Material Safety Data Sheet
Piperylene, tech., 60%, cis and trans isomers

ACC# 30000

Section 1 - Chemical Product and Company Identification

MSDS Name: Piperylene, tech., 60%, cis and trans isomers
Catalog Numbers: AC207650000, AC207650010, AC207650500
Synonyms: 1,3-Pentadiene; 1-Methylbutadiene; Penta-1,3-diene; Pentadiene, 1,3-
Company Identification:

Acros Organics N.V.
One Reagent Lane
Fair Lawn, NJ 07410

For information in North America, call: 800-ACROS-01
For emergencies in the US, call CHEMTREC: 800-424-9300

Section 2 - Composition, Information on Ingredients

CAS#	Chemical Name	Percent	EINECS/ELINCS
504-60-9	Piperylene	60	207-995-2

Section 3 - Hazards Identification

EMERGENCY OVERVIEW

Appearance: APHA: 25 max clear liquid. Flash Point: -28 deg C.
Danger! Extremely flammable liquid. Causes respiratory tract irritation. Irritant. Lachrymator (substance which increases the flow of tears). Causes eye and skin irritation. May cause digestive tract irritation. May cause central nervous system depression.
Target Organs: Central nervous system, respiratory system, eyes, skin.

Potential Health Effects

Eye: Vapors cause eye irritation. Lachrymator (substance which increases the flow of tears). Causes redness and pain. May cause chemical conjunctivitis and corneal damage.
Skin: Causes skin irritation. Causes redness and pain. May cause cyanosis of the extremities.
Ingestion: May cause gastrointestinal irritation with nausea, vomiting and diarrhea. Possible aspiration hazard. May cause central nervous system depression. Ingestion of large amounts may cause CNS depression.
Inhalation: Causes respiratory tract irritation. May cause effects similar to those described for ingestion. May cause dyspnea (difficult or labored breathing). Aspiration may lead to pulmonary edema. Vapors may cause dizziness or suffocation. May cause burning sensation in the chest.
Chronic: Effects may be delayed.

Section 4 - First Aid Measures

Eyes: Immediately flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids. Get medical aid. Do NOT allow victim to rub eyes or keep eyes closed.
Skin: Get medical aid. Flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Wash clothing before reuse.
Ingestion: Never give anything by mouth to an unconscious person. Get medical aid. Do NOT induce vomiting. If conscious and alert, rinse mouth and drink 2-4 cupfuls of milk or water.
Inhalation: Get medical aid immediately. Remove from exposure and move to fresh air immediately. If breathing is difficult, give oxygen. Do not use mouth-to-mouth resuscitation if victim ingested or inhaled the substance; induce artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device.
Notes to Physician: Treat symptomatically and supportively.

Section 5 - Fire Fighting Measures

General Information: As in any fire, wear a self-contained breathing apparatus in pressure-demand, MSHA/NIOSH (approved or equivalent), and full protective gear. Vapors may form an explosive mixture with air. Vapors can travel to a source of ignition and flash back. During a fire, irritating and highly toxic gases may be generated by thermal decomposition or combustion. Will burn if involved in a fire. Use water spray to keep fire-exposed containers cool. Extremely flammable liquid and vapor. Containers may explode in the heat of a fire. May form explosive peroxides. Vapors may be heavier than air. They can spread along the ground and collect in low or confined areas. Will be easily ignited by heat, sparks or flame.
Extinguishing Media: Use water spray to cool fire-exposed containers. Use foam, dry chemical, or carbon dioxide. This material is lighter than water and insoluble in water. The fire could easily be spread by the use of water in an area where the water cannot be contained. Do NOT use straight streams of water.
Flash Point: -28 deg C (-18.40 deg F)
Autoignition Temperature: Not applicable.
Explosion Limits, Lower:1.00 vol %
Upper: 7.00 vol %
NFPA Rating: (estimated) Health: 0; Flammability: 4; Instability: 2

Section 6 - Accidental Release Measures

General Information: Use proper personal protective equipment as indicated in Section 8.
Spills/Leaks: Absorb spill with inert material (e.g. vermiculite, sand or earth), then place in suitable container. Avoid runoff into storm sewers and ditches which lead to waterways. Remove all sources of ignition. Use a spark-proof tool. Provide ventilation. A vapor suppressing foam may be used to reduce vapors.

Section 7 - Handling and Storage

Handling: Ground and bond containers when transferring material. Use spark-proof tools and explosion proof equipment. Avoid contact with eyes, skin, and clothing. Empty containers retain product residue, (liquid and/or vapor), and can be dangerous. Keep away from heat, sparks and flame. Avoid ingestion and inhalation. Use only in a chemical fume hood. Do not pressurize, cut, weld, braze, solder, drill, grind, or expose empty containers to heat, sparks or open flames.
Storage: Keep away from heat, sparks, and flame. Store in a tightly closed container. Store in a cool, dry, well-ventilated area away from incompatible substances. Refrigerator/flammables.

Section 8 - Exposure Controls, Personal Protection

Engineering Controls: Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower. Use adequate general or local explosion-proof ventilation to keep airborne levels to acceptable levels.
Exposure Limits

Chemical Name	ACGIH	NIOSH	OSHA - Final PELs
Piperylene	none listed	none listed	none listed

OSHA Vacated PELs: Piperylene: No OSHA Vacated PELs are listed for this chemical.
Personal Protective Equipment
Eyes: Wear appropriate protective eyeglasses or chemical safety goggles as described by OSHA's eye and face protection regulations in 29 CFR 1910.133 or European Standard EN166.
Skin: Wear appropriate protective gloves to prevent skin exposure.
Clothing: Wear appropriate protective clothing to prevent skin exposure.
Respirators: A respiratory protection program that meets OSHA's 29 CFR 1910.134 and ANSI Z88.2 requirements or European Standard EN 149 must be followed whenever workplace conditions warrant respirator use.

Section 9 - Physical and Chemical Properties

Physical State: Clear liquid
Appearance: APHA: 25 max
Odor: None reported.
pH: Not available.
Vapor Pressure: 450 mbar @ 20 deg C
Vapor Density: 2.3
Evaporation Rate: Not available.
Viscosity: Not available.
Boiling Point: 42 deg C @ 760.00mm
Freezing/Melting Point:-78 deg C
Decomposition Temperature: Not available.
Solubility: insoluble
Specific Gravity/Density:.6830g/cm3
Molecular Formula:CH3CH=CHCH=CH2
Molecular Weight:68.11

Section 10 - Stability and Reactivity

Chemical Stability: Stable at room temperature in closed containers under normal storage and handling conditions.
Conditions to Avoid: High temperatures, incompatible materials, ignition sources, excess heat.
Incompatibilities with Other Materials: Strong oxidizing agents.
Hazardous Decomposition Products: Carbon monoxide, irritating and toxic fumes and gases, carbon dioxide.
Hazardous Polymerization: May occur.

Section 11 - Toxicological Information

RTECS#:
CAS# 504-60-9: RZ2464000
LD50/LC50:
CAS# 504-60-9:
Inhalation, mouse: LC50 = 1100 mg/m3/2H;
Inhalation, mouse: LC50 = 9760 mg/m3/2H;
Inhalation, rat: LC50 = 140 gm/m3/2H;
Inhalation, rat: LC50 = 97200 mg/m3/4H;
.

Carcinogenicity:

CAS# 504-60-9: Not listed by ACGIH, IARC, NTP, or CA Prop 65.

Epidemiology: No information found
Teratogenicity: No information found
Reproductive Effects: No information found
Mutagenicity: No information found
Neurotoxicity: No information found
Other Studies:

Section 12 - Ecological Information

Ecotoxicity: No data available. No information available.
Environmental: Will volatilize rapidly from both soil and water. Has high mobility in soil, and will not leach to groundwater systems. Will not hydrolyze, adsorb so suspended solids, or bioconcentrate in aquatic organisms. Undergoes rapid gas phase reactions with hydroxyl radicals and ozone. Reaction with nitrites at night in cities may be an important fate process. Wet deposition may be used to remove, but substance will most likely re-volatilze quickly, so this method may be ineffective.
Physical: No information available.
Other: No information available.

Section 13 - Disposal Considerations

Chemical waste generators must determine whether a discarded chemical is classified as a hazardous waste. US EPA guidelines for the classification determination are listed in 40 CFR Parts 261.3. Additionally, waste generators must consult state and local hazardous waste regulations to ensure complete and accurate classification.
RCRA P-Series: None listed.
RCRA U-Series:
CAS# 504-60-9: waste number U186 (Ignitable waste).

Section 14 - Transport Information

	US DOT	Canada TDG
Shipping Name:	FLAMMABLE LIQUIDS, N.O.S.	FLAMMABLE LIQUID NOS (PIPERYLENE)
Hazard Class:	3	3
UN Number:	UN1993	UN1993
Packing Group:	II	II
Additional Info:		FP -28C

Section 15 - Regulatory Information

US FEDERAL

TSCA
CAS# 504-60-9 is listed on the TSCA inventory.
Health & Safety Reporting List
None of the chemicals are on the Health & Safety Reporting List.
Chemical Test Rules
None of the chemicals in this product are under a Chemical Test Rule.
Section 12b
None of the chemicals are listed under TSCA Section 12b.
TSCA Significant New Use Rule
None of the chemicals in this material have a SNUR under TSCA.
CERCLA Hazardous Substances and corresponding RQs
CAS# 504-60-9: 100 lb final RQ; 45.4 kg final RQ
SARA Section 302 Extremely Hazardous Substances
None of the chemicals in this product have a TPQ.
Section 313 No chemicals are reportable under Section 313.
Clean Air Act:
This material does not contain any hazardous air pollutants.
This material does not contain any Class 1 Ozone depletors.
This material does not contain any Class 2 Ozone depletors.
Clean Water Act:
None of the chemicals in this product are listed as Hazardous Substances under the CWA.
None of the chemicals in this product are listed as Priority Pollutants under the CWA.
None of the chemicals in this product are listed as Toxic Pollutants under the CWA.
OSHA:
None of the chemicals in this product are considered highly hazardous by OSHA.
STATE
CAS# 504-60-9 can be found on the following state right to know lists: New Jersey, Pennsylvania, Massachusetts.

California Prop 65

California No Significant Risk Level: None of the chemicals in this product are listed.

European/International Regulations
European Labeling in Accordance with EC Directives
Hazard Symbols:
XI F

Risk Phrases:

R 11 Highly flammable.
R 36/37/38 Irritating to eyes, respiratory system and skin.

Safety Phrases:

S 16 Keep away from sources of ignition - No smoking.
S 26 In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
S 37/39 Wear suitable gloves and eye/face protection.

WGK (Water Danger/Protection)

CAS# 504-60-9: No information available.

Canada - DSL/NDSL

CAS# 504-60-9 is listed on Canada's DSL List.

Canada - WHMIS

This product has a WHMIS classification of B2.

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and the MSDS contains all of the information required by those regulations.

Canadian Ingredient Disclosure List

Section 16 - Additional Information

MSDS Creation Date: 9/02/1997
Revision #8 Date: 10/03/2005