



# SAFETY DATA SHEET

Issuing Date 07-May-2009

Revision Date 27-Feb-2015

Revision Number 1

## 1. PRODUCT AND COMPANY IDENTIFICATION

**Product Identifier**

**Product Name** Nitroblue Tetrazolium Chloride

**Other means of identification**

**Product Code(s)** 0329

**Synonyms** No information available

**Recommended use of the chemical and restrictions on use**

**Recommended Use** For Further Manufacturing Use Only.

**Uses advised against** Not for Human or Animal Drug Use

**Details of the supplier of the safety data sheet**

**Company Address**

AMRESCO, LLC  
6681 Cochran Road  
Solon, Ohio 44139

**Company Phone Number** 1-800-48-4442

**E-mail Address** info@amresco-inc.com

**Emergency Telephone Number**

**Emergency Telephone Number** Chemtrec 1-800-424-9300

## 2. HAZARDS IDENTIFICATION

**Classification**

**OSHA Regulatory Status**

This chemical is considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200)

|  |            |
|--|------------|
| Skin Corrosion/Irritation                        | Category 2 |
| Serious Eye Damage/Eye Irritation                | Category 2 |
| Specific target organ toxicity (single exposure) | Category 3 |

**Label elements**

**Emergency Overview**

**Warning**

**Hazard Statements**

H315 - Causes skin irritation

H319 - Causes serious eye irritation

H335 - May cause respiratory irritation



**Appearance** Yellow

**Physical State** Crystalline Powder

**Odor** No information available

**Precautionary Statements**

- P261 - Avoid breathing dust/fume/gas/mist/vapors/spray
- P264 - Wash face, hands and any exposed skin thoroughly after handling
- P271 - Use only outdoors or in a well-ventilated area
- P280 - Wear protective gloves/protective clothing/eye protection/face protection
- P302 + P352 - IF ON SKIN: Wash with plenty of soap and water
- P304 + P340 - IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing
- P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing
- P312 - Call a POISON CENTER or doctor if you feel unwell
- P321 - Specific treatment (see supplemental first aid instructions on this label)
- P332 + P313 - If skin irritation occurs: Get medical advice/attention
- P337 + P313 - If eye irritation persists: Get medical advice/attention
- P362 - Take off contaminated clothing and wash before reuse
- P403 + P233 - Store in a well-ventilated place. Keep container tightly closed
- P405 - Store locked up
- P501 - Dispose of contents/ container to an approved waste disposal plant

**Hazards not otherwise classified (HNOC)**

Not applicable

**Other Information**

**3. COMPOSITION/INFORMATION ON INGREDIENTS**

| Chemical Name   | CAS-No   | EC No.    | Weight % | Trade Secret   |
|---|----------|-----------|----------|----------------|
| 2H-Tetrazolium, 3,3'-(3,3'-dimethoxy[1,1'-biphenyl]-4,4'-diyl)bis[2-(4-nitrophenyl)-5-phenyl-, dichloride | 298-83-9 | 206-067-4 | 100      | Not applicable |

**4. FIRST AID MEASURES**

**First Aid Measures**

- Eye Contact** Rinse thoroughly with plenty of water for at least 15 minutes, lifting lower and upper eyelids. Consult a physician.
- Skin Contact** Wash off immediately with soap and plenty of water removing all contaminated clothes and shoes.
- Inhalation** Move to fresh air. If not breathing, give artificial respiration.
- Ingestion** Never give anything by mouth to an unconscious person. Rinse mouth.

**Most important symptoms and effects, both acute and delayed**

**Most Important Symptoms/Effects** No information available.

**Indication of any immediate medical attention and special treatment needed**

**Notes to Physician** Treat symptomatically.

**5. FIRE-FIGHTING MEASURES**

**Suitable Extinguishing Media**

Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

**Unsuitable Extinguishing Media** No information available.

**Specific Hazards Arising from the Chemical**

No information available.

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

**Explosion Data**

**Sensitivity to Mechanical Impact** None.

**Sensitivity to Static Discharge** None.

**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, protective equipment and emergency procedures**

**Personal Precautions** Ensure adequate ventilation, especially in confined areas.

**Environmental Precautions**

**Environmental Precautions** See Section 12 for additional Ecological information.

**Methods and material for containment and cleaning up**

**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**

**Precautions for Safe Handling**

**Handling** Handle in accordance with good industrial hygiene and safety practice. Protect from light and moisture.

**Conditions for safe storage, including any incompatibilities**

**Storage** Keep containers tightly closed in a dry, cool and well-ventilated place. Protect from light and moisture.

**Incompatible Products** Strong oxidizing agents.

**8. EXPOSURE CONTROLS/PERSONAL PROTECTION**

**Control parameters**

**Exposure Guidelines** This product does not contain any hazardous materials with occupational exposure limits established by the region specific regulatory bodies.

| 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<br>298-83-9 | -         | -        |            |

**Appropriate engineering controls**

**Engineering Measures**                      Showers  
   Eyewash stations  
   Ventilation systems.

**Individual protection measures, such as 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**

**Information on basic physical and chemical properties**

|                       |                          |                       |                          |
|-----------------------|--------------------------|-----------------------|--------------------------|
| <b>Physical State</b> | Crystalline Powder       | <b>Odor</b>           | No information available |
| <b>Appearance</b>     | Yellow                   | <b>Odor Threshold</b> | No information available |
| <b>Color</b>          | No information available |                       |                          |

| <u>Property</u>              | <u>Values</u>            | <u>Remarks • Method</u> |
|------------------------------|--------------------------|-------------------------|
| pH                           | No information available |                         |
| Melting point/freezing point | 200 °C                   |                         |
| Boiling Point/Range          | No information available |                         |
| Flash Point (High in °C)     | No information available |                         |
| Evaporation Rate             | No information available |                         |
| Flammability (solid, gas)    | No information available |                         |
| Flammability Limit in Air    |                          |                         |
| Upper flammability limit:    | No information available |                         |
| Lower flammability limit:    | No information available |                         |
| Vapor pressure               | No information available |                         |
| Vapor Density                | No information available |                         |
| Specific Gravity             | No information available |                         |
| Water Solubility             | No information available |                         |
| Solubility in other solvents | No information available |                         |
| Partition coefficient        | No information available |                         |
| Autoignition Temperature     |                          |                         |
| Decomposition Temperature    | No information available |                         |
| Kinematic viscosity          | No information available |                         |
| Dynamic viscosity            | No information available |                         |
| Explosive Properties         | No information available |                         |
| Oxidizing Properties         | No information available |                         |

**Other Information**

|                         |                          |
|-------------------------|--------------------------|
| <b>Softening Point</b>  | No information available |
| <b>Molecular Weight</b> | No information available |
| <b>VOC Content</b>      | No information available |
| <b>Density</b>          | No information available |
| <b>Bulk Density</b>     | No information available |

**10. STABILITY AND REACTIVITY**

**Reactivity**  
No data available

**Chemical Stability**

Stable under recommended storage conditions.

**Possibility of Hazardous Reactions**

None under normal processing.

**Conditions to Avoid**

Protect from light and moisture.

**Incompatible Materials**

Strong oxidizing agents.

**Hazardous Decomposition Products**

Carbon oxides. Nitrogen oxides (NOx). Hydrogen chloride gas.

**11. TOXICOLOGICAL INFORMATION**

**Information on likely routes of exposure**

**Product Information**

|                     |  |
|---------------------|--|
| <b>Inhalation</b>   | May cause irritation of respiratory tract.   |
| <b>Eye Contact</b>  | Irritating to eyes.                          |
| <b>Skin Contact</b> | Irritating to skin.                          |
| <b>Ingestion</b>    | There is no data available for this product. |

| Chemical Name   | LD50 Oral | LD50 Dermal | LC50 Inhalation |
|---|-----------|-------------|-----------------|
| 2H-Tetrazolium, 3,3'-(3,3'-dimethoxy[1,1'-biphenyl]-4,4'-diyl)bis[2-(4-nitrophenyl)-5-phenyl-, dichloride<br>298-83-9 | -         | -           | -               |

**Information on toxicological effects**

**Symptoms** No information available.

**Delayed and immediate effects as well as chronic effects from short and long-term exposure**

**Sensitization** No information available.  
**Mutagenic Effects** No information available.  
**Carcinogenicity** No information available.

| Chemical Name   | ACGIH | IARC | NTP | OSHA |
|---|-------|------|-----|------|
| 2H-Tetrazolium, 3,3'-(3,3'-dimethoxy[1,1'-biphenyl]-4,4'-diyl)bis[2-(4-nitrophenyl)-5-phenyl-, dichloride<br>298-83-9 | -     | -    | -   | -    |

**Reproductive Toxicity** No information available.  
**STOT - single exposure** Respiratory system.  
**STOT - repeated exposure** No information available.  
**Aspiration hazard** No information available.

**Numerical measures of toxicity - Product Information**

**12. ECOLOGICAL INFORMATION**

**Ecotoxicity**

100% of the mixture consists of component(s) of unknown hazards to the aquatic environment

| Chemical Name   | Toxicity to Algae | Toxicity to Fish | Daphnia Magna (Water Flea) |
|---|-------------------|------------------|----------------------------|
| 2H-Tetrazolium, 3,3'-(3,3'-dimethoxy[1,1'-biphenyl]-4,4'-diyl)bis[2-(4-nitrophenyl)-5-phenyl-, dichloride<br>298-83-9 | -                 | -                | -                          |

**Persistence and Degradability**

No information available.

**Bioaccumulation/Accumulation**

No information available.

| Chemical Name   | Log Pow |
|---|---------|
| 2H-Tetrazolium, 3,3'-(3,3'-dimethoxy[1,1'-biphenyl]-4,4'-diyl)bis[2-(4-nitrophenyl)-5-phenyl-, dichloride<br>298-83-9 | -       |

**Other Adverse Effects**

No information available

**13. DISPOSAL CONSIDERATIONS**

**Waste treatment methods**

**Waste Disposal Method**

Dispose of material in accordance with all federal, state, and local regulations.

**Contaminated Packaging**

Do not re-use empty containers.

| Chemical Name   | RCRA - Halogenated Organic Compounds | RCRA - P Series Wastes | RCRA - F Series Wastes | RCRA - K Series Wastes |
|---|--------------------------------------|------------------------|------------------------|------------------------|
| 2H-Tetrazolium, 3,3'-(3,3'-dimethoxy[1,1'-biphenyl]-4,4'-diyl)bis[2-(4-nitrophenyl)-5-phenyl-, dichloride<br>298-83-9 | -                                    | -                      | -                      | -                      |

| Chemical Name   | California Hazardous Waste Status |
|---|-----------------------------------|
| 2H-Tetrazolium, 3,3'-(3,3'-dimethoxy[1,1'-biphenyl]-4,4'-diyl)bis[2-(4-nitrophenyl)-5-phenyl-, dichloride<br>298-83-9 | -                                 |

**14. TRANSPORT INFORMATION**

**DOT**

Not regulated

**IATA**

Not regulated

**15. REGULATORY INFORMATION**

**International Inventories**

|                      |                 |
|----------------------|-----------------|
| <b>TSCA</b>          | Complies        |
| <b>DSL/NDSL</b>      | Complies        |
| <b>EINECS/ELINCS</b> | Complies        |
| <b>ENCS</b>          | Does not Comply |
| <b>IECSC</b>         | Does not Comply |
| <b>KECL</b>          | Complies        |

**PICCS** Does not Comply  
**AICS** Complies

**Legend:**

**TSCA** - United States Toxic Substances Control Act Section 8(b) Inventory  
**DSL/NDL** - Canadian Domestic Substances List/Non-Domestic Substances List  
**EINECS/ELINCS** - European Inventory of Existing Commercial Chemical Substances/EU List of Notified Chemical Substances  
**ENCS** - Japan Existing and New Chemical Substances  
**IECSC** - China Inventory of Existing Chemical Substances  
**KECL** - Korean Existing and Evaluated Chemical Substances  
**PICCS** - Philippines Inventory of Chemicals and Chemical Substances  
**AICS** - Australian Inventory of Chemical Substances

**U.S. Federal Regulations**

**SARA 313**

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product does not contain any chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372.

| Component   | SARA 313 - Threshold Values % |
|---|-------------------------------|
| 2H-Tetrazolium, 3,3'-(3,3'-dimethoxy[1,1'-biphenyl]-4,4'-diyl)bis[2-(4-nitrophenyl)-5-phenyl-, dichloride<br>298-83-9 ( 100 ) | -                             |

**SARA 311/312 Hazard Categories**

**Acute Health Hazard** Yes  
**Chronic Health Hazard** No  
**Fire Hazard** No  
**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)

| Chemical Name   | CWA - Reportable Quantities | CWA - Toxic Pollutants | CWA - Priority Pollutants | CWA - Hazardous Substances |
|---|-----------------------------|------------------------|---------------------------|----------------------------|
| 2H-Tetrazolium, 3,3'-(3,3'-dimethoxy[1,1'-biphenyl]-4,4'-diyl)bis[2-(4-nitrophenyl)-5-phenyl-, dichloride<br>298-83-9 | -                           | -                      | -                         | -                          |

**CERCLA**

This material, as supplied, does not contain any substances regulated as hazardous substances under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302) or the Superfund Amendments and Reauthorization Act (SARA) (40 CFR 355). There may be specific reporting requirements at the local, regional, or state level pertaining to releases of this material

| Chemical Name   | Hazardous Substances RQs | Extremely Hazardous Substances RQs | RQ |
|---|--------------------------|------------------------------------|----|
| 2H-Tetrazolium, 3,3'-(3,3'-dimethoxy[1,1'-biphenyl]-4,4'-diyl)bis[2-(4-nitrophenyl)-5-phenyl-, dichloride<br>298-83-9 | -                        | -                                  | -  |

**U.S. State Regulations**

**California Proposition 65**

This product does not contain any Proposition 65 chemicals.

| Chemical Name | California Prop. 65 |
|---------------|---------------------|
|               |                     |

|   |   |
|---|---|
| 2H-Tetrazolium,<br>3,3'-(3,3'-dimethoxy[1,1'-biphenyl]-4,4'-diyl)bis[2-(4-nitrophenyl)-5-phenyl-, dichloride - 298-83-9 | - |
|---|---|

**U.S. State Right-to-Know Regulations**

| Chemical Name  | New Jersey | Massachusetts | Pennsylvania |
|--|------------|---------------|--------------|
| 2H-Tetrazolium,<br>3,3'-(3,3'-dimethoxy[1,1'-biphenyl]-4,4'-diyl)bis[2-(4-nitrophenyl)-5-phenyl-, dichloride<br>298-83-9 | -          | -             | -            |

**U.S. EPA Label Information**

EPA Pesticide Registration Number Not applicable

**Canada**

**WHMIS Hazard Class**

D2B Toxic materials



**16. OTHER INFORMATION**

Issuing Date 07-May-2009

Revision Date 27-Feb-2015

**Revision Note**

No information available

**Disclaimer**

The information provided on this SDS 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 Safety Data Sheet**