

Material Safety Data Sheet

1. Product and Company Identification

Supplier:

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Product information

CAS #: 2440-22-4
MF: C13H11N3O
EC NO: 219-470-5
NAME: 2-(2H-Benzotriazol-2-yl)-p-cresol
Synonym name: UV Absorber P,Tinuvin P,UV Absorber P,Ultraviolet Light Absorber P

2. Hazards Identification

Emergency overview

Signal word: CAUTION: !
Colour: slightly yellow
Appearance: powder
State of matter: solid
Odour: odourless
Health: This product may cause skin sensitization. Avoid skin contact.
Physical/Chemical hazards: Refer to MSDS Section 7 for Dust Explosion information.

Potential health effects

Primary routes of entry:

Eyes, Skin, Inhalation, Ingestion

Potential environmental effects

Low toxicity to aquatic organisms. Releases to the environment are to be avoided.

3. Composition/Information on Ingredients

Chemical name	CAS Number	Hazardous
2-(2H-Benzotriazol-2-yl)-p-cresol	2440-22-4	Y

This material is classified as hazardous under OSHA regulations.

4. First-aid Measures

Inhalation:

Remove to fresh air, if not breathing give artificial respiration. If breathing is difficult, give oxygen and get immediate medical attention.

Skin:

After contact with skin, wash immediately with plenty of water and soap.
Get medical attention if irritation occurs.

Eyes:

In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.

Ingestion:

Do not induce vomiting. If vomiting occurs naturally, have casualty lean forward to reduce the risk of aspiration. Seek medical attention immediately.

Notes to physician:

May aggravate pre-existing allergies or eczema.

5. Fire-fighting Measures

Suitable extinguishing media:

dry powder, carbon dioxide, foam, water spray

Hazardous combustion products:

Burning may produce toxic combustion products.

Hazards during fire-fighting:

Standard procedure for chemical fires.

The product can form an explosive dust/air mixture. For further information, see Section 7 Explosion Hazards.

Protective equipment for fire-fighting:

Wear self-contained breathing apparatus and chemical-protective clothing.

6. Accidental Release Measures

Cleanup:

Sweep up and shovel into suitable containers for disposal.

Avoid raising dust.

Wear suitable protective equipment.

Should not be released into the environment.

7. Handling and Storage

Handling

General advice:

As with all industrial chemicals, use good industrial practices when handling. Avoid eye, skin, and clothing contact. Do not inhale. Do not taste or swallow. Use only with adequate ventilation.

Protection against fire and explosion:

Combustible powder. - Avoid creating dusty conditions. - Grounding is required when emptying into a conductive container. - When flammable solvents are present, the container must be inerted or the system otherwise designed to prevent or contain an explosion. Seek expert advice. In addition, for products packaged in fused-lined (coated) fiber drums, fiber drums with conductive liners, steel drums, steel pails, and Type "C" FIBC (bulk bags), or other conductive the following instructions also apply: - Always ground this package

before emptying. The user is responsible for designing the system to handle solid and ensuring proper training of employees in the system's use.

Storage

General advice:

Keep container tightly closed in a dry, cool and well-ventilated place.

> for industrial use only <

8. Exposure Controls and Personal Protection

Exposure Guidelines

Phenol, 2-(2H-benzotriazol-2-yl)-4-methyl- (2440-22-4)	CIEL	8h TWA: 1 mg/m ³ Skin sensitization observed in animal study
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Engineering Controls:

Work in well ventilated areas. Do not breathe dust.

Personal protective equipment

Respiratory protection:

Wear a NIOSH-certified respirator as necessary.

Eye protection:

Wear safety goggles (chemical goggles) if there is potential for airborne dust exposures.

Body protection:

Wear chemical resistant gloves and protective clothing.

General safety and hygiene measures:

There are no OSHA or ACGIH exposure guidelines available for component(s) in this product.

9. Physical and Chemical Properties

Colour:	slightly yellow	
Form:	powder	
State of matter:	solid	
Odour:	odourless	
pH value:	6	(20 °C) (as suspension)
Flammability:	Not tested	
Flash point:	205 °C	(DIN 51584)
Self-ignition temperature:		Not tested
Dust explosion class:	Very heavy dust explosion (>300 bar.m/sec). (3)	Minimum ignition energy: < 1 mJ
Melting point:	128 - 132 °C	(Directive 92/69/EEC, A.1)
Boiling point:		Not applicable
Vapour pressure:	0.00015 Pa	(20 °C)
Density:	1.38 g/cm ³	(20 °C)
Bulk density:	500 - 800 g/l	
Partitioning coefficient n-octanol/water (log Pow):	4.2	(20 - 25 °C)
Viscosity, kinematic:	7.5 mm ² /s	
% Volatiles:	0.5 %	(20 °C)
Solubility in water:	< 1 mg/l	

Solubility in other solvents:		Not tested
Autoignition:	520 °C	
Decomposition temperature:	> 350 °C	

10. Stability and Reactivity

Stability:

Stable

Conditions to avoid: Avoid electro-static discharge. Avoid sources of ignition.

Substances to avoid: Strong oxidizing agents, strong acids, strong bases.

Possibility of Hazardous Reactions: No hazardous reactions known.

Hazardous decomposition products: No decomposition expected under normal storage conditions.

11. Toxicological Information

Acute oral toxicity:

LD50 / oral / rat: > 10,000 mg/kg

Acute inhalation toxicity:

LC50 / by inhalation / rat: > 600 mg/m³

Acute dermal toxicity:

LD50 / dermal / rat: > 1,000 mg/kg

Skin irritation:

(Rabbits) Not an irritant.

Eye irritation:

(Rabbits) Minimal irritation. (Draize Score 1.7/110) (Based on components)

Skin Sensitization:

(Guinea pig) Maximization test: Strong skin sensitizer RIPT (Humans): No sensitization noted. There are some literature references indicating that sensitization reactions have developed in people exposed to cosmetic and plastic formulations containing this chemical. To our knowledge, such reactions have not occurred during industrial usage.

Subchronic Toxicity:

(Rat) 90-Day Oral Study: Effected organs: Kidney and Liver. NOEL = 0.2% equivalent to 142-162 mg/kg/day.
(Beagle Dogs) 3-Month Oral Study: No gross or microscopical changes were noted. NOEL = 1000 ppm corresponding to a daily intake of 31.7 mg/kg for males and 43.6 mg/kg for females.

Genetic toxicity:

(Mouse)

Dominant lethal study: Non-mutagenic

(Somatic cells)

(Chinese Hamster)

Ames Test: negative; Chromosome Aberration Test (in Vitro): negative

(Chinese hamsters) Nucleus anomaly test: Negative

Carcinogenicity:

(Rat) 104 week study. There was no evidence of tumorigenic potential. The NOEL is 1,000 ppm.

(Mice) 24 month carcinogenicity study. No clinical symptoms and no substance-related lesions were observed. The NOEL is 500 ppm.

None of the components in this product at concentrations greater than 0.1% are listed by IARC; NTP, OSHA or ACGIH as a carcinogen.

Reproductive toxicity:

Not tested

Developmental toxicity/teratogenicity:

(Rats)

(Mice)

Segment II Studies: No evidence of teratogenic or embryotoxic effects when pregnant rats and mice were dosed with 0, 150, 500 and 1,000 mg/kg by gavage from day 6 through 15 of pregnancy.

12. Ecological Information

Toxicity to fish:

Brachydanio rerio/96 h/LC50: > 100 mg/l (OECD Guide-line 203)

Toxicity to aquatic invertebrates:

Daphnia magna/24 h/EC50: > 1,000 mg/l (OECD 202)

Toxicity to aquatic plants:

Not tested

Toxicity to microorganisms:

activated sludge/3 h/IC50: > 100 mg/l (OECD 209)

Biodegradation:

Test method: OECD 301B
Degree of elimination: 0 - 2 % (28 d)
Evaluation: Not readily biodegradable.

Theoretical Carbon Dioxide Demand:

0 %

13. Disposal Considerations

Waste disposal of substance:

Dispose of in accordance with national, state and local regulations.

Resource Conservation and Recovery Act (RCRA): Not a hazardous waste under RCRA (40 CFR 261).

14. Transport Information

U.S. Department of Transportation

The listed Transportation Classification does not address regulatory variations due to changes in package size, mode of shipment or other regulatory descriptors.

Road transport:

Special shipping information: Not classified as a dangerous good under transport regulations.

Air transport:

Special shipping information: Not classified as a dangerous good under transport regulations.

International Air Transport Association (IATA)

Special shipping information: Not classified as a dangerous good under transport regulations.

International Maritime Dangerous Goods Code (IMDG)

Special shipping information: Not classified as a dangerous good under transport regulations.

15. Regulatory Information

Canada: Domestic Substances List (DSL): All components either exempt or listed on the DSL

US: Toxic Substances Control Act (TSCA): All component(s) comprising this product are either exempt or listed on the TSCA inventory

United States - Regulations

SARA Section 311/312 Hazard Communication Standard:

Acute Health:	Y	Fire:	N
Chronic Health:	N	Reactivity:	N
		Sudden release of pressure:	N

SARA Section 313 Toxic Chemical List:

No components listed.

OSHA hazard category:

This material is classified as hazardous under OSHA regulations.

Toxic Substances Control Act (TSCA) Significant New Use Rule (SNUR):

This product is not subject to a Significant New Use Rule (SNUR).

Toxic Substances Control Act (TSCA) Section 5(e) Consent Orders:

This product is not subject to a Section 5(e) Consent Order.

Toxic Substances Control Act (TSCA) Section 5(f):

This product is not subject to a Section 5(f)/6(a) rule.

Toxic Substances Control Act (TSCA) Section 12(b) Export Notification:

No components listed.

Clean Air Act - Hazardous Air Pollutants (HAP):

This product does not contain any Hazardous Air Pollutants (HAP), as defined by the U.S. Clean Air Act Section 112 (40 CFR 61).

Clean Air Act 602 - Ozone Depleting Substances (ODS):

This product neither contains, nor was manufactured with, a Class I or Class II ozone depleting substance (ODS), as defined by the U.S. Clean Air Act Section 602 (40 CFR 82, Subpt. A, App. A+B).

Clean Water Act - Priority Pollutants (PP):

This product does not contain any priority pollutants listed under the U.S. Clean Water Act Section 307(2)(1) Priority Pollutant List (40 CFR 401.15).

Pennsylvania Right to Know:

This product does not contain any components that are subject to the Pennsylvania Right-To-Know disclosure requirement.

California Proposition 65 - Chemicals Known to the State to Cause Cancer:

No components listed.

California Proposition 65 - Chemicals Known to the State to Cause Reproductive Toxicity:

No components listed.

International Regulations

Chemical Weapons Convention:

This product does not contain any component(s) listed under the Chemical Weapons Convention Schedule of Chemicals.

16. Other Information