

DU PONT

MATERIAL SAFETY DATA SHEET

IDENTIFICATION

Name

Titanium Dioxide Pigment (Slurries) Ti-Pure® R-941, R-943

Synonyms

TiO₂, titania, rutile

CAS Name

Titanium Oxide

I.D. Nos./Codes

NIOSH Access No: XR22750

Manufacturer/Distributor

E. I. du Pont de Nemours & Co., (Inc.)

Address

Wilmington, DE 19898

Chemical Family

Inorganic Oxide

CAS Registry No.

13463-67-7

Product Information and Emergency Phone

(302) 774-2421

Transportation Emergency Phone

(800) 424-9300

HAZARDOUS COMPONENTS

Material(s)

Amorphous Silica

Approximate %

R-941: 8% max (Dry Basis)

R-943: 9% max (Dry Basis)

PHYSICAL DATA

Boiling Point, 760 mm Hg

~100°C (212°F)

Specific Gravity

1.8-1.9

Vapor Density

Same as water

% Volatiles by wt.

36-38

Form

Liquid

Appearance

Opaque dispersion

pH Information

7.0-10.0

Melting Point

~0°C (32°F)

Vapor Pressure

Same as water (Liquid component is water)

Solubility in H₂O

Miscible - Dispersed solid is insoluble

Evaporation Rate (Butyl Acetate = 1)

Color

White

Odor Slight

amine odor

Octanol/Water Partition Coefficient

FIRE AND EXPLOSION DATA

Flash Point

Method

Will not burn

Autoignition Temperature

Flammable Limits in Air, % by Vol.

Lower

Upper

Fire and Explosion Hazards

None

Extinguishing Media

Special Fire Fighting Instructions

The data in this Material Safety Data Sheet relates only to the specific material designated herein and does not relate to use in combination with any other material or in any process. The information set forth herein is furnished free of charge and is based on technical data that Du Pont believes to be reliable. It is intended for use by persons having technical skill and at their own discretion and risk. Since conditions of use are outside our control, we make no warranties, express or implied, and assume no liability in connection with any use of this information. Nothing herein is to be taken as a license to operate under or a recommendation to infringe any patents.

HAZARDOUS REACTIVITY

Instability

Stable

Incompatibility

None known

Decomposition

Will not occur

Polymerization

Will not occur

HEALTH HAZARD INFORMATION

Exposure Limits When dried, dusts may form. OSHA Time-Weighted Average (TWA for TiO_2) is 15 mg/m^3 . The ACGIH TLV®-TWA (nuisance dust) is 10 mg/m^3 total dust or 5 mg/m^3 respirable dust. There is some ambiguity about the OSHA limit because of the amorphous silicon dioxide content of Ti-Pure® R-941 and R-943. Du Pont believes the ACGIH limit above best covers this case and has elected to observe that limit. The ACGIH recommended limit for amorphous silica in its 1980 Notice of Intended Change is 6 mg/m^3 total dust and 3 mg/m^3 respirable dust.

Routes of Exposure and Effects: According to Du Pont inhalation tests in rats, dusts from this type of products produce an inert or nuisance dust response in the lungs.

PROTECTION INFORMATION

Ventilation

Adequate to maintain exposure level as above.

Personal Protective Equipment If exposure limits may be exceeded, use OSHA-permissible respirator. For air concentrations up to 75 mg/m^3 , use dust respirator. For higher concentrations and for additional information, see References below.

DISPOSAL PROCEDURES

Aquatic Toxicity

TLm 96 > 1,000 ppm

Spill, Leak or Release Let dry or absorb with sand or other absorbent and shovel into container for disposal.

Waste Disposal Comply with Federal, State and local regulations. If approved, may be removed to land disposal site.

SHIPPING PRECAUTIONS

Transportation

DOT Hazard Classification: Not Regulated.

Shipping Containers

Railroad tank cars, tank trucks, and drums.

Storage Conditions

REFERENCES AND ADDITIONAL INFORMATION

See Du Pont's Ti-Pure® R-941 and R-943 Data Sheets.

For more information, refer to: 29 CFR 1910.134; 30 CFR 11.130 (h); DHEW (NIOSH) Publication No. 78-210, "NIOSH/OSHA Pocket Guide to Chemical Hazards." The two NIOSH publications may be obtained from Dept. HHS/NIOSH, 4676 Columbia Parkway, Cincinnati, OH 45226, phone (513) 684-4287.

DATE: 2/81

