

SAFETY DATA SHEET

According to OSHA Hazard Communication Standard Rule - 29 CFR 1910.1200 and the Canadian Hazardous Products Act



Lipla EsOne Yellow HD Series Ink

SUBID:000001013263

Version 1

Print Date 05-12-2016

Revision Date 05-12-2016

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

1.1 Identification of the substance or mixture:

Product name : Lipla EsOne Yellow HD Series Ink
MSDS Number : 000001013263

1.2 Use of the substance/mixture:

Use of the : Printing ink
Substance/Preparation

1.3 Company/undertaking identification

CMYK Engineering
1450 2nd Street, Los Angeles CA 90401

Ph: (424) 296-7227

Transport Emergency

Non-transportation

Call CHEMTREC : +1 800 4249300
International : +1 703 5273887

Health Emergency Phone : +1 303 6235716

SECTION 2. HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture:

GHS (Globally Harmonized System of Classification and Labelling of Chemicals)	
• Hazard classes	Chronic hazards to the aquatic environment
Hazard categories	Category 3
Hazard statements	H412
• Hazard classes	Serious eye damage
Hazard categories	Category 1
Hazard statements	H318
• Hazard classes	Skin irritation
Hazard categories	Category 2
Hazard statements	H315
• Hazard classes	Skin sensitizer
Hazard categories	Category 1
Hazard statements	H317
• Hazard classes	Specific target organ toxicity - single exposure
Hazard categories	Category 3
Hazard statements	H335
• Hazard classes	Specific target organ toxicity - repeated exposure
Hazard categories	Category 1

SAFETY DATA SHEET

According to OSHA Hazard Communication Standard Rule - 29 CFR 1910.1200 and the Canadian Hazardous Products Act



Lipla EsOne Yellow HD Series Ink

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Hazard statements	H372
• Hazard classes	Toxic to reproduction
Hazard categories	Category 2
Hazard statements	H351

2.2 Label elements:

Hazardous components which must be listed on the label :

Symbol(s)



GHS05



GHS07



GHS08

Signal word
Hazard
statements

: DANGER
: H315

Causes skin irritation.

H317
H318
H335
H336
H372

May cause an allergic skin reaction.
Causes serious eye damage.
May cause respiratory irritation.
May cause drowsiness or dizziness.
Causes damage to organs (or state all organs affected, if known) through prolonged or repeated exposure (state route of exposure if it is conclusively proven that no other routes of exposure cause the hazard).

Precautionary
statements:
prevention

: P201

Obtain special instructions before use.

P202

Do not handle until all safety precautions have been read and understood.

P260
P264
P270
P271
P272

Do not breathe dust/fume/gas/mist/vapours/spray.
Wash ... thoroughly after handling.
Do not eat, drink or smoke when using this product.
Use only outdoors or in a well-ventilated area.
Contaminated work clothing should not be allowed out of the workplace.

P280

Wear protective gloves/protective clothing/eye protection/face protection.

Precautionary
statements:
response

: P305+P351+P
338

IF IN EYES: Rinse cautiously with water for several minutes.
Remove contact lenses, if present and easy to remove.
Continue rinsing.

P310
P302+P352
P332+P313
P362
P363

Immediately call a POISON CENTER/doctor/...
IF ON SKIN: Wash with plenty of water/...
If skin irritation occurs: Get medical advice/attention.
Take off contaminated clothing.
Wash contaminated clothing before reuse.

SAFETY DATA SHEET

According to OSHA Hazard Communication Standard Rule - 29 CFR 1910.1200 and the Canadian Hazardous Products Act



Lipla EsOne Yellow HD Series Ink

SUBID:000001013263

Version 1

Print Date 05-12-2016

Revision Date 05-12-2016

Precautionary statements: storage	P333+P313	If skin irritation or rash occurs: Get medical advice/attention.
	P304+P340	IF INHALED: Remove person to fresh air and keep comfortable for breathing.
	P312	Call a POISON CENTER/ doctor/.../if you feel unwell.
	P314	Get medical advice/attention if you feel unwell.
Precautionary statements: disposal	P308+P313	IF exposed or concerned: Get medical advice/attention.
	P403+P233	Store in a well-ventilated place. Keep container tightly closed.
	P405	Store locked up.
Precautionary statements: disposal	P501NA	Dispose of contents / container to an approved waste disposal facility.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

3.1 Mixture related information:

Printer ink, mainly consisting of:

3.2 Hazard ingredients:

The hazard and labelling information in this section is that of the individual ingredients. The corresponding information relative to this product as supplied is given in section 2.1.

Hazardous components

• Oxybis(methyl-2,1-ethanediyl) diacrylate	Concentration [%] :	10.0	-	20.0
CAS-No. : 57472-68-1				
• N-vinyl caprolactam	Concentration [%] :	10.0	-	20.0
CAS-No. : 2235-00-9				
• Isobornyl acrylate	Concentration [%] :	10.0	-	20.0
CAS-No. : 5888-33-5				
• Phenoxyethylacrylate	Concentration [%] :	10.0	-	20.0
CAS-No. : 48145-04-6				
• Tetrahydrofurfuryl acrylate	Concentration [%] :	10.0	-	20.0
CAS-No. : 2399-48-6				
• 2-Propenoic acid ,1-6-hexanediyl ester, polymer with 2-aminoethanol	Concentration [%] :	5.0	-	10.0
CAS-No. : 67906-98-3				
• Isodecyl acrylate	Concentration [%] :	1.0	-	5.0
CAS-No. : 1330-61-6				
• Phosphine oxide, diphenyl(2,4,6-trimethylbenzoyl)-	Concentration [%] :	1.0	-	5.0
CAS-No. : 75980-60-8				
• phenyl bis(2,4,6-trimethylbenzoyl)-phosphine oxide	Concentration [%] :	1.0	-	5.0
CAS-No. : 162881-26-7				
• Hexamethylene diacrylate	Concentration [%] :	1.0	-	5.0

SAFETY DATA SHEET

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Lipla EsOne Yellow HD Series Ink

SUBID:000001013263

Version 1

Print Date 05-12-2016

Revision Date 05-12-2016

CAS-No. : 13048-33-4

Components with a community workplace exposure limit

- Caprolactam
- 2,6-bis(1,1-dimethylethyl)-4-methyl-phenol
- mequinol; 4-methoxyphenol; hydroquinone monomethyl ether
- Cupferron Al

3.3 Remark:

Full text of each relevant H-phrase is listed in section 16.

SECTION 4. FIRST AID MEASURES

4.1 Description of first aid measures:

- Eye contact : Immediately flush eye(s) with plenty of water. Consult an oculist if necessary.
- Skin contact : Immediately flush with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Get medical attention if symptoms occur.
- Ingestion : Rinse mouth with plenty of water. Consult a physician if necessary. Do not induce vomiting.
- Inhalation : Take patient to fresh air if necessary. Consult a physician if necessary.

4.2 Most important symptoms and effects:

- Symptoms : Upon contact with skin: redness, pain. In case of eye contact: redness and pain. Ingestion can cause nausea, vomiting and diarrhea. May cause headache and dizziness.

4.3 Indication of immediate medical attention and special treatment needed:

- General advice : Call a physician immediately.

SECTION 5. FIRE-FIGHTING MEASURES

5.1 Extinguishing media

- Suitable extinguishing media : All extinguishing media are suitable.

5.2 Special hazards arising from the substance or mixture:

- Specific hazards during fire fighting : Do not use a solid water stream as it may scatter and spread fire.
- Specific hazards during fire fighting : Toxic and irritating gases/fumes may be given off during burning or thermal decomposition.

SAFETY DATA SHEET

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Lipla EsOne Yellow HD Series Ink

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Version 1

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Further information : Collect contaminated fire extinguishing water separately. This must not be discharged into drains.

5.3 Advice for fire-fighters:

Special protective equipment for fire-fighters : Firefighters should be equipped with self-contained breathing apparatus to protect against potentially toxic and irritating fumes.
Special protective equipment for fire-fighters : Firefighters should be equipped with self-contained breathing apparatus to protect against potentially toxic and irritating fumes. Use cold water spray to cool fire-exposed containers to minimize the risk of rupture.

SECTION 6. ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures:

Personal precautions : Cleanup personnel must use appropriate personal protective equipment.
Additional advice : Observe normal precautions when handling chemicals.

6.2 Environmental precautions:

Environmental precautions : The product should not be allowed to enter drains, water courses or the soil.

6.3 Methods and material for containment and cleaning up:

Methods for cleaning up : Dike the spill if necessary. If spill occurs, apply a suitable absorbent material and collect into an impervious waste container. Collect the product in a plastic vessel. Carefully collect leftovers.

6.4 Reference to other sections:

For waste disposal see section 13.
For personal protection see section 8.

SECTION 7. HANDLING AND STORAGE

7.1 Precautions for safe handling:

Advice on safe handling : Prevent product from diffusing.
Hygiene measures : Employees should wash their hands and face before eating, drinking, or using tobacco products. Educate and train employees in the safe use and handling of this product. Emergency showers and eye wash stations should be available.
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Lipla EsOne Yellow HD Series Ink

SUBID:000001013263

Version 1

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Advice on protection against fire and explosion : No special protective measures against fire and explosion required.

7.2 Conditions for safe storage:

Requirements for storage areas and containers : Keep container tightly closed. Keep in a dry place.

Further information on storage conditions : Keep container in a well-ventilated place.

7.3 Specific end use:

This substance is used only by trained professionals under restricted conditions.

SECTION 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

8.1 Control parameters:

8.1.1 Components with occupational exposure limits resp. biological occupational exposure limits requiring monitoring:

8.1.1.1 Occupational exposure limits:

Air limit values (US)

- Caprolactam

CAS-No.: 105-60-2

Basis	Revision Date	Value	Type
ACGIH	03 2014	5 mg/m3	TWA
NIOSH	2010	1 mg/m3	REL
NIOSH	2010	3 mg/m3	STEL
NIOSH	2010	1 mg/m3	REL
		0.22 ppm	
NIOSH	2010	3 mg/m3	STEL
		0.66 ppm	
OSHA Z1A	1989	40 mg/m3	STEL
		10 ppm	
OSHA Z1A	1989	3 mg/m3	STEL
OSHA Z1A	1989	1 mg/m3	TWA
OSHA Z1A	1989	20 mg/m3	TWA
		5 ppm	
TN OEL	06 2008	3 mg/m3	STEL
TN OEL	06 2008	40 mg/m3	STEL
		10 ppm	
TN OEL	06 2008	1 mg/m3	TWA
TN OEL	06 2008	20 mg/m3	TWA
		5 ppm	
US CA OEL	09 2013	20 mg/m3	TWA PEL
		5 ppm	

SAFETY DATA SHEET

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Lipla EsOne Yellow HD Series Ink

SUBID:000001013263

Version 1

Print Date 05-12-2016

Revision Date 05-12-2016

US CA OEL	09 2013	3 mg/m3	STEL
US CA OEL	09 2013	40 mg/m3	STEL
		10 ppm	
US CA OEL	09 2013	1 mg/m3	TWA PEL

- 2,6-bis(1,1-dimethylethyl)-4-methyl-phenol

CAS-No.: 128-37-0

Basis	Revision Date	Value	Type
ACGIH	03 2014	2 mg/m3	TWA
NIOSH	2010	10 mg/m3	REL
OSHA Z1A	1989	10 mg/m3	TWA
TN OEL	06 2008	10 mg/m3	TWA
US CA OEL	09 2013	10 mg/m3	TWA PEL

- mequinol; 4-methoxyphenol; hydroquinone monomethyl ether

CAS-No.: 150-76-5

Basis	Revision Date	Value	Type
ACGIH	03 2014	5 mg/m3	TWA
NIOSH	2010	5 mg/m3	REL
OSHA Z1A	1989	5 mg/m3	TWA
TN OEL	06 2008	5 mg/m3	TWA
US CA OEL	09 2013	5 mg/m3	TWA PEL

- Cupferron Al

CAS-No.: 15305-07-4

Basis	Revision Date	Value	Type
ACGIH	03 2014	1 mg/m3	TWA

Air limit values (CA)

- Caprolactam

CAS-No.: 105-60-2

Basis	Revision Date	Value	Type
CAD AB OEL	07 2009	5 mg/m3	TWA
CAD BC OEL	05 2013	1 mg/m3	TWA
CAD BC OEL	05 2013	3 mg/m3	STEL
CAD MB OEL	03 2014	5 mg/m3	TWA
CAD ON OEL	11 2010	5 mg/m3	TWAEV
CAD SK OEL	05 2009	5 mg/m3	8 HR ACL
CAD SK OEL	05 2009	10 mg/m3	15 MIN ACL
OEL (QUE)	11 2011	46 mg/m3	STEL

SAFETY DATA SHEET

According to OSHA Hazard Communication Standard Rule - 29 CFR 1910.1200 and the Canadian Hazardous Products Act



Lipla EsOne Yellow HD Series Ink

SUBID:000001013263

Version 1

Print Date 05-12-2016

Revision Date 05-12-2016

OEL (QUE)	11 2011	3 mg/m3	STEL
OEL (QUE)	11 2011	1 mg/m3	TWA
OEL (QUE)	11 2011	23 mg/m3	TWA

- 2,6-bis(1,1-dimethylethyl)-4-methyl-phenol

CAS-No.: 128-37-0

Basis	Revision Date	Value	Type
CAD AB OEL	07 2009	10 mg/m3	TWA
CAD BC OEL	05 2013	2 mg/m3	TWA
CAD MB OEL	03 2014	2 mg/m3	TWA
CAD ON OEL	11 2010	2 mg/m3	TWAEV
CAD SK OEL	05 2009	2 mg/m3	8 HR ACL
CAD SK OEL	05 2009	4 mg/m3	15 MIN ACL
OEL (QUE)	11 2011	10 mg/m3	TWA

- mequinol; 4-methoxyphenol; hydroquinone monomethyl ether

CAS-No.: 150-76-5

Basis	Revision Date	Value	Type
CAD AB OEL	07 2009	5 mg/m3	TWA
CAD BC OEL	05 2013	5 mg/m3	TWA
CAD MB OEL	03 2014	5 mg/m3	TWA
CAD ON OEL	11 2010	5 mg/m3	TWAEV
CAD SK OEL	05 2009	10 mg/m3	15 MIN ACL
CAD SK OEL	05 2009	5 mg/m3	8 HR ACL
OEL (QUE)	11 2011	5 mg/m3	TWA

- Cupferron Al

CAS-No.: 15305-07-4

Basis	Revision Date	Value	Type
CAD BC OEL	05 2013	1 mg/m3	TWA
CAD MB OEL	03 2014	1 mg/m3	TWA
CAD ON OEL	11 2010	1 mg/m3	TWAEV
CAD SK OEL	05 2009	10 mg/m3	8 HR ACL
CAD SK OEL	05 2009	20 mg/m3	15 MIN ACL

Biological limit values (US)

SAFETY DATA SHEET

According to OSHA Hazard Communication Standard Rule - 29 CFR 1910.1200 and the Canadian Hazardous Products Act



Lipla EsOne Yellow HD Series Ink

SUBID:000001013263

Version 1

Print Date 05-12-2016

Revision Date 05-12-2016

We are not aware of any national exposure limit.

Biological limit values (CA)

We are not aware of any national exposure limit.

8.1.1.2 Additional exposure limits under the conditions of use:

No other exposure limits applicable.

8.2 Exposure controls:

Occupational exposure controls:

➤ Instruction measures to prevent exposure:

Employees should wash their hands and face before eating, drinking, or using tobacco products. Keep away from foodstuffs, drinks and tobacco.

➤ Technical measures to prevent exposure:

Ensure adequate ventilation.

➤ Personal measures to prevent exposure:

Respiratory protection : Under normal conditions of use, respirator protection is not required. If respirators are used, institute a program in accordance with OSHA standard 29CFR1910.134 or Canada CSA Standard Z94.4-02.

Hand protection : Use chemical resistant gloves. In case of prolonged immersion or frequently repeated contact use gloves made of the materials: butylrubber (thickness ≥ 0.70 mm, breakthrough time > 480 min).(EN 374). The use of protective gloves should conform to the specifications of EC directive 89/686/EC and the resultant standard EN374.

Additional advice: The data are based on own tests, literature data and information of glove manufacturers or derived from similar substances. Because several factors may influence these properties (eg temperature), one should take into account the fact that the life of a chemical gloves in practice may be considerably shorter than indicated by the permeation test. The high diversity of types of use are prescribed by the manufacturer.

Eye protection : Safety goggles. EN 166.

Body Protection : Safety clothes : long sleeved clothing EN13688

Personal protective equipment : Educate and train employees in the safe use and handling of this product. Emergency showers and eye wash stations should be available.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

9.1 Basic physical and chemical properties:

SAFETY DATA SHEET

According to OSHA Hazard Communication Standard Rule - 29 CFR 1910.1200 and the Canadian Hazardous Products Act



Lipla EsOne Yellow HD Series Ink

SUBID:000001013263

Version 1

Print Date 05-12-2016

Revision Date 05-12-2016

9.1.1 Appearance:

State of matter	: Liquid
Form	: liquid
Color	: Yellow
Odor	: Sweetish smell
Odor threshold	: No data available

9.1.2 Important health, safety and environmental information:

pH	: Not applicable	
Melting point/range	: < 0 °C	Method: Literature.
Boiling point/range	: > 100 °C	Method: Literature.
Flash point	: > 100 °C	Method: Literature.
Autoignition temperature	: No data available	
Vapour pressure	: No data available	
Relative vapour density	: No data available	
Relative density	: 1.058	Method: Literature.
Density	: No data available	
Solubility/qualitative	: Immiscible with water.	
Water solubility	: No data available	
Partition coefficient (n-octanol/water)	: No data available	
Viscosity, kinematic	: No data available	
Lower explosion limit	: No data available	
Upper explosion limit	: No data available	
Evaporation rate	: No data available	
Flammability (solid, gas)	: Not flammable.	Method: Literature.

9.2 Other information:

VOC content	: 184.1 g/l
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SECTION 10. STABILITY AND REACTIVITY

10.1 Reactivity:

Reactivity	: Reactivity is not to be expected under normal conditions of temperature and pressure.
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10.2 Chemical stability:

Stability	: The product is stable under normal conditions of storage and use.
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10.3 Possibility of hazardous reactions:

Hazardous reactions	: The product is stable under normal conditions of storage and use.
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10.4 Conditions to avoid:

SAFETY DATA SHEET

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Lipla EsOne Yellow HD Series Ink

SUBID:000001013263

Version 1

Print Date 05-12-2016

Revision Date 05-12-2016

Conditions to avoid : No data available

10.5 Materials to avoid:

Materials to avoid : No data available

10.6 Hazardous decomposition products:

Hazardous decomposition products : No specified dangerous decomposition products are known.

SECTION 11. TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects

Toxicokinetics, metabolism and distribution:

No data available

Acute effects (toxicity tests):

➤ Acute Toxicity

• Oxybis(methyl-2,1-ethanediyl) diacrylate

	Effect dose	Species	Value	Method
Acute oral toxicity	LD 50	Rat	4,626 mg/kg	
			Experimental result, Supporting study	
Acute dermal toxicity	LD 50	Rabbit	> 2,000 mg/kg	

• N-vinyl caprolactam

	Effect dose	Species	Value	Method
Acute oral toxicity	LD 50	Rat	+/- 1,400 mg/kg	
			Experimental result, Supporting study	
Acute dermal toxicity	LD 50	Rat	> 2,000 mg/kg	
Acute inhalation toxicity	LC 50	Rat	> 1.6 mg/l/ 8 h	
			Vapor Experimental result, Key study	

• Isobornyl acrylate

	Effect dose	Species	Value	Method
Acute oral toxicity	LD 50	Rat	4,350 mg/kg	
			Experimental result, Key study	
Acute dermal toxicity	LD 50	Rabbit	> 3,000 mg/kg	

• Phenoxyethylacrylate

	Effect dose	Species	Value	Method
Acute oral toxicity	LD 50	Rat	5,000 mg/kg	
			Experimental result, Key study	

SAFETY DATA SHEET

According to OSHA Hazard Communication Standard Rule - 29 CFR 1910.1200 and the Canadian Hazardous Products Act



Lipla EsOne Yellow HD Series Ink

SUBID:000001013263

Version 1

Print Date 05-12-2016

Revision Date 05-12-2016

- Isodecyl acrylate

	Effect dose	Species	Value	Method
Acute oral toxicity	LD 50	Rat	+/- 4,435 mg/kg	
	Read-across from supporting substance (structural analogue or surrogate), Key study			
Acute dermal toxicity	LD 50	Rabbit	7,522 mg/kg	
Acute inhalation toxicity	LC 50	Rat	> 1.19 mg/l/ 8 h	
	Vapor Read-across from supporting substance (structural analogue or surrogate), Key study			

- Phosphine oxide, diphenyl(2,4,6-trimethylbenzoyl)-

	Effect dose	Species	Value	Method
Acute oral toxicity	LD 50	Rat	> 5,000 mg/kg	
	Experimental result, Key study			
Acute dermal toxicity	LD 50	Rat	> 2,000 mg/kg	

- phenyl bis(2,4,6-trimethylbenzoyl)-phosphine oxide

	Effect dose	Species	Value	Method
Acute oral toxicity	LD 50	Rat	> 2,000 mg/kg	
	Experimental result, Key study			
Acute dermal toxicity	LD 50	Rat	> 2,000 mg/kg	

- Hexamethylene diacrylate

	Effect dose	Species	Value	Method
Acute oral toxicity	LD 50	Rat	> 5,000 mg/kg	
	Experimental result, Key study			
Acute dermal toxicity	LD 50	Rabbit	3,650 mg/kg	
Acute inhalation toxicity	LC 0	Rat	0.41 mg/l/ 7 h	
	Vapor Experimental result, Key study			

➤ Specific target organ toxicity (STOT):

Specific effects	Affected organs
May cause irritation of respiratory tract.	

➤ Irritant and corrosive effects:

- Oxybis(methyl-2,1-ethanediyl) diacrylate

	Exposure time	Species	Evaluation	Method
Primary irritation to the skin	24 - 72 hrs	Rabbit	Category 2	in vivo
Irritation to eyes		Rabbit	Category 1	in vivo
	OECD GHS			

- Isodecyl acrylate

	Exposure	Species	Evaluation	Method
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SAFETY DATA SHEET

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Lipla EsOne Yellow HD Series Ink

SUBID:000001013263

Version 1

Print Date 05-12-2016

Revision Date 05-12-2016

	time
Irritation to eyes	Mildly Irritating

- phenyl bis(2,4,6-trimethylbenzoyl)-phosphine oxide

	Exposure time	Species	Evaluation	Method
Irritation to eyes	24 - 72 hrs	Rabbit	Not Classified	in vivo
	EU			

- Hexamethylene diacrylate

	Exposure time	Species	Evaluation	Method
Primary irritation to the skin Irritation to eyes		Rabbit	Category 2 Irritating	in vivo

➤ Irritation to the respiratory tract:

May cause irritation of respiratory tract.

➤ Sensitisation:

Species	Evaluation	Method
	May cause sensitization by inhalation and skin contact.	

➤ Aspiration hazard:

No data available

Sub-acute, sub-chronic and chronic toxicity

➤ Repeated dose toxicity:

Based on available data, the classification criteria are not met.

➤ Specific target organ toxicity (STOT):

No information available.

➤ CMR effects (carcinogenicity, mutagenicity and toxicity for reproduction):

- Carcinogenicity

Based on available data, the classification criteria are not met.

- Mutagenicity

Based on available data, the classification criteria are not met.

SAFETY DATA SHEET

According to OSHA Hazard Communication Standard Rule - 29 CFR 1910.1200 and the Canadian Hazardous Products Act



Lipla EsOne Yellow HD Series Ink

SUBID:000001013263

Version 1

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Revision Date 05-12-2016

- Genetic toxicity in vitro

Based on available data, the classification criteria are not met.

- Genetic toxicity in vivo

Based on available data, the classification criteria are not met.

- Teratogenicity

Based on available data, the classification criteria are not met.

- Toxicity to reproduction

Based on available data, the classification criteria are not met.

➤ Summarised evaluation of the CMR properties:

Carcinogenicity	:	Based on available data, the classification criteria are not met.
Mutagenicity	:	Based on available data, the classification criteria are not met.
Teratogenicity	:	Based on available data, the classification criteria are not met.
Toxicity to reproduction	:	Based on available data, the classification criteria are not met.

Experiences made in practice:

SECTION 12. ECOLOGICAL INFORMATION

12.1 Ecotoxicity:

• Oxybis(methyl-2,1-ethanediyl) diacrylate

	Effect dose	Exposure time	Species	Value
Toxicity to fish	LC 50	96 h	Leuciscus idus	2.2 to 4.64 mg/l
	Method: Static experimental result			
Toxicity to daphnia	EC 50	48 h		22.3 mg/l
	Method: Static experimental result			

• Isodecyl acrylate

	Effect dose	Exposure time	Species	Value
Toxicity to bacteria	EC50	0.5 h	Pseudomonas putida (bacteria)	> 10,000 mg/l
	Method: Literature.			

• phenyl bis(2,4,6-trimethylbenzoyl)-phosphine oxide

	Effect dose	Exposure time	Species	Value
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SAFETY DATA SHEET

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Lipla EsOne Yellow HD Series Ink

SUBID:000001013263

Version 1

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Toxicity to fish	LC 50 96 h experimental result	> 0.09 mg/l
Toxicity to daphnia	EC 50 48 h experimental result	> 1.175 mg/l
Toxicity to bacteria	EC50 3 h Bacteria Method: OECD-Guideline No.209; 88/302/EEC C.11	> 100 mg/l

- Hexamethylene diacrylate

	Effect dose	Exposure time	Species	Value
Toxicity to fish	LC 50	96 h	Leuciscus idus	4.6 to 10 mg/l
	Method: Static experimental result			
Toxicity to daphnia	EC 50	48 h		2.6 mg/l
	Method: Static experimental result			
Toxicity to bacteria	EC50	0.5 h		ca. 270 mg/l
	Method: OECD-Guideline No.209; 88/302/EEC C.11			

12.2 Persistence and degradability:

Physico-chemical removability

No data available

Chemical Oxygen Demand (COD)

No data available

Adsorbed organic bound halogens (AOX)

Product does not contain any organic halogens.

Biodegradation

- Oxybis(methyl-2,1-ethanediyl) diacrylate
- N-vinyl caprolactam
- Isobornyl acrylate
- Phenoxyethylacrylate
- Tetrahydrofurfuryl acrylate
- 2-Propenoic acid ,1-6-hexanediyl ester, polymer with 2-aminoethanol
- Isodecyl acrylate

No data available

- Phosphine oxide, diphenyl(2,4,6-trimethylbenzoyl)-
- phenyl bis(2,4,6-trimethylbenzoyl)-phosphine oxide

SAFETY DATA SHEET

According to OSHA Hazard Communication Standard Rule - 29 CFR 1910.1200 and the Canadian Hazardous Products Act



Lipla EsOne Yellow HD Series Ink

SUBID:000001013263

Version 1

Print Date 05-12-2016

Revision Date 05-12-2016

Value	Exposure time	Method	Evaluation
1 %	28 d	OECD 301B	According to the results of tests of biodegradability this product is not readily biodegradable.

- Hexamethylene diacrylate

Value	Exposure time	Method	Evaluation
89 %	14 d	OECD 301D Readily biodegradable	According to the results of tests of biodegradability this product is considered as being readily biodegradable.

Biochemical Oxygen Demand (BOD)

No data available

12.3 Bioaccumulative potential:

Partition coefficient (n-octanol/water)

No data available

Bioconcentration factor (BCF)

Bioaccumulation is unlikely.

12.4 Mobility in soil:

No information available.

Henry's constant

Value	Temperature	Method
		No information available.

Transport between environmental compartments

Transport between environmental compartments is not expected.

12.5 Results of PBT and vPvB assessment:

This product does not meet the criteria concerning PBT or vPvB substances as described in Annex XIII of the REACH regulation (1907/2006 EC)

12.6 Other adverse effects:

This substance is not in Annex I of Regulation (EC) 2037/2000 on substances that deplete the ozone layer. Avoid infiltration in to drinking supplies, waste water or soil. An environmental hazard cannot be excluded in the event of unprofessional handling or disposal.

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Lipla EsOne Yellow HD Series Ink

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Version 1

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SECTION 13. DISPOSAL CONSIDERATIONS

Waste disposal methods

Waste disposal should be in accordance with existing federal, state and local environmental control laws. Recover nonusable free liquid and/or contaminated water, and dispose of in an approved and permitted treatment system. Discharge to sewer may require approval of permitting authority and may require pretreatment.

Empty containers.

Recondition or dispose of empty container in accordance with governmental regulations.

US. RCRA Hazardous Waste Classification (40 CFR 261)

If discarded in its purchased form, this product would not be a hazardous waste either by listing or by characteristic. However, under RCRA, it is the responsibility of the product user to determine at the time of disposal, whether a material containing the product or derived from the product should be classified as a hazardous waste.

SECTION 14. TRANSPORT INFORMATION

Not regulated according to IMO/IMDG.

Not regulated according to ICAO/IATA aircraft only.

Not regulated according to ICAO/IATA passenger and cargo aircraft.

Not Regulated according to US Department of Transportation (DOT) 49 CFR

Not regulated according to Transport of Dangerous Goods (TDG)

SECTION 15. REGULATORY INFORMATION

US. Toxic Substances Control Act (TSCA)

All components of this product are listed, or excluded from listing, on the United States Environmental Protection Agency Toxic Substance Control Act (U.S. EPA TSCA) 8(b) inventory.

US. OSHA Classification

This product is hazardous under the criteria of the Federal OSHA Hazard Communication Standard 29 CFR 1910.1200.

US. SARA 311/312 Hazard Categories

Acute Health Hazard.

US. EPA Emergency Planning and Community Right-To-Know Act (EPCRA) SARA Title III Section 313 Toxic Chemicals (40 CFR 372.65) - Supplier Notification Required

SAFETY DATA SHEET

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- Phenoxyethylacrylate :
 - : De minimis concentration: 1.0 %
 - : Reportable threshold: 25,000 lbs
 - : Reportable threshold: 10,000 lbs

US. EPA CERCLA Hazardous Substances (40 CFR 302)

State Right-to-Know Information

The following chemicals are specifically listed by individual states. Other product specific health and safety data in other sections of the MSDS may also be applicable for state requirements. For details on your regulatory requirements you should contact the appropriate agency in your state.

US. New Jersey Worker and Community Right-to-Know Act (New Jersey Statute Annotated Section 34:5A-5)

	<u>CAS-No.</u>	<u>Concentration [%]</u>
• Phenoxyethylacrylate	48145-04-6	>= 10.0 - <= 20.0
• Phenoxyethylacrylate	48145-04-6	>= 10.0 - <= 20.0

US. Pennsylvania Worker and Community Right-to-Know Law (34 Pa. Code Chap. 301-323)

	<u>CAS-No.</u>	<u>Concentration [%]</u>
• Phenoxyethylacrylate	48145-04-6	>= 10.0 - <= 20.0

US. Rhode Island Hazardous Substances Right-to-Know Act (R.I. Gen. Laws Section 28-21-1 et. seq.)

	<u>CAS-No.</u>	<u>Concentration [%]</u>
• Phenoxyethylacrylate	48145-04-6	>= 10.0 - <= 20.0

US. Massachusetts, New Jersey, Pennsylvania or Rhode Island Right to Know Substance Lists : See Section 2.

Canadian WHMIS Classification

E : Corrosive Material

Canadian Environmental Protection Act (CEPA)

This product contains the following components listed on the Canadian NDSL list. All other components are on the Canadian DSL list.

- Tetrahydrofurfuryl acrylate

SECTION 16. OTHER INFORMATION

Text of H-phrases referred to under headings 2 and 3:

SAFETY DATA SHEET

According to OSHA Hazard Communication Standard Rule - 29 CFR 1910.1200 and the Canadian Hazardous Products Act



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Version 1

Print Date 05-12-2016

Revision Date 05-12-2016

- | | |
|------|---|
| H315 | Causes skin irritation. |
| H317 | May cause an allergic skin reaction. |
| H318 | Causes serious eye damage. |
| H335 | May cause respiratory irritation. |
| H351 | Suspected of causing cancer (state route of exposure if it is conclusively proven that no other routes of exposure cause the hazard). |
| H372 | Causes damage to organs (or state all organs affected, if known) through prolonged or repeated exposure (state route of exposure if it is conclusively proven that no other routes of exposure cause the hazard). |

This SDS is replacing SDS number 1859C