

PRODUCT# NKT 90
MATERIAL SAFETY DATA SHEET
For TSCA Excluded Uses Only

DeGussa Corporation 24 Hour Emergency Number: 703-527-3887
Performance Products Group 24 Hour CHEMTREC Number: 800-424-9300

Approval Date: April 18, 2002
Print Date: April 18, 2002

Page: 1
MSDS Number: A200090 01-36

1. PRODUCT AND COMPANY IDENTIFICATION

Product Name : NKT 90
Synonyms : Isobutylmethoxysilane treated titanium dioxide
Product Use/Class: Toners

Supplier/Manufacturer:
Degussa Corporation
379 Interpace Parkway
Building C
P.O. Box 677
Parsippany, NJ 07054-0677
Product Information: 800-334-8772

2. COMPOSITION/INFORMATION ON INGREDIENTS

This product does not contain any components considered to be health hazards under the OSHA Hazard Communication Standard 29 CFR 1910.1200 or under the WHMIS Controlled Product Regulations in Canada.

3. HAZARDS IDENTIFICATION

*** EMERGENCY OVERVIEW ***:
Dust may be irritating to respiratory tract.

POTENTIAL HEALTH EFFECTS

Eye Contact:
Possibly irritating.

Skin Contact:
May cause drying of the skin.

Inhalation:
May cause irritation to the respiratory tract.

Ingestion:
No hazard expected in normal use.

General:

Medical conditions which may be aggravated by exposure to this product include: Conjunctivitis of the eye, dermatitis of the skin, asthma and respiratory diseases. High concentrations of titanium dioxide dust caused microscopic lung tumors in rats in lifetime inhalation studies. However, DuPont, the primary US manufacturer, based on a review of the best data and based on an epidemiological study of employees, concludes

Product Name: NKT 90

Approval Date: April 18, 2002

Print Date: October 25, 2002

Page: 2

MSDS Number: A200090 01-36

3. HAZARDS IDENTIFICATION (CONTINUED)

that titanium dioxide pigment will not cause chronic respiratory disease in humans at concentrations experienced in the workplace.

4. FIRST AID MEASURES

FIRST AID

Eye Contact:

In case of contact, immediately flush eyes with plenty of water. Obtain medical attention if irritation develops.

Skin Contact:

Flush skin with plenty of water. Remove contaminated clothing. Obtain medical attention if irritation develops or persists.

Inhalation:

If inhaled, remove to fresh air. If breathing is difficult, give oxygen. If unconscious, evaluate the need for artificial respiration. Get immediate medical attention.

5. FIRE FIGHTING MEASURES

Flash Point: Not Determined

Flash Point Method: Not determined

Lower Explosive Limit: Not determined

Upper Explosive Limit: Not determined

OSHA Flammability Classification: None

Autoignition Temperature: Not Determined

Extinguishing Media:

Use water spray or fog, foam, dry chemical or CO2.

Fire Fighting Procedures:

Fire fighters must wear positive pressure self-contained breathing apparatus and full protective clothing.

6. ACCIDENTAL RELEASE MEASURES

Steps To Be Taken In Case Material Is Released Or Spilled:

Obey relevant local, state, provincial and federal laws and regulations. Do not contaminate any lakes, streams, ponds, groundwater or soil. Use personal protective equipment as described in Section 8. Shovel spilled material into a suitable container.

7. HANDLING AND STORAGE

Handling:

Wash thoroughly after handling. Use with adequate ventilation. Follow all MSDS/label precautions even after container is emptied because it may retain product residues.

Storage:

Store in a cool, dry place. Keep container closed when not in use.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

This product does not contain any components considered to be health hazards under the OSHA Hazard Communication Standard 29 CFR 1910.1200 or under the WHMIS Controlled Product Regulations in Canada.

Other Exposure Limit Information:

Exposure Limits for Dust:

Particulates Not Otherwise Classified:

Inhalable particulate -

Value	Limit	Ref.
10 mg/m3	TWA/TLV	ACGIH

Respirable particulate -

3 mg/m3	TWA/TLV	ACGIH
---------	---------	-------

Particulates Not Otherwise Regulated:

Total particulate -

15 mg/m3	TWA/PEL	OSHA
----------	---------	------

Respirable particulate -

5 mg/m3	TWA/PEL	OSHA
---------	---------	------

Engineering Controls:

Use adequate ventilation.

Respiratory Protection:

A respiratory protection program that meets OSHA 1910.134 and ANSI Z88.2 or applicable federal/provincial requirements must be followed whenever workplace conditions warrant respirator use. NIOSH's "Respirator Decision Logic" may be useful in determining the suitability of various types of respirators.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION (CONTINUED)

Eye Protection:
Wear safety glasses with side shields.

Skin Protection:
Use impermeable gloves.

Other Protective Equipment:
A safety shower and eye wash fountain should be readily available. To identify additional Personal Protective Equipment requirements, it is recommended that a hazard assessment be conducted before using this product.

9. PHYSICAL AND CHEMICAL PROPERTIES

Vapor Pressure	:	Not available
Vapor Density (Air = 1)	:	Not applicable
Specific Gravity	:	3.7
Boiling Point	:	Not available
Melting Point	:	1850°C
pH @ 4.0%	:	3-5 @ 20°C
Evaporation Rate	:	Not applicable
% Non-Volatile	:	100

Other Properties:
White. Powder. Odorless. Solubility in water: Insoluble.

10. STABILITY AND REACTIVITY

Stability:
This product is stable under normal storage conditions.

Hazardous Polymerization:
Will not occur under normal conditions.

Conditions To Avoid:
Operations that create dust. Temperatures >150°C, hydrophobicity is lost.

Incompatibility With Other Materials:
No known incompatibility with other materials.

Hazardous Decomposition Products:
Carbon monoxide. Carbon dioxide. Thermal decomposition and burning may produce: Organic products of decomposition if heated above decomposition temperature.

Product Name: NKT 90
Approval Date: April 18, 2002
Print Date: October 25, 2002

Page: 5
MSDS Number: A200090 01-36

11. TOXICOLOGICAL INFORMATION

No product or component toxicological information available

12. ECOLOGICAL INFORMATION

No product ecological data available

13. DISPOSAL CONSIDERATIONS

Disposal Method:

Waste must be disposed of in accordance with federal, state, provincial and local regulations.

14. TRANSPORT INFORMATION

U.S. DOT Transport Information

Not regulated

15. REGULATORY INFORMATION

This product contains the following non-hazardous components:

	CAS Number	Wt. %
Isobutyltrimethoxysilane reaction product with Titanium Dioxide	220037-19-4	100

U.S. Federal Regulations

OSHA:

This document has been prepared in accordance with the MSDS requirements of the OSHA Hazard Communication Standard.

Clean Air Act Section 112:

This product contains the following components present at or above the OSHA de minimus level and listed as Hazardous Air Pollutants:

None

This product contains the following components present at or above the OSHA de minimus level and listed as Extremely Hazardous Air Pollutants:

None

Product Name: NKT 90
Approval Date: April 18, 2002
Print Date: October 25, 2002

Page: 6
MSDS Number: A200090 01-36

15. REGULATORY INFORMATION (CONTINUED)

SARA Section 302:

This product contains the following components listed as Extremely Hazardous Substances:

None

SARA Section 311/312:

Hazard Classifications: None

SARA Section 313:

This product contains the following substances subject to the reporting requirements of Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 and 40 CFR Part 372:

None

TSCA:

One or more components of this product is/are not listed in the TSCA inventory.

This product contains the following non-proprietary substances subject to export notification under Section 12(b) of TSCA:

None

Other U.S. Federal Regulation Information:

This product, a silane treated titanium dioxide (CAS#220037-19-4), is exempt from specific listing in TSCA under 40CFR720.30(h)(7).

Under TSCA rules it is considered a mixture of titanium dioxide (CAS#13463-67-7) and isobutyltrimethoxysilane (CAS# 18395-30-7).

Both components are listed on the TSCA inventory.

For OSHA Haz-Mat purposes the health hazard evaluation recognizes that a reaction has occurred, ie the individual components no longer exist.

State Regulations

New Jersey:

This product contains the following non-hazardous components subject to disclosure under New Jersey Right-To-Know legislation:

Isobutyltrimethoxysilane reaction product with Titanium Dioxide	CAS Number 220037-19-4
---	---------------------------

Pennsylvania:

This product contains the following non-hazardous components subject to disclosure under Pennsylvania Right-To-Know legislation:

Isobutyltrimethoxysilane reaction product with Titanium Dioxide	CAS Number 220037-19-4
---	---------------------------

15. REGULATORY INFORMATION (CONTINUED)

California (Proposition 65):

This product contains the following substances known to the State of California to cause cancer:

None

This product contains the following substances known to the State of California to cause adverse reproductive effects:

None

International Regulations

Summary of International Chemical Inventory Status

Canada	Not on inventory
Europe	Not on inventory
South Korea	Not on inventory
Australia	Not on inventory

16. OTHER INFORMATION

HMIS Ratings: Health - 1 Flammability - 0 Reactivity - 0

Ratings Key: 4 = Highest hazard, 0 = Lowest hazard,
* = Chronic health hazard, N = No rating for powders

NFPA Ratings: Health - 1 Flammability - 0 Reactivity - 0

Ratings Key: 4 = Highest hazard, 0 = Lowest hazard, N = No rating for powders

Key to abbreviations used:

NA Not applicable

NAV Not available

NE Not established

NJTSR No. New Jersey Trade Secret Registry Number

® Registered Trademark.

TM Trademark.

Revision Summary:

This is the first issue of this MSDS in the ANSI Z400.1 format.

Product Name: NKT 90
Approval Date: April 18, 2002
Print Date: October 25, 2002

Page: 8
MSDS Number: A200090 01-36

The data contained herein are accurate to Degussa Corp.'s best knowledge and based on information that Degussa Corp. believes to be reliable. However, the data are furnished without representation, inducement, license of any kind or expressed or implied warranty with regard to accuracy of data or suitability for a given situation. Such data relate only to the specific products described and not to such product in combination with any other product. No agent of Degussa Corp. is authorized to vary any of such data. Degussa Corp. and its agents disclaim all liability for actions taken or forgone in reliance upon such data. Customers are advised to read the product label and to conduct their own tests before use of any product.

MSDS last page