

# SAFETY DATA SHEET

## LED UV Inks (SOFT V.) VERJET MF

### Section 1: Identification of the substance/mixture and of the company/undertaking

#### Product Identifier

Trade Name : LED UV Inks (SOFT V.) VERJET MF

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

**Material of Use:** Industrial applications: Inkjet ink for drop-on-demand digital printing process.

#### 1.3 Details of the supplier of the safety data sheet

**COLORJET INDIA LTD.**

**Address:** B-195, PHASE II NOIDA

U.P. INDIA-201305

**Ph.:** +91 120 4897992

**Email:** [www.colorjetgroup.com](http://www.colorjetgroup.com)

### Section 2: Hazards Identification

#### 2.1 Classification of the substance or mixture

Classification according to Regulation (EC) No 1272/2008



#### Warning

Acute Tox. 4 H302 Harmful if swallowed.

Skin Irrit. H315 Causes skin irritation.

Eye Irrit. 2 H319 Causes serious eye irritation.

HMIS Ratings: Health: 1 Fire: 2 Physical Hazard: 1 Pers. Prot.: H

Hazard Scale: 0 = Minimal; 1 = Slight; 2 = Moderate; 3 = Serious; 4 = Severe \* = Chronic hazard

Classification according to Directive 67/548/EEC or Directive 1999/45/EC



**LED UV Inks (SOFT V.) VERJET MF****Revision Date: 07/01/2019****Harmful Xn: R20/21/22; R62****Xi: R36/37/38, R43****R52/53**

R phrases: 22: Harmful if swallowed.

R phrases: 36: Irritating to eyes.

R 20/21/22 Harmful by inhalation, in contact with skin and if swallowed.

R 36/37/38 Irritating to eyes, respiratory system and skin.

R 43 May cause sensitization by skin contact.

R 52/53 Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

R 62 Possible risk of impaired fertility.

S 9 Keep container in a well-ventilated place.

S 25 Avoid contact with eyes.

S 26 In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.

S 36/37 Wear suitable protective clothing and gloves.

S 60 This material and its container must be disposed of as hazardous waste.

S 61 Avoid release to the environment. Refer to special instructions/safety data sheets.

**Information concerning particular hazards for human and environment: Not applicable.****2.2 Label elements**

Labelling according to Regulation (EC) No 1272/2008

The substance is classified and labelled according to the CLP regulation.

Hazard pictograms

Warning

Signal word: Warning Hazard statements:

H302 Harmful if swallowed.

H315 Causes skin irritation.

H319 Causes serious eye irritation.

Precautionary statements:

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

**2.3 Other hazards**

Results of PBT and vPvB assessment

PBT: Not applicable.

vPvB: Not applicable.

**LED UV Inks (SOFT V.) VERJET MF**
**Revision Date: 07/01/2019**
**Section 3: Composition/Information on Ingredients**
**Chemical characterization: Mixture**
**LED UV Inks (SOFT V.) CYAN VERJET MF**

Ingredients	CAS-No.	EINECS	Percent	Classification	
				Regulation (EC) No. 1272/2008 [CLP]	67/548/EEC
Synthetic resin	Trade Secret	Trade Secret	1%–5%	—	—
Acrylated amine synergist	Trade Secret	Trade Secret	1%–5%		
Pigment blue 15	147-14-8	205-685-1	1%–5%	—	—
Hexamethylene diacrylate	13048-33-4	235-921-9	5%–10%	H315, H319 P305 , P351, P338	R36/38 S26
Tetrahydrofurfuryl Acrylate	2399-48-6	219-268-7	10%–20%	H315, H319 P305 , P351, P338	R36/38 S26
Isodecyl Acrylate	1330-61-6	215-542-5	10%–20%	H315, H319 P305 , P351, P338	R36/38 S26
Other photo sensitive monomers	Trade Secret	Trade Secret	35%–45%	H317, H413 P280	—
polymerization initiator	Trade Secret	Trade Secret	5%–15%	H317, H413 P280	—
Surfactant	Trade Secret	Trade Secret	0.1%–1%	—	—

**LED UV Inks (SOFT V.) MAGENTA VERJET MF**

Ingredients	CAS-No.	EINECS	Percent	Classification	
				Regulation (EC) No. 1272/2008 [CLP]	67/548/EEC
Synthetic resin	Trade Secret	Trade Secret	1%–5%	—	—
Acrylated amine synergist	Trade Secret	Trade Secret	1%–5%		
Magenta pigment	Trade Secret	Trade Secret	1%–5%	—	—
Hexamethylene diacrylate	13048-33-4	235-921-9	5%–10%	H315, H319 P305 , P351, P338	R36/38 S26
Tetrahydrofurfuryl Acrylate	2399-48-6	219-268-7	10%–20%	H315, H319 P305 , P351, P338	R36/38 S26
Isodecyl Acrylate	1330-61-6	215-542-5	10%–20%	H315, H319 P305 , P351, P338	R36/38 S26
Other photo sensitive monomers	Trade Secret	Trade Secret	35%–45%	H315, H319 P305 , P351, P338	R36/38 S26
polymerization initiator	Trade Secret	Trade Secret	5%–15%	H317, H413	P280
Surfactant	Trade Secret	Trade Secret	0.1%–1%	—	—

**LED UV Inks (SOFT V.) VERJET MF**
**Revision Date: 07/01/2019**
**LED UV Inks (SOFT V.) YELLOW VERJET MF**

Ingredients	CAS-No.	EINECS	Percent	Classification	
				Regulation (EC) No. 1272/2008 [CLP]	67/548/EEC
Synthetic resin	Trade Secret	Trade Secret	1%–5%	—	—
Acrylated amine synergist	Trade Secret	Trade Secret	1%–5%		
Yellow Pigment	68511-62-6	270-944-8	1%–5%	—	—
Hexamethylene diacrylate	13048-33-4	235-921-9	5%–10%	H315, H319 P305 , P351, P338	R36/38 S26
Tetrahydrofurfuryl Acrylate	2399-48-6	219-268-7	10%–20%	H315, H319 P305 , P351, P338	R36/38 S26
Isodecyl Acrylate	1330-61-6	215-542-5	10%–20%	H315, H319 P305 , P351, P338	R36/38 S26
Other photo sensitive monomers	Trade Secret	Trade Secret	35%–45%	H315, H319 P305 , P351, P338	R36/38 S26
polymerization initiator	Trade Secret	Trade Secret	5%–15%	H317, H413 P280	
Surfactant	Trade Secret	Trade Secret	0.1%–1%	—	—

**LED UV Inks (SOFT V.) BLACK VERJET MF**

Ingredients	CAS-No.	EINECS	Percent	Classification	
				Regulation (EC) No. 1272/2008 [CLP]	67/548/EEC
Synthetic resin	Trade Secret	Trade Secret	1%–5%	—	—
Acrylated amine synergist	Trade Secret	Trade Secret	1%–5%		
Carbon black	1333-86-4	215-609-9	1%–5%	—	—
Hexamethylene diacrylate	13048-33-4	235-921-9	5%–10%	H315, H319 P305 , P351, P338	R36/38 S26
Tetrahydrofurfuryl Acrylate	2399-48-6	219-268-7	10%–20%	H315, H319 P305 , P351, P338	R36/38 S26
Isodecyl Acrylate	1330-61-6	215-542-5	10%–20%	H315, H319 P305 , P351, P338	R36/38 S26
Other photo sensitive monomers	Trade Secret	Trade Secret	35%–45%	H315, H319 P305 , P351, P338	R36/38 S26
polymerization initiator	Trade Secret	Trade Secret	5%–15%	H317, H413	P280
Surfactant	Trade Secret	Trade Secret	0.1%–1%	—	—

**LED UV Inks (SOFT V.) VERJET MF**
**Revision Date: 07/01/2019**
**LED UV Inks (SOFT V.) WHITE VERJET MF**

Ingredients	CAS-No.	EINECS	Percent	Classification	
				Regulation (EC) No. 1272/2008 [CLP]	67/548/EEC
Synthetic resin	Trade Secret	Trade Secret	1%–5%	—	—
Acrylated amine synergist	Trade Secret	Trade Secret	1%–5%		
Titanium Dioxide	13463-67-7	236-675-5	5%–15%	—	—
Hexamethylene diacrylate	13048-33-4	235-921-9	5%–10%	H315, H319 P305 , P351, P338	R36/38 S26
Tetrahydrofurfuryl Acrylate	2399-48-6	219-268-7	10%–20%	H315, H319 P305 , P351, P338	R36/38 S26
Isodecyl Acrylate	1330-61-6	215-542-5	5%–10%	H315, H319 P305 , P351, P338	R36/38 S26
Other photo sensitive monomers	Trade Secret	Trade Secret	15%–25%	H315, H319 P305 , P351, P338	R36/38 S26
polymerization initiator	Trade Secret	Trade Secret	5%–15%	H317, H413 P280	—
Surfactant	Trade Secret	Trade Secret	0.1%–1.0%	—	—

**LED UV Inks (SOFT V.) GLOSS VERJET MF**

Ingredients	CAS-No.	EINECS	Percent (%)	Classification	
				Regulation (EC) No. 1272/2008 [CLP]	67/548/EEC
Synthetic resin	Trade Secret	Trade Secret	5–10	—	—
Acrylated amine synergist	Trade Secret	Trade Secret	1–5	—	—
3,3,5-Trimethyl Cyclohexane Acrylate	86178-38-3	289-200-9	10–15	H315, H319 P305 , P351, P338	R36/38 S26
Tetrahydrofurfuryl Acrylate	2399-48-6	219-268-7	25–40	H315, H319 P305 , P351, P338	R36/38 S26
Other photo sensitive monomer	Trade Secret	Trade Secret	10–30	H315, H319 P305 , P351, P338	R36/38 S26
2-Isopropylthioxanthone	5495-84-1	226-827-9	5–15	H302	R22
Other polymerization initiator	Trade Secret	Trade Secret	1–5	H317, H413	P280
Surfactant	Trade Secret	Trade Secret	0.1–2.0	—	—

**Section 4: First Aid Measures****4.1 Description of first aid measures**

**Eye contact:** Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician.

**Inhalation:** If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician.

**Skin contact:** Remove contaminated clothing and shoes immediately. Wash off with soap and plenty of water for at least 15-20 minutes. Consult a physician.

**Ingestion:** Rinse mouth with water. Never give anything by mouth to an unconscious person. Consult a physician.

**4.2 Most important symptoms and effects, both acute and delayed****Potential acute health effects**

**Eye contact:** Causes severe eye injury which may persist for several days.

**Inhalation:** Vapors or mist, especially as generated from heating the material or as from exposure in poorly ventilated areas or confined spaces, may irritate nose, throat/respiratory system.

**Skin contact:** May cause skin irritation, injury, dermatitis, allergy and/or sensitization.

**Ingestion:** May cause injury of mouth, throat, and stomach.

**Over-exposure signs/symptoms**

**Eye contact:** No specific data. **Inhalation:** No specific data. **Skin contact:** No specific data.

**Ingestion:** No specific data.

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

Treat symptomatically.

**Section 5: Fire Fighting Measures****5.1 Extinguishing media**

Suitable extinguishing media

Alcohol-resistant foam, dry chemical, carbon dioxide (CO<sub>2</sub>)

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

Carbon monoxides, carbon dioxide, oxides of nitrogen, toxic gases/vapors.

**5.3 Advice for firefighters**

Wear special chemical protective clothing and use breathing apparatus with independent air supply. Approach fire from upwind and avoid hazardous vapors and toxic decomposition products. Decontaminate or discard any clothing that may contain chemical residues.

**5.4 Further information**

Applying direct water may be dangerous because fire may expand to surroundings. Use water spray to cool unopened containers

**5.5 NFPA Ratings: Health: 1 Flammability: 2 Reactivity: 0**

Hazard Scale: 0 = Minimal; 1 = Slight; 2 = Moderate; 3 = Serious; 4 = Severe



**Section 6: Accidental Release Measure**

Absorb spill with sand or earth then place in a chemical waste container.

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

Use personal protective equipment. Avoid breathing vapors, mist or gas. Ensure adequate ventilation. Remove all sources of ignition. Beware of vapours accumulating to form explosive concentrations. Vapours can accumulate in low areas.

**6.2 Environmental precautions**

Prevent further leakage or spillage if safe to do so. Do not let product enter drains.

**6.3 Methods and materials for containment and cleaning up**

Contain spillage, and then collect with an electrically protected vacuum cleaner or by wet-brushing and place in container for disposal according to local regulations (see section 13). Keep in suitable, closed containers for disposal.

**6.4 Reference to other sections**

For disposal see section 13.

**Section 7: Handling and Storage****7.1 Handling Keep out of reach of children and do not drink.**

Avoid contact with skin and eyes. Avoid inhalation of vapour or mist. Keep away from sources of ignition - No smoking. Take measures to prevent the buildup of electrostatic charge. Make sure cartridge is dry before insertion into printer housing.

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

Store in a cool, dry and dark place. Keep container tightly closed in a dry and well-ventilated place. Containers which are opened must be carefully resealed and kept upright to prevent leakage.

**7.3 Specific end uses**

Inkjet printing

**Section 8: Exposure Control/Personal Protection****8.1 Control parameters**

Components with workplace control parameters

**8.2 Exposure controls**

Appropriate engineering controls Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.

Personal protective equipment

**LED UV Inks (SOFT V.) VERJET MF****Revision Date: 07/01/2019**

**Eye/face protection:** Face shield and safety glasses. Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).

**Skin protection:** Handle with gloves and wear appropriate protective impervious clothing. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices.

**Wash and dry hands:** The selected protective gloves have to satisfy the specifications of EU Directive 89/686/EEC and the standard EN 374 derived from it.

**Body Protection:** Complete suit protecting against chemicals. The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

**Respiratory protection:** Handle with NIOSH approved air purifying respiratory protection equipment in case ventilation is not adequate. Where risk assessment shows air-purifying respirators are appropriate use a full-face respirator with multi-purpose combination (US) or type ABEK (EN 14387) respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US).

**Hygiene measures:** Wash hands after handling. In case contact with clothing, wash before reuse. Do not eat, drink or smoke in handling or storage area.

**Environmental controls:** Do not release to the environment.

**Section 9: Physical and Chemical Properties****LED UV Inks (SOFT V.) CYAN VERJET MF**

Color	Cyan Liquid
Odor	Characteristic Odor
Boiling point/boiling range of ink	No Data Available
Melting Point/Melting Range	No Data Available
Flash Point of Ink	>90 Degree C
Auto Ignition Temperature	No Data Available
Flammability (Solid, Gas)	Not Applicable
Explosive Properties	No Data Available
Vapour Pressure	No Data Available
Specific Gravity	Aprox 1.0
Solubility	No Data Available
Water Solubility	Insoluble
Viscosity	5.0 – 10.0 cps
Ph	Not Applicable
Oxidizing Properties	No Data Available
Vapor Density	Not Applicable



**LED UV Inks (SOFT V.) VERJET MF****Revision Date: 07/01/2019****LED UV Inks (SOFT V.) MAGENTA VERJET MF**

Color	Magenta Liquid
Odor	Characteristic Odor
Boiling point/boiling range of ink	No Data Available
Melting Point/Melting Range	No Data Available
Flash Point of Ink	>90 Degree C
Auto Ignition Temperature	No Data Available
Flammability (Solid, Gas)	Not Applicable
Explosive Properties	No Data Available
Vapour Pressure	No Data Available
Specific Gravity	Aprox 1.0
Solubility	No Data Available
Water Solubility	Insoluble
Viscosity	5.0 – 10.0 cps
pH	Not Applicable
Oxidizing Properties	No Data Available
Vapor Density	Not Applicable

**LED UV Inks (SOFT V.) YELLOW VERJET MF**

Color	Yellow Liquid
Odor	Characteristic Odor
Boiling point/boiling range of ink	No Data Available
Melting Point/Melting Range	No Data Available
Flash Point of Ink	>90 Degree C
Auto Ignition Temperature	No Data Available
Flammability (Solid, Gas)	Not Applicable
Explosive Properties	No Data Available
Vapour Pressure	No Data Available
Specific Gravity	Aprox 1.0
Solubility	No Data Available
Water Solubility	Insoluble
Viscosity	5.0 – 10.0 cps
Ph	Not Applicable
Oxidizing Properties	No Data Available
Vapor Density	Not Applicable

**LED UV Inks (SOFT V.) VERJET MF****Revision Date: 07/01/2019****LED UV Inks (SOFT V.) BLACK VERJET MF**

Color	Black Liquid
Odor	Characteristic Odor
Boiling point/boiling range of ink	No Data Available
Melting Point/Melting Range	No Data Available
Flash Point of Ink	>90 Degree C
Auto Ignition Temperature	No Data Available
Flammability (Solid, Gas)	Not Applicable
Explosive Properties	No Data Available
Vapour Pressure	No Data Available
Specific Gravity	Approx 1.0
Solubility	No Data Available
Water Solubility	Insoluble
Viscosity	5.0 – 10.0 cps
pH	Not Applicable
Oxidizing Properties	No Data Available
Vapor Density	Not Applicable

**LED UV Inks (SOFT V.) WHITE VERJET MF**

Color	Magenta Liquid
Odor	Characteristic Odor
Boiling point/boiling range of ink	No Data Available
Melting Point/Melting Range	No Data Available
Flash Point of Ink	>90 Degree C
Auto Ignition Temperature	No Data Available
Flammability (Solid, Gas)	Not Applicable
Explosive Properties	No Data Available
Vapour Pressure	No Data Available
Specific Gravity	Approx 1.2
Solubility	No Data Available
Water Solubility	Insoluble
Viscosity	5.0 – 10.0 cps
Ph	Not Applicable
Oxidizing Properties	No Data Available
Vapor Density	Not Applicable

**LED UV Inks (SOFT V.) VERJET MF**
**Revision Date: 07/01/2019**
**LED UV Inks (SOFT V.) GLOSS VERJET MF**

Color	Clear Liquid
Odor	Characteristic Odor
Boiling point/boiling range of ink	No Data Available
Melting Point/Melting Range	No Data Available
Flash Point of Ink	>90 Degree C
Auto Ignition Temperature	No Data Available
Flammability (Solid, Gas)	Not Applicable
Explosive Properties	No Data Available
Vapour Pressure	No Data Available
Specific Gravity	Approx 1.0
Solubility	No Data Available
Water Solubility	Insoluble
Viscosity	4.0 – 8.0 cps
Ph	Not Applicable
Oxidizing Properties	No Data Available
Vapor Density	Not Applicable

The Physical and chemical data given in Section 9 are typical values for this product and are not intended to be product specifications.

**Section 10: Stability and Reactivity**

**10.1 Reactivity:** High temperatures and UV light may cause rapid polymerization.

**10.2 Chemical stability:** Unstable. Polymerize under heat and/or light.

**10.3 Possibility of hazardous reactions:** Not expected

**10.4 Conditions to avoid:** Elevated temperatures/heat, UV light, when not in use.

**10.5 Incompatible materials:** Avoid contact with acids, amines, free radical initiators, oxidizing agents.

**10.6 Hazardous decomposition products:** Carbon monoxide, carbon dioxide, oxides of nitrogen, toxic gases/vapors.

**Section 11: Toxicological Information**
**11.1 Information on toxicological effects**

**Routes of Overexposure:** Eye, skin, inhalation, and oral ingestion

**Acute Health Hazards:** Overexposure of the eye surface to ink may be mildly irritating. Overexposure of ink contact with the skin may cause irritation and, in some people, swelling and redness. Intentional inhalation to ink vapors may result in respiratory tract irritation. Intentional or accidental oral ingestion may cause an upset stomach.

**Chronic Health Hazards:** No information available

**Mutagenicity:** No information available

**Carcinogenicity:** No information available

**LED UV Inks (SOFT V.) VERJET MF****Revision Date: 07/01/2019****Acute Toxicity Data:** Hexamethylene diacrylate,

LD50 Oral, mouse: &gt;2000 mg/kg

LD50 Dermal, rabbit: &gt;2000 mg /kg

Causes moderate skin irritation

Causes moderate eye irritation

**Isodecyl Acrylate**

LD50 Oral, rat: 12,000 mg/kg

Causes moderate skin irritation

Causes moderate eye irritation

**Tetrahydrofurfuryl Acrylate**

Causes moderate skin irritation

Causes moderate eye irritation

The information shown in SECTION 3, Hazards identification, is based on toxicity profiles of similar materials or on the components present in this material.

**Section 12: Ecological Information****12.1 Toxicity****Acquatic toxicity:** No further relevant information available.**12.2 Persistence and degradability:** No further relevant information available.**12.3 Bioaccumulative potential:** No further relevant information available.**12.4 Mobility in soil:** No further relevant information available.**12.5 Results of PBT and vPvB assessment PBT:** Not applicable. vPvB: Not applicable.**12.6 Other adverse effects:** No further relevant information available.**Section 13: Disposal Considerations****13.1 Waste treatment methods****Product**

This combustible material may be burned in a chemical incinerator equipped with an afterburner and scrubber. Offer surplus and non-recyclable solutions to a licensed disposal company. Contact a licensed professional waste disposal service to dispose of this material.

Contaminated packaging

Dispose of as unused product

**Section 14: Transport Information****14.1 UN number**

ADR/RID: — IMDG: — IATA: —

**14.2 UN proper shipping name**

ADR/RID: Not dangerous goods

IMDG: Not dangerous goods

IATA: Not dangerous goods

**14.3 Transport hazard class(es)**

ADR/RID: — IMDG: — IATA: —

**14.4 Packaging group**

ADR/RID: — IMDG: — IATA: —

**14.5 Environmental hazards**

ADR/RID: no

IMDG Marine pollutant: no

IATA: no

**14.6 Special precautions for user**

No data available

**Section 15: Regulatory Information****15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture**

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

REACH Status: In compliance.

Pre-registration status: All components are listed or exempted.

Annex XIV - List of substances subject to authorization Substances of very high concern None of the components are listed.

Annex XVII - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles

Not applicable.

**15.2 Chemical Safety Assessment**

No data available

**15.3 Other information**

US Regulation:

TSCA Section 4(a) Final Test Rules Regulated: Not regulated.

TSCA Section 8(a) Preliminary Assessment Information Rule (PAIR): Not regulated.

TSCA Section 8(a) Inventory Update Rule: All components on TSCA INVENTORY

TSCA Section 8(d) Health and Safety Study Reporting: Not regulated.

TSCA Section 12(b) One-Time Export Notification Regulated: Not regulated.

California Proposition 65: Not regulated.

**Section 16: Other Information**

The data in this Material Safety Data Sheet relates only to the specific material designated herein and does not relate to use in combination with any other material or in any process.

This information is based upon technical information believed to be reliable. It is subject to revision as additional knowledge and experience is gained.