

Product name: Naugard® 445

1. PRODUCT AND COMPANY IDENTIFICATION

Product name: Naugard® 445**Chemical name:** 4,4' Di(a,a-dimethylbenzyl) diphenylamine**Supplier:** Crompton Corporation
199 Benson Road
Middlebury, CT 06749, USA**Emergency telephone number:** CHEMTREC (24 hours) 800-424-9300Crompton Corporation Emergency Response (24 hours)
800-292-5898**For MSDS, Product Safety, or regulatory inquiries, call:** 866-430-2775

2. COMPOSITION / INFORMATION ON INGREDIENTS

COMPONENT	CAS#	CONCENTRATION
-----------	------	---------------

Note(s): This product does not contain reportable hazardous ingredients as defined by the OSHA Hazard Communication Standard 29 CFR 1910.120

3. HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW**CAUTION!**

AVOID DISPERSION OF DUST IN AIR TO REDUCE POTENTIAL FOR DUST IGNITION/EXPLOSIONS.

4. FIRST AID MEASURES

Swallowing

Do not induce vomiting. Rinse mouth with water. Obtain medical attention.

Skin

Wash skin with soap and water. No harmful effects expected.

Inhalation

Remove to fresh air. Obtain medical attention if symptoms persist.

Eye contact

Product name: Naugard® 445

Flush eyes thoroughly with water for several minutes. Obtain medical attention if discomfort persists.

5. FIRE-FIGHTING MEASURES

Flash point: 276 °C (531 °F)

Autoignition temperature: 298 °C (569 °F)

NFPA CLASSIFICATION

Health: 0	Flammability: 3	Reactivity: 0	Special provisions: -
-----------	-----------------	---------------	-----------------------

Special fire fighting procedures

Do not discharge extinguishing waters into streams, rivers and lakes.

Special protective equipment for firefighters

Body covering protective clothing, full "turn-out" gear. Self-contained breathing apparatus.

Extinguishing media

Suitable:

- CO2
- dry powder
- foam
- water fog

Unsuitable: - water spray

6. ACCIDENTAL RELEASE MEASURES

Personal precautions

Wear suitable protective equipment. Do not breath dust. Eliminate sources of ignition. Avoid contact with skin and eyes.

Environmental precautions

Prevent from entering sewer system, surface water or soil.

Methods for cleaning up

Avoid dispersion of dust.

Sweep up and collect in a suitable container for disposal.

7. HANDLING AND STORAGE

HANDLING

Handling precautions

Normal precautions common to good safety practice should be followed in handling. Use with adequate ventilation. Avoid breathing dust. Keep container tightly closed.

Other precautions

Keep away from sources of ignition - No smoking.

Product name: Naugard® 445

STORAGE**Storage requirements**

Keep container tightly closed in a cool, well-ventilated place. Protect from heat. In case of occurrence of dust risk of dust explosion.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

PERSONAL PROTECTION**Respiratory protection**

Dust respirator, if dusting conditions exist.

Hand protection / protective gloves

Chemical resistant protective gloves

Eye protection

Safety glasses with side shields.

Skin protection

Wear protective clothing, such as long sleeves to minimize skin contact.

ENGINEERING CONTROLS**Ventilation**

General mechanical room ventilation is satisfactory for normal handling and storage operations.

EXPOSURE LIMITS

No exposure limits have been established

9. PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE

Physical state	Solid
Color	White to off-white
Odor	Characteristic

OTHER PROPERTIES

Boiling point	Not determined
Melting point	Melting point 98.5 °C (209 °F) at STP unless specified below.
Specific gravity (H₂O=1)	1.14
Vapor pressure	Not determined
Solubility in water	Insoluble
Solubility in organic solvents	Soluble

Product name: Naugard® 445

Flash point 276.7 °C (531 °F)
Method: Tag Closed Cup

Autoignition temperature 298 °C (569 °F)

Percent volatiles Negligible

10. STABILITY AND REACTIVITY

Stability: Stable under normal conditions.

Incompatible materials

Strong oxidizing agents.

Hazardous combustion products

Burning can produce the following combustion products:

Oxides of carbon.

Oxides of nitrogen.

11. TOXICOLOGICAL INFORMATION

Component toxicology 4,4'-Di-(alpha, alpha-dimethyl benzyl) diphenylamine Acute toxicity - Swallowing:	LD50 - Rat Result: > 10,000 mg/kg
Component toxicology 4,4'-Di-(alpha, alpha-dimethyl benzyl) diphenylamine Skin irritation - Skin contact:	Species: Rabbit Result: Not irritating
Component toxicology 4,4'-Di-(alpha, alpha-dimethyl benzyl) diphenylamine Eye irritation - Eye contact:	Species: Rabbit Result: Not irritating

Component (4,4'-Di-(alpha, alpha-dimethyl benzyl) diphenylamine): Ames-test: no mutagenic effect

12. ECOLOGICAL INFORMATION

No information available.

13. DISPOSAL CONSIDERATIONS

General: Dispose of in accordance with appropriate Federal, State, and local regulations. Avoid discharge to sewers and natural waters.

Product name: Naugard® 445

Non-cleaned packages

Empty drums should be decontaminated and either passed to an approved drum reconditioner or destroyed. Containers that cannot be cleaned must be treated as waste.

14. TRANSPORT INFORMATION

DOT Classification

This product is not regulated by DOT.

IMDG Classification

This product is not regulated by IMDG.

ICAO Classification

This product is not regulated by ICAO.

15. REGULATORY INFORMATION

Comprehensive Environmental Response Compensation and Liability Act of 1980 (CERCLA) requires notification of the National Response Center of release of quantities of hazardous substances equal to or greater than the reportable quantities (RQ's) in 40CFR302.4.

Components present in this product at a level which could require reporting under the statute are:

**** NONE ****

Superfund Amendments and Reauthorization Act of 1986 (SARA) Title III requires emergency planning based on Threshold Planning Quantities (TPQ's) and release reporting based on Reportable Quantities (RQ's) in 40CFR355 (used for SARA 302 and 304).

Components present in this product at a level which could require reporting under the statute are:

**** NONE ****

Superfund Amendments and Reauthorization Act of 1986 (SARA) Title III requires submission of annual reports of release of toxic chemicals that appear in 40CFR372 (for SARA 313). This information must be included in MSDS's that are copied and distributed for this material.

Components present in this product at a level which could require reporting under the statute are:

**** NONE ****

Massachusetts Right-To-Know Substance List (MSL)--Hazardous Substances and Extraordinarily Hazardous Substances on the MSL must be identified when present in products.

Components present in this product at a level which could require reporting under the statute are:

**** NONE ****

Pennsylvania Right-To-Know Hazardous Substance List--Hazardous Substances and Special Hazardous Substances on the list must be identified when present in products.

Components present in this product at a level which could require reporting under the statute are:

**** NONE ****

New Jersey Worker and Community Right-To-Know Act (Labeling Requirements)**Chemical name****CAS#****New Jersey TS Number**

Product name: Naugard® 445

4,4'-Di-(alpha, alpha-dimethyl benzyl) diphenylamine	10081-67-1
Benzenamine, 4-(1-methyl-1-phenyl-ethyl)-N-phenyl	72017-86-8
Benzenamine, 2,4-bis(1-methyl-1-phenylethyl)-N-{4-(1-methyl-1-phenylethyl)phenyl}	17419-19-1

EPA Hazard Categories (SARA 311, 312): None**California Proposition 65**

**** NONE ****

CHEMICAL INVENTORYCanada: This product is on the DSL.Europe: This product is on the EINECS inventory.United States: This product is on the TSCA inventory.Australia: This product, or the components, is listed or exempt from listing on the Australian Inventory of Chemical Substances (AICS).China: This product, or the components, is listed or exempt from listing on the Existing Chemical List (ECL).Japan: This product, or the components, is listed or exempt from listing on the Existing and New Chemical Substances (ENCS) list.Korea: This product is listed on the Existing Chemicals List (ECL).Philippines: This product, or the components, is listed or exempt from listing on the Philippines Inventory of Chemicals and Chemical Substances (PICCS).**FDA****Food contact**

21CFR175.105 Adhesives Not to Exceed Amount Required to Achieve the Desired Effect. 21CFR175.300 Resinous and Polymeric Coatings Not to exceed amount required to achieve the desired effect in side seam cements. 21CFR177.1590 Polyester Elastomers As an antioxidant in an amount required to achieve the desired effect 21CFR178.2010 Antioxidants and/or stabilizers for polymers. As an antioxidant for polypropylene complying with 21CFR177.1520 (Olefin copolymers) for use only where the polypropylene articles contact nonfatty foods. Additives not to exceed 0.3 wt% of composition.

16. OTHER INFORMATION

FURTHER INFORMATION

MAY BE ON THE INVENTORY LIST BUT NOT NECESSARILY REGISTERED, (Korea, China, New Zealand) CONSULT REGULATORY SPECIALIST.



MATERIAL SAFETY DATA SHEET

Revision: 1.2

03/12/2004

Page: 7 of 7

Product name: Naugard® 445

HMIS RATING

Health: 0	Flammability: 3	Reactivity: 0	PPI: X
-----------	-----------------	---------------	--------

LEGEND

STP	Standard temperature and pressure
W/W	Weight/Weight
0 (HMIS)	Minimal hazard
1 (HMIS)	Slight hazard
2 (HMIS)	Moderate hazard
3 (HMIS)	Serious hazard
4 (HMIS)	Severe hazard
X (HMIS)	Personal protection rating to be supplied by user depending on use conditions

Copyright 2004 Crompton Corporation

The opinions expressed herein are those of qualified experts within Crompton Corporation. We believe that the information contained herein is current as of the date of this Safety Data Sheet. Since the use of this information and of these opinions and the conditions of use of this product are not within the control of Crompton Corporation, it is the user's obligation to determine the conditions of safe use of the products.