.Flammability limit - lower (%)Not available.Flammability limit - lower (%)Not available.Explosive limit - lower (%)Not available.Explosive limit - lower (%)Not available.Bolibility (water)Not available.Not available.Not available.Vapor densityNot available.Solubility (water)InsolubleSolubility (water)Not available.Not available.Not available.Vis cosityNot available.Density7.34 lo/galLinguiste propertiesNot explosive.	Appearance	Amber liquid.
ColorAmberOdorMild.Odor thresholdNot available.pHNot available.Melting point/freezing pointNot available.Initial boiling point and boiling rangeNot available.Flash point> 201.0 °F (> 93.9 °C)Evaporation rateNot available.Flammability (solid, gas)Not available.Flammability (solid, gas)Not available.Flammability limit - lower (%)Not available.Flammability limit - lower (%)Not available.Explosive limit - lower (%)Not available.Flammability limit - upper (%)Not available.Explosive limit - lower (%)Not available.Vapor pressureNot available.Vapor densityNot available.Solubility (water)Not available.Solubility (water)InsolubleAuto-ignition temperature Vot available.Not available.ViscosityNot available.Not available.Not available.Flarition temperatureNot available.Not available.Not available.Solubility (water)InsolubleNot available.Not available.ViscosityNot available.Density7.34 lb/gal	Physical state	Liquid.
OdorMild.Odor thresholdNot available.pHNot available.Melting point/freezing pointNot available.Initial boiling point and boiling rangeNot available.Flash point> 201.0 °F (> 93.9 °C)Evaporation rateNot available.Flammability (solid, gas)Not available.Upper/lower flammability or explicable.Not available.flammability limit - lower (%)Not available.flammability limit - upper (%)Not available.flammability limit - lower (%)Not available.flammability limit - upper (%)Not available.flammability limit - upper (%)Not available.flammability limit - lower (%)Not available.flammability limit - upper (%)Not available.flammability limit - lower (%)Not available.flammability limit - upper (%)Not available.flative densityNot available.Vapor pressureNot available.Vapor densityNot available.Solubility(ies)InsolubleSolubility (water)InsolubleAuto-ignition temperatureNot available.ViscosityNot available.ViscosityNot available.Other informationT.34 lb/gal	Form	Liquid.
Odor thresholdNot available.pHNot available.Melting point/freezing pointNot available.Initial boiling point and boiling rangeNot available.Flash point> 201.0 °F (> 93.9 °C)Evaporation rateNot available.Flammability (solid, gas)Not available.Ipper/lower flammability or explicable.Not available.Upper/lower flammability or explicable.Not available.(%)Not available.Flammability limit - lower (%)Not available.Explosive limit - lower (%)Not available.Vapor pressureNot available.Vapor densityNot available.Vapor densityNot available.Solubility(ies)Solubility (water)Solubility (water)InsolubleAuto-ignition temperatureNot available.ViscosityNot available.ViscosityNot available.Other information7.34 lb/gal	Color	Amber
pHNot available.Melting point/freezing pointNot available.Initial boiling point and boiling rangeNot available.Flash point> 201.0 °F (> 93.9 °C)Evaporation rateNot available.Flammability (solid, gas)Not available.Upper/lower flammability or expireNot available.flammability limit - lower (%)Not available.Flammability limit - upper (%)Not available.flammability limit - upper (%)Not available.flammability limit - upper (%)Not available.Vapor pressureNot available.Vapor densityNot available.Vapor densityNot available.Solubility(ies) Solubility (water)InsolubleAuto-ignition temperature ViscosityNot available.ViscosityNot available.ViscosityNot available.Other information DensityNot available.Tot applicableNot available.YiscosityInsolubleOther informationNot available.Density7.34 lb/gal	Odor	Mild.
Melting point/freezing pointNot available.Melting point/freezing pointNot available.Initial boiling point and boiling rangeNot available.Flash point> 201.0 °F (> 93.9 °C)Evaporation rateNot available.Flammability (solid, gas)Not available.Upper/lower flammability or expire limitsNot available.Flammability limit - lower (%)Not available.Flammability limit - upper (%)Not available.Explosive limit - lower (%) (%)Not available.Vapor pressureNot available.Vapor density Solubility(ies) Solubility(water)Not available.Auto-ignition temperature UiscosityNot available.Viscosity DensityNot available.Other information Density7.34 lb/gal	Odor threshold	Not available.
Initial boiling point and boiling rangeNot available.Flash point> 201.0 °F (> 93.9 °C)Evaporation rateNot available.Flammability (solid, gas)Not applicable.Upper/lower flammability or explorationsNot available.Flammability (solid, gas)Not available.Upper/lower flammability or explorationsNot available.flammability limit - lower (%)Not available.Flammability limit - upper (%)Not available.Explosive limit - lower (%) (%)Not available.Explosive limit - upper (%)Not available.Vapor pressureNot available.Vapor densityNot available.Relative densityNot available.Solubility (water)InsolubleAuto-ignition temperatureNot available.ViscosityNot available.ViscosityNot available.Other information Density7.34 lb/gal	рН	Not available.
rangeFlash point> 201.0 °F (> 93.9 °C)Evaporation rateNot available.Flammability (solid, gas)Not applicable.Upper/lower flammability or exporter limitsFlammability limit - lowerNot available.(%)Not available.Flammability limit - upperNot available.(%)Not available.Explosive limit - lower (%)Not available.Explosive limit - upper (%)Not available.Vapor pressureNot available.Vapor densityNot available.Solubility(ies)Not available.Solubility(water)InsolubleAuto-ignition temperatureNot available.ViscosityNot available.ViscosityNot available.Other information7.34 lb/gal	Melting point/freezing point	Not available.
Evaporation rateNot available.Flammability (solid, gas)Not applicable.Upper/lower flammability or explored imitsFlammability limit - lowerNot available.(%)Not available.Flammability limit - upperNot available.(%)Not available.Explosive limit - lower (%)Not available.Explosive limit - upper (%)Not available.Vapor pressureNot available.Vapor densityNot available.Solubility(ies)Not available.Solubility (water)InsolubleAuto-ignition temperatureNot available.ViscosityNot available.Other informationNot available.Density7.34 lb/gal		Not available.
Flammability (solid, gas)Not applicable.Upper/lower flammability or explosive limitsFlammability limit - lower (%)Not available.Flammability limit - upper (%)Not available.Flammability limit - lower (%)Not available.Explosive limit - lower (%)Not available.Explosive limit - upper (%)Not available.Vapor pressureNot available.Vapor densityNot available.Solubility(ies)Not available.Solubility(water)InsolubleAuto-ignition temperatureNot available.ViscosityNot available.Other informationNot available.Density7.34 lb/gal	Flash point	> 201.0 °F (> 93.9 °C)
Upper/lower flammability or explosive limitsFlammability limit - lower (%)Not available.Flammability limit - upper (%)Not available.Flammability limit - upper (%)Not available.Explosive limit - lower (%) (%)Not available.Explosive limit - upper (%) (%)Not available.Vapor pressureNot available.Vapor density Solubility(ies) Solubility (water)Not available.Solubility (water) Decomposition temperature DensityInsolubleViscosity DensityNot available.Other information Density7.34 lb/gal	Evaporation rate	Not available.
Flammability limit - lower (%)Not available.Flammability limit - upper (%)Not available.Explosive limit - lower (%)Not available.Explosive limit - upper (%)Not available.Vapor pressureNot available.Vapor densityNot available.Solubility(ies)Not available.Solubility (water)InsolubleAuto-ignition temperatureNot available.ViscosityNot available.Other information7.34 lb/gal	Flammability (solid, gas)	Not applicable.
(%) Flammability limit - upper (%) Explosive limit - lower (%) Not available. Explosive limit - upper (%) Not available. Explosive limit - upper (%) Not available. Vapor pressure Not available. Vapor density Not available. Vapor density Not available. Solubility(ies) Solubility (water) Insoluble Auto-ignition temperature Not available. Decomposition temperature Not available. Viscosity Not available. Other information Density 7.34 lb/gal	•••••••••••••••••••••••••••••••••••••••	
(%) Explosive limit - lower (%) Not available. Explosive limit - upper (%) Not available. Vapor pressure Not available. Vapor density Not available. Relative density Not available. Solubility(ies) Solubility (water) Insoluble Auto-ignition temperature Not available. Decomposition temperature Not available. Viscosity Not available. Other information Density 7.34 lb/gal		Not available.
Explosive limit - upper (%)Not available.Vapor pressureNot available.Vapor densityNot available.Relative densityNot available.Solubility(ies)InsolubleSolubility (water)InsolubleAuto-ignition temperatureNot available.Decomposition temperatureNot available.ViscosityNot available.Other information7.34 lb/gal		Not available.
Vapor pressureNot available.Vapor densityNot available.Relative densityNot available.Solubility(ies)InsolubleSolubility (water)InsolubleAuto-ignition temperatureNot available.Decomposition temperatureNot available.ViscosityNot available.Other information7.34 lb/gal	Explosive limit - lower (%)	Not available.
Vapor densityNot available.Relative densityNot available.Solubility(ies)InsolubleAuto-ignition temperatureNot available.Decomposition temperatureNot available.ViscosityNot available.Other information7.34 lb/gal	Explosive limit - upper (%)	Not available.
Relative densityNot available.Solubility(ies)InsolubleSolubility (water)InsolubleAuto-ignition temperatureNot available.Decomposition temperatureNot available.ViscosityNot available.Other information7.34 lb/gal	Vapor pressure	Not available.
Solubility(ies)InsolubleSolubility (water)InsolubleAuto-ignition temperatureNot available.Decomposition temperatureNot available.ViscosityNot available.Other information7.34 lb/gal	Vapor density	Not available.
Solubility (water)InsolubleAuto-ignition temperatureNot available.Decomposition temperatureNot available.ViscosityNot available.Other information7.34 lb/gal	Relative density	Not available.
Auto-ignition temperatureNot available.Decomposition temperatureNot available.ViscosityNot available.Other information7.34 lb/gal	Solubility(ies)	
Decomposition temperatureNot available.ViscosityNot available.Other information7.34 lb/gal	Solubility (water)	Insoluble
ViscosityNot available.Other information7.34 lb/gal	Auto-ignition temperature	Not available.
Other information Density 7.34 lb/gal	Decomposition temperature	Not available.
Density 7.34 lb/gal	Viscosity	Not available.
-	Other information	
Explosive properties Not explosive.	Density	7.34 lb/gal
	Explosive properties	Not explosive.

Flammability class	Combustible IIIB estimated
Oxidizing properties	Not oxidizing.
Specific gravity	0.88

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	Avoid temperatures exceeding the decomposition temperature. Avoid temperatures exceeding the flash point. Contact with incompatible materials.
Incompatible materials	Strong oxidizing agents.
Hazardous decomposition products	Irritating and/or toxic fumes and gases may be emitted upon the products decomposition. Irritating and/or toxic fumes and gases may be emitted upon the product's decomposition.

11. Toxicological information

Information on likely routes of exposure

Inhalation	Prolonged inhalation may be harmful.
Skin contact	May cause an allergic skin reaction.
Eye contact	Direct contact with eyes may cause temporary irritation.
Ingestion	Expected to be a low ingestion hazard.
Symptoms related to the physical, chemical and toxicological characteristics	May cause an allergic skin reaction. Dermatitis. Rash.

Information on toxicological effects

Acute toxicity	Not known.	
Product	Species	Test Results
Kovar Ampio DR		
Acute		
Dermal		
LD50	Rat	> 5000 mg/kg
Inhalation		
LC50	Rat	> 5 mg/l, 4 hr
Oral		
LD50	Rat	> 5000 mg/kg
Components	Species	Test Results
Amine salts of organic acid	ls	
Acute		
Oral		
Liquid		
LD50	Rat	1400 mg/kg
Methylated Seed Oil		
Acute		
Dermal		
Liquid		
LD50	Rabbit	> 2000 mg/kg
Oral		
Liquid		
LD50	Rat	> 5000 mg/kg
Proprietary organic acids		
Acute		
Dermal		
LD50	Rabbit	> 2000 mg/kg, 24 Hours

Components	Species	Test Results
Inhalation		
Dust	5.4	
LC50	Rat	> 12200 mg/m3, 4 Hours
Oral LD50	Rat	2742 malka
		2742 mg/kg
Skin corrosion/irritation	-	ct may cause temporary irritation.
Erythema value	2.1111	
Oedema value	1.3333 Disc et e e e e e	·····
Serious eye damage/eye irritation	Direct conta	es may cause temporary irritation.
Corneal opacity value	0.1111	
Iris lesion value	0.6667	
Conjunctival reddening value	1.5556	
Conjunctival oedema value	0.6667	
Recover days	4	
Respiratory or skin sensitization		
Respiratory sensitization	Not a respira	
Skin sensitization	•	c skin reaction.
Germ cell mutagenicity	mutagenic c	
Carcinogenicity		carcinogenicity to humans.
IARC Monographs. Overall	Evaluation of	genicity
Not listed. OSHA Specifically Regulate Not listed.	ed Substances	R 1910.1001-1053)
US. National Toxicology Pro	ogram (NTP) I	n Carcinogens
Reproductive toxicity	This produc	spected 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.	
Chronic effects	Prolonged inhalation may be harmful.	
12. Ecological information	1	
Ecotoxicity	The product	assified as environmentally hazardous. However, this does not exclude the or frequent spills can have a harmful or damaging effect on the environment.
Product		ies Test Results
Kovar Ampio DR		
Aquatic		
Acute	5050	
Crustacea	EC50	nia 40.12 mg/l, 48 hours
F : 1	NOEC	nia 2.25 mg/l, 48 hours
Fish	LC50	how Trout > 162 mg/l, 96 hours
	NOEC	ow Trout > 50 mg/l, 96 hours
Persistence and degradability	No data is a	on the degradability of any ingredients in the mixture.
Bioaccumulative potential		
Partition coefficient n-octar Proprietary organic acids	nol / water (log	1.87

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.

ΙΑΤΑ

Not regulated as dangerous goods.

IMDG

Not regulated as dangerous goods.

Transport in bulk according to Not established. Annex II of MARPOL 73/78 and

the IBC Code

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 listed on or exempted from the U.S. EPA TSCA Inventory List.

Listed.

Toxic Substances Control Act (TSCA)

One or more components of the mixture are not on the TSCA 8(b) inventory or are designated "inactive".

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

Not regulated.

CERCLA Hazardous Substance List (40 CFR 302.4)

Proprietary organic acids (CAS Trade Secret)

SARA 304 Emergency release notification

Not regulated.

OSHA Specifically Regulated Substances (29 CFR 1910.1001-1053)

Not listed.

Superfund Amendments and Reauthorization Act of 1986 (SARA)

SARA 302 Extremely hazardous substance

Not listed.

SARA 311/312 Hazardous Yes chemical

Classified hazard Respiratory or skin sensitization

categories

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 Not regulated.
(SDWA)

US state regulations

California Proposition 65

California Safe Drinking Water and Toxic Enforcement Act of 1986 (Proposition 65): This material is not known to contain any chemicals currently listed as carcinogens or reproductive toxins. For more information go to www.P65Warnings.ca.gov.

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

Issue date	07-21-2021
Revision date	07-21-2021
Version #	02
NFPA ratings	Health: 2 Flammability: 0 Instability: 0
NFPA ratings	200

Disclaimer

This information was developed from information on the constituent materials. No warranty is expressed or implied regarding the completeness or continuing accuracy of the information contained herein, and the manufacturer disclaims all liability for reliance thereon. The user should satisfy himself that he has all current data relevant to his particular use.