

# ACROS ORGANICS

## Material Safety Data Sheet

Creation Date 14-May-2009

Revision Date 12-Feb-2014

Revision Number 2

### 1. PRODUCT AND COMPANY IDENTIFICATION

**Product Name** n-Pentane  
**Cat No. :** AC383900000; AC383900010; AC383900025; AC383900100  
**Synonyms** normal pentane.; n-Pentane; Amyl hydride  
**Recommended Use** Laboratory chemicals

**Company**  
Fisher Scientific  
One Reagent Lane  
Fair Lawn, NJ 07410  
Tel: (201) 796-7100

**Entity / Business Name**  
Acros Organics  
One Reagent Lane  
Fair Lawn, NJ 07410

**Emergency Telephone Number**  
For information **US** call: 001-800-ACROS-01 /  
**Europe** call: +32 14 57 52 11  
Emergency Number **US**:001-201-796-7100 /  
**Europe**: +32 14 57 52 99  
**CHEMTREC** Tel. No.**US**:001-800-424-9300 /  
**Europe**:001-703-527-3887

### 2. HAZARDS IDENTIFICATION

#### DANGER!

#### Emergency Overview

Extremely flammable liquid and vapor. Vapors may cause flash fire or explosion. Inhalation may cause central nervous system effects. May cause skin, eye, and respiratory tract irritation. Aspiration hazard if swallowed - can enter lungs and cause damage. Repeated exposure may cause skin dryness or cracking. Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

**Appearance** Clear

**Physical State** Liquid

**Odor** Petroleum distillates

**Target Organs** Central nervous system (CNS), Skin, Kidney

#### Potential Health Effects

#### Acute Effects

#### Principle Routes of Exposure

<b>Eyes</b>	May cause irritation.
<b>Skin</b>	May cause irritation. May be harmful in contact with skin. Repeated exposure may cause skin dryness or cracking.
<b>Inhalation</b>	May cause irritation of respiratory tract. Inhalation may cause central nervous system effects. May be harmful if inhaled.

**Ingestion** May be harmful if swallowed. Aspiration hazard. Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea.

**Chronic Effects** Repeated exposure may cause skin dryness or cracking. May cause adverse kidney effects.

See Section 11 for additional Toxicological information.

**Aggravated Medical Conditions** Central nervous system disorders. Preexisting eye disorders. Skin disorders.

### 3. COMPOSITION/INFORMATION ON INGREDIENTS

#### Haz/Non-haz

Component	CAS-No	Weight %
n-Pentane	109-66-0	>95

### 4. FIRST AID MEASURES

**Eye Contact** Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Obtain medical attention.

**Skin Contact** Wash off immediately with plenty of water for at least 15 minutes. Get medical attention immediately if symptoms occur.

**Inhalation** Move to fresh air. If breathing is difficult, give oxygen. Do not use mouth-to-mouth resuscitation if victim ingested or inhaled the substance; induce artificial respiration with a respiratory medical device. Get medical attention immediately if symptoms occur.

**Ingestion** Do not induce vomiting. Call a physician or Poison Control Center immediately.

**Notes to Physician** Treat symptomatically.

### 5. FIRE-FIGHTING MEASURES

**Flash Point** -49°C / -56.2°F

**Method -** No information available.

**Autoignition Temperature** 260°C / 500°F

**Explosion Limits**  
**Upper** 7.8 vol %  
**Lower** 1.5 vol %

**Suitable Extinguishing Media** CO<sub>2</sub>, dry chemical, dry sand, alcohol-resistant foam. Cool closed containers exposed to fire with water spray.

**Unsuitable Extinguishing Media** Water may be ineffective, Do not use a solid water stream as it may scatter and spread fire

**Hazardous Combustion Products** No information available.

**Sensitivity to mechanical impact** No information available.

**Sensitivity to static discharge** No information available.

#### Specific Hazards Arising from the Chemical

Extremely flammable. Risk of ignition. Containers may explode when heated. Vapors may form explosive mixtures with air. Vapors may travel to source of ignition and flash back.

**Protective Equipment and Precautions for Firefighters**

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear. Thermal decomposition can lead to release of irritating gases and vapors.

**NFPA**                      **Health** 3                      **Flammability** 4                      **Instability** 0                      **Physical hazards** N/A

**6. ACCIDENTAL RELEASE MEASURES**

<b>Personal Precautions</b>	Use personal protective equipment. Remove all sources of ignition. Take precautionary measures against static discharges.
<b>Environmental Precautions</b>	Should not be released into the environment. See Section 12 for additional ecological Information. Avoid release to the environment. Collect spillage.
<b>Methods for Containment and Clean Up</b>	Soak up with inert absorbent material. Keep in suitable, closed containers for disposal. Remove all sources of ignition. Use spark-proof tools and explosion-proof equipment.

**7. HANDLING AND STORAGE**

<b>Handling</b>	Use only under a chemical fume hood. Wear personal protective equipment. Keep away from open flames, hot surfaces and sources of ignition. Use explosion-proof equipment. Use only non-sparking tools. Take precautionary measures against static discharges. Avoid contact with skin, eyes and clothing. Do not breathe vapors or spray mist.
<b>Storage</b>	Keep containers tightly closed in a dry, cool and well-ventilated place. Keep away from heat and sources of ignition. Flammables area.

## 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

### Engineering Measures

Use only under a chemical fume hood. Ensure that eyewash stations and safety showers are close to the workstation location. Use explosion-proof electrical/ventilating/lighting/equipment.

### Exposure Guidelines

Component	ACGIH TLV	OSHA PEL	NIOSH IDLH
n-Pentane	TWA: 600 ppm	(Vacated) TWA: 600 ppm (Vacated) TWA: 1800 mg/m <sup>3</sup> (Vacated) STEL: 750 ppm (Vacated) STEL: 2250 mg/m <sup>3</sup> TWA: 1000 ppm TWA: 2950 mg/m <sup>3</sup>	IDLH: 1500 ppm TWA: 120 ppm TWA: 350 mg/m <sup>3</sup> Ceiling: 610 ppm Ceiling: 1800 mg/m <sup>3</sup>

Component	Quebec	Mexico OEL (TWA)	Ontario TWAEV
n-Pentane	TWA: 120 ppm TWA: 350 mg/m <sup>3</sup>	TWA: 600 ppm TWA: 1800 mg/m <sup>3</sup> STEL: 760 ppm STEL: 2250 mg/m <sup>3</sup>	TWA: 600 ppm TWA: 1770 mg/m <sup>3</sup> STEL: 750 ppm STEL: 2210 mg/m <sup>3</sup>

### Legend

**NIOSH IDLH:** Immediately Dangerous to Life or Health

### Personal Protective Equipment

#### Eye/face Protection

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 and body protection

Wear appropriate protective gloves and clothing to prevent skin exposure.

#### Respiratory Protection

Follow the OSHA respirator regulations found in 29 CFR 1910.134 or European Standard EN 149. Use a NIOSH/MSHA or European Standard EN 149 approved respirator if exposure limits are exceeded or if irritation or other symptoms are experienced.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

Physical State	Liquid
Appearance	Clear
Odor	Petroleum distillates
Odor Threshold	No information available.
pH	No information available.
Vapor Pressure	573 mbar @ 20 °C
Vapor Density	2.5 (Air = 1.0)
Viscosity	0.25 mPa.s @ 20 °C
Boiling Point/Range	36°C / 96.8°F @ 760 mmHg
Melting Point/Range	-130°C / -202°F
Decomposition temperature	No information available.
Flash Point	-49°C / -56.2°F
Evaporation Rate	28.6 (Butyl Acetate = 1.0)
Specific Gravity	0.626
Solubility	Insoluble in water
log Pow	No data available
Molecular Weight	72.15
Molecular Formula	C <sub>5</sub> H <sub>12</sub>

## 10. STABILITY AND REACTIVITY

### Stability

Stable under normal conditions.

### Conditions to Avoid

Incompatible products. Heat, flames and sparks.

<b>Incompatible Materials</b>	Strong oxidizing agents, Halogens
<b>Hazardous Decomposition Products</b>	Carbon monoxide (CO), Carbon dioxide (CO <sub>2</sub> )
<b>Hazardous Polymerization</b>	Hazardous polymerization does not occur.
<b>Hazardous Reactions</b>	None under normal processing.

## 11. TOXICOLOGICAL INFORMATION

### Acute Toxicity

#### Component Information

Component	LD50 Oral	LD50 Dermal	LC50 Inhalation
n-Pentane	2000 mg/kg ( Rat )	3000 mg/kg ( Rabbit )	364 g/m <sup>3</sup> ( Rat ) 4 h

<b>Irritation</b>	No information available.
<b>Toxicologically Synergistic Products</b>	No information available.
<b>Chronic Toxicity</b>	
<b>Carcinogenicity</b>	There are no known carcinogenic chemicals in this product
<b>Sensitization</b>	No information available.
<b>Mutagenic Effects</b>	No information available.
<b>Reproductive Effects</b>	No information available.
<b>Developmental Effects</b>	No information available.
<b>Teratogenicity</b>	No information available.
<b>Other Adverse Effects</b>	See actual entry in RTECS for complete information.
<b>Endocrine Disruptor Information</b>	No information available

## 12. ECOLOGICAL INFORMATION

### Ecotoxicity

Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

Component	Freshwater Algae	Freshwater Fish	Microtox	Water Flea
n-Pentane	Not listed	11.59 mg/L LC50 96 h 9.99 mg/L LC50 96 h 9.87 mg/L LC50 96 h	Not listed	9.74 mg/L EC50 = 48 h

<b>Persistence and Degradability</b>	No information available
<b>Bioaccumulation/ Accumulation</b>	No information available
<b>Mobility</b>	.

Component	log Pow
n-Pentane	3.39

### 13. DISPOSAL CONSIDERATIONS

**Waste Disposal Methods** Chemical waste generators must determine whether a discarded chemical is classified as a hazardous waste. Chemical waste generators must also consult local, regional, and national hazardous waste regulations to ensure complete and accurate classification.

### 14. TRANSPORT INFORMATION

#### DOT

UN-No UN1265  
 Proper Shipping Name PENTANES  
 Hazard Class 3  
 Packing Group II

#### TDG

UN-No UN1265  
 Proper Shipping Name PENTANES  
 Hazard Class 3  
 Packing Group II

#### IATA

UN-No UN1265  
 Proper Shipping Name PENTANES  
 Hazard Class 3  
 Packing Group II

#### IMDG/IMO

UN-No UN1265  
 Proper Shipping Name PENTANES  
 Hazard Class 3  
 Packing Group II

### 15. REGULATORY INFORMATION

#### International Inventories

Component	TSCA	DSL	NDSL	EINECS	ELINCS	NLP	PICCS	ENCS	AICS	CHINA	KECL
n-Pentane	T	X	-	203-692-4	-		X	X	X	X	X

#### Legend:

X - Listed

E - Indicates a substance that is the subject of a Section 5(e) Consent order under TSCA.

F - Indicates a substance that is the subject of a Section 5(f) Rule under TSCA.

N - Indicates a polymeric substance containing no free-radical initiator in its inventory name but is considered to cover the designated polymer made with any free-radical initiator regardless of the amount used.

P - Indicates a commenced PMN substance

R - Indicates a substance that is the subject of a Section 6 risk management rule under TSCA.  
 S - Indicates a substance that is identified in a proposed or final Significant New Use Rule  
 T - Indicates a substance that is the subject of a Section 4 test rule under TSCA.  
 XU - Indicates a substance exempt from reporting under the Inventory Update Rule, i.e. Partial Updating of the TSCA Inventory Data Base Production and Site Reports (40 CFR 710(B)).  
 Y1 - Indicates an exempt polymer that has a number-average molecular weight of 1,000 or greater.  
 Y2 - Indicates an exempt polymer that is a polyester and is made only from reactants included in a specified list of low concern reactants that comprises one of the eligibility criteria for the exemption rule.

**U.S. Federal Regulations**

**TSCA 12(b)**

Component	TSCA 12(b)
n-Pentane	Section 4

**SARA 313**  
 Not applicable

**SARA 311/312 Hazardous Categorization**

Acute Health Hazard	Yes
Chronic Health Hazard	Yes
Fire Hazard	Yes
Sudden Release of Pressure Hazard	No
Reactive Hazard	No

**Clean Water Act**  
 Not applicable

**Clean Air Act**  
 Not applicable

**OSHA** Occupational Safety and Health Administration  
**OSHA** - Occupational Safety and Health Administration

**CERCLA**  
 Not Applicable

**California Proposition 65**  
 This product does not contain any Proposition 65 chemicals.

**State Right-to-Know**

Component	Massachusetts	New Jersey	Pennsylvania	Illinois	Rhode Island
n-Pentane	X	X	X	-	X

**U.S. Department of Transportation**

Reportable Quantity (RQ):	N
DOT Marine Pollutant	N
DOT Severe Marine Pollutant	N

**U.S. Department of Homeland Security**

This product contains the following DHS chemicals:

Component	DHS Chemical Facility Anti-Terrorism Standard
n-Pentane	7500 lb STQ

**Other International Regulations**

Mexico - Grade

Severe risk, Grade 4

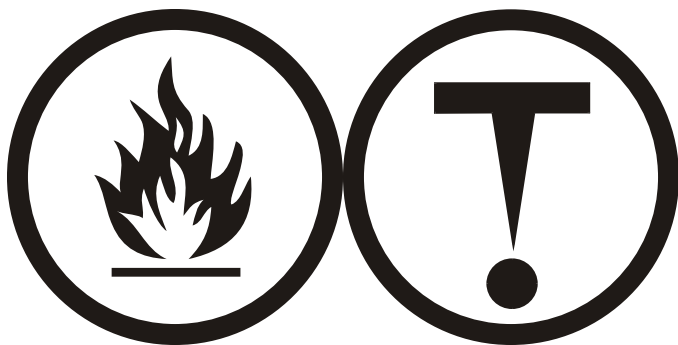
Canada

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

**WHMIS Hazard Class**

B2 Flammable liquid

D2B Toxic materials

**16. OTHER INFORMATION****Prepared By**

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**Creation Date**

14-May-2009

**Print Date**

12-Feb-2014

**Revision Summary**

(M)SDS sections updated, 2, 3.

**Disclaimer**

The information provided on this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guide for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered as a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other material or in any process, unless specified in the text.

**End of MSDS**