SAFETY DATA SHEET

ETHANOX™ 330

Version	Revision Date:	Date of last issue: 10/15/2020
1.3	09/27/2022	Date of first issue: 06/28/2019

SECTION 1. IDENTIFICATION

Product identifier

Product name : ETHANOX™ 330

Recommended use of the chemical and restrictions on use

Recommended use : Industrial uses: Uses of substances as such or in preparations at industrial sites

Restrictions on use : For industrial use only.

Manufacturer or supplier's details

Supplier

Company : SI Group, Inc.

Address : 1790 Hughes Landing Blvd., Suite 600
The Woodlands, TX
United States
77380

E-mail address : sds.info@siigroup.com

Emergency telephone

Emergency Phone Number : CHEMTREC/US : +1 703-741-5970
NCEC/CHINA : 400 120 6011
NCEC/INDIA : 000 800 100 7479
NCEC/ROW : +44 1235 239670

SECTION 2. HAZARDS IDENTIFICATION

GHS classification in accordance with 29 CFR 1910.1200

Combustible dust

GHS label elements

Signal Word : Warning

Hazard Statements : May form combustible dust concentrations in air.

Other hazards

None known.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance / Mixture : Substance
CAS-No. : 1709-70-2

Hazardous ingredients

Chemical name	CAS-No.	Concentration (% w/w)
3,3',3",5,5',5"-hexa-tert-butyl-alpha,alpha',alpha"-(mesitylene-2,4,6-triyl)tri-para-cresol	1709-70-2	>= 90 - <= 100

The exact percentage concentrations of components are being withheld as a trade secret in accordance with paragraph (i) of §1910.1200

SECTION 4. FIRST AID MEASURES

General advice : Do not leave the victim unattended.

If inhaled : Move to fresh air.
If symptoms persist, call a physician.
If unconscious, place in recovery position and seek medical advice.

In case of skin contact : If on skin, rinse well with water.
If skin irritation persists, call a physician.
If on clothes, remove clothes.

In case of eye contact : Flush eyes with water as a precaution.
Remove contact lenses.
Protect unharmed eye.
Keep eye wide open while rinsing.
If eye irritation persists, consult a specialist.

If swallowed : Keep respiratory tract clear.
Do not give milk or alcoholic beverages.
Never give anything by mouth to an unconscious person.
If symptoms persist, call a physician.

Most important symptoms and effects, both acute and delayed : Product dust may be irritating to eyes, skin and respiratory system.

Notes to physician : The first aid procedure should be established in consultation with the doctor responsible for industrial medicine.

SECTION 5. FIRE-FIGHTING MEASURES

Suitable extinguishing media : Water fog, Dry chemical, Foam, Carbon dioxide

Unsuitable extinguishing media : High volume water jet

Specific hazards during fire fighting : Do not allow run-off from fire fighting to enter drains or water courses.
Avoid generating dust; fine dust dispersed in air in sufficient concentrations, and in the presence of an ignition source is a potential dust explosion hazard.

Hazardous combustion prod- : Carbon oxides

ucts

Further information	:	Collect contaminated fire extinguishing water separately. This must not be discharged into drains. Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations.
Special protective equipment for fire-fighters	:	Wear self-contained breathing apparatus for firefighting if necessary.

SECTION 6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures	:	Use personal protective equipment. Dust deposits should not be allowed to accumulate on surfaces, as these may form an explosive mixture if they are released into the atmosphere in sufficient concentration. Avoid dispersal of dust in the air (i.e., clearing dust surfaces with compressed air). Non-sparking tools should be used. Use personal protective equipment. Avoid dust formation. Avoid breathing dust.
Environmental precautions	:	Prevent product from entering drains. Prevent further leakage or spillage if safe to do so. If the product contaminates rivers and lakes or drains inform respective authorities.
Methods and materials for containment and cleaning up	:	Keep in suitable, closed containers for disposal.

SECTION 7. HANDLING AND STORAGE

Advice on protection against fire and explosion	:	Provide appropriate exhaust ventilation at places where dust is formed.
Advice on safe handling	:	Minimize dust generation and accumulation. Routine housekeeping should be instituted to ensure that dusts do not accumulate on surfaces. Dry powders can build static electricity charges when subjected to the friction of transfer and mixing operations. Keep away from heat and sources of ignition. Avoid contact with skin and eyes. For personal protection see section 8. Smoking, eating and drinking should be prohibited in the application area. Dispose of rinse water in accordance with local and national regulations.
Conditions for safe storage	:	Keep container tightly closed in a dry and well-ventilated place. Containers which are opened must be carefully resealed and kept upright to prevent leakage.

		Electrical installations / working materials must comply with the technological safety standards.
Further information on storage stability	:	No decomposition if stored and applied as directed. Keep in a dry place.

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Ingredients with workplace control parameters

Contains no substances with occupational exposure limit values.

Engineering measures : It is recommended that all dust control equipment such as local exhaust ventilation and material transport systems involved in handling of this product contain explosion relief vents or an explosion suppression system or an oxygen deficient environment.
Ensure that dust-handling systems (such as exhaust ducts, dust collectors, vessels, and processing equipment) are designed in a manner to prevent the escape of dust into the work area (i.e., there is no leakage from the equipment).
Good general ventilation (typically 10 air changes per hour) should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level. Ensure adequate ventilation, especially in confined areas.

Dust formation may be relevant in the processing of this product. In addition to substance-specific OELs, general limitations of concentrations of particulates in the air at workplaces have to be considered in workplace risk assessment. Relevant limits include: OSHA PEL for Particulates Not Otherwise Regulated of 15 mg/m3 - total dust, 5 mg/m3 - respirable fraction; and ACGIH TWA for Particles (insoluble or poorly soluble) Not Otherwise Specified of 3 mg/m3 - respirable particles, 10 mg/m3 - inhalable particles.

Personal protective equipment

Respiratory protection : If engineering controls do not maintain airborne concentrations below recommended exposure limits (where applicable) or to an acceptable level (in countries where exposure limits have not been established), an approved respirator must be worn.
In the absence of engineering controls sufficient to maintain airborne limit values, appropriate respiratory protection should be utilized.

Hand protection		
Material	:	Protective gloves
Remarks	:	The suitability for a specific workplace should be discussed with the producers of the protective gloves.
Eye protection	:	Eye wash bottle with pure water Tightly fitting safety goggles
Skin and body protection	:	Dust impervious protective suit Choose body protection according to the amount and concentration of the dangerous substance at the work place.
Hygiene measures	:	When using do not eat or drink. When using do not smoke. Wash hands before breaks and at the end of workday.

Environmental exposure controls

Water	:	Do not let product enter drains.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	:	solid, powder
Color	:	white
Odor	:	odorless
Odor Threshold	:	No data available
pH	:	No data available
Melting point	:	241 °C / 241 °C
Boiling point/boiling range	:	> 325 °C / > 325 °C Decomposition: yes Decomposes
Flash point	:	> 95 °C / 95 °C
Evaporation rate	:	< Ether
Flammability (solid, gas)	:	No data available
Upper explosion limit	:	No data available
Lower explosion limit	:	No data available
Vapor pressure	:	< 0.000013 Pa (20 °C / 20 °C)
Relative vapor density	:	Heavier than air.
Relative density	:	1.05 (25 °C / 25 °C)
Bulk density	:	No data available
Solubility(ies)		
Water solubility	:	insoluble
Solubility in other solvents	:	No data available
Partition coefficient: n-	:	log Pow: 17.17

octanol/water		
Autoignition temperature	:	> 245 °C / > 245 °C
Decomposition temperature	:	> 325 °C / > 325 °C
Viscosity, dynamic	:	No data available
Viscosity, kinematic	:	No data available
Explosive properties	:	Not classified due to data which are conclusive although insufficient for classification.
Oxidizing properties	:	Not classified due to data which are conclusive although insufficient for classification.
Surface tension	:	No data available

SECTION 10. STABILITY AND REACTIVITY

Reactivity	:	No decomposition if stored and applied as directed.
Chemical stability	:	No decomposition if stored and applied as directed.
Possibility of hazardous reactions	:	No decomposition if stored and applied as directed. Dust may form explosive mixture in air.
Conditions to avoid	:	Heat, flames and sparks.
Incompatible materials	:	Bases Acids
Hazardous decomposition products	:	This product may release the following: Carbon dioxide (CO2) Carbon monoxide Hydrocarbons

SECTION 11. TOXICOLOGICAL INFORMATION

Acute toxicity

Product:

Acute oral toxicity	:	Remarks: Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea.
Acute inhalation toxicity	:	Remarks: May cause irritation of respiratory tract.
Acute dermal toxicity	:	Acute toxicity estimate: 2,500 mg/kg Method: Calculation method

Components:

3,3',3'',5,5',5''-hexa-tert-butyl-alpha,alpha',alpha''-(mesitylene-2,4,6-triyl)tri-para-cresol:

Acute oral toxicity	:	LD50 (Rat): > 10,000 mg/kg

Acute dermal toxicity : LD0 (Rat): > 2,000 mg/kg

Skin corrosion/irritation

Components:

3,3',3'',5,5',5''-hexa-tert-butyl-alpha,alpha',alpha''-(mesitylene-2,4,6-triyl)tri-para-cresol:

Result : No skin irritation

Based on available data, the classification criteria are not met.

Serious eye damage/eye irritation

Components:

3,3',3'',5,5',5''-hexa-tert-butyl-alpha,alpha',alpha''-(mesitylene-2,4,6-triyl)tri-para-cresol:

Result : No eye irritation

Based on available data, the classification criteria are not met.

Respiratory or skin sensitization

Components:

3,3',3'',5,5',5''-hexa-tert-butyl-alpha,alpha',alpha''-(mesitylene-2,4,6-triyl)tri-para-cresol:

Assessment : Did not cause sensitization on laboratory animals.

Based on available data, the classification criteria are not met.

Germ cell mutagenicity

Components:

3,3',3'',5,5',5''-hexa-tert-butyl-alpha,alpha',alpha''-(mesitylene-2,4,6-triyl)tri-para-cresol:

Genotoxicity in vitro : Metabolic activation: with and without metabolic activation
Method: Mutagenicity (Salmonella typhimurium - reverse mutation assay)
Result: negative

Germ cell mutagenicity - Assessment : Experiments showed mutagenic effects in cultured bacterial cells.

Based on available data, the classification criteria are not met.

Carcinogenicity

Components:

3,3',3'',5,5',5''-hexa-tert-butyl-alpha,alpha',alpha''-(mesitylene-2,4,6-triyl)tri-para-cresol:

Carcinogenicity - Assessment : Animal testing did not show any carcinogenic effects.

IARC No ingredient of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

OSHA No component of this product present at levels greater than or equal to 0.1% is on OSHA's list of regulated carcinogens.

NTP No ingredient of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.

Based on available data, the classification criteria are not met.

Reproductive toxicity

Components:

3,3',3'',5,5',5''-hexa-tert-butyl-alpha,alpha',alpha''-(mesitylene-2,4,6-triyl)tri-para-cresol:

Reproductive toxicity - Assessment : No effects on or via lactation

Based on available data, the classification criteria are not met.

STOT-single exposure

Based on available data, the classification criteria are not met.

STOT-repeated exposure

Components:

3,3',3'',5,5',5''-hexa-tert-butyl-alpha,alpha',alpha''-(mesitylene-2,4,6-triyl)tri-para-cresol:

Routes of exposure : Oral

Assessment : The substance or mixture is not classified as specific target organ toxicant, repeated exposure.

Based on available data, the classification criteria are not met.

Repeated dose toxicity

Based on available data, the classification criteria are not met.

Aspiration toxicity

Based on available data, the classification criteria are not met.

Further information

Product:

Remarks : No data available

SECTION 12. ECOLOGICAL INFORMATION

Ecotoxicity

Components:

3,3',3'',5,5',5''-hexa-tert-butyl-alpha,alpha',alpha''-(mesitylene-2,4,6-triyl)tri-para-cresol:

Toxicity to fish	:	LC50 (Danio rerio (zebra fish)): > 100 mg/l Exposure time: 96 h Test Type: static test
Toxicity to daphnia and other aquatic invertebrates	:	EC50 (Daphnia magna (Water flea)): > 100 mg/l Exposure time: 24 h Test Type: static test
Toxicity to algae/aquatic plants	:	EC50 (green algae): > 100 mg/l Exposure time: 72 h Test Type: static test

Persistence and degradability

Product:

Biodegradability	:	Remarks: Not readily biodegradable.

Components:

3,3',3'',5,5',5''-hexa-tert-butyl-alpha,alpha',alpha''-(mesitylene-2,4,6-triyl)tri-para-cresol:

Biodegradability	:	Remarks: According to the results of tests of biodegradability this product is not readily biodegradable.

Bioaccumulative potential

Components:

3,3',3'',5,5',5''-hexa-tert-butyl-alpha,alpha',alpha''-(mesitylene-2,4,6-triyl)tri-para-cresol:

Partition coefficient: n-octanol/water	:	log Pow: 17.17

Mobility in soil

Product:

Stability in soil	:	Remarks: No data available

Other adverse effects

Product:

Ozone-Depletion Potential	:	Regulation: 40 CFR Protection of Environment; Part 82 Protection of Stratospheric Ozone - CAA Section 602 Class I Substances Remarks: This product neither contains, nor was manufactured with a Class I or Class II ODS as defined by the U.S. Clean Air Act Section 602 (40 CFR 82, Subpt. A, App.A + B).
Additional ecological information	:	An environmental hazard cannot be excluded in the event of unprofessional handling or disposal.

SECTION 13. DISPOSAL CONSIDERATIONS

Disposal methods

Waste from residues	:	The product should not be allowed to enter drains, water courses or the soil. Do not contaminate ponds, waterways or ditches with chemical or used container. Send to a licensed waste management company.
Contaminated packaging	:	Empty remaining contents.Dispose of as unused product.Do not re-use empty containers.

SECTION 14. TRANSPORT INFORMATION

International Regulations

IATA-DGR
Not regulated as a dangerous good

IMDG-Code
Not regulated as a dangerous good

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code
Not applicable for product as supplied.

Domestic regulation

49 CFR
Not regulated as a dangerous good

SECTION 15. REGULATORY INFORMATION

EPCRA - Emergency Planning and Community Right-to-Know

CERCLA Reportable Quantity
This material does not contain any components with a CERCLA RQ.

SARA 304 Extremely Hazardous Substances Reportable Quantity

This material does not contain any components with a section 304 EHS RQ.

SARA 302 Extremely Hazardous Substances Threshold Planning Quantity

This material does not contain any components with a section 302 EHS TPQ.

SARA 311/312 Hazards : See section 2 for classified hazards based on component information

SARA 313 : This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

Clean Air Act

This product neither contains, nor was manufactured with a Class I or Class II ODS as defined by the U.S. Clean Air Act Section 602 (40 CFR 82, Subpt. A, App.A + B).
This product does not contain any hazardous air pollutants (HAP), as defined by the U.S. Clean Air Act Section 112 (40 CFR 61).
This product does not contain any chemicals listed under the U.S. Clean Air Act Section 112(r) for Accidental Release Prevention (40 CFR 68.130, Subpart F).
This product does not contain any chemicals listed under the U.S. Clean Air Act Section 111 SOCMI Intermediate or Final VOC's (40 CFR 60.489).

Clean Water Act

This product does not contain any Hazardous Substances listed under the U.S. CleanWater Act, Section 311, Table 116.4A.
This product does not contain any Hazardous Chemicals listed under the U.S. CleanWater Act, Section 311, Table 117.3.
This product does not contain any toxic pollutants listed under the U.S. Clean Water Act Section 307

US State Regulations

Massachusetts Right To Know

No components are subject to the Massachusetts Right to Know Act.

Maine Chemicals of High Concern

Product does not contain any listed chemicals

Vermont Chemicals of High Concern

Product does not contain any listed chemicals

Washington Chemicals of High Concern

Product does not contain any listed chemicals

The ingredients of this product are reported in the following inventories:

DSL : All components of this product are on the Canadian DSL

AICS : On the inventory, or in compliance with the inventory

NZIoC : On the inventory, or in compliance with the inventory

ENCS	:	On the inventory, or in compliance with the inventory
ISHL	:	On the inventory, or in compliance with the inventory
KECI	:	On the inventory, or in compliance with the inventory
PICCS	:	On the inventory, or in compliance with the inventory
IECSC	:	On the inventory, or in compliance with the inventory
TCSI	:	On the inventory, or in compliance with the inventory
TSCA	:	All substances listed as active on the TSCA inventory

TSCA list

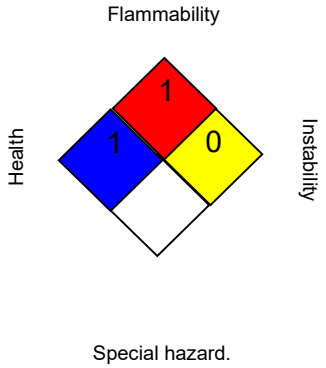
No substances are subject to a Significant New Use Rule.

No substances are subject to TSCA 12(b) export notification requirements.

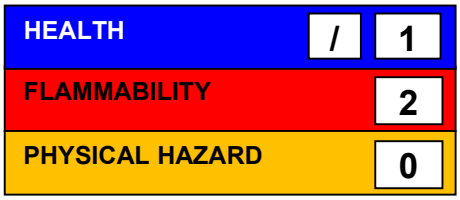
SECTION 16. OTHER INFORMATION

Further information

NFPA 704:



HMIS® IV:



HMIS® ratings are based on a 0-4 rating scale, with 0 representing minimal hazards or risks, and 4 representing significant hazards or risks. The "*" represents a chronic hazard, while the "/" represents the absence of a chronic hazard.

Full text of other abbreviations

AICS - Australian Inventory of Chemical Substances; ASTM - American Society for the Testing of Materials; bw - Body weight; CERCLA - Comprehensive Environmental Response, Compensation, and Liability Act; CMR - Carcinogen, Mutagen or Reproductive Toxicant; DIN - Standard of the German Institute for Standardisation; DOT - Department of Transportation; DSL - Domestic Sub-

stances List (Canada); ECx - Concentration associated with x% response; EHS - Extremely Hazardous Substance; ELx - Loading rate associated with x% response; EmS - Emergency Schedule; ENCS - Existing and New Chemical Substances (Japan); ErCx - Concentration associated with x% growth rate response; ERG - Emergency Response Guide; GHS - Globally Harmonized System; GLP - Good Laboratory Practice; HMIS - Hazardous Materials Identification System; IARC - International Agency for Research on Cancer; IATA - International Air Transport Association; IBC - International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk; IC50 - Half maximal inhibitory concentration; ICAO - International Civil Aviation Organization; IECSC - Inventory of Existing Chemical Substances in China; IMDG - International Maritime Dangerous Goods; IMO - International Maritime Organization; ISHL - Industrial Safety and Health Law (Japan); ISO - International Organisation for Standardization; KECI - Korea Existing Chemicals Inventory; LC50 - Lethal Concentration to 50 % of a test population; LD50 - Lethal Dose to 50% of a test population (Median Lethal Dose); MARPOL - International Convention for the Prevention of Pollution from Ships; MSHA - Mine Safety and Health Administration; n.o.s. - Not Otherwise Specified; NFPA - National Fire Protection Association; NO(A)EC - No Observed (Adverse) Effect Concentration; NO(A)EL - No Observed (Adverse) Effect Level; NOELR - No Observable Effect Loading Rate; NTP - National Toxicology Program; NZIoC - New Zealand Inventory of Chemicals; OECD - Organization for Economic Co-operation and Development; OPPTS - Office of Chemical Safety and Pollution Prevention; PBT - Persistent, Bioaccumulative and Toxic substance; PICCS - Philippines Inventory of Chemicals and Chemical Substances; (Q)SAR - (Quantitative) Structure Activity Relationship; RCRA - Resource Conservation and Recovery Act; REACH - Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals; RQ - Reportable Quantity; SADT - Self-Accelerating Decomposition Temperature; SARA - Superfund Amendments and Reauthorization Act; SDS - Safety Data Sheet; TCSI - Taiwan Chemical Substance Inventory; TSCA - Toxic Substances Control Act (United States); UN - United Nations; UNRTDG - United Nations Recommendations on the Transport of Dangerous Goods; vPvB - Very Persistent and Very Bioaccumulative

Refer to NFPA 654, Standard for the Prevention of Fire and Dust Explosions from the Manufacturing, Processing, and Handling of Combustible Particulate Solids, for safe handling.

Revision Date : 09/27/2022

The information and recommendations contained in this safety data sheet are, to the best of SI Group's knowledge, belief and experience, accurate and reliable as of the date of its publication and describe the product only with regard to safety requirements. It is the user's responsibility to confirm that it is using the most current available version of this safety data sheet. The information and recommendations herein are offered for the user's consideration and examination. Identified uses in this safety data sheet do neither represent an agreement on the quality of the Product nor a designated use. For the avoidance of doubt, nothing herein shall be construed as relieving the user of its responsibility to ensure that the product is suitable for the intended use and that any proprietary rights, existing laws and legislation are observed. NO WARRANTIES OF ANY KIND, EITHER EXPRESSED OR IMPLIED, INCLUDING WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE, ARE MADE REGARDING THE PRODUCT DESCRIPTIONS, DATA OR INFORMATIN HEREIN. This safety data sheet is neither a Certificate of Analysis (CoA) nor a technical data sheet and shall not be mistaken for a description of the product's specifications. If user repackages this product, it is the user's responsibility to insure proper health, safety and other necessary information is included with and/or on the packaging.

Appropriate warnings and safe-handling procedures should be provided to handlers and further users of the product. Alteration of this document is strictly prohibited. Except to the extent required by law, re-publication or retransmission of this document, in whole or in part, is not permitted.

US / Z8