



SDS: 0005738
Date Prepared: 09/09/2016

SAFETY DATA SHEET

1. IDENTIFICATION

Product Name: CYASORB® UV-3529 Light Stabilizer
Product Description: Substituted amine oligomer
Synonyms: None
Chemical Family: Substituted Amine Oligomer
Molecular Formula: (C₃₃H₆₀N₈O)_n
Molecular Weight: 1500 - 2000
Intended/Recommended Use: Plastic additive

CYTEC INDUSTRIES INC., FIVE GARRET MOUNTAIN PLAZA, WOODLAND PARK, NEW JERSEY 07424, USA
For Product and all Non-Emergency Information call 1-800/652-6013. Outside the USA and Canada call 1-973/357-3193.

EMERGENCY PHONE (24 hours/day) - For emergency only involving spill, leak, fire, exposure or accident call:

Asia Pacific:

Australia - +61-3-9663-2130 or 1800-033-111 (IXOM)
China (PRC) - +86 0532 83889090 (NRCC)
New Guinea - +61-3-9663-2130 or 1800-033-111
New Zealand - +61-3-9663-2130 or 0800-734-607 (IXOM)
India, Japan, Korea, Malaysia, Thailand - +65 3158 1074 (Carechem24 Singapore)
India (Hindi Speaking Only) - +65 3158 1198 or 000800 100 7479 (Carechem24 Singapore)

Canada: +1-905-356-8310 (Cytec Welland, Canada plant)

Europe/Africa/Middle East (Carechem24 UK):

Europe, Middle East, Africa, Israel - +44 (0) 1235 239 670
(Arabic speaking countries) - +44 (0) 1235 239 671

Latin America:

Brazil - 0800 7077 022 (SUATRANS)
Chile - +56-2-2-247-3600 (CITUC QUIMICO)
All Others - +52-376-73 74122 (Cytec Atequiza, Mexico plant)

USA: +1-703-527-3887 or 1-800-424-9300 (CHEMTREC #CCN6083)

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2. HAZARDS IDENTIFICATION

GHS Classification

Combustible Dust
Acute Toxicity (Oral) Hazard Category 4
Acute Toxicity (Inhalation) Hazard Category 4
Specific Target Organ Toxicity - Repeated Exposure Hazard Category 2
Serious Eye Damage / Eye Irritation Hazard Category 2A
Aquatic Environment Acute Hazard Category 1
Aquatic Environment Chronic Hazard Category 1

LABEL ELEMENTS

**Signal Word**

Warning

Hazard Statements

May form combustible dust concentrations in air
 Harmful if swallowed
 Harmful if inhaled
 May cause damage to organs through prolonged or repeated exposure
 Causes serious eye irritation
 Very toxic to aquatic life with long lasting effects

Precautionary Statements

Wash face, hands and any exposed skin thoroughly after handling.
 Do not eat, drink or smoke when using this product.
 Use only outdoors or in a well-ventilated area.
 Do not breathe dust/fume/gas/mist/vapours/spray.
 Wear protective gloves/protective clothing/eye protection/face protection.
 Avoid release to the environment.
 IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell.
 Rinse mouth.
 IF INHALED: Remove person to fresh air and keep comfortable for breathing.
 Get medical advice/attention if you feel unwell.
 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
 If eye irritation persists: Get medical advice/attention.
 Collect spillage.
 Dispose of contents/container in accordance with local and national regulations.

Hazards Not Otherwise Classified (HNOC), Other Hazards

May form flammable/explosive dust-air mixture.
 Dust may be explosive if mixed with air in critical proportions and in the presence of a source of ignition.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance, Mixture or Article? Substance

HAZARDOUS INGREDIENTS

Component / CAS No.	%	GHS Classification	Carcinogen
Substituted amine	95 - 100	Acute Tox. 4 (H332) Acute Tox. 4 (H302) STOT Rep. 2 (H373) Eye Irrit. 2A (H319) Aquatic Acute 1 (H400) Aquatic Chronic 1 (H410)	-

The specific chemical identity and/or exact percentage of composition for one or more ingredients has been withheld as a trade secret.

Additional GHS classification or other information may be included in this section but has not been adopted by OSHA.

See Section 16 for full text of H phrases.

4. FIRST AID MEASURES

DESCRIPTION OF FIRST AID MEASURES

Eye Contact:

Rinse immediately with plenty of water for at least 15 minutes. Obtain medical advice if there are persistent symptoms.

Skin Contact:

Wash immediately with plenty of water and soap.

Ingestion:

If swallowed, call a physician immediately. Only induce vomiting at the instruction of a physician. Never give anything by mouth to an unconscious person.

Inhalation:

Remove to fresh air. If breathing is difficult, give oxygen. Obtain medical advice if there are persistent symptoms.

MOST IMPORTANT SYMPTOMS AND EFFECTS, BOTH ACUTE AND DELAYED

None known

INDICATION OF ANY IMMEDIATE MEDICAL ATTENTION AND SPECIAL TREATMENT NEEDS

Not applicable

5. FIRE-FIGHTING MEASURES

Suitable Extinguishing Media:

Use water spray or fog, carbon dioxide or dry chemical.

Extinguishing Media to Avoid:

full water jet

Protective Equipment:

Firefighters, and others exposed, wear self-contained breathing apparatus. Wear full firefighting protective clothing. See MSDS Section 8 (Exposure Controls/Personal Protection).

Special Hazards:

Dust may be explosive if mixed with air in critical proportions and in the presence of a source of ignition.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions:

Where exposure level is not known, wear approved, positive pressure, self-contained respirator. Where exposure level is known, wear approved respirator suitable for level of exposure. Refer to Section 8 (Exposure Controls/Personal Protection) for appropriate personal protective equipment.

Methods For Cleaning Up:

Sweep up into containers for disposal. Flush spill area with water. Residues should be collected using an explosion-proof vacuum cleaner or hose from mechanical exhaust ventilation system. Do not flush spill to waterways. Collected material should be disposed of in a secure landfill or by incineration. 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.

References to other sections:

See Sections 8 and 13 for additional information.

7. HANDLING AND STORAGE

HANDLING

Precautions: Avoid release to the environment. Use only outdoors or in a well-ventilated area. Wash hands thoroughly after handling. Do not eat, drink or smoke when using this product. Wear eye/face protection. Contains finely divided material. Dust suspended in air may ignite with static discharge, sparks or flame. Equipment, including venting systems, should be grounded. Do not breathe dust.

Special Handling Statements: Maintain good housekeeping to control dust accumulations. DUST EXPLOSION HAZARD CLASS - 3. Handling of material should be in accordance with standards for venting of deflagrations (e.g. NFPA-68). If handled with flammable or combustible materials the explosion hazard may increase. Dry powders can build static electricity charges when subjected to the friction of transfer and mixing operations. Provide adequate precautions, such as electrical grounding and bonding, or inert atmospheres.

STORAGE

Store in accordance with local, state, and federal regulations.

Storage Temperature: Not applicable

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Engineering Measures:

Where this material is not used in a closed system, good enclosure and local exhaust ventilation should be provided to control exposure.

Respiratory Protection:

For operations where inhalation exposure can occur, use an approved respirator fitted with Organic Vapor/HEPA cartridges. Where inhalation exposure cannot occur, no respiratory protection is required. A full facepiece respirator also provides eye and face protection.

Eye Protection:

Wear eye/face protection such as chemical splash proof goggles or face shield. Eyewash equipment and safety shower should be provided in areas of potential exposure.

Skin Protection:

Avoid skin contact. Wear impermeable gloves and suitable protective clothing. Since this product is absorbed through the skin, care must be taken to prevent skin contact and contamination of clothing.

Hand Protection:

Nitrile or fluorinated rubber gloves. Consider the porosity and elasticity data of the glove manufacturer and the specific conditions in the work place. Replace gloves immediately when torn or any change in appearance (dimension, colour, flexibility etc) is noticed.

Additional Advice:

Food, beverages, and tobacco products should not be carried, stored, or consumed where this material is in use. Before eating, drinking, or smoking, wash face and hands thoroughly with soap and water.

Exposure Limit(s)

The below constituents are the only constituents of the product which have a PEL, TLV or other recommended exposure limit. At this time, the other constituents have no known exposure limits.

No values have been established.

9. PHYSICAL AND CHEMICAL PROPERTIES

Color:	off white		
Appearance:	pastille		
Odor:	odorless		
Boiling Point:	Not available		
Melting Point:	85 - 101 °C	185 - 213.8 °F	Glass transition point
Vapor Pressure:	Negligible		
Specific Gravity/Density:	1.096		
Vapor Density:	Not available		
Percent Volatile (% by wt.):	<0.5		
pH:	Not applicable		
Saturation In Air (% By Vol.):	Not applicable		
Evaporation Rate:	Not applicable		
Solubility In Water:	0.00061g/L @ 20 °C		
Volatile Organic Content:	<5 gm/L		
Flash Point:	Not applicable		
Flammability (solid, gas):	Not available		
Flammable Limits (% By Vol):	Not applicable		
Autoignition (Self) Temperature:	Not available		
Decomposition Temperature:	>315 °C	599 °F	
Partition coefficient (n-octanol/water):	Not available		
Odor Threshold:	Not available		
Viscosity (Kinematic):	Not available		

DUST HAZARD INFORMATION

Particle Size (microns):	<75
Kst (bar-m/sec):	362
Maximum Explosion Pressure (Pmax):	8.3
Dust Class:	3
Minimum Ignition Energy (MIE) (mJ):	10 - 30
Minimum Ignition Temperature (MIT) (°C):	Not available
Minimum Explosive Concentration (MEC) (g/m³):	Not available
Limiting Oxygen Concentration (LOC) (%):	Not available

10. STABILITY AND REACTIVITY

Reactivity:	No information available
Stability:	Stable
Conditions To Avoid:	None known
Polymerization:	Will not occur
Conditions To Avoid:	None known
Materials To Avoid:	Strong oxidizing agents, acids, acid halides, certain halogens.
Hazardous Decomposition Products:	Ammonia (NH ₃) Carbon dioxide Carbon monoxide (CO) hydrogen cyanide (HCN) Oxides of nitrogen

11. TOXICOLOGICAL INFORMATION

PRODUCT TOXICITY INFORMATION

Likely Routes of Exposure: Oral, Respiratory System, Eyes, Skin.

ACUTE TOXICITY DATA

oral (gavage)	rat	Acute LD50	>500 - < 2000 mg/kg
dermal	rat	Acute LD50	>2000 mg/kg
inhalation	rat	Acute LC50 4 hr	~2.8 mg/l (Dust/Mist)

LOCAL EFFECTS ON SKIN AND EYE

Acute Irritation	dermal	rabbit	Not irritating
Acute Irritation	eye	rabbit	Irritating

ALLERGIC SENSITIZATION

Maximization Test (Magnusson-Kligman)	dermal	guinea pig	Not sensitizing
Sensitization	respiratory	No data	

SUBACUTE/SUBCHRONIC TOXICITY

oral	rat	SubAcute 28 day	15 mg/kg/day NOEL
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GENOTOXICITY

Assays for Gene Mutations

Ames Salmonella Assay	Salmonella Typhimurium	Escherichia coli	Not mutagenic
Mouse Lymphoma Assay	L5178Y TK +/-		Not mutagenic

Assays for Chromosomal Aberrations

In Vitro Chromosomal Aberrations	Human Lymphocyte		Not clastogenic
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OTHER INFORMATION

The toxicity data above are the results from Cytec sponsored studies or from the available public literature.

HAZARDOUS INGREDIENT TOXICITY DATA

Substituted amine has an acute oral LD50 (rat) of greater than 500 mg/kg. The acute dermal (rat) LD50 is greater than 2000 mg/kg. The acute 4-hour inhalation (rat) LC50 value is estimated to be >2.5 mg/liter based on test data on a similar material. Direct contact with this material caused moderate eye and no skin irritation when tested in laboratory animals. No skin sensitization was seen when tested in guinea pigs. This material was negative in the Ames mutagenicity assay with and without metabolic activation.

California Proposition 65 Warning (applicable in California only) - This product contains (a) chemical(s) known to the State of California to cause cancer and birth defects or other reproductive harm.

12. ECOLOGICAL INFORMATION

TOXICITY, PERSISTENCE AND DEGRADABILITY, BIOACCUMULATIVE POTENTIAL, MOBILITY IN SOIL, OTHER ADVERSE EFFECTS

This material is not readily biodegradable.
 This material is highly toxic to aquatic organisms.
 This material does not significantly bioaccumulate.

ECOTOXICITY

ALGAE TEST RESULTS

Test: Growth Inhibition (OECD 201)

Duration: 72 hr

Species: Green Algae (*Selenastrum capricornutum*)

>0.15 mg/l EbC50

Maximum obtainable test concentrations due to limited water solubility.

>0.15 mg/l ErC50

Maximum obtainable test concentrations due to limited water solubility.

FISH TEST RESULTS

Test: Acute toxicity, freshwater (OECD 203)

Duration: 96 hr.

Species: Rainbow Trout (*Oncorhynchus mykiss*)

>1.5 mg/l LC50

INVERTEBRATE TEST RESULTS

Test: Acute Immobilization (OECD 202)

Duration: 48 hr

Species: Water Flea (*Daphnia magna*)

0.64 mg/l EC50

BACTERIA TEST RESULTS

Test: Respiration Inhibition (OECD 209)

Duration: 3 hr

Species: Activated Sludge - Bacterial

>100 mg/l EC50

ACCUMULATION

Test: Bioaccumulation

Species: Carp (*Cyprinus carpio*)

Material does not significantly bioaccumulate

PERSISTENCE AND DEGRADABILITY

DEGRADATION

Test: CO₂ Evolution: Modified Sturm (OECD 301B)

Duration: 28 day **Procedure:** Ready biodegradability

0 %

Test: Abiotic Degradation

Procedure: Other

Hydrolytically stable under acidic, neutral and basic conditions

Test: Adsorption / Desorption Coefficient (Koc)
 1.38 Equivalent Koc = 23.8, very high
 mobility in soil

RESULTS OF PBT AND vPvB ASSESSMENT

Not determined

HAZARDOUS INGREDIENT TOXICITY DATA

Component / CAS No.	Toxicity to Algae	Toxicity to Fish	Toxicity to Water Flea
Substituted amine	Not available	Not available	Not available

13. DISPOSAL CONSIDERATIONS

The information on RCRA waste classification and disposal methodology provided below applies only to the product, as supplied. If the material has been altered or contaminated, or it has exceeded its recommended shelf life, the guidance may be inapplicable. Hazardous waste classification under federal regulations (40 CFR Part 261 et seq) is dependent upon whether a material is a RCRA "listed hazardous waste" or has any of the four RCRA "hazardous waste characteristics." Refer to 40 CFR Part 261.33 to determine if a given material to be disposed of is a RCRA "listed hazardous waste"; information contained in Section 15 of this MSDS is not intended to indicate if the product is a "listed hazardous waste." RCRA Hazardous Waste Characteristics: There are four characteristics defined in 40 CFR Section 261.21-61.24: Ignitability, Corrosivity, Reactivity, and Toxicity. To determine Ignitability, see Section 9 of this MSDS (flash point). For Corrosivity, see Sections 9 and 14 (pH and DOT corrosivity). For Reactivity, see Section 10 (incompatible materials). For Toxicity, see Section 3 (composition). Federal regulations are subject to change. State and local requirements, which may differ from or be more stringent than the federal regulations, may also apply to the classification of the material if it is to be disposed. The Company encourages the recycle, recovery and reuse of materials, where permitted, as an alternate to disposal as a waste. The Company recommends that organic materials classified as RCRA hazardous wastes be disposed of by thermal treatment or incineration at EPA approved facilities. The Company has provided the foregoing for information only; the person generating the waste is responsible for determining the waste classification and disposal method.

14. TRANSPORT INFORMATION

This section provides basic shipping classification information. Refer to appropriate transportation regulations for specific requirements.

US DOT

Dangerous Goods? X

Proper Shipping Name: Environmentally hazardous substance, solid, n.o.s.

Hazard Class: 9

Packing Group: III

UN/ID Number: UN3077

Transport Label Required: Miscellaneous
 Marine Pollutant

Marine Pollutant

Technical Name (N.O.S.): Substituted amine

Comments: Marine Pollutants - DOT requirements specific to Marine Pollutants do not apply to non-bulk packagings transported by motor vehicles, rail cars or aircraft.

TRANSPORT CANADA

Dangerous Goods? X

Proper Shipping Name: Environmentally hazardous substance, solid, n.o.s.

Hazard Class: 9

Packing Group: III

UN Number: UN3077

Transport Label Required: Miscellaneous
Marine Pollutant

Marine Pollutant

Technical Name (N.O.S.): Substituted amine

ICAO / IATA

Dangerous Goods? X

Proper Shipping Name: Environmentally hazardous substance, solid, n.o.s.

Hazard Class: 9

Packing Group: III

UN Number: UN3077

Transport Label Required: Miscellaneous
Marine Pollutant

Technical Name (N.O.S.): Substituted amine

Comments: Marine Pollutants-IATA Special Provision A197 when transported in single or combination packagings containing a net quantity per single or inner packaging of 5L or less for liquids or 5 kg for solids, are not subject to any provisions of these regulations. Note if the material also meets the criteria under additional hazard classes then all requirements continue to apply for those hazards.

IMO

Dangerous Goods? X

Proper Shipping Name: Environmentally hazardous substance, solid, n.o.s.

Hazard Class: 9

UN Number: UN3077

Packing Group: III

Transport Label Required: Miscellaneous
Marine Pollutant

Marine Pollutant

Technical Name (N.O.S.): Substituted amine

Comments: Marine Pollutants -IMDG 2.10.2.7 when packaged in single or combination packagings, containing a net quantity per single or inner packaging of 5L or less for liquids or 5 kg for solids are not subject to any other provisions of this code. Note if the material also meets the criteria under additional hazard classes then all requirements continue to apply for those hazards.

15. REGULATORY INFORMATION

Inventory Information

United States (USA): All components of this product are included on the TSCA Chemical Inventory or are not required to be listed on the TSCA Chemical Inventory.

Canada: All components of this product are included on the Domestic Substances List (DSL) or are not required to be listed on the DSL.

European Economic Area (including EU): When purchased from a Cytec legal entity based in the EU, this product is compliant with the registration of the REACH Regulation (EC) No. 1907/2006 as all its components are either excluded, exempt, pre-registered and/or registered.

Australia: All components of this product are included in the Australian Inventory of Chemical Substances (AICS) or are not required to be listed on AICS.

China: All components of this product are included on the Chinese inventory or are not required to be listed on the Chinese inventory.

Japan: All components of this product are included on the Japanese (ENCS) inventory or are not required to be listed on the Japanese inventory.

Korea: All components of this product are included on the Korean (ECL) inventory or are not required to be listed on the Korean inventory.

Philippines: One or more components of this product are NOT included on the Philippine (PICCS) inventory.

Switzerland: All components of this product are exempt from the new substance notification requirements for Switzerland (SR 813.11 art. 16-17).

Taiwan: All components of this product are included on the Taiwan Chemical Substance Inventory (TCSI) or are not required to be listed on the Taiwan inventory.

OTHER ENVIRONMENTAL INFORMATION

The following components of this product may be subject to reporting requirements pursuant to Section 313 of CERCLA (40 CFR 372), Section 12(b) of TSCA, or may be subject to release reporting requirements (40 CFR 307, 40 CFR 311, etc.) See Section 13 for information on waste classification and waste disposal of this product.

This product does not contain any components regulated under these sections of the EPA

PRODUCT HAZARD CLASSIFICATION UNDER SECTION 311 OF SARA

- Acute
- Fire

16. OTHER INFORMATION

NFPA Hazard Rating (National Fire Protection Association)

Health: 2 - Materials that, under emergency conditions, can cause temporary incapacitation or residual injury.

Fire: 3 - Liquids and solids that can be ignited under almost all ambient temperature conditions.

Instability: 0 - Materials that in themselves are normally stable, even under fire exposure conditions.

Reasons For Issue: Revised Section 9

Date Prepared: 09/09/2016

Date of last significant revision: 05/04/2016

Component Hazard Phrases

Substituted amine

H302 - Harmful if swallowed.

H319 - Causes serious eye irritation.

H332 - Harmful if inhaled.

H373 - May cause damage to organs through prolonged or repeated exposure.

H400 - Very toxic to aquatic life.

H410 - Very toxic to aquatic life with long lasting effects.

Prepared By: Legal & Compliance Services; E-mail: custinfo@cytec.com

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