

Material Safety Data Sheet



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

Product name: NBT/BCIP STOCK SOLUTION
Product number: 1681451
Global material number: 11681451001
Business area: Roche Applied Sciences
Product line: Not applicable
Instrument type: Not applicable
Supplier: Roche Diagnostics Corporation
9115 Hague Road
Indianapolis, IN 46250
Site Phone Number: 1-800-428-5074
Emergency telephone number: CHEMTREC:
1-800-424-9300 (U.S. or Canada)
1-703-527-3887 (International)

2. COMPOSITION/INFORMATION ON INGREDIENTS

Description 1: Bottle 1

Components	CAS Number	Weight %	OSHA PEL:	OSHA STEL:	ACGIH TLV:	ACGIH STEL:
5-Bromo-4-chloro-3-indolyl phosphate, 4-toluidine salt	6578-06-9	0.1-<1	NA	NA	NA	NA
Nitro blue tetrazolium chloride (NBT)	298-83-9	1-5	NA	NA	NA	NA
Dimethyl Sulfoxide (DMSO)	67-68-5	60-70	NA	NA	NA	NA

3. HAZARDS IDENTIFICATION

Emergency Overview

NFPA Ratings: Health= 1 Flammability= 1 Reactivity= 0 Special= I

Special Definitions: A=Allergen CA=Carcinogen CO=Corrosive F=Flammable H=Harmful I=Irritant Ox=Oxidizer PB=Potential Biohazard R=Reproductive S=Sensitizer T=Toxic T+=Highly Toxic W=Water Reactive

Principle routes of exposure: Ingestion, inhalation, skin absorption, skin and/or eye contact.

Inhalation: May cause irritation of respiratory tract.

Ingestion: Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea.

Skin contact: Substance may cause slight skin irritation. May be absorbed through the skin in harmful amounts. Chronic exposure may cause dermatitis.

Eye contact: Moderately irritating to the eyes.

Sensitization or Odor threshold: The following chemical(s) may cause sensitization, be absorbed via skin, and/or has an odor threshold for detection:

Medical conditions aggravated by exposure: Persons with pre-existing skin disorders, eye problems, impaired liver, kidney, or respiratory function may be more susceptible to the effects of the substance.

Additional information: None

4. FIRST AID MEASURES

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

Skin contact: Wash off immediately with plenty of water for at least 15 minutes. If skin irritation persists, call a physician.

Ingestion: Call a physician immediately. Do not induce vomiting without medical advice.

Eye contact: Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes.

Notes to physician: None determined

5. FIRE-FIGHTING MEASURES

Suitable extinguishing media: Use dry chemical, CO₂, water spray or "alcohol" foam.

Unusual hazards: Combustible material.

Special protective equipment for firefighters: In the event of fire, wear self-contained breathing apparatus.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions: Use personal protective equipment. Evacuate personnel to safe areas. Remove all sources of ignition.

Environmental precautions: Prevent further leakage or spillage if safe to do so. Prevent product from entering drains. Do not flush into surface water or sanitary sewer system. Do not let product enter drains.

Methods for cleaning up: Never return spills in original containers for re-use. Soak up with oil absorbent material. Sweep up or vacuum (if powder) or soak up with inert absorbent material (if liquid), then place into a suitable clean, dry, closed container, and label for disposal.

7. HANDLING AND STORAGE

Handling: Protect from contamination. Wear personal protective equipment.

Storage: No special precautions required.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Engineering measures: Ensure adequate ventilation.

Personal Protective Equipment

Respiratory protection: Respiratory protection is not required under normal use of this product. If respiratory protection is needed, follow the OSHA regulation, 29CFR1910.134. Always use a NIOSH approved respirator when necessary.

Hand protection: Wear appropriate protective gloves to prevent skin contact. Replace torn or punctured gloves promptly.

Skin and body protection: Wear appropriate body protection to prevent skin contact.

Eye protection: Wear appropriate eye protection to prevent eye contact.

Hygiene measures: When using, do not eat, drink or smoke. Keep away from food and drink. Wash hands before breaks and at the end of workday.

9. PHYSICAL AND CHEMICAL PROPERTIES

Boiling point/range: No information available

Melting point/range: Not determined

pH: 6.7

Physical state: Liquid.

Flash point: 95 C/ 203 F

LEL (%): 2.5

UEL (%): 29

10. STABILITY AND REACTIVITY

Stability: Stable under recommended storage conditions.

Polymerization: None under normal processing.

Hazardous decomposition products: Thermal decomposition can lead to release of irritating gases and vapours. Aldehydes. Sulphur oxides.

Materials to avoid: Incompatible with strong acids and bases. Oxidising agents (strong). Heavy metals.

11. TOXICOLOGICAL INFORMATION

Components	NIOSH - Selected LD50s and LC50s:	NIOSH Pocket Guide - Target Organs:
Nitro blue tetrazolium chloride (NBT)	=2 g/kg Oral LD50 Mouse	
Dimethyl Sulfoxide (DMSO)	=40 g/kg Dermal LD50 Rat	

Inhalation: No additional data available
Skin: No additional data available
Oral: No additional data available
Mutagenic effects: No data is available on the product itself
Reproductive toxicity: No data is available on the product itself

12. ECOLOGICAL INFORMATION

Bioaccumulation: Not determined
Aquatic toxicity: No data is available on the product itself
Ecotoxicity effects: No data is available on the product itself

U.S. EPA, RCRA, CERCLA, SARA, or DGC information on persistent, bioaccumulative, and toxic chemicals (PBTs):
 The following chemicals are listed under the U.S. EPA regulations of RCRA, CERCLA, SARA, or DGC:

13. DISPOSAL CONSIDERATIONS

Waste from residues / unused products: Waste disposal must be in accordance with appropriate Federal, State, and local regulations. This product, if unaltered by use, may be disposed of by treatment at a permitted facility or as advised by your local hazardous waste regulatory authority. Residue from fires extinguished with this material may be hazardous.

14. TRANSPORT INFORMATION

Is product hazardous to ship? No.
DOT

Proper shipping name: None			
UN Number: Not applicable	Hazard class: Not applicable	Subsidiary risk: Not applicable	Packing group: Not applicable

ICAO/IATA

Proper shipping name: None			
UN Number: Not applicable	Hazard class: Not applicable	Subsidiary risk: Not applicable	Packing group: Not applicable

15. REGULATORY INFORMATION

U.S. Regulations:

U.S. CERCLA/SARA/TSCA Regulatory Information: The following chemicals are listed under the following TSCA/SARA/CERCLA lists. Refer to TSCA regulation if you need a definition for acronyms that may be shown in the TSCA Inventory field in the table below

Components	CERCLA/SARA 302 RQ and TPQ (40 CFR 355, App.A)	CERCLA/SARA 304 RQ (40 CFR Table 302.4)	SARA 313 Emission reporting	TSCA Inventory
5-Bromo-4-chloro-3-indolyl phosphate, 4-toluidine salt				Present
Nitro blue tetrazolium chloride (NBT)				Present
Dimethyl Sulfoxide (DMSO)				Present

U.S. Clean Water Act (CWA)/ California Proposition 65: The following chemicals are listed under the CWA and/or California Proposition 65:

Canadian Regulations:

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and the MSDS contains all the information required by the Controlled Products Regulations.

Components	Canada - WHMIS: Classifications of Substances:
Dimethyl Sulfoxide (DMSO)	B3

16. OTHER INFORMATION

Reason for revision: Not applicable
References: None.
Additional advice: None
Prepared by: Roche Diagnostics, Health & Safety Department, MSDS Contact: 317-521-7425 or 317-521-7505

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End of Safety Data Sheet