CONTACT : LEONID CHEMICALS
62/A-2 1st Stage,Yeshwanthpur Industrial Suburb
Ashokpuram School Road
Bangalore-560 022, Karnataka, INDIA
Ph: +91-80-2337 8354, Fax: +91-80-2357 4827

14 DIOXANE

SECTION 1- CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

MSDS Name:
14 Dioxane Certified Acs 4l

Catalog Numbers: D/4480, D/4500, D/4551, D/4556

Synonyms:
Un Listed

Company Information:
LEONID CHEMICALS
62/A-2 1st Stage, Yeshwanthpur Industrial Suburb
Ashokpuram School Road
Bangalore-560 022, Karnataka, INDIA
Ph: +91-80-2337 8354, Fax: +91-80-2357 4827

SECTION 2- COMPOSITION, INFORMATION ON INGREDIENTS

CAS #	:	123-91-1
Chemical Name	:	1,4-dioxane
%	:	Un Listed.
EINECS#	:	204-661-8
Hazard Symbols	:	XN F
Risk Phrases	:	11 36/37 40

SECTION 3- HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW
Highly flammable. Irritating to eyes and respiratory system. Limited evidence of a carcinogenic effect.

Potential Health Effects
The toxicological properties of this material have not been investigated. Use appropriate procedures to prevent opportunities for direct contact with the skin or eyes and to prevent inhalation.

SECTION 4- FIRST AID MEASURES

Eyes:
Not available.
Skin:
Not available.
Ingestion:
Do NOT induce vomiting. If conscious and alert, rinse mouth and drink 2-4 cupfuls of milk or water.
Inhalation:
Not available.

Notes to Physician:
Un Listed

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.

Extinguishing Media:
In case of fire, use water, dry chemical, chemical foam, or alcohol-resistant 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.

SECTION 7 - HANDLING and STORAGE

Handling:
Not available.

Storage:
Not available.

SECTION 8 - EXPOSURE CONTROLS, PERSONAL PROTECTION

Engineering Controls:
Use adequate general or local exhaust ventilation to keep airborne concentrations below the permissible exposure limits.

Personal Protective Equipment :

Eyes:
Wear safety glasses and chemical goggles if splashing is possible.
Skin:
Wear appropriate protective gloves and clothing to prevent skin exposure.
Clothing:
Wear appropriate protective clothing to minimize contact with skin.
Respirators:
Wear a NIOSH/MSHA or European Standard EN 149 approved full-facepiece airline respirator in the positive pressure mode with emergency escape provisions.

SECTION 9 - PHYSICAL AND CHEMICAL PROPERTIES

Physical State	:	Liquid
Color	:	Colorless liquid.
Odor	:	Ether-like odor.
pH	:	6-8
Vapor Pressure	:	41 mbar @ 20 deg C
Viscosity	:	Not available.

CHEMLABS
62/A-2 1st Stage, Yeshwanthpur Industrial Suburb
Ashokpuram School Road
Bangalore-560 022, Karnataka, INDIA
Ph: +91-80-2337 8354, Fax: +91-80-2357 4827

Boiling Point	:	101 deg C
Freezing/Melting Point	:	12 deg C
Autoignition Temperature	:	356 deg F (180.00 deg C)
Flash Point	:	53.6 deg F (12.00 deg C)
Explosion Limits, lower	:	2.0
Explosion Limits, upper	:	22.00
Decomposition Temperature	:	Not available.
Solubility in water	:	Completely soluble in water.
Specific Gravity/Density	:	1.0340
Molecular Formula	:	C4H8O2
Molecular Weight	:	88.0548

SECTION 10 - STABILITY AND REACTIVITY

Chemical Stability:
Stable under normal temperatures and pressures.
Conditions to Avoid:
Incompatible materials, moisture, excess heat.
Incompatibilities with Other Materials:
Oxidizing agents, reducing agents, halogens, silver perchlorate, oxygen.
Hazardous Decomposition Products:
Carbon monoxide, carbon dioxide.
Polymerization:
Will not occur.

SECTION 11 - TOXICOLOGICAL INFORMATION

RTECS#:
CAS# 123-91-1: Jg8225000

LD50/LC50:
CAS# 123-91-1: Draize test, rabbit, eye: 100 mg Severe; Draize test, rabbit, eye: 100 mg/24H Moderate; Inhalation, mouse: LC50 = 37 gm/m3/2H; Inhalation, rat: LC50 = 46 gm/m3/2H; Oral, mouse: LD50 = 5300 mg/kg; Oral, rabbit: LD50 = 2 gm/kg; Oral, rat: LD50 = 4200 mg/kg; Skin, rabbit: LD50 = 7600 uL/kg.

Carcinogenicity:
1,4-dioxane -

ACGIH	:	A3 - Animal Carcinogen
California	:	carcinogen; initial date 1/1/88
NIOSH	:	potential occupational carcinogen
NTP	:	Suspect carcinogen
OSHA	:	Possible Select carcinogen
IARC	:	Group 2B carcinogen

See actual entry in RTECS for complete information.

SECTION 12 - ECOLOGICAL INFORMATION

No information available.

SECTION 13 - DISPOSAL CONSIDERATIONS

Products which are considered hazardous for supply are classified as Special Waste and the disposal of such chemicals is covered by regulations which may vary according to location. Contact a specialist disposal company or the local waste regulator for advice.

CHEMLABS
62/A-2 1st Stage, Yeshwanthpur Industrial Suburb
Ashokpuram School Road
Bangalore-560 022, Karnataka, INDIA
Ph: +91-80-2337 8354, Fax: +91-80-2357 4827

Empty containers must be decontaminated before returning for recycling.

SECTION 14 - TRANSPORT INFORMATION

IATA

Shipping Name	:	DIOXANE
Hazard Class	:	3
UN Number	:	1165
Packing Group	:	II

IMO

Shipping Name	:	DIOXANE
Hazard Class	:	3
UN Number	:	1165
Packing Group	:	II

RID/ADR

Shipping Name	:	DIOXANE
Hazard Class	:	3
UN Number	:	1165
Packing Group	:	II

USA RQ:CAS# 123-91-1: 100 lb final RQ; 45.4 kg final RQ

SECTION 15 - REGULATORY INFORMATION

European/International Regulations
European Labeling in Accordance with EC Directives

Hazard Symbols:
XN F

Risk Phrases:
R 11 Highly flammable.
R 36/37 Irritating to eyes and respiratory system.
R 40 Limited evidence of a carcinogenic effect.

Safety Phrases:
S 16 Keep away from sources of ignition No smoking.
S 36/37 Wear suitable protective clothing and gloves.

WGK (Water Danger/Protection)
CAS# 123-91-1: 2

United Kingdom Occupational Exposure Limits
CAS# 123-91-1: OES-United Kingdom, TWA 25 ppm TWA; 91 mg/m3 TWA
CAS# 123-91-1: OES-United Kingdom, STEL 100 ppm STEL; 366 mg/m3 STEL

United Kingdom Maximum Exposure Limits

Canada
CAS# 123-91-1 is listed on Canada's DSL List.
CAS# 123-91-1 is listed on Canada's Ingredient Disclosure List.

CHEMLABS
62/A-2 1st Stage, Yeshwanthpur Industrial Suburb
Ashokpuram School Road
Bangalore-560 022, Karnataka, INDIA
Ph: +91-80-2337 8354, Fax: +91-80-2357 4827

Exposure Limits :
CAS# 123-91-1: OEL-AUSTRALIA:TWA 25 ppm (90 mg/m3);Skin
OEL-AUSTRIA:TWA 50 ppm (180 mg/m3);Skin
OEL-BELGIUM:TWA 25 ppm (90 mg/m3);Skin
OEL-DENMARK:TWA 10 ppm (36 mg/m3);Skin
OEL-FINLAND:TWA 25 ppm (90 mg/m3);STEL 40 ppm (13 mg/m3);Skin
OEL-FRANCE:TWA 10 ppm (35 mg/m3);STEL 40 ppm (140 mg/m3);CAR
OEL-GERMANY:TWA 50 ppm (180 mg/m3);Skin;Carcinoge
OEL-HUNGARY:STEL 10 mg/m3;Skin;Carcinogen
OEL-JAPAN:TWA 10 ppm (36 mg/m3);Skin;Carcinogen
OEL-THE NETHERLANDS:TWA 50 ppm (180 mg/m3);Skin
OEL-THE PHILIPPINES:TWA 100 ppm (360 mg/m3);Skin
OEL-POLAND:TWA 10 mg/m3
OEL-RUSSIA:TWA 10 ppm;STEL 10 mg/m3;Skin
OEL-SWEDEN:TWA 25 ppm (90 mg/m3);STEL 50 ppm;Skin;CAR
OEL-SWITZERLAND:TWA 25 ppm (90 mg/m3);STEL 50 ppm;Skin
OEL-TURKEY:TWA 100 ppm (360 mg/m3);Skin
OEL-UNITED KINGDOM:TWA 25 ppm (90 mg/m3);STEL 100 ppm;Skin
OEL IN BULGARIA, COLOMBIA, JORDAN, KOREA check ACGIH TLV
OEL IN NEW ZEALAND, SINGAPORE, VIETNAM check ACGI TLV

US FEDERAL
TSCA:
CAS# 123-91-1 is listed on the TSCA inventory.

SECTION 16 - ADDITIONAL INFORMATION

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.

CHEMLABS™

CHEMLABS™
62/A-2 1st Stage, Yeshwanthpur Industrial Suburb
Ashokpuram School Road
Bangalore-560 022, Karnataka, INDIA
Ph: +91-80-2337 8354, Fax: +91-80-2357 4827