



Issuing Date 07-May-2009

Revision Date 31-Mar-2011

Revision Number 4

1. IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND THE COMPANY/UNDERTAKING

Product Name Nitroblue Tetrazolium Chloride
Product Code(s) 0329
Recommended Use For Further Manufacturing Use Only
Not for Human or Animal Drug Use
Synonyms NBT (DYE) * NITRO BLUE TETRAZOLIUM * P-NITRO BLUE TETRAZOLIUM * NITRO BLUE TETRAZOLIUM CHLORIDE * P-NITRO BLUE TETRAZOLIUM CHLORIDE * NITRO BT * NITROTETRAZOLIUM BLUE * P-NITROTETRAZOLIUM BLUE * NITRO TETRAZOLIUM BT * NITROTETRAZOLIUM CHLORIDE BLUE * NITRO BLUETETRAZOLIUM SALT * TETRAZOLIUM NITRO BLUE * TETRAZOLIUM NITRO BT *

Company
AMRESCO, LLC
6681 Cochran Road
Solon, Ohio 44139

Emergency Telephone Number Chemtrec 1-800-424-9300
Company Phone Number 1-800-448-4442
E-mail Address info@amresco-inc.com

2. HAZARDS IDENTIFICATION

GHS - Classification

Classification Flammable Solid 2 Skin Irritant 2 Eye Irritant 2
Signal Word Warning



Hazard Statements H302 - Harmful if swallowed H313 - May be harmful in contact with skin H315 - Causes skin irritation H319 - Causes serious eye irritation H370 - Causes damage to organs H228 - Flammable solid

Precautionary Statements P260 - Do not breathe dust/fume/gas/mist/vapors/spray P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing P307 + P311 - IF exposed: Call a POISON CENTRE or doctor/physician P210 - Keep away from heat/sparks/open flames/hot surfaces. - No smoking P240 - Ground/Bond container and receiving equipment

3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Name	EC No.	REACH Reg. No.	CAS-No	Weight %	Classification
2H-Tetrazolium, 3,3'-(3,3'-dimethoxy[1,1'-biphenyl]-4,4'-diyl)bis[2-(4-nitrophenyl)-5-phenyl-, dichloride	EEC No. 206-067-4	Not available	298-83-9	95-100	-

4. FIRST AID MEASURES

Eye Contact Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician.

Skin Contact Wash off immediately with plenty of water.

Inhalation Move to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen.

Ingestion Clean mouth with water and afterwards drink plenty of water

Notes to Physician Treat symptomatically

5. FIRE-FIGHTING MEASURES

Flammable Properties Flammable solid.

Flash Point Not determined

Suitable Extinguishing Media Use extinguishing media appropriate to surrounding fire conditions.

Hazardous Combustion Products Carbon oxides, Nitrogen oxides (NOx), Hydrogen Chloride gas.

Explosion Data

Sensitivity to Mechanical Impact Not sensitive

Sensitivity to Static Discharge Not sensitive

Protective Equipment and Precautions for Firefighters As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear

6. ACCIDENTAL RELEASE MEASURES

Personal Precautions Ensure adequate ventilation. Avoid contact with skin, eyes and clothing.

Methods for Containment Prevent further leakage or spillage if safe to do so

Methods for Cleaning Up Avoid dust formation. Ventilate area and wash spill site after material pickup is complete. Pick up and transfer to properly labeled containers.

7. HANDLING AND STORAGE

Handling Handle in accordance with good industrial hygiene and safety practice. Light Sensitive. Moisture sensitive.

Storage Protect from light. Protect from moisture. Keep container tightly closed in a dry and well-ventilated place.

Incompatible Products Strong oxidizing agents.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Chemical Name	ACGIH TLV	OSHA PEL	NIOSH IDLH
2H-Tetrazolium, 3,3'-(3,3'-dimethoxy[1,1'-biphenyl]-4,4'-diyl)bis[2-(4-nitrophenyl)-5-phenyl-, dichloride 298-83-9			

Engineering Measures Showers
 Eyewash stations
 Ventilation systems

Personal Protective Equipment

Eye/Face Protection Safety glasses with side-shields.

Skin and Body Protection Wear protective gloves/clothing.

Respiratory Protection If exposure limits are exceeded or irritation is experienced, NIOSH/MSHA approved respiratory protection should be worn. Positive-pressure supplied air respirators may be required for high airborne contaminant concentrations. Respiratory protection must be provided in accordance with current local regulations

Hygiene Measures Handle in accordance with good industrial hygiene and safety practice

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	Yellow
Odor	No information available
Odor Threshold	No information available
Decomposition Temperature °C	No information available
Freezing Point	No information available
Initial Boiling Point	No information available
Physical State	Crystalline Powder
pH	No data available
Flash Point	Not determined
Flammable Properties	Flammable solid.
Autoignition Temperature	No data available
Boiling Point/Range	No data available
Melting Point/Range	200 °C
Flammability Limits in Air	Upper No data available Lower No data available
Explosive Properties	No information available
Oxidizing Properties	No information available
Evaporation Rate	No data available
MMHG @ 37.8 C	No data available
Vapor Density	No data available
Specific Gravity	No data available
Solubility	No information available
Partition Coefficient (n-octanol/water)	No data available
Viscosity	No information available

10. STABILITY AND REACTIVITY

Stability	Stable under recommended storage conditions
Incompatible Products	Strong oxidizing agents.
Conditions to Avoid	Protect from moisture. Protect from light and moisture. Flammable Solid.
Hazardous Decomposition Products	Carbon oxides. Nitrogen oxides (NOx). Hydrogen chloride gas.
Hazardous Polymerization	Hazardous polymerization does not occur

11. TOXICOLOGICAL INFORMATION

Acute Toxicity

Product Information Causes skin, eye and respiratory tract irritation.

Chronic Toxicity

Chronic Toxicity No known effect based on information supplied

Target Organ Effects Eyes, Kidneys.

12. ECOLOGICAL INFORMATION

Ecotoxicity

The environmental impact of this product has not been fully investigated

13. DISPOSAL CONSIDERATIONS

Waste Disposal Method Dispose of material in accordance with all federal, state, and local regulations

Contaminated Packaging Dispose of in accordance with all federal, state and local regulations

14. TRANSPORT INFORMATION

IATA Regulated
UN-No 1325
Proper Shipping Name FLAMMABLE SOLIDS, ORGANIC, N.O.S. (NITRO BLUE TETRAZOLIUM CHLORIDE)
Hazard Class 4.1
Packing Group III

DOT Regulated
Proper Shipping Name FLAMMABLE SOLIDS, ORGANIC, N.O.S. (NITRO BLUE TETRAZOLIUM CHLORIDE)
Hazard Class 4.1
UN-No 1325
Packing Group III

15. REGULATORY INFORMATION

REACH Title VII Restrictions No information available.

Chemical Name	Dangerous Substances	Organic Solvents	Harmful Substances Whose Names Are to be Indicated on the Label	Pollution Release and Transfer Registry (Class II):	Pollution Release and Transfer Registry (Class I):	Poison and Deleterious Substances Control Law:
2H-Tetrazolium, 3,3'-(3,3'-dimethoxy[1,1'-biphenyl]-4,4'-diyl)bis[2-(4-nitrophenyl)-5-phenyl-, dichloride	Not applicable	Not applicable	Not applicable	Not applicable	Not applicable	Not applicable

Component	ISHA - Harmful Substances Prohibited for Manufacturing, Importing, Transferring, or Supplying	ISHA - Harmful Substances Requiring Permission	Toxic Chemical Classification Listing (TCCL) - Toxic Chemicals	Toxic Release Inventory (TRI) - Group I	Toxic Release Inventory (TRI) - Group II
2H-Tetrazolium, 3,3'-(3,3'-dimethoxy[1,1'-biphenyl]-4,4'-diyl)bis[2-(4-nitrophenyl)-5-phenyl-, dichloride 298-83-9 (95-100)	Not applicable	Not applicable	Not applicable	Not applicable	Not applicable

International Inventories

TSCA	Complies
EINECS/ELINCS	Complies
ENCS	Does not Comply
IECSC	Does not Comply
KECL	Complies
PICCS	Does not Comply
AICS	Complies

U.S. Federal Regulations

SARA 313

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product contains a chemical or chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372

SARA 311/312 Hazard Categories

Acute Health Hazard	Yes
Chronic Health Hazard	No
Fire Hazard	Yes
Sudden Release of Pressure Hazard	No
Reactive Hazard	No

Clean Water Act

This product does not contain any substances regulated as pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42)

Clean Air Act, Section 112 Hazardous Air Pollutants (HAPs) (see 40 CFR 61)

This product does not contain any substances regulated as hazardous air pollutants (HAPS) under Section 112 of the Clean Air Act Amendments of 1990

CERCLA

U.S. State Regulations

California Proposition 65

This product does not contain any Proposition 65 chemicals.

International Regulations

Mexico - Grade No information available.

Canada

WHMIS Hazard Class

B4 Flammable solid
D2B Toxic materials



16. OTHER INFORMATION

Issuing Date 07-May-2009

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Revision Note
No information available.

Recommended Restrictions No information available

Disclaimer

The information provided on this MSDS is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guide for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered as a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other material or in any process, unless specified in the text.

End of MSDS