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

1.1. Product identifier
Product form : Mixture
Product name : NXG UV Curable Screen Printing Ink
Product code : NXG
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

1.4. Emergency telephone number
Emergency number : 800-424-9300
For Chemical Emergency, Spill, Leak, Fire, Exposure, or Accident, call

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

GHS-US classification

Skin Irrit. 2	H315
Eye Irrit. 2A	H319
Skin Sens. 1	H317
Carc. 2	H351
Repr. 2	H361

2.2. Label elements

GHS-US labelling
Hazard pictograms (GHS-US) :


GHS08


GHS07

Signal word (GHS-US) : Warning
Hazard statements (GHS-US) : H315 - Causes skin irritation
H317 - May cause an allergic skin reaction
H319 - Causes serious eye irritation
H351 - Suspected of causing cancer
H361 - Suspected of damaging fertility or the unborn child

Precautionary statements (GHS-US) : P201 - Obtain special instructions before use
P202 - Do not handle until all safety precautions have been read and Understood
P261 - Avoid breathing mist, spray, vapours
P264 - Wash hands and forearms thoroughly after handling
P272 - Contaminated work clothing should not be allowed out of the workplace
P280 - Wear eye protection, face protection, protective clothing Protective gloves
P302+P352 - IF ON SKIN: Wash with plenty of water
P305+P351+P338 - If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing
P308+P313 - IF exposed or concerned: Get medical advice/attention
P333+P313 - If skin irritation or rash occurs: Get medical advice/attention
P337+P313 - If eye irritation persists: Get medical advice/attention
P362 - Take off contaminated clothing
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
Titanium dioxide	(CAS No.) 13463-67-7	30-40	Skin Irrit. 2, H315 Carc. 2, H351
1,6-Hexanediol diacrylate	(CAS No.) 13048-33-4	10 - 15	Skin Irrit. 2, H315 Eye Irrit. 2A, H319 Skin Sens. 1, H317
Poly[oxy(methyl-1,2-ethanediyl)], .alpha.,.alpha.',.alpha.''-1,2,3-propanetriyltris[.omega.-[(1-oxo-2-propenyl)oxy]-	(CAS No.) 52408-84-1	5 - 10	Skin Irrit. 2, H315 Eye Irrit. 2A, H319
2-Propenoic acid, 2-phenoxyethyl ester	(CAS No.) 48145-04-6	5 - 10	Eye Irrit. 2A, H319 Skin Sens. 1, H317
Trimethylolpropane triacrylate	(CAS No.) 15625-89-5	5 -10	Skin Irrit. 2, H315 Eye Irrit. 2A, H319 Skin Sens. 1, H317
1-Propanone, 2-methyl-1-[4-(methylthio)phenyl]-2-(4-morpholinyl)	(CAS No.) 71868-10-5	1 - 5	Acute Tox. 4 (Oral), H302

Aluminum hydroxide	(CAS No.) 21645-51-2	1 - 5	Skin Irrit. 2, H315 Eye Irrit. 2A, H319 STOT SE 3, H335

Name	Product identifier	%	GHS-US classification
Diphenyl-2,4,6-trimethylbenzoyl phosphine oxide	(CAS No.) 75980-60-8	0.1 - 1	Repr. 2, H361
Phosphine oxide, phenylbis(2,4,6-trimethylbenzoyl)	(CAS No.) 162881-26-7	0.1 - 1	Skin Sens. 1, H317

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 exposed or concerned: Get medical advice/attention.

First-aid measures after inhalation : If inhaled, remove to fresh air and keep at rest in a position comfortable for breathing. If not breathing, give artificial respiration. 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 or rash occurs: 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 an allergic skin reaction.
Symptoms/injuries after skin contact : Causes skin irritation.
Symptoms/injuries after eye contact : Causes serious eye irritation.
Symptoms/injuries after ingestion : If a large quantity has been ingested : Gastrointestinal irritation. Abdominal pain.
Chronic symptoms : May produce an allergic reaction. May cause cancer. Suspected of damaging fertility. Suspected of damaging the unborn child.

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

Reactivity : Hazardous reactions will not occur under normal conditions.

5.3. Advice for firefighters

Firefighting instructions : 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

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. Avoid release to the environment.

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

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 vapour. Avoid breathing fume/gas/mist/vapours/spray. Obtain special instructions before use. Do not handle until all safety precautions have been read and understood.

Hygiene measures : Contaminated work clothing should not be allowed out of the workplace. Wash contaminated clothing before reuse.

7.2. Conditions for safe storage, including any incompatibilities

Storage conditions : Keep only in the original container in a cool, well ventilated place away from
: Incompatible materials. Keep container closed when not in use.

Incompatible materials : Strong base. Strong acids.

7.3. Specific end use(s)

Industrial manufacture of coatings and inks.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Titanium dioxide (13463-67-7)		
USA ACGIH	ACGIH TWA) (mg/m³	10 mg/m³
USA IDLH	US IDLH (mg/m³)	5000 mg/m³
USA OSHA	OSHA PEL (twa) (mg/m³)	15 mg/m³

8.2. Exposure controls

Appropriate engineering controls : Provide adequate ventilation to minimize dust and/or vapour Concentrations.

Hand protection : Wear protective 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.

Other information : Do not eat, drink or smoke during use.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state : Liquid

Colour : White

Odour : No data available

Odour threshold : No data available

Ph	: No data available
Relative evaporation rate (butylacetate=1)	: No data available
Melting point	: No data available
Freezing point	: No data available
Boiling point	: No data available
Flash point	: No data available
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	: No data available
Relative density	: No data available
Solubility	: No data available
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
Oxidizing properties	: No data available
Explosive limits	: No data available

9.2. Other information

No additional information available

SECTION 10: Stability and reactivity

10.1. Reactivity

Hazardous reactions will not occur under normal conditions..

10.2. Chemical stability

Stable at standard temperature and pressure.

10.3. Possibility of hazardous reactions
Hazardous polymerization will not occur.

10.4. Conditions to avoid
Extremely high or low temperatures.

10.5. Incompatible materials
Strong acids. Strong bases.

10.6. Hazardous decomposition products
Carbon monoxide. Carbon dioxide.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity : Not classified

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

2-Propenoic acid, 2-phenoxyethyl ester (48145-04-6)	
LD50 oral rat	4660 µl/kg
LD50 dermal rabbit	2540 µl/kg

Trimethylolpropane triacrylate (15625-89-5)	
LD50 oral rat	5190 µl/kg
LD50 dermal rabbit	5000 µl/kg

Trimethylolpropane triacrylate (15625-89-5)	
ATE (dermal)	5000 mg/kg

1,6-Hexanediol diacrylate (13048-33-4)	
LD50 oral rat	5 g/kg
LD50 dermal rabbit	3600 µl/kg
ATE (oral)	5000 mg/kg

Aluminum hydroxide (21645-51-2)	
LD50 oral rat	> 5000 mg/kg

1-Propanone, 2-methyl-1-[4-(methylthio)phenyl]-2-(4-morpholinyl)- (71868-10-5)	
LD50 oral rat	1984 mg/kg
ATE (oral)	1984 mg/kg

Skin corrosion/irritation : Causes skin irritation.

Serious eye damage/irritation : Causes serious eye irritation.

Respiratory or skin sensitisation : May cause an allergic skin reaction.

Germ cell mutagenicity : Not classified

Carcinogenicity : Suspected of causing cancer.

Titanium dioxide (13463-67-7)	
IARC group	2B

Respiratory toxicity : Suspected of damaging fertility or the unborn child.

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

Ecology - water : Harmful to aquatic life with long lasting effects.

12.2. Persistence and degradability

NXG UV Curable Screen Printing Ink	
Persistence and degradability	May cause long-term adverse effects in the environment.

12.3. Bioaccumulative potential

NXG UV Curable Screen Printing Ink	
Bioaccumulative potential	Not established.

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 waste material in accordance with all local, regional, national, and international regulations..

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
No dangerous good in sense of transport regulations.

14.2. UN proper shipping name
Not applicable

14.2 Additional information
Other information : No supplementary information available.

Overland transport
No additional information available

Transport by sea
No additional information available

Air transport
No additional information available

SECTION 15: Regulatory information

15.1. US Federal regulations

NXG UV Curable Screen Printing Ink	
SARA Section 311/312 Hazard Classes	Immediate (acute) health hazard Delayed (chronic) health hazard

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

Diphenyl-2,4,6-trimethylbenzoyl phosphine oxide (75980-60-8)
Listed on the United States TSCA (Toxic Substances Control Act) inventory

2-Propenoic acid, 2-phenoxyethyl ester (48145-04-6)
Listed on the United States TSCA (Toxic Substances Control Act) inventory

Trimethylolpropane triacrylate (15625-89-5)
Listed on the United States TSCA (Toxic Substances Control Act) inventory

1,6-Hexanediol diacrylate (13048-33-4)
Listed on the United States TSCA (Toxic Substances Control Act) inventory

Aluminum hydroxide (21645-51-2)
Listed on the United States TSCA (Toxic Substances Control Act) inventory

Poly[oxy(methyl-1,2-ethanediyl)], alpha.,.alpha.',.alpha.''-1,2,3-propanetriyltris[.omega.-[(1-oxo-2-propenyl)oxy]- (52408-84-1)
Listed on the United States TSCA (Toxic Substances Control Act) inventory

1-Propanone, 2-methyl-1-[4-(methylthio)phenyl]-2-(4-morpholinyl)- (71868-10-5)
Listed on the United States TSCA (Toxic Substances Control Act) inventory

15.2. US State regulations

Titanium dioxide (13463-67-7)
U.S. - California – Carcinogen **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 U.S. - Washington - Permissible Exposure Limits - STELs U.S. - Washington - Permissible Exposure Limits - TWAs

2-Propenoic acid, 2-phenoxyethyl ester (48145-04-6)
U.S. - Texas - Effects Screening Levels - Long Term U.S. - Texas - Effects Screening Levels - Short Term

Trimethylolpropane triacrylate (15625-89-5)
U.S. - Minnesota - Hazardous Substance List U.S. - Texas - Effects Screening Levels - Long Term U.S. - Texas - Effects Screening Levels - Short

1,6-Hexanediol diacrylate (13048-33-4)
U.S. - Minnesota - Chemicals of High Concern
U.S. - Minnesota - Hazardous Substance List
U.S. - Texas - Effects Screening Levels - Long Term
U.S. - Texas - Effects Screening Levels - Short Term

Aluminum hydroxide (21645-51-2)
U.S. - Texas - Effects Screening Levels - Long Term
U.S. - Texas - Effects Screening Levels - Short Term

SECTION 16: Other information

Full text of H- phrases:

Acute Tox. 4 (Oral)	Acute toxicity (oral) Category 4
Carc. 1A	Carcinogenicity Category 1A
Eye Irrit. 2	Serious eye damage/eye irritation Category 2
Repr. 2	Reproductive toxicity Category 2
Skin Irrit. 2	skin corrosion/irritation Category 2
Skin Sens. 1	Skin sensitisation Category 1
STOT SE 3	Specific target organ toxicity (single exposure) Category 3
H302	Harmful if swallowed
H315	Causes skin irritation
H317	May cause an allergic skin reaction
H319	Causes serious eye irritation
H335	May cause respiratory irritation
H350	May cause cancer
H361f	Suspected of damaging fertility

SDS US (GHS HazCom 2012) SDT2

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.