

MATERIAL SAFETY DATA SHEET



Conforms to 93/112/EC and ISO 11014-1

1. Chemical Product and Company Identification

Product Name: Oxosol C14 Oxidizer

Product Number: LS-211

**Chemical Names/
Description:**

Solution of xylene, co-solvent and alkyl ether amine with scintillation phosphors.

Manufacturer

National Diagnostics
305 Patton Drive
Atlanta, GA 30336

Telephone Numbers

(800) 526-3867
(404) 699-2121

Emergency Numbers

Chemtrec

(800) 424-9300 (U.S. & Canada)
01-703-527-3887 (outside U.S. & Canada)

2. Composition/Information on Ingredients

Component	% Comp.	CAS #	EINECS #	TLV (Units)
3-Methoxypropylamine	20 - 30	5332-73-0		No Data
Xylene	40 - 50	1330-20-7	215-535-7	100 ppm
Butoxy Ethanol	20 - 30	111-76-2	203-805-0	25 ppm (skin)

EEC LABEL SYMBOL AND CLASSIFICATION



HARMFUL



CORROSIVE

R: 10-20/21/22-34

Flammable. Harmful by inhalation and in contact with skin and if swallowed. Causes burns

S: (2-) 24/25-36/3

Keep out of reach of children. Avoid contact with skin and eyes. Wear suitable protective clothing, gloves and eye/face protection. In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).

3. Hazards Identification

Appearance and Odor

Clear colorless liquid with a slight aromatic hydrocarbon odor.

EMERGENCY OVERVIEW - IMMEDIATE HAZARD

3-Methoxypropylamine

FLAMMABLE LIQUID AND VAPOR. CORROSIVE - CAUSES EYE AND SKIN BURNS. HARMFUL OR FATAL IF SWALLOWED. CAUSES RESPIRATORY TRACT IRRITATION AND CAN CAUSE DAMAGE. ASPIRATION HAZARD IF SWALLOWED. CAN ENTER LUNGS AND CAUSE DAMAGE.

Xylene

DANGER! HARMFUL OR FATAL IF SWALLOWED. VAPOR HARMFUL. AFFECTS CENTRAL NERVOUS SYSTEM. CAUSES SEVERE EYE IRRITATION. CAUSES IRRITATION TO SKIN AND RESPIRATORY TRACT. MAY BE HARMFUL IF ABSORBED THROUGH SKIN. FLAMMABLE LIQUID AND VAPOR.

Butoxy Ethanol

CAUTION! SEVERELY IRRITATING TO THE EYES. IRRITATING TO THE SKIN, NOSE THROAT AND RESPIRATORY TRACT. TOXIC IF INHALED, INGESTED OR ABSORBED THROUGH SKIN.

EMERGENCY OVERVIEW - CHRONIC HAZARD WARNING:

3-Methoxypropylamine

REPEATED SKIN CONTACT MAY CAUSE A PERSISTENT IRRITATION OR DERMATITIS. REPEATED INHALATION MAY CAUSE LUNG DAMAGE.

Xylene

ACUTE OR CHRONIC OVEREXPOSURE TO THIS MATERIAL OR ITS COMPONENTS MAY CAUSE SYSTEMIC TOXICITY INCLUDING ADVERSE EFFECTS TO THE FOLLOWING: KIDNEY, LIVER, BRAIN, BLOOD, SPLEEN, TESTES, FETUS AND CENTRAL NERVOUS SYSTEM.

Butoxy Ethanol

NO INFORMATION FOUND.

Potential Health Effects

Inhalation

3-Methoxypropylamine:

Vapors or mist, especially as generated from heating the material or as from exposure in poorly confined spaces, are irritating to the nose and throat. Prolonged or repeated exposure may result in lung damage. Prolonged or repeated exposure may result in the absorption of potentially harmful amounts of material.

Xylene:

Inhalation of vapors may be irritating to the nose and throat. High vapor concentrations are anesthetic and central nervous system depressants.

Butoxy Ethanol:

Vapors may cause irritation to the nose, throat, and respiratory tract and are toxic if inhaled.

Ingestion

3-Methoxypropylamine:

Causes burning of mouth, throat and stomach with abdominal and chest pain. Aspiration may result during swallowing or vomiting, resulting in lung damage.

Xylene:

May cause irritation of the mouth, throat, and gastrointestinal tract. Aspiration into lungs may cause chemical pneumonia and lung damage.

Butoxy Ethanol:

Moderately toxic if ingested.

Skin

3-Methoxypropylamine:

Causes severe irritation with pain.

Xylene:

Skin contact results in loss of natural oils and often results in a characteristic dermatitis. May be absorbed through the skin.

Butoxy Ethanol:

Product is mildly irritating to the skin and toxic if absorbed through the skin.

Eyes

3-Methoxypropylamine:

Causes severe irritation and chemical burns of the eye. Severe eye damage may cause blindness.

Xylene:

Vapors cause eye irritation. Splashes cause severe irritation, possible corneal burns and eye damage.

Butoxy Ethanol:

Causes severe eye irritation.

Signs and Symptoms of Overexposure

Inhalation

3-Methoxypropylamine:

Nasal discharge, coughing, and discomfort in nose and throat.

Xylene:

Inhalation of high concentrations may result in nausea, vomiting, headache, ringing in the ears, and severe breathing difficulties which may be delayed in onset. Substernal pain, cough, and hoarseness are also reported. Symptoms of central nervous system depression or effects which may occur can include headache, excitation, euphoria, dizziness, incoordination, drowsiness, light-headedness, blurred vision, fatigue, tremors, convulsions, loss of consciousness, coma, respiratory arrest and death, depending on the concentration and duration of exposure.

Butoxy Ethanol:

Burning in nose and throat, coughing. Headache, dizziness, drowsiness, fatigue, nausea.

Ingestion

3-Methoxypropylamine:

Causes burning of mouth, throat, and stomach with abdominal and chest pain, nausea, vomiting, diarrhea, thirst, weakness, and collapse.

Xylene:

Salivation, pain, nausea, vomiting and diarrhea. Exposure may also cause central nervous system symptoms similar to those listed under Inhalation.

Butoxy Ethanol:

Headache, dizziness, drowsiness, fatigue, nausea, vomiting.

Skin

3-Methoxypropylamine:

Severe excess redness and swelling with chemical burns, blister formation, and possible tissue destruction.

Xylene:

Reddening, itching, and inflammation. Repeated or prolonged contact may result in drying, reddening, itching, pain, inflammation, cracking and possible secondary infection with tissue damage.

Butoxy Ethanol:

Redness, pain and itching.

Eyes

3-Methoxypropylamine:

Extreme redness and swelling of the eye. Severe eye damage may cause blindness.

Xylene:

Pain, tears, burns, sensitivity to light, swelling and possible corneal damage. Prolonged or repeated exposure may cause irritation and conjunctivitis.

Butoxy Ethanol:

Redness, tearing, and pain.

Carcinogenicity

3-Methoxypropylamine:

Not listed as a known or anticipated carcinogen by OSHA, IARC, or NTP.

Xylene:

IARC has determined that there is inadequate evidence to assign the carcinogenicity of xylene in humans and in experimental animals (IARC Class 3).

Butoxy Ethanol:

Not listed as a known or anticipated carcinogen by NTP or IARC.

Mutagenicity

3-Methoxypropylamine:

No information found.

Xylene:

Has been shown to be positive in mutagenicity assays.

Butoxy Ethanol:

No information found.

Reproductive Toxicity

3-Methoxypropylamine:

No information found.

Xylene:

May cause adverse reproductive and/or developmental effects. Pregnant women may be at an increased risk from exposure. Consumption of alcoholic beverages may enhance toxic effects.

Butoxy Ethanol:

Inhalation exposure of pregnant rabbits caused some lethality to the dam and fetus at 200 ppm, but there were no effects at 100 ppm and below. Inhalation exposure to pregnant rats caused irritancy to the dams and related fetotoxicity at 200 and 100 ppm, but there were no effects at 50 ppm and below.

Teratogenic Effects

3-Methoxypropylamine:

No information found.

Xylene:

May cause teratogenic effects.

Butoxy Ethanol:

Has not been shown to cause birth defects.

Routes of Entry

3-Methoxypropylamine:

Inhalation, ingestion, skin contact.

Xylene:

Inhalation, ingestion, and skin contact.

Butoxy Ethanol:

Inhalation, ingestion, skin contact.

Target Organ Statement

3-Methoxypropylamine:

Skin contact may aggravate an existing dermatitis (skin condition). Overexposure to vapor, dust or mist may aggravate existing respiratory conditions, such as asthma, bronchitis, and inflammatory or fibrotic respiratory disease.

Xylene:

Pre-existing medical conditions which may be aggravated by exposure include disorders of the skin, eye, heart, kidney, liver, blood, respiratory system, neurological and hemopoietic organs.

Butoxy Ethanol:

Preexisting skin, eye, and lung disorders may be aggravated by exposure.

4. First Aid Measures

Inhalation

Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Call a physician.

Ingestion

If person is conscious and can swallow, immediately give two glasses of water (16 oz.) but DO NOT INDUCE VOMITING. This material is corrosive. If vomiting occurs, give fluids again. Do not give anything by mouth to an unconscious or convulsing person.

Skin

Immediately flush skin with plenty of soap and water for at least 15 minutes while removing contaminated clothing and shoes. Get medical attention. Wash clothing before reuse. Thoroughly clean shoes before reuse.

Eyes

Immediately flush eyes with plenty of water for at least fifteen minutes, lifting lower and upper eyelids occasionally. Get medical attention immediately.

5. Fire Fighting Measures

Flash Point	32 C	Flammable Limits	No Data
Flash Point Method	PMCC*	Autoignition temperature	No Data

* Flash point value determined by Pensky-Martin Closed Cup method (PMCC). Upon request, alternate Tagliabue Closed Cup data (TCC) has been provided in some instances to local regulatory agencies.

Extinguishing media

Dry powder, foam, carbon dioxide. (Water may be ineffective.)

Protective Equipment

In the event of a fire, wear full protective clothing and NIOSH-approved self-contained breathing apparatus with full facepiece operated in the pressure demand or other positive pressure mode.

Hazardous Combustion Products

Thermal decomposition products may include toxic oxides of nitrogen and carbon.

Unusual Fire and Explosion Hazards

Flammable liquid. Vapor forms explosive mixtures with air. Vapor may travel considerable distances to ignition source and flash back.

NFPA Codes: Health 3 Flammability 3 Reactivity 0

6. Accidental Release Measures

Steps to be taken in case material is released or spilled

Eliminate source of ignition. Ventilate area. Cover with sand, earth or other suitable absorbant to confine spill and sweep or shovel into container. Close container tightly. Avoid breathing vapors.

Waste Disposal Method

Disposal must be made in accordance with applicable federal, state, and local regulations.

Personal Precautions

Wear appropriate protective equipment as specified in section 8.

7. Handling and Storage

Handling

Avoid contact and inhalation. Do not get in eyes, on skin, on clothing. Wash thoroughly after handling. Transfer methods should avoid static sparks. Use explosion proof ventilation.

Storage

Keep in a tightly closed container, stored in a cooled, dry, ventilated area away from sources of heat or ignition. Protect from physical damage. Isolate from incompatible materials (section 10).

Storage Temperature

Room Temperature

Disposal

Observe all national, state, and local regulations regarding product disposal. Containers of this material may be hazardous when empty since they retain product residues (vapors, liquids).

8. Exposure Controls/Personal Protection

Airborne Exposure Limits

Component: 3-Methoxypropylamine

ACGIH Threshold Limit Value (TLV): No Data

OSHA Permissible Exposure Limit

(PEL):

Component: Xylene

ACGIH Threshold Limit Value (TLV): 100 ppm

OSHA Permissible Exposure Limit

(PEL): 100 ppm

Component: Butoxy Ethanol

ACGIH Threshold Limit Value (TLV): 25 ppm (skin)

OSHA Permissible Exposure Limit

(PEL): 25 ppm

Engineering Controls

A system of local and/or general exhaust is recommended to keep employee exposures low. Local exhaust ventilation is generally preferred because it can control the emissions of the contaminant at its source.

Respiratory Protection

In conditions where exposure to this substance may occur, wear a supplied air, full-facepiece respirator, airtight hood, or full-facepiece self-contained breathing apparatus.

Eye Protection

Use chemical safety goggles and/or a full face shield where splashing is possible. Maintain eye wash fountain and quick-drench facilities in work area.

Skin Protection

Wear impervious protective clothing, including boots, gloves, lab coat, apron or coveralls, as appropriate, to prevent skin contact.

Other Control Measures

There is insufficient data in the published literature to assign complete numerical safety ratings and

laboratory protective equipment for this product. Special precautions must be used in storage, use and handling.

9. Physical Properties

Boiling point	137 - 140C	Evaporation Rate	0.7
Melting point	No Data	Solubility in water	Insoluble
Vapor pressure (mmHg)	25mmHg @ 25C	pH	Not applicable.
Vapor density (Air = 1)	3.7	Specific gravity (H2O = 1)	0.87
% volatile by volume	70		

10. Stability and Reactivity

Stability

Stable under ordinary conditions of use and storage.

Conditions to Avoid

Heat, flame, ignition sources and incompatibles.

Hazardous Decomposition Products

Toxic levels of ammonia, hydrocarbons, and oxides of nitrogen and carbon may be formed on burning in a limited air supply.

Hazardous Polymerization

Will not occur

Incompatibles

3-Methoxypropylamine:

Strong oxidizing agents and acids.

Xylene:

Strong oxidizing agents and strong acids.

Butoxy Ethanol:

Strong oxidizing agents. Strong bases and salts of strong bases at elevated temperatures. Aluminum surfaces.

11. Toxicological Information

Product LD50 Values

Oxosol C14 Oxidizer	Oral Rat LD50 (mg/kg):	2760
Oxosol C14 Oxidizer	Dermal Rabbit LD50 (mg/kg):	8000

Component Cancer List Status

NTP Carcinogen

	Known	Anticipated	IARC Category
3-Methoxypropylamine	No	No	None
Xylene	No	No	3
Butoxy Ethanol	No	No	None

12. Ecological Information

3-Methoxypropylamine

No information available.

Xylene

When released into the soil, this material may evaporate to a moderate extent. When released into the soil, this material is expected to leach into groundwater, When released into the soil, this material may biodegrade to a moderate extent. When released into water, this material may evaporate to a moderate extent. When released into water, this material may biodegrade to a moderate extent. When released into the air, this material may be moderately degraded by reaction with photochemically produced hydroxyl radicals. When released into the air, this material is expected to have a half-life of less than 1 day. This material is not expected to significantly bioaccumulate (mixed xylenes: octanol/water partition coefficient 3.1 - 3.2; bioconcentration factor - 1.3 eels). This material is expected to be slightly toxic to aquatic life. The LC50/96-hour values for fish are between 10 and 100 mg/l.

Butoxy Ethanol

No information available.

13. Disposal Considerations

Observe all national, state, and local regulations regarding product disposal. Containers of this material may be hazardous when empty since they retain product residues (vapors, liquids).

14. Transport Information

D.O.T.

Proper Shipping Name: Flammable liquid, corrosive, N.O.S.

Hazard Class: 3, 8

UN Number: 2924

Packing Group: II

I.A.T.A.

Proper Shipping Name: Flammable liquid, corrosive, N.O.S.

Hazard Class: 3, 8

UN Number: 2924

Packing Group: II

I.M.O.

Proper Shipping Name: Flammable liquid, corrosive, N.O.S.

Hazard Class: 3, 8

UN Number: 2924

Packing Group: II

15. Regulatory Information

United States

TSCA Regulatory Statement

All intentional ingredients are listed on the TSCA Inventory.

SARA 311/312 Hazard Categories

Component	Fire	Pressure	Reactivity	Acute	Chronic
3-Methoxypropylamine	Yes	No	No	Yes	Yes
Xylene	Yes	No	No	Yes	Yes
Butoxy Ethanol	Yes	No	No	Yes	No

Europe

EEC Regulatory

All intentional ingredients are listed on the European EINECS Inventory.

EEC LABEL SYMBOL AND CLASSIFICATION



HARMFUL



CORROSIVE

R: 10-20/21/22-34

Flammable. Harmful by inhalation and in contact with skin and if swallowed. Causes burns

S: (2-) 24/25-36/3

Keep out of reach of children. Avoid contact with skin and eyes. Wear suitable protective clothing, gloves and eye/face protection. In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).

16. Other Information

NFPA Codes: Health 3 Flammability 3 Reactivity 0

MANUFACTURER DISCLAIMER: The information given herein is offered in good faith as accurate, but without guarantee. Conditions of the use and suitability of the product for particular uses are beyond our control. All risks of use of the product are therefore assumed by the user. Nothing is intended as a recommendation for uses which infringe valid patents or as extending license under valid patents. Appropriate warnings and safe handling procedures should be provided to handlers and users.