SAFETY DATA SHEET

Revision Date
May-31-2011

Revision Number
1

Section 1. IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

1.1 Product Identifier

Product Name	UV White
Product Category	INK PRODUCT

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

Recommended uses	Printing ink. Printing ink related material

1.3 Details of the supplier of the safety data sheet

#16-20 Wertheim Crt. Richmond Hill, ON L4B 3A8	Telephone: +1 905 482 3106 Fax: 905 482 3107

Section 2. HAZARDS IDENTIFICATION

2.1 Classification of substance or mixture

According to Regulation Directive 1999/45/EC [DPD]

The product is classified as dangerous according to Directive 1999/45/EC and its amendments
Xi; R36/38
R43
R52/53

Human health hazards	Irritating to eyes and skin. May cause sensitization by skin contact
Environmental hazards	Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment

See section 16 for the full text of the R-phrases declared above
See section 11 for more detailed information on health effects and symptoms

2.2 Label Elements

Hazard symbol or symbols

Indication of danger	Irritant
Risk phrases	R36/38 – Irritating to eyes and skin R43- May cause sensitization by skin contact

	R52/53 – Harmful to aquatic organism, may cause long-term adverse effects in the aquatic environment
Safety phrases	S24- Avoid contact with skin S37 – Wear suitable gloves
Hazardous ingredients	(5-ethyl-1,3-dioxan-5-yl) methyl acrylate trimethylolpropane triacrylate
Supplemental Label elements	No applicable

2.3 Other hazards

Other hazards which do Not result in classification	Not available

Section 3. COMPOSITION/INFORMATION ON INGREDIENTS

3.2 Mixtures

Component	EC No.	CAS-No	Weight %	Classification		Type
				67/548/EEC	According to Regulation (EC) No. 1272/2008 (CLP)	
(5-ethyl-1,3-dioxan-5-yl) methyl acrylate	266-380-7	66492-51-1	10-25	Xi; R38, R43	Not available	[1]
1-vinylhexahydro-2H-azepin-2-one	218-787-6	2235-00-9	10-25	Xn; R22 Xi; R36	Not available	[1]
2-phenoxyethyl	256-360-6	48145-04-6	10-25	Xi; R36/38	Not available	[1]
Phenoxy ethyl acrylate	256-360-6	48145-04-6	2.5-5	Xi; R36/38	Not available	[1]
Substituted phosphine oxide	278-355-8	75980-60-8	2.5-5	Repr. Cat 3;R62 N; R51/53	Not available	[1]
trimethylolpropane	239-701-3	15625-89-5	1 – 2.5	Xi; R36/38 R43	Skin irrit. 2, H315 Eye irrit. 2, H319 Skin sens. 1, H317	
				See section 16 for the full text of the R-phrase declared above	See section 16 for the full text of the H statements declared above	

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment, are PBTSs or vPvBs or have been assigned a workplace exposure limit and hence require reporting in this section.

Type
[1] Substance classified with a health or environmental hazard
[2] Substance with a workplace exposure limit
[3] Substance meets the criteria for PBT according to Regulation (EC) No. 1907/2006, Annex XII
[4] Substance meets the criteria for vPvB according to Regulation (EC) No. 1907/2006, Annex XII

Occupational exposure limits, if available, are listed in Section 8

Section 4. FIRST AID MEASURES

4.1 Description of first aid measures

General	In all cases of doubt, or when symptoms persist, seek medical attention. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and seek medical advice
Eye Contact	Check for and remove any contact lenses. Immediately flush eyes with running water for at least 15 minutes, keeping eyelids open. In case of accidental eye contact, avoid concurrent exposure to the sun or other sources of UV light which may increase the sensitivity of the eyes.
Skin Contact	Remove contaminated clothing and shoes. Wash skin thoroughly with soap and water or use recognized skin cleanser. Do NOT use solvents or thinners. In case of accidental skin contact, avoid concurrent exposure to the sun or other sources of UV light which may increase the sensitivity of skin.
Inhalation	Remove to fresh air. Keep person warm at rest. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel.
Ingestion	If swallowed, seek medical advice immediately and show this container or label. Keep person warm and at rest. Do not induce vomiting.

4.2 Most important symptoms and effects, both acute and delayed

There are no data available on the preparation itself. The preparation has been assessed following the conventional method of the Dangerous Preparation Directive 1999/45/EC and classified for toxicology hazards accordingly. See sections 2 and 3 for details.

This takes into account, where known, delayed and immediate effects and also chronic effects of components from short-term and long-term exposure by oral, inhalation and dermal routes od exposure and eye contact. Acrylate components of the preparation have irritating properties. Prolonged or repeated contact with skin or mucous membrane may result in irritation symptoms, such as redness, blistering, dermatitis, etc. May cause allergic skin reactions with repeated exposure.

If splashed in the eyes, the liquid may cause irritation and reversible damage. The inhalation of airborne droplets o aerosols may cause irritation of the respiratory tract. Ingestion may cause nausea, weakness and central nervous system effects.

Contains (5-ethyl-1, 3-dioxan-5-yl)methyl acrylate, trimethylolproprane triacrylate. May produce an allergic reaction.

The following products have sensitizing properties: (5-ethyl-1,3-dioxan-5-yl)methyl acrylate, trimethylolpropane triacylate. Cases of hypersensitivity may occur, possible with cross-sensitization to other acrylate materials.

4.3 Indication of any immediate medical attention and special treatment needed

Note to Medical doctor	In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours.
Specific treatments	No specific treatment

Section 5. FIRE FIGHTING MEASURES

5.1 Extinguishing Media

Suitable Extinguishing Media

Use dry chemical, CO_2, water spray (fog) or foam.

Unsuitable Extinguishing Media

Do not use water jet

5.2 Special hazards arising from the substance or mixture

Hazards from the substance or mixture	Fire will produce dense black smoke. Exposure to decomposition products may cause a health hazard.
Hazardous thermal decomposition products	Decomposition products may include the following materials; carbon monoxide, carbon dioxide, smoke, oxides of nitrogen

5.3 Advice for Firefighters

Special protective actions for fire-fighters	Cool closed containers exposed to fire with water. Do not release runoff from fire to drains or water courses
Special protective equipment for fire-fighters	Appropriate breathing apparatus may be required

Section 6. ACCIDENTAL RELEASE MEASURES

6.1 Personal precaution, protective equipment and emergency procedures

For non-emergency personnel	Exclude sources ignition and ventilate the area. Avoid breathing vapor or mist. Refer to protective measures listed in sections 7 & 8
For emergency responders	If specialized clothing is required to deal with the spillage, take note of any information in section 8 on suitable and unsuitable materials. See also section 8 for additional information on hygiene measures.

6.2 Environmental precautions

Do not allow to enter drains or watercourses. If the product contaminates the lakes, rivers, or sewers, inform the appropriate authorities in accordance with local regulations.

6.3 Methods and material for containment and cleaning up

Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diamotaceous earth and place in container for disposal according to local regulations (see section 13). Preferably clean with a detergent. Avoid using solvents.

Section 7. HANDLING AND STORAGE

Persons with a history of skin sensitization problems should not be employed in any process in which this product is used, without Personal Protective Equipment measures.

7.1 Precautions for safe handling

Use only in well-ventilated areas. Avoid contact with skin and eyes. Avoid the inhalation of dust, particulates, spray or mist arising from the application of this preparation. Keep container tightly closed. Keep away from heat, sparks and flame.
Always keep in containers made from the same material as the original one.
Put on appropriate personal protective equipment (see Section 8). Never use pressure to empty. Container is not a pressure vessel. Eating, drinking and smoking should not be prohibited in areas where this material is handled, stored and processed. Comply with the health and safety at work laws.

7.2 Conditions for safe storage, including any incompatibilities

Store between the following temperatures: 5° – 35° C. Store in accordance with the local regulations.
Note on joint storage:
Keep away from: Oxidising agent, strong alkalis, strong acids.
Additional information on storage conditions:
Observe label precautions. Store in a dry, cool and well-ventilated area. Keep away from heat and direct sunlight.
Keep container tightly closed.
Keep away from sources of ignition. No smoking. Prevent unauthorized access. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Keep only in the original container.

7.3 Specific end use(s)

Recommendations	No information available
Industrial sector specific solutions	No information available

Section 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 Control Parameters

Occupational Exposure Limits
No exposure limit value known

Recommended Monitoring Procedure
If this product contains ingredients with exposure limits, personal, workplace atmosphere or biological monitoring may be required to determine the effectiveness of the ventilation or other control measure and/or the necessity to use respiratory protective equipment. Reference should be made to European Standard EN 689 for methods for the assessment of exposure by inhalation to chemical agents and national guidance documents for methods for the determination of hazardous substances.

8.2 Exposure controls

Appropriate Engineering Controls	Provide adequate ventilation. Where reasonably practicable, this should be achieved by the use of local exhaust ventilation and good general extraction. If these are not sufficient to maintain concentrations of particulates and solvent vapors below the OEL, suitable respiratory protection must be worn.
Personal Protective Equipment	
Hygiene Measures	Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should ne used to remove potentially contaminated clothing. Contaminated work clothing should not be allowed out of the workplace. Wash

	contaminated clothing before reusing. Ensure the eyewash stations and safety showers are close to the workstation location.
Eye/Face Protection	Use safety eyewear designed to protect against splash of liquids
Skin & hand protection	Barrier creams may help to protect the exposed areas of the skin but should not be applied once exposure has occurred.
Gloves	"RadTech recommend use of: Single use: disposable, unpowered, nitrile gloves: Use fort short duration exposures not exceeding 30 minutes, in situations where only splashes are likely. Do not use where mechanical resistance is required or where puncturing or tearing of the gloves is likely to occur. Replace immediately if punctured, degraded or tearing of the gloves has occurred. General use: Minimum 0.45mm thick, unlined, un-powdered, natural rubber latex-free nitrile gloves: Use for longer duration exposure (up to 4 hours for most UV/EB curing acrylates) or mechanical handling activities. Replace immediately when punctured or when a change of appearance (color, elasticity, shape) occurs. Heavy duty: unlined, natural; rubber latex-free nitrile gloves: Use when handling solvents. Avoid the use of chlorinated solvents and limit the use of ketones (e.g. acetone, MEK, MIBK) and ethyl and butyl acetates, as they may accelerate glove deterioration.
Body protection	Personnel should wear protective clothing
Respiratory protection	In situations where missing or flying may occur, use appropriate certified respirators
Environmental exposure controls	Do not allow to enter drains or watercourses

Section 9. PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties

Physical State	Liquid	**Appearance**	No data available
Odor	white	**Odor Threshold**	No data available

Property	**Values**	Remarks • Method
pH		No data available
Melting Point/Freezing Point		No data available
Boiling Point/Boiling Range		No data available
Flash Point	96 °C	
Evaporation Rate		No data available
Flammability Limit in Air		
Upper flammability Limit		No data available
Lower flammability Limit		No data available
Vapor Pressure		No data available
Vapor Density		No data available
Specific Gravity		No data available
Water Solubility		No data available
Solubility in other solvents		No data available
Partition coefficient: n-octanol/water		No data available
Auto-ignition Temperature		No data available
Decomposition Temperature		No data available
Kinematic Viscosity		No data available
Dynamic Viscosity		No data available
Explosive Properties	No data available	
Oxidizing Properties	No data available	

9.2 Other Information

Softening Point No data available

Section 10. STABILITY AND REACTIVITY

10.1 Reactivity

No specific test data related to reactivity available for this product or its ingredients

10.2 Chemical Stability

Hazardous reactions or instability may occur under certain conditions of storage or use

10.3 Possibility of Hazardous Reactions

Under normal conditions of storage and use, hazardous reactions will not occur

10.4 Conditions to avoid

This preparation contains materials which are unstable under the following conditions: exposure to heat, strong UV sources. These could cause the product to polymerize exothermically. Unintentional contact with them should be avoided.

10.5 Incompatible materials

Keep away from: free radical initiators, peroxides, strong alkalis, reactive metals.

10.6 Hazardous decomposition products

Under normal conditions of storage and use, hazardous decomposition products should not be produced

Section 11. TOXICOLOGY INFORMATION

There are no data available on the preparation itself. The preparation has been assessed following the conventional method of the Dangerous Preparations Directive 1999/45/EC and classified for toxicological hazards accordingly. See sections 2 and 3 for details

This takes into account, where known, delayed and immediate effects and also chronic effects of components from short-term and long-term exposure by oral inhalation, dermal routes of exposure and eye contact. Acrylate components of the preparation have irritating properties. Prolonged or repeated contact with skin or mucous membrane may result in irritation symptoms, such as redness, blistering, dermatitis, etc. May cause allergic skin reaction with repeated exposure.
If splashed in the eyes, the liquid may cause irritation and irreversible damage.
The inhalation of airborne droplets or aerosol may cause irritation of the respiratory tract.
Ingestion may cause nausea, weakness and central nervous system effects.

Contains (5-ethyl-1,3=dioxan-5-yl)methyl acrylate, trimethylolpropane triacrylate. May produce an allergic reaction.

The following products have sensitizing properties: (5-ethyl-1,3-dioxan-5-yl) methyl acrylate, trimethylolpropane triacrylate. Case of hypersensitivity may occur, possible with cross-sensitization to other acrylate materials.

11.1 Information on toxicological effects

Acute toxicity	No information available
Irritation/Corrosion	No information available
Sensitization	No information available
Mutagenic	No information available
Carcinogenicity	No information available
Reproductive Effects	No information available

Teratogenicity	No information available

Section 12. ECOLOGICAL INFORMATION

There are no data available or the preparation itself
Do not allow to enter drains or watercourses

The preparation has been assessed following the conventional method of Dangerous Preparations Directive 1999/45/EC and is classified for eco-toxicological properties accordingly. See sections 3 and 15 details.

12.1 Toxicity
No information available

12.2 Persistence and degradability
No information available

12.3 Bio accumulative potential
No information available

12.4 Mobility in Soil

Soil/water partition coefficient (Koc)	No information available
Mobility	No information available

12.5 Results of PBT and vPvB assessment
Not applicable

12.6 Other adverse effects
No known significant effects or critical hazards

Section 13. DISPOSAL CONSIDERATIONS

Do not allow to enter drains or watercourses.
Dispose of according to all federal, state and local applicable regulations.

13.1 Water treatment methods

Products

Methods of Disposal	The generation of waste should be avoided or minimized whenever possible. Significant quantities of waste product residues should not be disposed of via the foul sewer but processed in suitable effluent treatment plant. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements.
Hazardous Waste	The classification of the product may meet the criteria for a hazardous waste.

Packaging

Methods of disposal	The generation of waste should be avoided or minimized whenever possible. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible
European Waste Catalogue (EWC)	08 03 12

Special precautions The material and its container must be disposed of in a safe way. Care should be taken when handling emptied containers that have not been cleared or rinsed out. Empty containers or liners may retain some product residues. Avoid dispersal spilled material and runoff and contact with soil, waterways, drains, and sewers.

Section 14. TRANSPORT CONSIDERATIONS

	ADR/RID	AND/ADNR	IMDG	IATA
14.1 UN number	Not classified	Not classified	Not classified	Not classified
14.2 UN proper shipping name	Not classified	Not classified	Not classified	Not classified
14.3 Transport hazard class (es)	Not classified	Not classified	Not classified	Not classified
14.4 Packaging group	-	-	-	-
14.5 Environmental hazards	No	Yes	No	No
Additional Information	-	Classification applicable to tank vessels only	-	-
14.6 Special precautions for user	Transport within user's premises: always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or spillage.			

Section 15. REGULATORY INFORMATION

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

EU Regulation (EC) No. 1907/2006 (REACH)

Annex XIV – List of substance subject to authorization

Annex XVII – Restrictions: Not applicable

On the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles

Product/ingredient name	Carcinogenic effects	Mutagenic effects	Developmental effects	Fertility effects
Substituted phosphine oxide	-	-	-	Repr. Cat. 3; R32
Industrial use	The information contain in this safety data sheet does not constitute the user's own assessment of workplace risks, as required by other health and safety legislation. The provision of the national health and safety at work regulations apply to the use of this product at work			

15.2 Chemical Safety Assessment

This product contains substances for which Chemical Safety Assessment are still to be received.

Section 16. OTHER INFORMATION

CEPE Code

Indicates information that has changed from previously issued version

Abbreviation and acronyms ATE = Acute Toxicity Estimate

CLP = Classification, Labelling and Packaging Regulation [Regulation (EC) No. 1272/2008]

DNEL = Derived No Effect Level

	EUH statement = CLP – specific Hazard statement PNEC = Predicted No Effect Concentration RRN = REACH Registration Number
Full text of abbreviated H statements	H315 Causes skin irritation H317 May cause an allergic skin reaction H319 Causes serious eye irritation
Full text of classifications [CLP/GHS]	Eye Irrit. 2, H319 – Serious eye damage/eye irritation – category 2 Skin Irrit. 2, H315 – Skin Corrosion/irritation – category 2 Skin Sens. 1, H317 – Skin Sensitization – category 1
Full text of abbreviated R phrases	R62- Possible risk of impaired fertility R22 – Harmful if swallowed R36 – Irritating to eyes R38 – Irritating to skin R36/38 – Irritating to eyes and skin R43 – May cause sensitization by skin contact R51/53 – Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment
Full text of classifications	Repr. Cat. 3 – Toxic to reproduction category 3 Xn – harmful Xi – Irritant N – Dangerous for the environment

Revision/Issue Date May-31-2011

This safety data sheet complies with the requirement of Regulation (EC) No. 1907/2006

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 product is not to be used for purposes other than those specified under section 1 without first obtaining written handling instructions. The information relates only to the specific material designated and may not be valid for such material used on combination with any other materials or in any process, unless specified in the text.

End of Safety Date Sheet