



#174

**SECTION 1: Identification of the substance/mixture and of the company/undertaking**

**1.1 Product identifier**

Product form : Mixture  
Product name : 11000 Series Printing Base  
Product code : 11000  
Product group : Commercial product

**1.2. Relevant identified uses of the substance or mixture and uses advised against**

Use of the substance/preparation : Industrial manufacture of coatings and inks

**1.3. Details of the supplier of the safety data sheet**

TW Graphics Group  
3323 S. Malt Avenue  
Commerce, CA 90040

T 323-721-1400  
[www.twgraphics.com](http://www.twgraphics.com)

**1.4. Emergency telephone number**

Emergency number : 800-424-9300  
For Chemical Emergency, Spill, Leak, Fire, Exposure, or Accident, call  
CHEMTREC – Day or Night

**SECTION 2: Hazards identification**

**2.1. Classification of the substance or mixture**

**GHS-US classification**

Flam. Liq. 3 H226  
Skin Irrit. 2 H315  
Carc. 2 H351

**2.2. Label elements**

**GHS-US labeling**

Hazard pictograms (GHS-US)



Signal word (GHS-US) : Warning  
Hazard statements (GHS-US) : H226 - Flammable liquid and vapor  
H315 - Causes skin irritation  
H351 - Suspected of causing cancer  
Precautionary statements (GHS-US) : P201 - Obtain special instructions before use



- P202 - Do not handle until all safety precautions have been read and Understood
- P210 - Keep away from heat, hot surfaces, open flames, sparks. - No Smoking
- P233 - Keep container tightly closed
- P240 - Ground/bond container and receiving equipment
- P241 - Use explosion-proof electrical, lighting, ventilating equipment
- P242 - Use only non-sparking tools
- P243 - Take precautionary measures against static discharge
- P264 - Wash hands and forearms thoroughly after handling
- P280 - Wear eye protection, face protection, protective clothing
- P302+P352 - IF ON SKIN: Wash with plenty of water
- P303+P361+P353 - IF ON SKIN (or hair): Remove/Take off immediately all Contaminated clothing. Rinse skin with water/shower
- P308+P313 - IF exposed or concerned: Get medical advice/attention
- P332+P313 - If skin irritation occurs: Get medical advice/attention
- P362 - Take off contaminated clothing
- P370+P378 - In case of fire: Use foam, carbon dioxide (CO2), alcohol resistant foam, dry chemical, water fog for extinction
- P403+P235 - Store in a well-ventilated place. Keep cool
- P405 - Store locked up
- P501 - Dispose of contents/container according to local, regional, national, and international regulations

**2.3. Other hazards**

No additional information available

**SECTION 3: Composition/information on ingredients**

**3.1. Substances**

Not applicable

**3.2. Mixtures**

Name	Product identifier	%	GHS-US classification
Propylene glycol monomethyl ether acetate	(CAS No.) 108-65-6	35 - 40	Flam. Liq. 3, H226
Titanium dioxide	(CAS No.) 13463-67-7	25 - 30	Skin Irrit. 2, H315 Carc. 2, H351
1,2-Ethenediol, diacetate	(CAS No.) 111-55-7	5-10	Flam. Liq. 4, H227 Skin Irrit. 2, H315

**SECTION 4: First aid measures**

**4.1. Description of first aid measures**

First-aid measures general : Never give anything by mouth to an unconscious person. If you feel unwell, seek medical advice (show the label where possible).



First-aid measures after inhalation	: If breathing is difficult, remove to fresh air and keep at rest in a position comfortable for breathing. Call a POISON CENTER/doctor/physician if you feel unwell.
First-aid measures after skin contact	: Wash with plenty of soap and water. Wash contaminated clothing before reuse. If skin irritation occurs: Get medical advice/attention. Get medical advice/attention.
First-aid measures after eye contact	: Rinse immediately with plenty of water. Obtain medical attention if pain, blinking or redness persist.
First-aid measures after ingestion	: Rinse mouth. Do NOT induce vomiting. Obtain emergency medical attention.

**4.2. Most important symptoms and effects, both acute and delayed**

Symptoms/injuries after inhalation	: May cause respiratory irritation.
Symptoms/injuries after skin contact	: Causes skin irritation.
Symptoms/injuries after eye contact	: May cause eye irritation.
Symptoms/injuries after ingestion	: If a large quantity has been ingested: Gastrointestinal irritation.
Chronic symptoms	: Prolonged and frequent exposure through inhalation may cause cancer.

**4.3. Indication of any immediate medical attention and special treatment needed**

No additional information available

**SECTION 5: Firefighting measures**

**5.1. Extinguishing media**

Suitable extinguishing media	: Foam. Dry powder. Carbon dioxide. Water spray. Sand.
Unsuitable extinguishing media	: Do not use a heavy water stream.

**5.2. Special hazards arising from the substance or mixture**

Fire hazard	: Flammable liquid and vapour. Vapours are heavier than air and may travel considerable distance to an ignition source and flash back to source of vapours. Under conditions of fire this material may produce: Carbon dioxide (CO2). Carbon monoxide. Hydrogen cyanide. Hexamethylene diisocyanate. Nitrogen oxides. Low molecular weight hydrocarbon fragments.
Explosion hazard	: May form flammable/explosive vapor-air mixture.
Reactivity	: Stable at ambient temperature and under normal conditions of use.

**5.3. Advice for firefighters**

Firefighting instructions	: Closed containers exposed to heat may explode. Use water spray or fog for cooling exposed containers. Exercise caution when fighting any chemical fire. Keep upwind. Avoid (reject) fire-fighting water to enter environment.
Protection during firefighting	: Do not enter fire area without proper protective equipment, including respiratory protection.



**SECTION 6: Accidental release measures**

**6.1. Personal precautions, protective equipment and emergency procedures**

General measures : Remove ignition sources. Use special care to avoid static electric charges. No naked lights. No smoking.

**6.1.1. For non-emergency personnel**

Emergency procedures : Evacuate unnecessary personnel.

**6.1.2. For emergency responders**

Protective equipment : Equip cleanup crew with proper protection.

Emergency procedures : Ventilate area.

**6.2. Environmental precautions**

Prevent entry to sewers and public waters. Notify authorities if liquid enters sewers or public waters.

**6.3. Methods and material for containment and cleaning up**

Methods for cleaning up : Soak up spills with inert solids, such as clay or diatomaceous earth as soon as possible. Collect absorbed material and place into a sealed, labeled container for proper disposal.

**6.4. Reference to other sections**

See Heading 8. Exposure controls and personal protection.

**SECTION 7: Handling and storage**

**7.1. Precautions for safe handling**

Additional hazards when processed : Handle empty containers with care because residual vapors are flammable.

Precautions for safe handling : Wash hands and other exposed areas with mild soap and water before eating, drinking, or smoking and again when leaving work. Provide good ventilation in process area to prevent formation of vapor. No naked lights. No smoking. Take precautionary measures against static discharge. Use only non-sparking tools. Obtain special instructions before use. Do not handle until all safety precautions have been read and understood.

**7.2. Conditions for safe storage, including any incompatibilities**

Technical measures : Proper grounding procedures to avoid static electricity should be followed. Ground/bond container and receiving equipment. Use explosion-proof electrical, ventilating, lighting equipment.

Storage conditions : Keep only in the original container in a cool, well ventilated place away from: Incompatible materials, Heat sources. Keep container tightly closed.

Incompatible materials : Strong oxidizers.

**7.3. Specific end use(s)**

Industrial manufacture of coatings and inks

**SECTION 8: Exposure controls/personal protection****8.1. Control parameters**

<b>Zinc stearate (557-05-1)</b>		
USA NIOSH	NIOSH REL (TWA) (mg/m3)	5 mg/m <sup>3</sup>
USA NIOSH	OSHA PEL (TWA) (mg/m3)	5 mg/m <sup>3</sup>

<b>Titanium dioxide (13463-67-7)</b>		
USA ACGIH	ACGIH TWA (mg/m <sup>3</sup> )	10 mg/m <sup>3</sup>
USA IDLH	US IDLH (mg/m3)	5000 mg/m <sup>3</sup>
USA OSHA	OSHA PEL (TWA) (mg/m3)	15 mg/m <sup>3</sup>

**8.2. Exposure controls**

Appropriate engineering controls	: Provide adequate ventilation to minimize dust and/or vapour Concentrations.
Hand protection	: Neoprene or nitrile rubber gloves.
Eye protection	: Chemical safety goggles.
Skin and body protection	: Wear suitable protective clothing.
Respiratory protection	: Use approved respiratory protection with an organic vapor cannister or filter if vapor concentrations are expected to exceed recommended exposure levels.



Environmental exposure controls	: Emergency eye wash fountains and safety showers should be available in the immediate vicinity of any potential exposure.
---------------------------------	--

**SECTION 9: Physical and chemical properties****9.1. Information on basic physical and chemical properties**

Physical state	: Liquid
Colour	: Clear to pale yellow.
Odour	: Sweet. Ether-like.
Odour threshold	: No data available
Ph	: No data available
Relative evaporation rate (butylacetate=1)	: No data available
Relative evaporation rate (ether=1)	: > 1



Melting point	: No data available
Freezing point	: No data available
Boiling point	: 150 - 187 °C (302 - 369 °F)
Flash point	: 45 °C (114 °F) TCC
Self ignition temperature	: No data available
Decomposition temperature	: No data available
Flammability (solid, gas)	: No data available
Vapour pressure	: No data available
Relative vapour density at 20 °C	: < 1 (Air = 1)
Relative density	: 1.1
Solubility	: Water: Insoluble
Log Pow	: No data available
Log Kow	: No data available
Viscosity, kinematic	: No data available
Viscosity, dynamic	: No data available
Explosive properties	: No data available
Oxidising properties	: None known
Explosive limits	: 1.3 - 13.1 vol %

**9.2. Other information**

VOC content : 0.774 g/l

**SECTION 10: Stability and reactivity****10.1. Reactivity**

Stable at ambient temperature and under normal conditions of use.

**10.2. Chemical stability**

Flammable liquid and vapour. May form flammable/explosive vapour-air mixture.

**10.3. Possibility of hazardous reactions**



Hazardous polymerization will not occur.

**10.4. Conditions to avoid**

Extremely high or low temperatures. Open flame. Overheating. Heat. Sparks.

**10.5. Incompatible materials**

Strong oxidizers.

**10.6. Hazardous decomposition products**

Under conditions of fire this material may produce: Carbon monoxide. Carbon dioxide. Nitrogen oxides. Hydrogen cyanide. Hexamethylene diisocyanate. Low molecular weight hydrocarbon fragments.

**SECTION 11: Toxicological information****11.1. Information on toxicological effects**

Acute toxicity : Not classified

<b>Zinc stearate (557-05-1)</b>	
LD50 oral rat	> 5000 mg/kg
LD50 dermal rabbit	> 2000 mg/kg

<b>1,2-Ethandiol, diacetate (111-55-7)</b>	
LD50 oral rat	6850 mg/kg
LD50 dermal rabbit	8480 µl/kg
ATE (oral)	6850 mg/kg

<b>Propylene glycol monomethyl ether acetate (108-65-6)</b>	
LD50 oral rat	8532 mg/kg
LD50 dermal rabbit	> 5000 mg/kg
ATE (oral)	8532 mg/kg

<b>Titanium dioxide (13463-67-7)</b>	
LD50 oral rat	> 10000 mg/kg

Skin corrosion/irritation : Causes skin irritation.  
 Serious eye damage/irritation : Not classified  
 Respiratory or skin sensitisation : Not classified  
 Germ cell mutagenicity : Not classified  
 Carcinogenicity : Suspected of causing cancer.

<b>Titanium dioxide (13463-67-7)</b>	
IARC group	2B

Reproductive toxicity : Not classified  
 Specific target organ toxicity (single exposure) : Not classified





Specific target organ toxicity (repeated exposure) : Not classified  
 Aspiration hazard : Not classified

**SECTION 12: Ecological information****12.1. Toxicity****1,2-Ethandiol, diacetate (111-55-7)**

LC50 fish 1	90 mg/l (Exposure time: 96 h - Species: Lepomis macrochirus [static])
-------------	---

**Propylene glycol monomethyl ether acetate (108-65-6)**

LC50 fish 1	161 mg/l (Exposure time: 96 h - Species: Pimephales promelas [static])
EC50 Daphnia 1	> 500 mg/l (Exposure time: 48 h - Species: Daphnia magna)

**12.2. Persistence and degradability****11000 Series Printing Base**

Persistence and degradability	Not established.
-------------------------------	------------------

**12.3. Bioaccumulative potential****11000 Series Printing Base**

Bioaccumulative potential	Not established.
---------------------------	------------------

**Zinc stearate (557-05-1)**

Log Pow	1.2
---------	-----

**Propylene glycol monomethyl ether acetate (108-65-6)**

Log Pow	0.43
---------	------

**12.4. Mobility in soil**

No additional information available

**12.5. Other adverse effects**

Other information : Avoid release to the environment.

**SECTION 13: Disposal considerations****13.1. Waste treatment methods**

Waste disposal recommendations : Dispose of contents/container according to local, regional, national, and international regulations.

Additional information : Handle empty containers with care because residual vapours are flammable.





Ecology - waste materials : Avoid release to the environment.

**SECTION 14: Transport information**

In accordance with DOT / TDG / ADR / RID / ADNR / IMDG / ICAO / IATA

**14.1. UN number**

UN-No.(DOT) : 1993  
DOT NA no. : UN1993

**14.2. UN proper shipping name**

DOT Proper Shipping Name : Flammable liquids, n.o.s.  
Contains : Propylene glycol monomethyl ether acetate  
Department of Transportation (DOT) : 3 - Class 3 - Flammable and combustible liquid 49 CFR 173.120  
Hazard Classes  
Hazard labels (DOT) : 3 - Flammable liquid



DOT Symbols : G - Identifies PSN requiring a technical name  
Packing group (DOT) : III - Minor Danger  
DOT Special Provisions (49 CFR 172.102) : B1 - If the material has a flash point at or above 38 C (100 F) and below 93 C (200 F), then the bulk packaging requirements of 173.241 of this subchapter are applicable. If the material has a flash point of less than 38 C (100 F), then the bulk packaging requirements of 173.242 of this subchapter are applicable.  
B52 - Notwithstanding the provisions of 173.24b of this subchapter, nonreclosing pressure relief devices are authorized on DOT 57 portable tanks. IB3 - Authorized IBCs: Metal (31A, 31B and 31N); Rigid plastics (31H1 and 31H2); Composite (31HZ1 and 31HA2, 31HB2, 31HN2, 31HD2 and 31HH2). Additional Requirement: Only liquids with a vapor pressure less than or equal to 110 kPa at 50 C (1.1 bar at 122 F), or 130 kPa at 55 C (1.3 bar at 131 F) are authorized, except for UN2672 (also see Special Provision IP8 in Table 2 for UN2672). T4 - 2.65 178.274(d)(2) Normal..... 178.275(d)(3) TP1 - The maximum degree of filling must not exceed the degree of filling determined by the following: (image) Where: tr is the maximum mean bulk temperature during transport, and tf is the temperature in degrees celsius of the liquid during filling. TP29 - A portable tank having a minimum test pressure of 1.5 bar (150.0 kPa) may be used provided the calculated test pressure is 1.5 bar or less based on the MAWP of the hazardous materials, as defined in 178.275 of this subchapter, where the test pressure is 1.5 times the MAWP.



DOT Packaging Exceptions (49 CFR 173.xxx) : 150

DOT Packaging Non Bulk (49 CFR 173.xxx) : 203

DOT Packaging Bulk (49 CFR 173.xxx) : 242

**14.2 Additional information**

Other information : No supplementary information available.

**Overland transport**

No additional information available

**Transport by sea**

DOT Vessel Stowage Location : A - The material may be stowed "on deck" or "under deck" on a cargo vessel and on a passenger vessel.

**Air transport**

DOT Quantity Limitations Passenger aircraft/rail (49 CFR 173.27) : 60 L

DOT Quantity Limitations Cargo aircraft only (49 CFR 175.75) : 220 L

**SECTION 15: Regulatory information**

**15.1. US Federal regulations**

<b>11000 Series Printing Base</b>	
SARA Section 311/312 Hazard Classes	Immediate (acute) health hazard Delayed (chronic) health hazard Fire hazard

<b>Zinc stearate (557-05-1)</b>
Listed on the United States TSCA (Toxic Substances Control Act) inventory

<b>1,2-Ethandiol, diacetate (111-55-7)</b>
Listed on the United States TSCA (Toxic Substances Control Act) inventory

<b>Propylene glycol monomethyl ether acetate (108-65-6)</b>
Listed on the United States TSCA (Toxic Substances Control Act) inventory

<b>Titanium dioxide (13463-67-7)</b>
Listed on the United States TSCA (Toxic Substances Control Act) inventory

**15.2. US State regulations**

<b>Zinc stearate (557-05-1)</b>
---------------------------------



U.S. - Connecticut - Hazardous Air Pollutants - HLVs (30 min)  
U.S. - Connecticut - Hazardous Air Pollutants - HLVs (8 hr)  
U.S. - Hawaii - Occupational Exposure Limits - STELs  
U.S. - Hawaii - Occupational Exposure Limits - TWAs  
U.S. - Idaho - Occupational Exposure Limits - TWAs  
U.S. - Massachusetts - Right To Know List  
U.S. - Massachusetts - Toxics Use Reduction Act  
U.S. - Michigan - Occupational Exposure Limits - TWAs  
U.S. - Minnesota - Chemicals of High Concern  
U.S. - Minnesota - Hazardous Substance List  
U.S. - Minnesota - Permissible Exposure Limits - TWAs  
U.S. - New Hampshire - Regulated Toxic Air Pollutants - Ambient Air Levels (AALs) - 24-Hour

**Zinc stearate (557-05-1)**

U.S. - New Hampshire - Regulated Toxic Air Pollutants - Ambient Air Levels (AALs) - Annual  
U.S. - New Jersey - Right to Know Hazardous Substance List  
U.S. - Oregon - Permissible Exposure Limits - TWAs  
U.S. - Pennsylvania - RTK (Right to Know) - Environmental Hazard List  
U.S. - Pennsylvania - RTK (Right to Know) List  
U.S. - Tennessee - Occupational Exposure Limits - TWAs  
U.S. - Texas - Effects Screening Levels - Long Term  
U.S. - Texas - Effects Screening Levels - Short Term  
U.S. - Vermont - Permissible Exposure Limits - TWAs  
U.S. - Washington - Permissible Exposure Limits - STELs  
U.S. - Washington - Permissible Exposure Limits - TWAs

**1,2-Ethandiol, diacetate (111-55-7)**

U.S. - Pennsylvania - RTK (Right to Know) List  
U.S. - Texas - Effects Screening Levels - Long Term  
U.S. - Texas - Effects Screening Levels - Short Term

**Propylene glycol monomethyl ether acetate (108-65-6)**

U.S. - Idaho - Non-Carcinogenic Toxic Air Pollutants - Acceptable Ambient Concentrations  
U.S. - Idaho - Non-Carcinogenic Toxic Air Pollutants - Emission Levels (ELs)  
U.S. - Texas - Effects Screening Levels - Long Term  
U.S. - Texas - Effects Screening Levels - Short Term

**Titanium dioxide (13463-67-7)**

U.S. - California - Proposition 65 Carcinogen List

**WARNING:** This material contains Titanium dioxide, a substance known to the state of California to cause cancer.

U.S. - Connecticut - Hazardous Air Pollutants - HLVs (30 min)  
U.S. - Connecticut - Hazardous Air Pollutants - HLVs (8 hr)  
U.S. - Hawaii - Occupational Exposure Limits - STELs  
U.S. - Hawaii - Occupational Exposure Limits - TWAs  
U.S. - Idaho - Occupational Exposure Limits - TWAs  
U.S. - Illinois - Toxic Air Contaminant Carcinogens  
U.S. - Massachusetts - Right To Know List



- U.S. - Michigan - Occupational Exposure Limits - TWAs
- U.S. - Minnesota - Chemicals of High Concern
- U.S. - Minnesota - Hazardous Substance List
- U.S. - Minnesota - Permissible Exposure Limits - TWAs
- U.S. - New Hampshire - Regulated Toxic Air Pollutants - Ambient Air Levels (AALs) - 24-Hour
- U.S. - New Hampshire - Regulated Toxic Air Pollutants - Ambient Air Levels (AALs) - Annual
- U.S. - New Jersey - Right to Know Hazardous Substance List
- U.S. - New York - Occupational Exposure Limits - TWAs
- U.S. - North Dakota - Air Pollutants - Guideline Concentrations - 8-Hour
- U.S. - Oregon - Permissible Exposure Limits - TWAs
- U.S. - Pennsylvania - RTK (Right to Know) List
- U.S. - Tennessee - Occupational Exposure Limits - TWAs
- U.S. - Texas - Effects Screening Levels - Long Term
- U.S. - Texas - Effects Screening Levels - Short Term
- U.S. - Vermont - Permissible Exposure Limits - TWAs

**Titanium dioxide (13463-67-7)**

- U.S. - Washington - Permissible Exposure Limits - STELs
- U.S. - Washington - Permissible Exposure Limits - TWAs

**SECTION 16: Other information**

Full text of H- phrases:

Carc. 1A	Carcinogenicity Category 1A
Eye Irrit. 2	Serious eye damage/eye irritation Category 2
Flam. Liq. 3	Flammable liquids Category 3
Skin Irrit. 2	skin corrosion/irritation Category 2
H226	Flammable liquid and vapour
H315	Causes skin irritation
H319	Causes serious eye irritation
H350	May cause cancer

HMIS III Rating

Health: 1 Slight Hazard - Irritation or minor reversible injury possible  
 \* Chronic - Chronic (long-term) health effects may result from repeated overexposure

Flammability: 3 Serious Hazard

Physical: 0 Minimal Hazard

*This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product*