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

Product information

Trade name	:	VP Disp. W 2730 X
Use of the Substance / Preparation	:	catalyst Ceramics
Company	:	Evonik Degussa Corporation USA 299 Jefferson Road Parsippany,NJ 07054-0677 USA
Telephone	:	973-929-8000
Telefax	:	973-929-8040
US: CHEMTREC EMERGENCY NUMBER	:	800-424-9300
CANADA: CANUTEC EMERGENCY NUMBER	:	613-996-6666
Product Regulatory Services	:	973-929-8060

2. HAZARDS IDENTIFICATION

***** EMERGENCY OVERVIEW *****

***Form**-liquid* ***Color**-white* **Odor**-*aromatic*

Low hazard for usual industrial handling.

POTENTIAL HEALTH EFFECTS

Eye contact
Possibly irritating.

Skin Contact
Possibly irritating.

Inhalation
Possibly irritating.

Ingestion
No hazard expected in normal use.

Chronic Health Hazard
IARC Category 2B (possibly carcinogenic to human).

3. COMPOSITION/INFORMATION ON INGREDIENTS

Information on ingredients / Hazardous components

Titanium dioxide

CAS-No.	13463-67-7	Percent (Wt./ Wt.)	30 %

NJTSR No.56705700001-6059P

CAS-No.	Trade Secret	Percent (Wt./ Wt.)	1.24 %

Other information

This material is classified as hazardous under OSHA regulations.
IARC Category 2B (possibly carcinogenic to human).

4. FIRST AID MEASURES

Inhalation

If aerosol or mists are formed: Take affected persons out into the fresh air.

Skin contact

Wash off with soap and plenty of water.

Eye contact

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

Ingestion

If accidentally swallowed, rinse mouth thoroughly with water and afterwards, drink plenty of water. In case of discomfort, obtain medical attention.

5. FIRE-FIGHTING MEASURES

Lower explosion limit	not applicable
Upper explosion limit	not applicable
Autoignition temperature	not applicable

Suitable extinguishing media

All extinguishing substances suitable.

Specific hazards during fire fighting

None known.

Special protective equipment for fire-fighters

As in any fire, wear self-contained positive-pressure breathing apparatus, (MSHA/NIOSH approved or equivalent) and full protective gear.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions

Wear personal protective equipment.

Environmental precautions

Obey relevant local, state, provincial and federal laws and regulations. Do not contaminate any lakes, streams, ponds, groundwater or soil.

Methods for cleaning up

Pick up mechanically with an adsorbent and collect in a suitable container.
Rinse with water in suitable containers.

7. HANDLING AND STORAGE

Handling

Safe handling advice

Stir and/or shake well before use. Always close container tightly after removal of product.

Advice on protection against fire and explosion

No special precautions required.

Storage

Requirements for storage areas and containers

Keep containers tightly closed in a dry, cool place.
Avoid heat effect and frost.

Storage stability

Product Information

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Component occupational exposure guidelines

- **Titanium dioxide**

CAS-No.	13463-67-7	
Control parameters	10 mg/m3	Time Weighted Average (TWA):(ACGIH)
	15 mg/m3	PEL:(OSHA Z1)
	Total dust.	

Personal protective equipment

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.

Hand protection

Use impermeable gloves.

Eye protection

Use chemical splash goggles or face shield.

Skin and body protection

A safety shower and eye wash fountain should be readily available.
To identify additional Personal Protective Equipment (PPE) requirements, it is recommended that a hazard assessment in accordance with the OSHA PPE Standard (29CFR1910.132) be conducted before using this product.

Hygiene measures

When using, do not eat, drink or smoke. Wash face and/or hands before break and end of work.
To ensure ideal skin protection: use super fatted soaps and skin cream for skin care.
Wash contaminated clothing before re-use.

Protective measures

Handle in accordance with good industrial hygiene and safety practices.
If there is the possibility of skin/eye contact, the indicated hand/eye/body protection should be used.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance

Form	liquid
Color	white
Odor	aromatic

Safety data

pH	6.5 - 7.5	
Melting point/range	ca. 1850 °C related to substance:	Titanium dioxide
Flammability	not applicable	
Autoignition temperature:	not applicable	
Autoinflammability	not applicable	
Lower explosion limit	not applicable	
Upper explosion limit	not applicable	
Vapor pressure	23.5 hPa related to substance:	water
Density	1.29 g/cm3	
Water solubility	miscible	
Viscosity, dynamic	< 100 mPa.s	

10. STABILITY AND REACTIVITY

Hazardous decomposition products	None known.
Thermal decomposition	Stable under normal conditions.

11. TOXICOLOGICAL INFORMATION

Product Acute oral toxicity	LD50 Rat: > 10000 mg/kg Method: literature (limit test) related to substance: Titanium dioxide
Product Acute dermal toxicity	LD50 Rabbit: >= 10000 mg/kg Method: literature related to substance: Titanium dioxide
Product Skin irritation	Rabbit literature not irritating related to substance: Titanium dioxide
Product Eye irritation	Rabbit literature not irritating related to substance: Titanium dioxide
Product Sensitization	Optimizations-test guinea pig: not sensitizing Method: literature related to substance: Titanium dioxide Patch test : not sensitizing Method: literature related to substance: Titanium dioxide
Product Gentoxicity in vitro	Microorganisms, cell cultures Shown no mutagenic/genotoxic effect., literature related to substance: Titanium dioxide
Product Gentoxicity in vivo	Microorganisms, cell cultures Shown no mutagenic/genotoxic effect., literature related to substance: Titanium dioxide
Product Carcinogenicity	Oral rat, mouse: 103 weeks no evidence that cancer may be caused, literature. Feeding experiments related to substance: Titanium dioxide inhalative Rat: 2 years Method: literature Increased incidence of lung tumors. The scientific discussion of the tumorigenic effect of sparingly soluble inorganic particles (fine dusts)- such as titanium dioxide - is ongoing. It is the opinion of many inhalation toxicologists that the tumor formation

observed in rats results from a species-specific mechanism involving overloading of the rat lung (overload phenomenon). Corresponding findings resulting from exposure of humans have not been observed to date. On the other hand, the International Agency for Research on Cancer (IARC) assessed, in February of 2006, the available rat model studies as constituting sufficient proof of the carcinogenicity of titanium dioxide in animal models. For humans, the IARC does not see sufficient evidence of a carcinogenic effect of titanium dioxide. However, the IARC evaluation scheme results in an overall assessment of titanium dioxide as "possibly carcinogenic to humans" (Group 2B).

related to substance: Titanium dioxide

inhalative (mouse): 2 years
no evidence that cancer may be caused, literature.
related to substance: Titanium dioxide

Component carcinogenicity assessment: Titanium dioxide
13463-67-7
Contains a component which is classified as an IARC 2B carcinogen (possibly carcinogenic to humans).

Product General Toxicity Information: No results of animal experiments with the product available.

Product Human experience: Epidemiological studies to date have not revealed any evidence of a relation between exposure to titanium dioxide and diseases of the respiratory tract beyond general effects of dust.

12. ECOLOGICAL INFORMATION

Ecotoxicity effects

Toxicity to fish: LC50 Fundulus heteroclitus: > 1000 mg/l / 96 h
Method: literature
related to substance: Titanium dioxide

Toxicity to daphnia: EC0 Daphnia magna: 1000 mg/l / 48 h
Method: literature
related to substance: Titanium dioxide

Toxicity to bacteria: EC0 Pseudomonas fluorencens: 10000 mg/l / 24 h
Method: DEV, DIN 38412, T. 8 (modified).
related to substance: Titanium dioxide

General Ecological Information: No ecotoxicological studies are available.

13. DISPOSAL CONSIDERATIONS

WASTE DISPOSAL

Advice on disposal — Waste must be disposed of in accordance with federal, state and local regulations. Incineration is the preferred method.

14. TRANSPORT INFORMATION

Transport/further information
Not dangerous according to transport regulations.

15. REGULATORY INFORMATION

Information on ingredients / Non-hazardous components

This product contains the following non-hazardous components

NJTSR No.56705700001-6815P
CAS-No. Trade Secret Percent (Wt./ Wt.) 1.06 %

Water
CAS-No. 7732-18-5 Percent (Wt./ Wt.) 67.7 %

US Federal Regulations

OSHA
If listed below, chemical specific standards apply to the product or components:

- None listed

Clean Air Act Section (112)
If listed below, components present at or above the de minimus level are hazardous air pollutants:

- None listed

CERCLA Reportable Quantities
If listed below, a reportable quantity (RQ) applies to the product based on the percent of the named component:

- None listed

SARA Title III Section 311/312 Hazard Categories
The product meets the criteria only for the listed hazard classes:

- Acute Health Hazard
- Chronic Health Hazard

SARA Title III Section 313 Reportable Substances
If listed below, components are 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 listed

Toxic Substances Control Act (TSCA)

If listed below, non-proprietary substances are subject to export notification under Section 12 (b) of TSCA:

- None listed

State Regulations

The Listing requirements of the Right to Know (RTK) legislation varies by state. All information for NJ, PA, MA and other states can be derived from the listing of hazardous and non-hazardous components in section 2 and 15 of this MSDS.

California Proposition 65

A warning under the California Drinking Water Act is required only if listed below:

- None listed

International Chemical Inventory Status

Unless otherwise noted, this product is in compliance with the inventory listing of the countries shown below. For information on listing for countries not shown, contact the Product Regulatory Services Department.

• Europe (EINECS/ELINCS)	Listed/registered
• USA (TSCA)	Listed/registered
• Canada (DSL)	Listed/registered
• Australia (AICS)	Listed/registered
• Japan (MITI)	Listed/registered
• Korea (TCCL)	Listed/registered
• Philippines (PICCS)	Listed/registered
• China	Listed/registered

16. OTHER INFORMATION

HMIS Ratings

Health :	1
Flammability :	0
Physical Hazard :	0

NFPA Ratings

Health :	1
Flammability :	0
Reactivity :	0

Further information

Changes since the last version are highlighted in the margin. This version replaces all previous versions.

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.