



Material Safety Data Sheet

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Version: 4.1

1. PRODUCT AND COMPANY IDENTIFICATION

Product Code: 07178TWU

Product Name: TAN 686A, 33446 WATER REDUCIBLE,
MIL-DTL-64159B, TYPE II, PART A

Hentzen Coatings, Inc.
6937 West Mill Road, Milwaukee, WI 53218-1225

Company Phone Number: 1-414-353-4200
Emergency Telephone: ChemTrec 1-800-424-9300

2. HAZARDS IDENTIFICATION

Emergency Overview

The product contains no substances which at their given concentration, are considered to be hazardous to health.

Potential Health Effects

Principle Routes of Exposure Inhalation, Skin Contact, Eye Contact

Acute Toxicity

Eyes Prolonged contact may result in chemical burns or blindness.

Skin Irritant.

Inhalation May be harmful if inhaled.

Ingestion No known effect based on information supplied.

Chronic Toxicity No known effect based on information supplied.

Aggravated Medical Conditions Preexisting eye disorders. Skin disorders. Respiratory disorders. Lungs.

Environmental hazard See Section 12 for additional Ecological Information.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Contains a known or suspected carcinogen

This product contains substances regulated as hazardous air pollutants (HAPS) under Section 112 of the Clean Air Act Amendments of 1990. See Section 15 for list of HAPS.

Hazardous Components

Chemical Name	CAS-No	% Weight	ACGIH TLV	OSHA PEL
TITANIUM DIOXIDE	13463-67-7	10% - 20%	TWA: 10 mg/m ³	TWA: 15 mg/m ³ total dust (vacated) TWA: 10 mg/m ³ total dust
N-METHYL-2-PYRROLIDONE	872-50-4	0% - 5%	N/A	N/A
CHROME OXIDE	1308-38-9	0% - 5%	TWA: 0.5 mg/m ³ Cr	TWA: 0.5 mg/m ³ Cr
TRIETHYLAMINE	121-44-8	0% - 5%	STEL: 3 ppm TWA: 1 ppm S*	TWA: 25 ppm TWA: 100 mg/m ³ (vacated) TWA: 10 ppm (vacated) TWA: 40 mg/m ³ (vacated) STEL: 15 ppm (vacated) STEL: 60 mg/m ³

4. FIRST AID MEASURES

Eye Contact	Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician.
Skin Contact	Wash skin with soap and water. If skin irritation persists, call a physician.
Inhalation	IF INHALED: Remove to fresh air and keep at rest in a position comfortable for breathing. If not breathing, give artificial respiration. Consult a physician.
Ingestion	If swallowed, call a poison control center or doctor immediately.

5. FIRE-FIGHTING MEASURES

Flammable Properties	Not flammable
Flash Point	201 °F / 94 °C
Flammability Limits in Air	
Upper	0.33 %
Lower	0.05 %
Suitable Extinguishing Media	Dry Chemical.
Explosion Data	
Sensitivity to Mechanical Impact	None.
Sensitivity to Static Discharge	None.
Protective Equipment and Precautions for Firefighters	As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear
NFPA	Health Hazard 0 Flammability 1 Stability 0 Physical and chemical hazards -
HMIS	Health Hazard 0 * Flammability 1 Physical Hazard 1 Personal protection X
* Chronic Health Hazard	

6. ACCIDENTAL RELEASE MEASURES

Personal Precautions	Avoid breathing vapors or mists. Ventilate the area.
Environmental Precautions	Try to prevent the material from entering drains or water courses.
Methods for Containment	Prevent further leakage or spillage if safe to do so.
Methods for Cleaning Up	Use personal protective equipment. Dam up. Cover liquid spill with sand, earth or other noncombustible absorbent material. Take up mechanically and collect in suitable container for disposal. Clean contaminated surface thoroughly.

7. HANDLING AND STORAGE

Advice on Safe Handling	Use bonding and grounding when transferring materials. Use non-sparking tools and equipment.
Technical Measures/Storage Conditions	Keep containers tightly closed in a dry, cool and well-ventilated place.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Exposure Guidelines

Chemical Name	ACGIH TLV	OSHA PEL
TITANIUM DIOXIDE	TWA: 10 mg/m ³	TWA: 15 mg/m ³ total dust (vacated) TWA: 10 mg/m ³ total dust
CHROME OXIDE	TWA: 0.5 mg/m ³ Cr	TWA: 0.5 mg/m ³ Cr
TRIETHYLAMINE	STEL: 3 ppm TWA: 1 ppm S*	TWA: 25 ppm TWA: 100 mg/m ³ (vacated) TWA: 10 ppm (vacated) TWA: 40 mg/m ³ (vacated) STEL: 15 ppm (vacated) STEL: 60 mg/m ³

NIOSH IDLH: *Immediately Dangerous to Life or Health*

Engineering Measures

Handle only in a place equipped with local exhaust (or other appropriate exhaust). However it is the duty of the user to verify this and follow given exposure limits at the workplace. Keep away from fire, sparks and heated surfaces.

Personal Protective Equipment

Eye/Face Protection

Safety glasses with side-shields. Do not wear contact lenses.

Skin and Body Protection

Solvent-resistant gloves. Handle in accordance with good industrial hygiene and safety practice. Remove contaminated clothing and shoes. Wash contaminated clothing before reuse.

Respiratory Protection

Maintain adequate ventilation. If exposure limits are exceeded or irritation is experienced, NIOSH/MSHA approved respiratory protection should be worn. Respiratory protection must be provided in accordance with current local regulations.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical State @20°C	Liquid	Appearance	Opaque
Odor	Solvent.	Flash Point	201 °F / 94 °C
Boiling Point	192 °F / 89 °C	Specific Gravity	1.32
Weight per Gallon (lbs/gal):	10.95		
Flammability Limits in Air			
Upper	0.33 %		
Lower	0.05 %		

10. STABILITY AND REACTIVITY

Stability

Stable under recommended storage conditions.

Incompatible Products

Strong oxidizing agents.

Conditions to Avoid

None known based on information supplied.

Hazardous Decomposition Products

Thermal decomposition can lead to release of irritating gases and vapors. Carbon monoxide (CO). Carbon dioxide (CO₂).

Hazardous Polymerization

Hazardous polymerization does not occur.

11. TOXICOLOGICAL INFORMATION

Acute Toxicity

Product Information Excessive inhalation of crystalline silica may cause lung damage in the form of silicosis, which is progressive and sometimes fatal.

Component Information

Chemical Name	LD50 Oral	LD50 Dermal	LC50 Inhalation
TITANIUM DIOXIDE	10000 mg/kg (Rat)	N/A	N/A
N-METHYL-2-PYRROLIDONE	3598 mg/kg (Rat)	2000 mg/kg (Rabbit) 2500 mg/kg (Rat)	3.1 mg/L (Rat) 4 h
TRIETHYLAMINE	460 mg/kg (Rat)	416 mg/kg (Rabbit) 570 µL/kg (Rabbit)	0.42 mg/L (Rat) 1 h 3496 ppm (Rat) 1 h

Chronic Toxicity

Product Information Excessive inhalation of crystalline silica may cause lung damage in the form of silicosis, which is progressive and sometimes fatal.

Carcinogenicity This product contains one or more substances which are classified by IARC as carcinogenic to humans (Group I), probably carcinogenic to humans (Group 2A) or possibly carcinogenic to humans (Group 2B).

Chemical Name	IARC	ACGIH	NTP	OSHA
TITANIUM DIOXIDE	Group 2B	N/A	N/A	X
CHROME OXIDE	Group 3	N/A	N/A	N/A

Legend:

- IARC: (International Agency for Research on Cancer)**
- Group 2B - Possibly Carcinogenic to Humans
- Group 3 - Not Classifiable as to Carcinogenicity in Humans
- OSHA: (Occupational Safety & Health Administration)**
- X - Present

Target Organ Effects Eyes, Lungs, Respiratory system, Skin.

12. ECOLOGICAL INFORMATION

Ecotoxicity

The environmental impact of this product has not been fully investigated.

Chemical Name	Toxicity to algae	Toxicity to fish	Toxicity to microorganisms	Toxicity to daphnia and other aquatic invertebrates
N-METHYL-2-PYRROLIDONE	500: 72 h Desmodesmus subspicatus mg/L EC50	832: 96 h Lepomis macrochirus mg/L LC50 static 4000: 96 h Leuciscus idus mg/L LC50 static 1072: 96 h Pimephales promelas mg/L LC50 static 1400: 96 h Poecilia reticulata mg/L LC50 static	N/A	4897: 48 h Daphnia magna mg/L EC50
TRIETHYLAMINE	N/A	43.7: 96 h Pimephales promelas mg/L LC50 static	N/A	200: 48 h Daphnia magna mg/L EC50

13. DISPOSAL CONSIDERATIONS

Waste Disposal Methods This material, as supplied, is a hazardous waste according to federal regulations (40 CFR 261).

US EPA Waste Number U404

This product contains one or more substances that are listed with the State of California as a hazardous waste.

Chemical Name	California Hazardous Waste Status
CHROME OXIDE	Toxic Corrosive Ignitable

14. TRANSPORT INFORMATION

<u>DOT</u>	Not regulated
<u>TDG</u>	Not regulated
<u>MEX</u>	Not regulated
<u>ICAO</u>	Not regulated
<u>ICAO/IATA</u>	Not regulated
<u>IMDG/IMO</u>	Not regulated
<u>RID</u>	Not regulated
<u>ADR/RID</u>	Not regulated
<u>ADN</u>	Not regulated

15. REGULATORY INFORMATION

International Inventories

TSCA	Complies
DSL/NDSL	Complies

Legend

TSCA - United States Toxic Substances Control Act Section 8(b) Inventory
DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances List

U.S. Federal Regulations

SARA 313

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product contains a chemical or chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372:

Chemical Name	CAS-No	% Weight	SARA 313 - Threshold Values %
N-METHYL-2-PYRROLIDONE	872-50-4	0% - 5%	1.0

SARA 311/312 Hazard Categories

Acute Health Hazard	No
Chronic Health Hazard	No
Fire Hazard	No
Sudden Release of Pressure Hazard	No
Reactive Hazard	No

Clean Air Act

This product contains the following substances which are listed hazardous air pollutants (HAPS) under Section 112 of the Clean Air Act:

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