ETHANOX™ 330 GRANULAR



Version Revision Date:
Date of last issue: 06/28/2019
1.1 Date of first issue: 06/28/2019
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SECTION 1. IDENTIFICATION

Product identifier

Product name : ETHANOX™ 330 GRANULAR

Other means of identification : 3,3',3",5,5',5"-hexa-tert-butyl-alpha,alpha',alpha'-(mesitylene-

2,4,6-triyl)tri-para-cresol

Recommended use of the chemical and restrictions on use

Recommended use : Antioxidant

Polymer stabilizer

Restrictions on use : For industrial use only.

Manufacturer or supplier's details

Supplier

Company : SI Group, Inc.

Address : 2750 Balltown Rd.,

Schenectady, NY United States

12309

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

Emergency telephone number

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

Not a hazardous substance or mixture.

GHS label elements

Not a hazardous substance or mixture.

Other hazards

May form combustible dust concentrations in air.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

ETHANOX™ 330 GRANULAR



Version **Revision Date:** Date of last issue: 06/28/2019 Date of first issue: 06/28/2019 1.1 10/15/2020

Substance / Mixture Substance

Substance name 3,3',3",5,5',5"-hexa-tert-butyl-alpha,alpha',alpha''-(mesitylene-

2,4,6-triyl)tri-para-cresol

CAS-No. 1709-70-2

Hazardous components

No hazardous ingredients

SECTION 4. FIRST AID MEASURES

Do not leave the victim unattended. General advice

If inhaled Move to fresh air.

If unconscious, place in recovery position and seek medical

If symptoms persist, call a physician.

In case of skin contact If on skin, rinse well with water.

If on clothes, remove clothes.

If skin irritation persists, call a physician.

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.

The first aid procedure should be established in consultation Notes to physician

with the doctor responsible for industrial medicine.

SECTION 5. FIREFIGHTING MEASURES

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

Unsuitable extinguishing

media

: High volume water jet

ETHANOX™ 330 GRANULAR



Version Revision Date: 1.1 10/15/2020

Date of last issue: 06/28/2019 Date of first issue: 06/28/2019

Specific hazards during

firefighting

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

products

Carbon oxides

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 firefighters

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.

Methods and materials for containment and cleaning up Take up mechanically.

Do not create a powder cloud by using a brush or compressed

Keep in suitable, closed containers for disposal.

SECTION 7. HANDLING AND STORAGE

Advice on protection against fire and explosion

Advice on safe handling

Provide appropriate exhaust ventilation at places where dust

is formed.

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.

ETHANOX™ 330 GRANULAR



Version Revision Date: 1.1 10/15/2020

Date of last issue: 06/28/2019 Date of first issue: 06/28/2019

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.

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Components 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

ETHANOX™ 330 GRANULAR



Version Revision Date: 1.1 10/15/2020

Date of last issue: 06/28/2019 Date of first issue: 06/28/2019

respirator must be worn.

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 : granules

Colour : white

Odour : odourless

Odour Threshold : No data available

pH : No data available

Melting point : 471 °F / 244 °C

Boiling point/boiling range : No data available

Flash point : $> 203 \, ^{\circ}\text{F} / > 95 \, ^{\circ}\text{C}$

Method: ISO 2719

Evaporation rate : <Ether

Flammability (solid, gas) : No data available

Upper explosion limit : No data available

Lower explosion limit : No data available

Vapour pressure : No data available

ETHANOX™ 330 GRANULAR



Version Revision Date: 1.1 10/15/2020

Date of last issue: 06/28/2019 Date of first issue: 06/28/2019

Relative vapour density : Heavier than air.

Relative density : 0.95

Bulk density : No data available

Solubility(ies)

Water solubility : insoluble

Solubility in other solvents : No data available

Partition coefficient: n-

octanol/water

No data available

Auto-ignition temperature : No data available

Decomposition temperature : > 617 °F / > 325 °C

Viscosity, dynamic : No data available

Viscosity, kinematic : No data available

Explosive properties : No data available

Oxidizing properties : No data available

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 : Strong oxidizing agents, Strong acids and strong bases

Hazardous decomposition

products

: Carbon dioxide (CO2), carbon monoxide (CO), oxides of

nitrogen (NOx), dense black smoke.

SECTION 11. TOXICOLOGICAL INFORMATION

ETHANOX™ 330 GRANULAR



Version Revision Date: 1.1 10/15/2020

Date of last issue: 06/28/2019 Date of first issue: 06/28/2019

Acute toxicity

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

Skin corrosion/irritation

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

Serious eye damage/eye irritation

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

Respiratory or skin sensitisation

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

Germ cell mutagenicity

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

Carcinogenicity

IARC No component of this product present at levels greater than or equal to 0.1% is

identified as probable, possible or confirmed human carcinogen by IARC.

OSHANo component of this product present at levels greater than or equal to 0.1% is

on OSHA's list of regulated carcinogens.

NTP No component 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

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

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

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

ETHANOX™ 330 GRANULAR



Version Revision Date: 1.1 10/15/2020

Date of last issue: 06/28/2019 Date of first issue: 06/28/2019

Persistence and degradability

Product:

Biodegradability : Remarks: Not readily biodegradable.

Bioaccumulative potential

There is no data available for this product.

Mobility in soil

Product:

Stability in soil : Remarks: Adsorbs on soil.

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 +

В).

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

ETHANOX™ 330 GRANULAR



Version Revision Date: 1.1 10/15/2020

Date of last issue: 06/28/2019 Date of first issue: 06/28/2019

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Not applicable for product as supplied.

National Regulations

49 CFR

Not regulated as a dangerous good

SECTION 15. REGULATORY INFORMATION

EPCRA - Emergency Planning and Community Right-to-Know Act

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.

ETHANOX™ 330 GRANULAR



Version Revision Date: 1.1 10/15/2020

Date of last issue: 06/28/2019 Date of first issue: 06/28/2019

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 components 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

REACH : This substance has been registered according to Regulation

(EC) No. 1907/2006 (REACH).

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

ETHANOX™ 330 GRANULAR



Version Revision Date: 1.1 10/15/2020

Date of last issue: 06/28/2019 Date of first issue: 06/28/2019

Further information

NFPA 704: HMIS® IV:

Flammability

1 0 = 0

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.

Special 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 Substances 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 Cooperation 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

ETHANOX™ 330 GRANULAR



Version Revision Date: 1.1 10/15/2020

Date of last issue: 06/28/2019 Date of first issue: 06/28/2019

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 : 10/15/2020

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 INFORMATION 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.

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