Safety Data Sheet

according to the Hazard Communication Standard (CFR29 1910.1200) HazCom 2012

Printing date 02/05/2024 Version: 1.0 Reviewed on 02/05/2024

* 1 Identification

Product identifier

Product name: V-BOND White Ink (S-UVP-WH)

Article number: A119xx, A219xx
Application of the substance / the mixture: Printing inks

Details of the supplier of the safety data sheet
Roland DGA
15363 Barranca Parkway
Irvine, CA 92618
(800) 542-2307

* 2 Hazard(s) identification

Classification of the substance or mixture

Acute Toxicity - Oral 4 H302 Harmful if swallowed.

Sensitization - Skin 1 H317 May cause an allergic skin reaction.

Toxic to Reproduction 2 H361 Suspected of damaging fertility or the unborn child.

Label elements

GHS label elements The product is classified and labeled according to the Globally Harmonized System (GHS).

Hazard pictograms

GHS07 GHS08

Signal word Warning

Hazard-determining components of labeling:
2-Propenoic acid, 2-[2-(ethenyloxy)ethoxy]ethyl ester
Diphenyl(2,4,6-trimethylbenzoyl)phosphine oxide
Neopentylglycol(PO)2 Diacrylate
propylidynetrimethanol, ethoxylated, esters with acrylic acid
4,4'-isopropylidenediphenol, oligomeric reaction products with 1-chloro-2,3-epoxypropane, esters with acrylic acid

Hazard statements
Harmful if swallowed.
May cause an allergic skin reaction.
Suspected of damaging fertility or the unborn child.

Precautionary statements
Obtain special instructions before use.
Do not handle until all safety precautions have been read and understood.

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Product name: White UV LED Ink

Avoid breathing dust/fume/gas/mist/vapors/spray
Wash thoroughly after handling.
Do not eat, drink or smoke when using this product.
Contaminated work clothing must not be allowed out of the workplace.
Wear protective gloves/protective clothing/eye protection/face protection.
If swallowed: Call a poison center/doctor if you feel unwell.
Rinse mouth.
If on skin: Wash with plenty of water.
IF exposed or concerned: Get medical advice/attention.
Specific treatment (see on this label).
If skin irritation or rash occurs: Get medical advice/attention.
Wash contaminated clothing before reuse.
Store locked up.
Dispose of contents/container in accordance with local/regional/national/international regulations.

Additional information:
4.4 % of the mixture consists of component(s) of unknown toxicity.

* 3 Composition/information on ingredients

Chemical characterization: Mixtures
Description: Mixture of the substances listed below with nonhazardous additions.

Dangerous components:

86273-46-3	2-Propenoic acid, 2-[2-(ethenyloxy)ethoxy]ethyl ester Acute Toxicity - Oral 4, H302; Sensitization - Skin 1, H317	≥ 50 - ≤ 100%
13463-67-7	titanium dioxide Carcinogenicity 2, H351	≥ 2.5 - ≤ 25%
84170-74-1	Neopentylglycol(PO)2 Diacrylate Sensitization - Skin 1, H317	≥ 2.5 - ≤ 10%
75980-60-8	Diphenyl(2,4,6-trimethylbenzoyl)phosphine oxide Toxic to Reproduction 2, H361	2.5 - 10%
	Ethanol, 2-amino-, polymer with α-hydro-ω-[(1-oxo-2-propen-1-yl)oxy]poly(oxy-1,2-ethanediyl) ether with 2-ethyl-2-(hydroxymethyl)-1,3-propanediol (3:1) Skin Irritation 2, H315; Eye Irritation 2A, H319	≤ 2.5%
28961-43-5	propylidynetrimethanol, ethoxylated, esters with acrylic acid Eye Irritation 2A, H319; Sensitization - Skin 1, H317	≤ 2.5%
55818-57-0	4,4'-isopropylidenediphenol, oligomeric reaction products with 1-chloro-2,3-epoxypropane, esters with acrylic acid Sensitization - Skin 1, H317	≥ 0 - ≤ 2.5%

4 First-aid measures

Description of first aid measures
After inhalation:
Supply fresh air and to be sure call for a doctor.
In case of unconsciousness place patient stably in side position for transportation.
After skin contact: Immediately wash with water and soap and rinse thoroughly.
After eye contact: Rinse opened eye for several minutes under running water.
After swallowing: If symptoms persist consult doctor.
Most important symptoms and effects, both acute and delayed No further relevant information available.

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Indication of any immediate medical attention and special treatment needed
No further relevant information available.

5 Fire-fighting measures

Extinguishing media
Suitable extinguishing agents: Use fire fighting measures that suit the environment.
Special hazards arising from the substance or mixture No further relevant information available.
Advice for firefighters
Protective equipment: No special measures required.

6 Accidental release measures

Personal precautions, protective equipment and emergency procedures Not required.
Environmental precautions:
Do not allow product to reach sewage system or any water course.
Inform respective authorities in case of seepage into water course or sewage system.
Dilute with plenty of water.
Do not allow to enter sewers/ surface or ground water.
Methods and material for containment and cleaning up:
Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).
Ensure adequate ventilation.
Reference to other sections
See Section 7 for information on safe handling.
See Section 8 for information on personal protection equipment.
See Section 13 for disposal information.

7 Handling and storage

Handling:
Precautions for safe handling
Ensure good ventilation/exhaustion at the workplace.
Prevent formation of aerosols.
Information about protection against explosions and fires: No special measures required.

Conditions for safe storage, including any incompatibilities
Storage:
Requirements to be met by storerooms and receptacles: No special requirements.
Information about storage in one common storage facility: Not required.
Further information about storage conditions: None.
Specific end use(s) No further relevant information available.

8 Exposure controls/personal protection

Additional information about design of technical systems: No further data; see section 7.

Control parameters
Components with limit values that require monitoring at the workplace:
The product does not contain any relevant quantities of materials with critical values that have to be monitored at the workplace.
Additional information: The lists that were valid during the creation were used as basis.

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Exposure controls

Personal protective equipment:

General protective and hygienic measures:

Immediately remove all soiled and contaminated clothing.

Wash hands before breaks and at the end of work.

Breathing equipment:

In case of brief exposure or low pollution use respiratory filter device. In case of intensive or longer exposure use respiratory protective device that is independent of circulating air.

Protection of hands:

Protective gloves

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.

Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.

Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

Material of gloves

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.

Penetration time of glove material

The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

Eye protection: Goggles recommended during refilling.

9 Physical and chemical properties

Information on basic physical and chemical properties

General Information

Appearance:

Form: Liquid

Color: White

Odor: Characteristic

Odor threshold: Not determined.

pH-value: Not determined.

Change in condition

Melting point/Melting range: Undetermined.

Boiling point/Boiling range: Undetermined.

Flash point: > 100 °C (> 212 °F)

Flammability (solid, gaseous): Not applicable.

Decomposition temperature: Not determined.

Ignition temperature: Product is not selfigniting.

Danger of explosion: Product does not present an explosion hazard.

Explosion limits:

Lower: Not determined.

Upper: Not determined.

Vapor pressure: Not determined.

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Density: Not determined.
Relative density Not determined.
Vapor density Not determined.
Evaporation rate Not determined.

Solubility in / Miscibility with
Water: Fully miscible.

Partition coefficient (n-octanol/water): Not determined.

Viscosity:
Dynamic: Not determined.
Kinematic: Not determined.

Other information No further relevant information available.

10 Stability and reactivity

Reactivity No further relevant information available.
Chemical stability
Thermal decomposition / conditions to be avoided: No decomposition if used according to specifications.
Possibility of hazardous reactions No dangerous reactions known.
Conditions to avoid No further relevant information available.
Incompatible materials: No further relevant information available.
Hazardous decomposition products: No dangerous decomposition products known.

11 Toxicological information

Information on toxicological effects
Acute toxicity:
LD/LC50 values that are relevant for classification:

ATE (Acute Toxicity Estimate)

Oral	LD50	624 - 633 mg/kg

86273-46-3 2-Propenoic acid, 2-[2-(ethenyloxy)ethoxy]ethyl ester

Oral	LD50	500 mg/kg (ATE)

13463-67-7 titanium dioxide

Oral	LD50	> 20,000 mg/kg (rat)
Dermal	LD50	> 10,000 mg/kg (rabbit)
Inhalative	LC50/4 h	> 6.82 mg/l (rat)

Primary irritant effect:
on the skin: No irritant effect.
on the eye: No irritating effect.
Sensitization: Sensitization possible through skin contact.
Additional toxicological information:
The product shows the following dangers according to internally approved calculation methods for preparations:
Irritant

Carcinogenic categories
IARC (International Agency for Research on Cancer)

13463-67-7 titanium dioxide: 2B
108-88-3 Toluene: 3

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Product name: White UV LED Ink

100-41-4 ethylbenzene: 2B

127-19-5 N,N-dimethylacetamide: 2B

NTP (National Toxicology Program)

None of the ingredients is listed.

OSHA-Ca (Occupational Safety & Health Administration)

None of the ingredients is listed.

12 Ecological information

Toxicity

Aquatic toxicity: No further relevant information available.

Persistence and degradability No further relevant information available.

Behavior in environmental systems:

Bioaccumulative potential No further relevant information available.

Mobility in soil No further relevant information available.

Ecotoxical effects:

Remark: Harmful to fish

Additional ecological information:

General notes:

Water hazard class 2 (Self-assessment): hazardous for water

Do not allow product to reach ground water, water course or sewage system.

Danger to drinking water if even small quantities leak into the ground.

Harmful to aquatic organisms

Results of PBT and vPvB assessment

PBT: Not applicable.

vPvB: Not applicable.

Other adverse effects No further relevant information available.

13 Disposal considerations

Waste treatment methods

Recommendation:

Must not be disposed of together with household garbage. Do not allow product to reach sewage system.

Uncleaned packagings:

Recommendation: Disposal must be made according to official regulations.

Recommended cleansing agent: Water, if necessary with cleansing agents.

14 Transport information

UN-Number

DOT, IMDG, IATA not regulated

UN proper shipping name

DOT, IMDG, IATA not regulated

Transport hazard class(es)

DOT, ADN, IMDG, IATA

Class not regulated

Packing group

DOT, IMDG, IATA not regulated

Environmental hazards: Not applicable.

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Special precautions for user	Not applicable.
Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code	Not applicable.
UN "Model Regulation":	not regulated

* 15 Regulatory information

Safety, health and environmental regulations/legislation specific for the substance or mixture

No further relevant information available.

SARA

Section 355 (extremely hazardous substances):

None of the ingredients is listed.

Section 313 (Specific toxic chemical listings):

None of the ingredients is listed.

TSCA (Toxic Substances Control Act):

86273-46-3 2-Propenoic acid, 2-[2-(ethenyloxy)ethoxy]ethyl ester: ACTIVE

13463-67-7 titanium dioxide: ACTIVE

84170-74-1 Neopentylglycol(PO)2 Diacrylate: ACTIVE

75980-60-8 Diphenyl(2,4,6-trimethylbenzoyl)phosphine oxide: ACTIVE

28961-43-5 propylidynetrimethanol, ethoxylated, esters with acrylic acid: ACTIVE

55818-57-0 4,4'-isopropylidenediphenol, oligomeric reaction products with 1-chloro-2,3-epoxypropane, esters with acrylic acid: ACTIVE

Hazardous Air Pollutants

67-56-1 methanol

108-88-3 Toluene

100-41-4 ethylbenzene

Proposition 65

Chemicals known to cause cancer:

13463-67-7 titanium dioxide

100-41-4 ethylbenzene

127-19-5 N,N-dimethylacetamide

Chemicals known to cause reproductive toxicity for females:

None of the ingredients is listed.

Chemicals known to cause reproductive toxicity for males:

127-19-5 N,N-dimethylacetamide

Chemicals known to cause developmental toxicity:

67-56-1 methanol

108-88-3 Toluene

127-19-5 N,N-dimethylacetamide

Carcinogenic categories

EPA (Environmental Protection Agency)

108-88-3 Toluene: II

100-41-4 ethylbenzene: D

TLV (Threshold Limit Value)

13463-67-7 titanium dioxide: A4

108-88-3 Toluene: A4

100-41-4 ethylbenzene: A3

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127-19-5 N,N-dimethylacetamide: A4

NIOSH-Ca (National Institute for Occupational Safety and Health)

13463-67-7 titanium dioxide

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Hazard pictograms

GHS07 GHS08

Signal word Warning

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4,4'-isopropylidenediphenol, oligomeric reaction products with 1-chloro-2,3-epoxypropane, esters with acrylic acid

Hazard statements
Harmful if swallowed.
May cause an allergic skin reaction.
Suspected of damaging fertility or the unborn child.

Precautionary statements
Obtain special instructions before use.
Do not handle until all safety precautions have been read and understood.
Avoid breathing dust/fume/gas/mist/vapors/spray
Wash thoroughly after handling.
Do not eat, drink or smoke when using this product.
Contaminated work clothing must not be allowed out of the workplace.
Wear protective gloves/protective clothing/eye protection/face protection.
If swallowed: Call a poison center/doctor if you feel unwell.
Rinse mouth.
If on skin: Wash with plenty of water.
IF exposed or concerned: Get medical advice/attention.
Specific treatment (see on this label).
If skin irritation or rash occurs: Get medical advice/attention.
Wash contaminated clothing before reuse.
Store locked up.
Dispose of contents/container in accordance with local/regional/national/international regulations.

Chemical safety assessment: A Chemical Safety Assessment has not been carried out.

16 Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

Relevant phrases
H302 Harmful if swallowed.
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.

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Contact:

Date of preparation / last revision 02/05/2024

Abbreviations and acronyms:

IMDG: International Maritime Code for Dangerous Goods
DOT: US Department of Transportation
IATA: International Air Transport Association
EINECS: European Inventory of Existing Commercial Chemical Substances
ELINCS: European List of Notified Chemical Substances
CAS: Chemical Abstracts Service (division of the American Chemical Society)
LC50: Lethal concentration, 50 percent
LD50: Lethal dose, 50 percent
PBT: Persistent, Bioaccumulative and Toxic
vPvB: very Persistent and very Bioaccumulative
NIOSH: National Institute for Occupational Safety
OSHA: Occupational Safety & Health
TLV: Threshold Limit Value
PEL: Permissible Exposure Limit
REL: Recommended Exposure Limit
Acute Toxicity - Oral 4: Acute toxicity – Category 4
Skin Irritation 2: Skin corrosion/irritation – Category 2
Eye Irritation 2A: Serious eye damage/eye irritation – Category 2A
Sensitization - Skin 1: Skin sensitisation – Category 1
Carcinogenicity 2: Carcinogenicity – Category 2
Toxic to Reproduction 2: Reproductive toxicity – Category 2

*** Data compared to the previous version altered.**