MATERIAL SAFETY DATA SHEET

IDENTIFICATION

Name Titanium Dioxide Pigment
TI-PURE® R-931, R-933, R-960

Synonyms TiO_2, titania, rutile

Chemical Family Inorganic Oxide

CAS Name Titanium Oxide

CAS Registry No. 13463-67-7

I.D. Nos./Codes NIOSH Access No: XR22750

Manufacturer/Distributor E I DUPONT DE NEMOURS & CO, INC.

Address WILMINGTON, DE 19898

Product Information and Emergency Phone
(302) 774-2421

Transportation Emergency Phone
(800) 424-9300

HAZARDOUS COMPONENTS

Material(s)
Amorphous Silica

Approximate %
R-931, R-933 // 9 % See Comment on R-931 / R-933 sheet
R-960 // 6 %

PHYSICAL DATA

Boiling Point, 760 mm Hg Not applicable

Melting Point Not applicable

Specific Gravity 3.6 - 3.9

Vapor Pressure Not Volitile

Vapor Density Not volatile

Solubility in H_2O Insoluble

% Volatiles by Vol. 0.2 - 1.0

Evaporation Rate (Butyl Acetate = 1)

Form Solid **Appearance** Powder

Color White **Odor** None

CM **pH Information** 8.0 - 10.0 (of water slurry)

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 OSHA Time-Weighted Average (TWA for TiO_2) is 15 mg/m³. The ACGIH TLV® - TWA (nuisance dust) is 10 mg/m³ total dust or 5 mg/m³ respirable dust. There is some ambiguity about the OSHA limit because of the amorphous silicon dioxide content of Ti-PURE® R-931, R-933 and R-960. DuPont believes the ACGIH limit 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/m³ total dust and 3 mg/m³ respirable dust.

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

First Aid

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 to 75 mg/M³, use dust respirator. For higher concentrations and for additional information, see References below.

DISPOSAL PROCEDURES

UP AMK 12/7/80

Aquatic Toxicity TLm 96 > 1,000 ppm

Spill, Leak or Release 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.

CJM

Shipping Containers ~~Railroad tank cars, tank trucks, and drums.~~ Bags

Storage Conditions Store in clean, dry place. CJM

REFERENCES AND ADDITIONAL INFORMATION

See Du Pont's Ti-Pure® R-931, R-933 and R-960 Data Sheets

For more information, refer to 29CFR1910.134; 30CFR11.130(h); DHEW (NIOSH) Publication No. 76-189, "A Guide to Industrial Respiratory Protection"; 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.

DUP050070479