

SAFETY DATA SHEET

Published Date Revision Date Revision Number May-15-2019 May-15-2019 2.5

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

Product identifier

Product code 15359

Product name Tinting Black

Product category 1500 Series UV Screen Ink

Other means of identification

Synonyms None

Recommended use of the chemical and restrictions on use Recommended use Printing operations

Details of the supplier of the safety data sheet

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24 Hour Emergency Phone Number

2. HAZARDS IDENTIFICATION

Classification

Skin Corrosion/irritation	Category 2 - (H315)
Serious eye damage/eye irritation	Category 2 - (H319)
Skin sensitization	Category 1A - (H317)
Reproductive toxicity	Category 1B - (H360FD)
Specific target organ toxicity (repeated exposure)	Category 1 - (H372)
Chronic aquatic toxicity	Category 2 - (H411)

Label elements







Signal Word Danger

Hazard Statements

H315 - Causes skin irritation

H317 - May cause an allergic skin reaction

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H319 - Causes serious eye irritation

H360FD - May damage fertility. May damage the unborn child

H372 - Causes damage to organs through prolonged or repeated exposure

H411 - Toxic to aquatic life with long lasting effects

Precautionary Statements

P264 - Wash face, hands and any exposed skin thoroughly after handling

P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing

P337 + P313 - If eye irritation persists: Get medical advice/attention

P261 - Avoid breathing dust/fume/gas/mist/vapors/spray

P333 + P313 - If skin irritation or rash occurs: Get medical advice/attention

P202 - Do not handle until all safety precautions have been read and understood P280 - Wear protective gloves/protective clothing/eye protection/face protection

P308 + P313 - IF exposed or concerned: Get medical advice/attention

P270 - Do not eat, drink or smoke when using this product

P314 - Get medical advice/attention if you feel unwell

P273 - Avoid release to the environment

Hazards not otherwise classified (HNOC)

Toxic to aquatic life.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Mixture

Inhalation

Component	CAS-No	Weight %	Trade Secret	Note
Glycol Ether Acrylate	Trade Secret	10 - 30	*	
Vinyl Functional Monomer	Trade Secret	10 - 30	*	
Acrylated Monomer	Trade Secret	10 - 30	*	
Carbon black	1333-86-4	1 - 5	*	
Photoinitiator	Trade Secret	1 - 5	*	
Photoinitiator	Trade Secret	1 - 5	*	

^{*}The exact percentage (concentration) of composition has been withheld as a trade secret.

4. FIRST AID MEASURES

Description of first aid measures

General Advice Show this safety data sheet to the doctor in attendance.

Eye Contact Immediately flush with plenty of water. After initial flushing, remove any contact lenses and

continue flushing for at least 15 minutes. Get medical attention if irritation develops and

persists.

Skin Contact Wash off immediately with soap and plenty of water for at least 15 minutes. Remove

contaminated clothing. If irritation (redness, rash, blistering) develops, get medical attention. Remove person to fresh air and keep comfortable for breathing. If breathing is irregular or

stopped, administer artificial respiration. Get medical attention immediately.

Ingestion Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Call a

physician or poison control center immediately.

Most important symptoms and effects, both acute and delayed

None under normal use conditions.

Indication of any immediate medical attention and special treatment needed

Notes to Physician Treat symptomatically.

5. FIRE-FIGHTING MEASURES

Suitable Extinguishing Media

Foam. Carbon dioxide (CO2). Dry chemical. Water spray. Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

Unsuitable Extinguishing Media

No information available.

Specific Hazards Arising from the Chemical

Thermal decomposition can lead to release of irritating gases and vapors. May emit toxic fumes under fire conditions. Hazardous polymerization may take place during a fire due to heat. Closed containers could violently rupture.

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. Cool containers / tanks with water spray. Sealed containers may rupture when heated.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

Personal Precautions Remove all sources of ignition. Ventilate the area. Avoid contact with eyes, skin and

clothing. Avoid breathing dust or vapor. Evacuate personnel to safe areas. Keep people

away from and upwind of spill/leak.

Environmental precautions

Prevent product from entering drains. Prevent further leakage or spillage if safe to do so. Keep out of drains, sewers, ditches and waterways. Local authorities should be advised if significant spillages cannot be contained.

Methods and material for containment and cleaning up

Contain spillage, and then collect with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and place in container for disposal according to local / national regulations (see section 13). Use clean non-sparking tools to collect absorbed material.

7. HANDLING AND STORAGE

Precautions for safe handling

HandlingUse personal protective equipment as required. Do not eat, drink or smoke when using this

product. Ensure adequate ventilation.

Conditions for safe storage, including any incompatibilities

Storage Keep at temperatures between 18°-32°C (65°-90°F). Keep containers tightly closed in a dry,

cool and well-ventilated place. Keep container closed when not in use. Keep out of the reach of children. Protect from direct sunlight. Keep away from open flames, hot surfaces

and sources of ignition.

Incompatible Products Strong acids. Strong bases. Strong oxidizing agents. Reducing agent.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

Exposure limits

Component	ACGIH TLV
Carbon black	TWA: 3 mg/m³ inhalable particulate matter
1333-86-4	

Component	OSHA PEL
Carbon black	TWA: 3.5 mg/m ³
1333-86-4	

Component	OSHA PEL (vacated)
Carbon black	TWA: 3.5 mg/m ³

1333-86-4	

Component	Ontario TWAEV
Carbon black	TWA: 3 mg/m³ inhalable
1333-86-4	-

Component	Mexico OEL (TWA)
Carbon black	TWA/VLE-PPT: 3.5 mg/m ³
1333-86-4	STEL/PPT-CT: 7 mg/m³

Appropriate engineering controls

Engineering Measures Provide a good standard of general ventilation. Natural ventilation is from doors, windows

etc. Controlled ventilation means air is supplied or removed by a powered fan. Users are advised to consider national Occupational Exposure Limits or other equivalent values. In

case of insufficient ventilation, wear suitable respiratory equipment.

Individual protection measures, such as personal protective equipment

Eye/Face Protection Wear safety glasses with side shields (or goggles). If splashes are likely to occur:. Wear

suitable face shield. Ensure that eyewash stations and safety showers are close to the

workstation location.

Skin Protection Wear impervious protective clothing, including boots, gloves, lab coat, apron or coveralls,

as appropriate, to prevent skin contact.

Hand Protection Chemical resistant protective gloves.

Suitable materials also with prolonged, direct contact (Recommended: Protective index 6, corresponding >480 minutes of permeation time): eg. nitrile rubber (0.4 mm), chloroprene

rubber (0.5 mm), polyvinylchloride (0.7 mm) and other

Supplementary note: The specifications are based on tests, literature data and information of glove manufacturers. Taking into account the varying conditions, the practical usage of a chemical-protective glove in practice may be much shorter than the permeation time

determined through testing.

Due to different glove types, the manufacturer's directions for use should be observed. Replace gloves immediately when torn or any change in appearance is noticed such as

dimension, color, flexibility.

Respiratory Protection 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. Selection of air-purifying or positive-pressure supplied-air will depend on the specific operation and the potential airborne concentration of

the material.

General Hygiene Considerations Handle in accordance with good industrial hygiene and safety practice. Wash hands before

eating, drinking or smoking. Wash contaminated clothing before reuse. Avoid contact with eyes, skin and clothing. Wear suitable gloves and eye/face protection. Regular cleaning of

equipment, work area and clothing is recommended.

9. PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

Flammability Limit in Air

Physical State Liquid Appearance Colored Liquid

Odor Sweet Mild Acrylic Odor Threshold No information available

<u>Property</u> <u>Values</u> <u>Remarks • Method</u>

pH No data available
Melting Point / Freezing Point No data available

Boiling Point / Boiling Range > 149 °C / 300 °F Flash Point > 94 °C / > 201 °F Pensky Martens Closed Cup (PMCC)

Evaporation rate No data available

Upper flammability limit No data available

Lower flammability limitNo data availableVapor PressureNo data availableVapor DensityNo data available

Specific Gravity 1.09

Water SolubilityNo data availableSolubility in other solventsNo data availablePartition coefficient: n-octanol/waterNo data availableAutoignition TemperatureNo data availableDecomposition temperatureNo data availableKinematic viscosityNo data availableDynamic viscosityNo data available

Explosive PropertiesNo data available **Oxidizing Properties**No data available

Other Information

Photochemically Reactive No Weight Per Gallon (lbs/gal) 9.09

VOC by weight %	VOC by volume %	VOC lbs/gal	VOC grams/liter
(less water)	(less water)	(less water)	(less water)
0-1	0-1	0-1	4.8

10. STABILITY AND REACTIVITY

Reactivity

No information available.

Chemical stability

Stable under normal conditions.

Possibility of Hazardous Reactions

None under normal processing. Do not store for longer periods at temperatures above 93°C (200°F).

Conditions to avoid

Temperatures above 93 °C / 200 °F. Protect from direct sunlight. Keep away from open flames, hot surfaces and sources of ignition.

Incompatible materials

Strong acids. Strong bases. Strong oxidizing agents. Reducing agent.

Hazardous Decomposition Products

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

11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure

InhalationSpecific test data for the substance or mixture is not available.Eye ContactSpecific test data for the substance or mixture is not available.Skin ContactSpecific test data for the substance or mixture is not available.IngestionSpecific test data for the substance or mixture is not available.

Component	Oral LD50
Glycol Ether Acrylate	= 4660 μL/kg(Rat)
Acrylated Monomer	= 4890 mg/kg(Rat)
Carbon black 1333-86-4	> 15400 mg/kg (Rat)

Information on toxicological effects

Symptoms Specific test data for the substance or mixture is not available.

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Skin corrosion/irritation Specific test data for the substance or mixture is not available. Causes skin irritation (pain,

redness and swelling). (based on components).

Eye damage/irritation Specific test data for the substance or mixture is not available. Causes serious eye irritation.

(based on components).

IrritationSpecific test data for the substance or mixture is not available.CorrosivitySpecific test data for the substance or mixture is not available.

Sensitization Specific test data for the substance or mixture is not available. May cause an allergic skin

reaction. (based on components).

Mutagenic EffectsSpecific test data for the substance or mixture is not available.Carcinogenic effectsSpecific test data for the substance or mixture is not available.

Reproductive Effects Specific test data for the substance or mixture is not available. May damage fertility. May

damage the unborn child. (based on components).

STOT - single exposure Specific test data for the substance or mixture is not available.

STOT - repeated exposure Specific test data for the substance or mixture is not available. Causes damage to organs

through prolonged or repeated exposure. (based on components).

Chronic Toxicity Specific test data for the substance or mixture is not available

Target Organ Effects Liver, Respiratory system.

Aspiration hazard Specific test data for the substance or mixture is not available.

Carcinogenicity The table below indicates whether each agency has listed any ingredient as a carcinogen.

Component	ACGIH
Carbon black	A3
1333-86-4	

Component	IARC
Carbon black	Group 2B
1333-86-4	

Component	OSHA
Kiarhon hlack	Χ
1333-86-4	

Numerical measures of toxicity - Product Information

Unknown Acute Toxicity 0 % of the mixture consists of ingredient(s) of unknown toxicity

The following values are calculated based on chapter 3.1 of the GHS document

 ATEmix (oral)
 2,381.00 mg/kg

 ATEmix (dermal)
 5,501.00 mg/kg mg/l

12. ECOLOGICAL INFORMATION

Ecotoxicity

Specific test data for the substance or mixture is not available. Toxic to aquatic life with long lasting effects. (based on components).

 $0\ \%$ of the mixture consists of component(s) of unknown hazards to the aquatic environment

Persistence and Degradability

No information available.

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Bioaccumulation

No information available

Other adverse effects

No information available

13. DISPOSAL CONSIDERATIONS

Waste treatment methods

Waste Disposal Methods Contain and dispose of waste according to local regulations.

Contaminated Packaging Empty containers should be taken to an approved waste handling site for recycling or

disposal.

14. TRANSPORT INFORMATION

Note: This information is not intended to convey all specific transportation requirements relating to

this product. Transportation classifications may vary by container volume and may be influenced by regional or country variations in regulations. Additional transportation information can be found in the specific regulations for your mode of transportation. It is the responsibility of the transporting organization to follow all applicable laws, regulations and

rules relating to the transportation of the material.

DOT Not regulated

Exception: In the US and Canada except when all or part of the transportation is by vessel, containers 119 gallons/ 450 Liters and less are not regulated [see 49CFR 171.4 (c)(1)] If in quantities of 5L or less (per inner packaging) for liquids or 5KG or less (per inner packaging) for solids these items may be shipped as not regulated [additional general packaging requirements must be met see 49CFR 173.24] [see 49CFR 171.4 (c)(2)]

ICAO / IATA / IMDG / IMO Not Regulated

Exception: If in quantities of 5L or less (per inner packaging) for liquids or 5KG or less (per inner packaging) for solids these items may be shipped as not regulated [additional general

packaging requirements must be met see ICAO/IATA special provision A197]

Exception: If in quantities of 5L or less (per inner packaging) for liquids or 5KG or less (per inner packaging) for solids these items may be shipped as not regulated [additional general

packaging requirements must be met see IMDG code 2.10.2.7]

15. REGULATORY INFORMATION

International Inventories

All components are listed on the TSCA Inventory. For further information, please contact:. Supplier (manufacturer/importer/downstream user/distributor).

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.

Component	CAS-No	Weight %	SARA 313 - Threshold Values
Glycol Ether Acrylate	Trade Secret	10 - 30	1.0

The above glycol ether acrylate is considered a reactive chemical in ultraviolet curable inks. Once initiated by a high dose of ultraviolet light, this glycol ether acrylate rapidly polymerizes (i.e. hardens) and becomes part of the ink film. The polymerization process of UV curable inks is measured in milliseconds.

Clean Air Act, Section 112 Hazardous Air Pollutants (HAPs) (see 40 CFR 61)

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

Component	CAS-No	Weight %
Glycol Ether Acrylate	Trade Secret	10 - 30
Xylenes (o-, m-, p- isomers)	1330-20-7	< 0.5

U.S. State Regulations

The state of the s	Massachusetts Right To Know
Carbon black	X
1333-86-4	

	Minnesota Right To Know
Carbon black	X
1333-86-4	

	New Jersey Right To Know
Glycol Ether Acrylate	Х
Carbon black 1333-86-4	X

Component	Pennsylvania
	Right To Know
Glycol Ether Acrylate	X
Carbon black	Χ
1333-86-4	

California Prop. 65

This product contains chemical(s) known to the State of California to cause cancer and/or to cause birth defects or other reproductive harm

Component	California Prop. 65
Carbon black	Carcinogen

⁻ This product contains carbon black in a non-respirable form. Inhalation of carbon black is unlikely to occur from exposure to this product

Canada

No information available

16. OTHER INFORMATION HMIS: Reactivity Personal Protection

HMIS: Health Flammability Reactivity Personal Protection

Key or legend to abbreviations and acronyms used in the safety data sheet

Legend - Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

TWA TWA (time-weighted average)
STEL STEL (Short Term Exposure Limit)

Ceiling Maximum limit value

ACGIH: (American Conference of Governmental Industrial Hygienists)

A1 - Known Human Carcinogen A2 - Suspected Human Carcinogen

A3 - Animal Carcinogen

IARC: (International Agency for Research on Cancer)

Group 1 - Carcinogenic to Humans

Group 2A - Probably Carcinogenic to Humans

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Group 2B - Possibly Carcinogenic to Humans NTP: (National Toxicity Program)

Known - Known Carcinogen

Reasonably Anticipated to be a Human Carcinogen
OSHA: (Occupational Safety & Health Administration)

X - Present

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Pursuant to NOM-018-STPS-2015

This information within is considered correct but is not exhaustive and will be used for guidance only, which is based on the current knowledge of the substance or mixture and is applicable to the appropriate safety precautions for the product.

Disclaimer

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.

End of Safety Data Sheet