

**Clinac Product Line Hazardous Substance Matrix:  
Isooctane Cassette (PortalVision)**

\*\*\*\* SECTION 1 - CHEMICAL PRODUCT AND COMPANY IDENTIFICATION \*\*\*\*

MSDS Name: Isooctane

Catalog Numbers:

S71963ACS, S71963HPLC, 0299RB200, 0299RB50, 0299RS200, 0299RS50,  
FLO296RS-115, FLO296RS-200, FLO296RS-28, FLO296RS-50, NC9480637, NC9518965,  
NC9643768, NC9677444, NC9741872, NC9746688, NC9809854, NC9822380, NC9825230  
O296 1, O296 4, O296-1, O296-4, O2961, O2964, O296FB115, O296FB19,  
O296FB200, O296FB50, O296J4, O296RS115, O296RS200, O296RS28, O296RS50,  
O296SK 1, O296SK 4, O296SK-1, O296SK-4, O296SK1, O296SK4, O296SS115,  
O296SS200, O296SS28, O296SS50, O297 4, O297-4, O2974, O298-1, O299 1,  
O299 4, O299-1, O299-4, O299-500, O2991, O2994, O299FB115, O299FB19,  
O299FB200, O299FB50, O299J4, O299SS115, O299SS200, O299SS28, O299SS50,  
O300 1, O300 4, O300-1, O300-4, O3001, O3004, O301 4, O301-4, O3014,  
O3014LC, O301J4, XX029655GAL, XXO299204LI

Synonyms:

Isooctane; Isobutyltrimethylmethane; 2,2,4-Trimethyl Pentane.

Company Identification: Fisher Scientific  
1 Reagent Lane  
Fairlawn, NJ 07410

For information, call: 201-796-7100  
Emergency Number: 201-796-7100  
For CHEMTREC assistance, call: 800-424-9300  
For International CHEMTREC assistance, call: 703-527-3887

\*\*\*\* SECTION 2 - COMPOSITION, INFORMATION ON INGREDIENTS \*\*\*\*

CAS#	Chemical Name	%	EINECS#
540-84-1	Isooctane	100	208-759-1

Hazard Symbols: XN F N  
Risk Phrases: 11 38 50/53 65 67

\*\*\*\* SECTION 3 - HAZARDS IDENTIFICATION \*\*\*\*

**EMERGENCY OVERVIEW**

Highly flammable. Irritating to skin. Very toxic to aquatic organisms; may cause long-term adverse effects in the aquatic environment. Harmful: may cause lung damage if swallowed. Vapors may cause drowsiness and dizziness.

## Potential Health Effects

### *Eye:*

May cause eye irritation. Causes redness and pain.

### *Skin:*

May cause skin irritation. Prolonged and/or repeated contact may cause defatting of the skin and dermatitis.

### *Ingestion:*

Aspiration hazard. May cause gastrointestinal irritation with nausea, vomiting and diarrhea. May cause central nervous system depression, characterized by excitement, followed by headache, dizziness, drowsiness, and nausea. Advanced stages may cause collapse, unconsciousness, coma and possible death due to respiratory failure. Aspiration of material into the lungs may cause chemical pneumonitis, which may be fatal. May cause central nervous system depression.

### *Inhalation:*

Inhalation of high concentrations may cause central nervous system effects characterized by nausea, headache, dizziness, unconsciousness and coma. May cause irritation of the respiratory tract with burning pain in the nose and throat, coughing, wheezing, shortness of breath and pulmonary edema. May cause narcotic effects in high concentration. Aspiration may lead to pulmonary edema.

### *Chronic:*

Prolonged or repeated skin contact may cause defatting and dermatitis. May cause transient kidney disturbances

## \*\*\*\* SECTION 4 - FIRST AID MEASURES \*\*\*\*

### *Eyes:*

Flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids. Get medical aid immediately.

### *Skin:*

Get medical aid immediately. Flush skin with plenty of soap and water for at least 15 minutes while removing contaminated clothing and shoes. Wash clothing before reuse.

### *Ingestion:*

Do NOT induce vomiting. If victim is conscious and alert, give 2-4 cupfuls of milk or water. Never give anything by mouth to an unconscious person. Get medical aid immediately.

### *Inhalation:*

Get medical aid immediately. Remove from exposure to fresh air immediately. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Do NOT use mouth-to-mouth resuscitation.

*Notes to Physician:*

\*\*\*\* 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. Will burn if involved in a fire. Vapor may cause flash fire. Containers may explode in the heat of a fire. Liquid will float and may reignite on the surface of water. Flammable liquid and vapor. Vapors may be heavier than air. They can spread along the ground and collect in low or confined areas. May polymerize explosively when involved in a fire.

**Extinguishing Media:**

Use water spray to cool fire-exposed containers. Water may be ineffective. 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. For small fires, use dry chemical, carbon dioxide, water spray or regular foam. For large fires, use water spray, fog or regular foam.

\*\*\*\* 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. Take precautionary measures against static discharges. Keep container tightly closed. Avoid contact with heat, sparks and flame. Avoid ingestion and inhalation. Do not pressurize, cut, weld, braze, solder, drill, grind, or expose empty containers to heat, sparks or open flames. Use only with adequate ventilation.

**Storage:**

Keep away from heat, sparks, and flame. Keep away from sources of ignition. Store in a tightly closed container. Keep from contact with oxidizing materials. Store in a cool, dry, well-ventilated area away from incompatible substances. Refrigerator/flammables.

**\*\*\*\* SECTION 8 - EXPOSURE CONTROLS, PERSONAL PROTECTION \*\*\*\*****Engineering Controls:**

Ventilation fans and other electrical service must be non-sparking and have an explosion-proof design.  
Personal Protective Equipment

**Eyes:**

Wear chemical goggles.

**Skin:**

Wear appropriate 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 a respirator's use.

**\*\*\*\* SECTION 9 - PHYSICAL AND CHEMICAL PROPERTIES \*\*\*\***

Physical State: Liquid

Appearance: clear

Odor: gasoline-like

pH: Not applicable.

Vapor Pressure: 40.6 mm Hg @ 21 deg C

Vapor Density: 3.94 (air=1)

Evaporation Rate: < 1 (ether=1)

Viscosity: 0.51 mPas 22 de

Boiling Point: 98 - 99 deg C @ 760mm Hg

Freezing/Melting Point: -107 deg C

Autoignition Temperature: 417 deg C ( 782.60 deg F)

Flash Point: -12 deg C ( 10.40 deg F)

Explosion Limits, lower: 1.10 vol %

Explosion Limits, upper: 6.00 vol %

Decomposition Temperature:

Solubility: insoluble

Specific Gravity/Density: .6920g/cm3

Molecular Formula: C8H18

Molecular Weight: 114.23

\*\*\*\* SECTION 10 - STABILITY AND REACTIVITY \*\*\*\*

**Chemical Stability:**

Stable at room temperature in closed containers under normal storage and handling conditions.

**Conditions to Avoid:**

Incompatible materials, ignition sources, excess heat, electrical sparks.

**Incompatibilities with Other Materials:**

Strong oxidizing agents, strong acids, strong bases, oxygen.

**Hazardous Decomposition Products:**

Carbon monoxide, irritating and toxic fumes and gases, carbon dioxide.

**Hazardous Polymerization:**

Will not occur.

\*\*\*\* SECTION 11 - TOXICOLOGICAL INFORMATION \*\*\*\*

RTECS#:

CAS# 540-84-1: SA3320000

LD50/LC50:

Not available.

Carcinogenicity:

Isooctane -

Not listed by ACGIH, IARC, NIOSH, NTP, or OSHA.

Epidemiology:

Not available.

Teratogenicity:

Not available.

Reproductive Effects:

Not available.

Neurotoxicity:

Not available.

Mutagenicity:

Mutation & EPA: see RTECS

Other Studies:

Not available.

\*\*\*\* SECTION 12 - ECOLOGICAL INFORMATION \*\*\*\*

Other

No information available.

\*\*\*\* SECTION 13 - DISPOSAL CONSIDERATIONS \*\*\*\*

Dispose of in a manner consistent with federal, state, and local regulations.

\*\*\*\* SECTION 14 - TRANSPORT INFORMATION \*\*\*\*

US DOT

Shipping Name: OCTANES

Hazard Class: 3

UN Number: UN1262

Packing Group: II

Canadian TDG

Shipping Name: OCTANES

Hazard Class: 3

UN Number: UN1262

Other Information: FLASHPOINT -12 C

\*\*\*\* SECTION 15 - REGULATORY INFORMATION \*\*\*\*

**US FEDERAL**

TSCA

CAS# 540-84-1 is listed on the TSCA inventory.

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**

Isooctane can be found on the following state right to know lists:

New Jersey, Florida, Pennsylvania, Massachusetts.

*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:*

XN F N

*Risk Phrases:*

R 11 Highly flammable.

R 38 Irritating to skin.

R 50/53 Very toxic to aquatic organisms; may cause long-term adverse effects in the aquatic environment.

R 65 Harmful: may cause lung damage if swallowed.

R 67 Vapors may cause drowsiness and dizziness.

*Safety Phrases:*

S 2 Keep out of reach of children.

S 9 Keep container in a well-ventilated place.

S 16 Keep away from sources of ignition - No smoking.

S 29 Do not empty into drains.

S 33 Take precautionary measures against static discharges.

S 60 This material and/or its container must be disposed of as hazardous waste.

S 61 Avoid release to the environment. Refer to special instructions/Safety data sheets.

S 62 If swallowed, do not induce vomiting: seek medical advice immediately and show this container or label.

WGK (Water Danger/Protection)

CAS# 540-84-1: No information available.

United Kingdom Occupational Exposure Limits

**Canada**

CAS# 540-84-1 is listed on Canada's DSL List.

CAS# 540-84-1 is not listed on Canada's Ingredient Disclosure List.

Exposure Limits

\*\*\*\* SECTION 16 - ADDITIONAL INFORMATION \*\*\*\*

MSDS Creation Date: 12/12/1997 Revision #6 Date: 4/11/2001

The information above is believed to be accurate and represents the best information currently available to us. However, we make no warranty of merchantability or any other warranty, express or implied, with respect to such information, and we assume no liability resulting from its use. Users should make their own investigations to determine the suitability of the information for their particular purposes. In no way shall the company be liable for any claims, losses, or damages of any third party or for lost profits or any special, indirect, incidental, consequential or exemplary damages, howsoever arising, even if the company has been advised of the possibility of such damages.

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