Safety Data Sheet
acc. to OSHA HCS

Printing date 04/16/2015 Reviewed on 04/16/2015

1 Identification

· **Product identifier**

· **Trade name:** **PICCOLYTE® AO PLUS**
· **Product Description** polyterpene oligomer

· **Article number:** 108816
· **Relevant identified uses of the substance or mixture and uses advised against**
No further relevant information available.
· **Application of the substance / the mixture**
Retention aid for agricultural chemicals
Film former and fixative agent
Compatible extender for organic phase of agricultural chemicals

· **Details of the supplier of the safety data sheet**
· **Manufacturer/Supplier:**
Pinova, Inc.
2801 Cook Street
Brunswick, Georgia, USA 31520
MSDS@pinovasolutions.com

· **Information department:** Regulatory Affairs
· **Emergency telephone number:**
Within USA and Canada: 1-800-CHEMTREC (424-9300)
Outside the USA and Canada: 1-703-527-3887

2 Hazard(s) identification

· **Classification of the substance or mixture**
The substance is not classified according to the Globally Harmonized System (GHS).

· **Classification according to Directive 67/548/EEC or Directive 1999/45/EC**
· **Information concerning particular hazards for human and environment:**
DANGER!
HOT MOLTEN product: Burns may cause irreversible eye injury and blindness. Causes skin burns. Inhalation of smoke or fumes may cause throat discomfort, coughing, or breathing difficulty. Product may burn if ignited.
CAUTION!
LIQUID product at ambient temperature: May cause eye irritation. Inhalation of mist may cause respiratory tract irritation. Prolonged or repeated contact may cause skin irritation.
GENERAL HYGIENIC PRACTICES - Avoid contact with eyes, skin, and clothing. Avoid breathing vapor, fumes or mist. Handle in areas with adequate ventilation.
Refer to Section 5 for Hazardous Combustion Products, and Section 10 for Hazardous Decomposition/ Hazardous Polymerization Products.

· **Label elements**
· **GHS label elements** Void
· **Hazard pictograms** Void
· **Signal word** Void
· **Hazard statements** Void
· **Precautionary statements**

P202	Do not handle until all safety precautions have been read and understood.
P234	Keep only in original container.
P261	Avoid breathing mist/vapours/spray.
P262	Do not get in eyes, on skin, or on clothing.
P264	Wash thoroughly after handling.
P270	Do not eat, drink or smoke when using this product.
P280	Wear protective gloves / eye protection.

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P284	In case of inadequate ventilation wear respiratory protection.
P301+P312	If swallowed: Call a doctor if you feel unwell.
P301+P330+P331	If swallowed: Rinse mouth. Do NOT induce vomiting.
P302+P352	If on skin: Wash with plenty of soap and water.
P304+P312	IF INHALED: Call a doctor if you feel unwell.
P304+P341	If inhaled: If breathing is difficult, remove person to fresh air and keep comfortable for breathing.
P305+P351+P338	If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P314	Get medical advice/attention if you feel unwell.
P337+P313	If eye irritation persists: Get medical advice/attention.
P362	Take off contaminated clothing and wash before reuse.
P402+P404	Store in a dry place. Store in a closed container.
P403+P233	Store in a well-ventilated place. Keep container tightly closed.
P501	Dispose of contents/container in accordance with local/regional/national/international regulations.

· **Classification system:**
· **NFPA ratings (scale 0 - 4)**

Health = 0
Fire = 1
Reactivity = 0

· **HMIS-ratings (scale 0 - 4)**

Health = 0
Fire = 1
Reactivity = 0

· **Other hazards**
· **Results of PBT and vPvB assessment**
· **PBT:** Not applicable.
· **vPvB:** Not applicable.

3 Composition/information on ingredients

· **Chemical characterization: Substances**
· **CAS No.:** 31393-98-3
· **CAS No. Description**
Bicyclo[3.1.1]hept-2-ene, 2,6,6-trimethyl-,polymer with 6,6-dimethyl-2-methylenebicyclo[3.1.1]heptane
· **EC number:** 608-613-0
· **Index number:** 006-086-13-0
· **Additonal information:**
This product is shipped and delivered as a LIQUID or HOT LIQUID. THE HMIS HEALTH HAZARD RATING FOR THE HOT MOLTEN OR HOT LIQUID IS 3 SERIOUS. See SDS Section 2 for the HMIS health hazard rating for the product at ambient temperature.
When shipped at elevated temperatures and delivered in HOT MOLTEN or HOT LIQUID form, refer to SDS Sections 2, 4, 5, 7 and 8 for additional hazard information.

4 First-aid measures

· **Description of first aid measures**
· **After inhalation:** Remove to fresh air. Get medical attention if nasal, throat or lung irritation develops.

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· **After skin contact:**
HOT LIQUID product: Immediately cool skin burns with water and cold packs for at least 15 minutes. Do NOT put ice directly on the skin. Do NOT attempt to remove solidified resin from the skin as severe tissue damage may result. Get immediate medical attention. See Note to Physician.
LIQUID product at ambient temperature. Wash thoroughly with soap and water. Get medical attention if irritation persists.

· **After eye contact:**
HOT LIQUID product: Cool burns with plenty of low-pressure water. Get immediately medical attention.
LIQUID product at ambient temperature. Hold eyelids apart. Immediately flush eye with plenty of low-pressure water for at least 15 minutes. Get medical attention if irritation persists.

· **After swallowing:**
Not an ingestion hazard under anticipated conditions of use.
For accidental ingestion: Do NOT induce vomiting. Get immediate medical attention.

· **Information for doctor:**
For HOT MOLTEN or HOT LIQUID product: Material should not be forcibly removed from the skin. Mineral oil may be used to loosen and soften the material.

· **Most important symptoms and effects, both acute and delayed**
No further relevant information available.

· **Indication of any immediate medical attention and special treatment needed**
No further relevant information available.

5 Fire-fighting measures

· **Extinguishing media**

· **Suitable extinguishing agents:**
Water spray, dry chemical, foam, carbon dioxide or clean extinguishing agents may be used on fires involving this product.

· **Special hazards arising from the substance or mixture**
If heated to combustion, the following substances may be formed:
Carbon monoxide (CO)
Carbon Dioxide (CO_2)
Aldehydes
Carboxylic acids
Smoke

· **Advice for firefighters**

· **Protective equipment:**
Wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH approved (or equivalent) and full protective gear when fighting fires involving this product.
Apply water to HOT MOLTEN or HOT LIQUID resin fires from a safe, protected location to avoid body contact with hot resin.
Cool containers with water to prevent rupture.

6 Accidental release measures

· **Personal precautions, protective equipment and emergency procedures**
For HOT MOLTEN or HOT LIQUID product: Wear protective equipment as required (see SDS Section 8). Contain spilled material and allow it to cool and solidify. Do NOT apply water. After solidification, clean up and place in suitable containers for use or disposal.
For LIQUID product. Ventilate area. For small spill: Add absorbent, sweep up, and dispose appropriately. For large spills: Dike to contain and pump into drums for use or disposal. In case of accidental spill or release, refer to Section 8, Personal Protective Equipment and General Hygiene Practices.

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· **Environmental precautions:** Do not allow to enter sewers/ surface or ground water.
· **Methods and material for containment and cleaning up:**
Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).
· **Reference to other sections**
See Section 7 for information on safe handling.
See Section 8 for information on personal protection equipment.
See Section 13 for disposal information.

7 Handling and storage

· **Handling:**
· **Precautions for safe handling**
For HOT MOLTEN or HOT LIQUID product: Use personal protective equipment as indicated in Section 8: Exposure Controls/Personal Protection.
· **Information about protection against explosions and fires:**
Water contact with HOT MOLTEN or HOT LIQUID resin may result in foaming or spattering, which can cause eye or skin burns.

· **Conditions for safe storage, including any incompatibilities**
· **Storage:**
· **Requirements to be met by storerooms and receptacles:** Store in cool, dry area.
· **Information about storage in one common storage facility:** Not required.
· **Further information about storage conditions:** None.
· **Specific end use(s)** No further relevant information available.

8 Exposure controls/personal protection

· **Additional information about design of technical systems:**
Eyewash fountains and safety showers should be easily acessible.
Provide adequate ventilation.
If upper respiratory tract irritation occurs, use an approved dust/mist respirator to minimize exposure.
Eliminate ignition sources.
Completely isolate and thoroughly clean all equipment, piping, or vessels before beginning maintenance or repairs.
Keep area clean. Product will burn.

· **Control parameters**
· **Components with limit values that require monitoring at the workplace:** Not required.
· **Additional Occupational Exposure Limit Values for possible hazards during processing:**
No exposure limit has been established. This product may irritate the upper respiratory tract if used under conditions that create dust or mist particulates.

· **Exposure controls**
· **Personal protective equipment:**
· **General protective and hygienic measures:**
Avoid contact with eyes, skin, and clothing.
Avoid breathing vapor, fumes or mist.
Handle in areas with adequate ventilation.
Avoid contamination of food, beverages, or smoking materials.
Wash thoroughly after handling, and before eating, drinking or smoking.
Remove contaminated clothing promptly and clean thoroughly before reuse.
· **Breathing equipment:**
Wear approved dust/mist respirator if user operations create dust/mist that causes irritation.

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· **Protection of hands:**
Impervious gloves
The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.
Selection of the glove material should be made based on consideration of the penetration times, rates of diffusion and the degradation
· **Material of gloves**
The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer.
· **Penetration time of glove material**
The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.
· **Eye protection:** Safety glasses
· **Body protection:**
Appropriate protective clothing
Personnel exposed to HOT MOLTEN or HOT LIQUID material should wear protective clothing that provides protection against thermal burns. Required Protective Equipment: a) Longsleeved protective shirt, long pants and work shoes; b) Hard hat and face shield; c) Long-cuff gloves (Gauntlet type-extending beyond wrist); d) Lined rain suit with protective hood or shoulder shroud or e) Full aluminized or thermal suit with hood.

9 Physical and chemical properties

· **Information on basic physical and chemical properties**
· **General Information**
· **Appearance:**

Form:	hot liquid viscous liquid at > 90°C (> 194°F); liquid product at ambient temperature
Color:	hot liquid product: pale yellow; liquid product at ambient temperature: pale yellow to light amber
· **Odor:**	typical rosin
· **Percent Volatile**	Negligible at 20°C
· **Specific Gravity**	0.96
· **Change in condition**	
Boiling point/Boiling range:	Undetermined.
· **Flash point:**	> 109 °C (> 228 °F) (Pensky-Martens Closed Cup)
· **Danger of explosion:**	Product does not present an explosion hazard.
· **Density:**	Not determined.
· **Bulk density:**	Not determined
· **Solubility in / Miscibility with Water:**	Slightly soluble.
· **Other information**	No further relevant information available.

10 Stability and reactivity

· **Reactivity**
· **Chemical stability**
· **Thermal decomposition / conditions to be avoided:**
Stable under recommended handling and storage conditions.

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· **Possibility of hazardous reactions**
Not anticipated under normal or recommended handling and storage.
· **Conditions to avoid** No further relevant information available.
· **Incompatible materials:** None known.
· **Hazardous decomposition products:** No dangerous decomposition products known.

11 Toxicological information

· **Information on toxicological effects**
· **Acute toxicity:**
· **LD/LC50 values that are relevant for classification:**
PRODUCT/SIMILAR PRODUCT - Ninety-day feeding studies of up to 50,000 ppm in the diet caused body weight depression at the highest dose due to poor palatability, and increase in liver size.
PRODUCT/SIMILAR PRODUCT:
Acute oral LD50 (rat): >34g/kg
Two year chronic oral no effect level (rat, dog): NOAEL = 0.05% in diet.
These and other studies conducted on similar products show this chemistry to be relatively non-toxic.
· **Primary irritant effect:**
· **on the skin:** No irritant effect.
· **on the eye:** No irritating effect.
· **Sensitization:** No human toxicity studies have been carried out with this product.
· **Subacute to chronic toxicity:**
PRODUCT/SIMILAR PRODUCT: No human toxicity studies have been carried out with this product.
· **Additional toxicological information:**
When used and handled according to specifications, the product does not have any harmful effects according to our experience and the information provided to us.
The substance is not subject to classification.

· **Carcinogenic categories**
· **IARC (International Agency for Research on Cancer)** Substance is not listed.
· **NTP (National Toxicology Program)** Substance is not listed.
· **OSHA-Ca (Occupational Safety & Health Administration)** Substance is not listed.

12 Ecological information

· **Toxicity**
· **Aquatic toxicity:** No further relevant information available.
· **Persistence and degradability**
Based upon data from this or similar materials, this product cannot be regarded as readily biodegradable; however, it may be slowly biodegradable.
· **Behavior in environmental systems:**
· **Bioaccumulative potential** No further relevant information available.
· **Mobility in soil** No further relevant information available.
· **Ecotoxical effects:**
· **Remark:** No ecological studies have been carried out on this product.
· **Additional ecological information:**
· **General notes:**
Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.
· **Results of PBT and vPvB assessment**
· **PBT:** Not a PBT.
· **vPvB:** Undetermined.

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· **Other adverse effects** No further relevant information available.

13 Disposal considerations

· **Waste treatment methods**
· **Recommendation:**
For LIQUID and HOT LIQUID product that has cooled and solidified. Incineration in accordance with applicable regulations is the recommended disposal method.
Landfilling in a permitted solid or hazardous waste facility is a suitable alternative after solidification to remove free liquids.
Waste water containing this product can be considered for treatment in an acclimated biological treatment system.
Disposal should be in accordance with applicable Federal, State and local regulations.

· **Uncleaned packagings:**
· **Recommendation:** Disposal must be made according to official regulations.

14 Transport information

· **UN-Number** · **DOT, ADR, ADN, IMDG, IATA**	Void
· **UN proper shipping name** · **DOT, ADR, ADN, IMDG, IATA**	Void
· **Transport hazard class(es)** · **DOT, ADR, ADN, IMDG, IATA** · **Class**	Void
· **Packing group** · **DOT, ADR, IMDG, IATA**	Void
· **Environmental hazards:** · **Marine pollutant:**	No
· **Special precautions for user**	Not applicable.
· **Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code**	Not applicable.
· **UN "Model Regulation":**	-

15 Regulatory information

· **Safety, health and environmental regulations/legislation specific for the substance or mixture**
· **Sara**
· **Section 355 (extremely hazardous substances):** Substance is not listed.
· **Section 313 (Specific toxic chemical listings):**
This product does not contain any chemicals subject to reporting under Section 313 of Title III of the Superfund Amendments and Reauthorization Act and 40CFR372.

Substance is not listed.

· **SECTIONS 302/304**
This product is not an Extremely Hazardous Substance subject to reporting under 40CFR355.

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· **SECTION 311 AND 312**
NHH: Not a health hazard
HC-3: Fire hazard
· **CERCLA**
This product does not contain any chemicals subject to reporting as a CERCLA Hazardous Substance under 40CFR302.4.
· **RCRA**
This product is not a hazardous waste as listed in 40CFR261.33. It does not exhibit any of the hazardous characteristics listed in 40CFR261, Subpart C.
· **TSCA (Toxic Substances Control Act):** Substance is listed.
· **Proposition 65**
· **Chemicals known to cause cancer:** Substance is not listed.
· **Chemicals known to cause reproductive toxicity for females:** Substance is not listed.
· **Chemicals known to cause reproductive toxicity for males:** Substance is not listed.
· **Chemicals known to cause developmental toxicity:** Substance is not listed.

· **Carcinogenic categories**
· **EPA (Environmental Protection Agency)** Substance is not listed.
· **TLV (Threshold Limit Value established by ACGIH)** Substance is not listed.
· **NIOSH-Ca (National Institute for Occupational Safety and Health)** Substance is not listed.
· **Canadian substance listings:**
· **Canadian Domestic Substances List (DSL)** Substance is listed.
· **GHS label elements** Void
· **Hazard pictograms** Void
· **Signal word** Void
· **Hazard statements** Void
· **Precautionary statements**

P202	Do not handle until all safety precautions have been read and understood.
P234	Keep only in original container.
P261	Avoid breathing mist/vapours/spray.
P262	Do not get in eyes, on skin, or on clothing.
P264	Wash thoroughly after handling.
P270	Do not eat, drink or smoke when using this product.
P280	Wear protective gloves / eye protection.
P284	In case of inadequate ventilation wear respiratory protection.
P301+P312	If swallowed: Call a doctor if you feel unwell.
P301+P330+P331	If swallowed: Rinse mouth. Do NOT induce vomiting.
P302+P352	If on skin: Wash with plenty of soap and water.
P304+P312	IF INHALED: Call a doctor if you feel unwell.
P304+P341	If inhaled: If breathing is difficult, remove person to fresh air and keep comfortable for breathing.
P305+P351+P338	If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P314	Get medical advice/attention if you feel unwell.
P337+P313	If eye irritation persists: Get medical advice/attention.
P362	Take off contaminated clothing and wash before reuse.
P402+P404	Store in a dry place. Store in a closed container.
P403+P233	Store in a well-ventilated place. Keep container tightly closed.
P501	Dispose of contents/container in accordance with local/regional/national/ international regulations.

· **Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

USA

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16O ther information

DISCLAIMER: The information and recommendations contained in this Material Safety Data Sheet have been compiled from sources believed to be reliable and to represent the most reasonable current opinion on the subject when the SDS was prepared. No warranty, guaranty or representation is made as to the correctness or sufficiency of the information. The user of this product must decide what safety measures are necessary to safely use this product, either alone or in combination with other products, and determine its environmental regulatory compliance obligations under any applicable federal or state laws.

· **Department issuing SDS:** *Regulatory Affairs*
· **Contact:** *MSDS@pinovasolutions.com*
· **Date of preparation / last revision** *04/16/2015 / 24*
· **Abbreviations and acronyms:**
RID: Règlement international concernant le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail)
ICAO: International Civil Aviation Organisation
ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)
IMDG: International Maritime Code for Dangerous Goods
DOT: US Department of Transportation
IATA: International Air Transport Association
ACGIH: American Conference of Governmental Industrial Hygienists
EINECS: European Inventory of Existing Commercial Chemical Substances
CAS: Chemical Abstracts Service (division of the American Chemical Society)
NFPA: National Fire Protection Association (USA)
HMIS: Hazardous Materials Identification System (USA)
LC50: Lethal concentration, 50 percent
LD50: Lethal dose, 50 percent

USA