

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

1.1. Product identifier

Product name **HydraJET® 2110K**

Synonym(s) Not available.

Registration number REACH Not applicable (mixture)

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

Recommended use Ink for inkjet printing

1.3. Details of the supplier of the safety data sheet

Company identification **MYLAN GROUP**

Long Duc Industrial Park
Tra Vinh City, Tra Vinh Province, Vietnam
Tel. +84-294-3846-997
Fax +84-294-3846-998
E-mail address: info@mylangroup.com

1.4. Emergency telephone number

Name	Address	City	Telephone	Website
Poison Control Center	Bach Mai Hospital 78 Giai Phong Avenue Dong Da District	Ha Noi	+84 (0)243 869 3731	www.chongdoc.org.vn

Hours of operation: 8.00-17.00 Monday-Friday

Section 2: Hazard(s) identification

2.1. Classification of the substance or mixture

Product definition : Mixture

Classification according to Regulation (EC) No 1272/2008 (CLP):

Physical hazards Not classified.

Health hazards Serious eye damage (Category 1), H318
Reproductive toxicity (Category 1B), H360D

2.2. Label elements

Labeling according to Regulation (EC) No 1272/2008 (CLP):

Pictograms



GHS08

GHS05

Signal word	Danger
Hazard statements	H318- Causes serious eye damage H360D May damage the unborn child
Precautionary statements	
Prevention	P203: Obtain, read and follow all safety instructions before use. P264+P265-Wash hands (and ...) thoroughly after handling. Do not touch eyes. P280-Wear protective gloves/protective clothing/eye protection/face protection/hearing protection/...
Response	P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. P318: if exposed or concerned, get medical advice. P337+P317-If eye irritation persists: Get medical help.
Storage	P405 - Store locked up.
Disposal	P501- Dispose of contents/container in accordance with local/regional/national/international regulations.

2.3. Other hazards

PBT Substances None

vPvB Substances: None

Other hazards The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

The substance/mixture contain Substance of Very High Concern (SVHC)

Name of substance	CAS No	EC No	Listed in	Remarks
1-Methyl-2-pyrrolidone	872-50-4	212-828-1	Candidate list	Repr.A57c

Legend:

Candidate list: Substances meeting the criteria referred to in Article 57 and for eventual inclusion in Annex XIV

Repr. A57c Toxic for reproduction (article 57c)

Section 3: Composition/information on ingredients

3.1. Substance No

3.2. Mixtures

Hazardous Components (Chemical Name)/ REACH Registration No.	CAS Number	EC Number	Concentration (%)	Classification
Water	7732-18-5	231-791-2	>74	Not Classified
1,3-propanediol	504-63-2	207-997-3	≤ 8	Not Classified
1,2-Hexanediol	6920-22-5	230-029-6	≤5	Eye Irrit. 2,H319
1-Methyl-2-pyrrolidinone	872-50-4	212-828-1	≤6	Skin Irrit. 2: H315 Eye Irrit. 2: H319

				STOT SE 3: H335 Repr. 1B: H360D Concentration limits: >= 10 %: STOT SE 3, H335;
Gamma butyrolactone	96-48-0	202-509-5	<5	Acute Tox. 4, H302 Eye Dam. 1, H318 STOT SE 3, H336
Color	Proprietary	Proprietary	<2	Not Classified

Section 4: First-aid measures

4.1. Description of first aid measures

In case of:

Inhalation	Move person to fresh air immediately. If symptoms persist, get immediate medical attention.
Skin contact	In case of contact, immediately remove contaminated clothing and flush skin with copious amounts of water. Wash clothing separately before reuse. Get medical attention, if needed.
Eye contact	In case of eye contact, remove contact lens and rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Get medical attention immediately.
Ingestion	Rinse mouth out with water. If the material is swallowed, get immediate medical attention or advice - Do not induce vomiting. Never give anything by mouth to an unconscious person. Get medical attention immediately.

4.2. Most important symptoms/ effects, acute and delayed

The most important known symptoms and effects are described in the labelling (see section 2.2) and/or in section 11

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

No special treatment needed, treat symptomatically.

Section 5: Fire-fighting measures

5.1. Extinguishing media

Suitable extinguishing media sand, carbon dioxide (CO₂) or dry chemical.

Unsuitable extinguishing media Not available.

5.2. Special hazards arising from the substance or mixture

In case of fire, smoke and other combustion products may be formed, the inhalation of such combustion products can have serious adverse effects on health.

5.3. Advice for firefighters

Wear suitable protective suit and self-contained breathing apparatus.

Section 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

For non-emergency personnel
(a) the wearing of suitable protective equipment (including personal protective equipment referred to under

section 8 of the safety data sheet) to prevent any contamination of skin, eyes and personal clothing;
 (b) removal of ignition sources, provision of sufficient ventilation, control of dust; and
 (c) emergency procedures such as the need to evacuate the danger area or to consult an expert.
 For personal protection see section 8.

6.2. Environmental precautions

Do not flush into surface water or sanitary sewer system.

6.3. Methods and materials for containment and cleaning up

Absorb or cover with dry earth, sand or other non-combustible material and transfer to sealable containers for disposal. Remove all sources of ignition. Use spark-proof tools and explosion-proof equipment.

6.4. Reference to other sections

For further and detailed information see section 8 and 13.

Section 7. Handling and storage

7.1 Precautions for safe handling

Advice on protection against fire and explosion

Keep away from open flames, hot surfaces and sources of ignition. Take precautionary measures against static discharge.

Hygiene measures

Change contaminated clothing. Wash hands after working with substance. For further precautions information see section 2.2.

7.2 Conditions for safe storage, including any incompatibilities

Keep containers tightly closed in a dry, cool and well-ventilated place. Keep away from heat, sparks and flame.

7.3 Specific end uses

No specific uses are stipulated.

Section 8. Exposure controls/personal protection

8.1 Control parameters National limit values

Occupational exposure limit values (Workplace Exposure Limits)

Country	Name of agent	CAS No	Notation	Identifier	TWA (ppm)	TWA (mg/m ³)	STEL (ppm)	STEL (mg/m ³)	Source
EU	N-methyl-2-pyrrolidone	872-50-4		IOELV	10	40	20	80	2009/161/EU
GB	N-methyl-2-pyrrolidone	872-50-4		WEL	10	40	20	80	EH40/2005

Notation

STEL Short-term exposure limit: a limit value above which exposure should not occur and which is related to a 15-minute period (unless otherwise specified)

TWA Time-weighted average (long-term exposure limit): measured or calculated in relation to a reference period of 8 hours time-weighted average (unless otherwise specified)

i Inhalable fraction

r Respirable fraction

particle as airborne particles

H absorbed through the skin

Relevant DNELs/DMELs/PNECs and other threshold levels

- human health values

	End point	Threshold level	Protection goal, route of exposure	Used in	Exposure time
1,2 hexanediol	DNEL	17.5 mg/kg	human, dermal	worker (industry)	chronic - systemic effects
	DNEL	123 mg/m ³	human, inhalatory	worker (industry)	chronic - systemic effects
1-Methyl-2-pyrrolidinone	DNEL	14.4 mg/m ³	human, inhalatory	worker (industry)	chronic – systemic effects
	DNEL	40 mg/m ³	human, inhalatory	worker (industry)	chronic – local effects
	DNEL	4.8 mg/kg bw/day	human, dermal	worker (industry)	chronic – systemic effects
γ-Butyrolactone	DNEL	19 mg/kg	human, dermal	worker (industry)	chronic - systemic effects
	DNEL	130 mg/m ³	human, inhalatory	worker (industry)	chronic - systemic effects

• environmental values

	End point	Threshold level	Environmental compartment
1-Methyl-2-pyrrolidinone	PNEC	0.25 mg/l	freshwater
	PNEC	0.025 mg/l	marine water
	PNEC	10 mg/l	sewage treatment plant (STP)
	PNEC	1.09 mg/k	freshwater sediment
	PNEC	0.109 mg/kg	marine sediment
	PNEC	0.07 mg/kg	soil
γ-Butyrolactone	PNEC	0,02 mg/l	marine sediment
	PNEC	0,0056 mg/l	marine water
	PNEC	0,56 mg/l	air
	PNEC	0,24 mg/l	freshwater sediment
	PNEC	0,056 mg/l	freshwater
	PNEC	452 mg/l	sewage treatment plant (STP)

8.2 Exposure controls

Individual protection measures, such as personal protective equipment

Eye/face protection



Wear safety glasses; chemical goggles (if splashing is possible).
Eye wash fountain and emergency showers are recommended.

Skin and body protection

Protective suit, Safety shoes.

Hand protection



Wear appropriate chemical resistant gloves.

Respiratory protection	Provide adequate ventilation. In case of insufficient ventilation wear suitable respiratory equipment.
Thermal hazards	Not available.
General hygiene considerations	Do not get this material in contact with skin. Avoid contact with skin, eyes and clothing. When using, do not eat, drink or smoke. Wash hands before breaks and immediately after handling the product. Laundry contaminated clothing before reuse.

Section 9. Physical and chemical properties

9.1 Information on basic physical and chemical properties

Physical state	Liquid
Color	Black
Odor	Characteristic
Melting point/freezing point;	Not available.
Boiling point or initial boiling point and boiling range	>90°C
Flammability (solid, gas)	Not available.
Lower and upper explosion limit	Not available.
Flash point	>93.3°C (closed-cup)
Auto-ignition temperature	Not available.
Decomposition temperature	Not available.
pH	Not available.
Viscosity (cPs)	Not available.
Solubility(ies)	Soluble in water
Partition coefficient n-octanol/water (log value)	Not available.
Vapor pressure	Not available.
Density and/or relative density	Not available.
Relative vapour density	Not available.
Particle characteristics	Not available.
9.2 Other information	Not available.

Section 10. Stability and reactivity

10.1 Reactivity	Not available.
10.2 Chemical stability	Stable at normal conditions.
10.3 Possibility of hazardous reactions	None known.
10.4 Conditions to avoid	Heat, flames and sparks.
10.5 Incompatible materials	Not available.
10.6 Hazardous decomposition products	Hazardous combustion products: see section 5

Section 11. Toxicological information

11.1 Information on hazard classes as defined in Regulation (EC) No 1272/2008

Acute toxicity value

Components	Species	Test results
1,2 hexanediol (CAS 6920-22-5)		
Oral (LD50)	Rat - male	5.339 - 6.470 mg/kg
Dermal (LD50)	Rat - female	6.166 mg/kg
1-Methyl-2-pyrrolidinone (CAS 872-50-4)		
Oral (LD50)	Rat	4,150 mg/kg
Dermal (LD50)	Rat	4 h - > 5.1 mg/l
Dermal (LD50)	Rat	> 5,000 mg/kg
γ-butyrolactone (CAS 96-48-0)		
Oral (LD50)	Rat	1.582 mg/kg
Inhalation (LC50)	Rat - male and female	4 h - > 5,1 mg/l
Dermal (LD50)	Guinea pig	-5.000 mg/kg
Skin corrosion/irritation	Not available.	
Serious eye damage/eye irritation	Causes serious eye damage	
Respiratory or skin sensitisation	Not available.	
Germ cell mutagenicity	Not available.	
Carcinogenicity	Not available.	
Reproductive toxicity	May damage the unborn child	
STOT-single exposure;	Not available.	
STOT-repeated exposure;	Not available.	
Aspiration hazard	Not available.	

11.2 Information on other hazards

11.2.1 Endocrine disrupting properties

Not available.

11.2.2 Other information

Not available.

Section 12. Ecological information

12.1 Toxicity

Aquatic toxicity

Components

Species

Test Results

1,2 hexanediol (CAS 6920-22-5)

Fish	LC50	Oncorhynchus mykiss (rainbow trout)	> 1,000 mg/l
Daphnia and other aquatic invertebrates	EC10	Freshwater algae	> 110 mg/L - 48h
Microorganisms	EC0	Activated sludge	>1000 mg/L – 3h

1-Methyl-2-pyrrolidinone (CAS 872-50-4)

Fish	LC50	Oncorhynchus mykiss (rainbow trout)	> 500 mg/l - 96 h
Daphnia and other aquatic invertebrates	EC50	Daphnia magna (Water flea)	4,897 mg/l - 48 h
Algae	EC50	Desmodesmus subspicatus (green algae)	672.8 mg/l - 72 h

γ-butyrolactone (CAS 96-48-0)

Fish	static test LC50	Lepomis macrochirus (Bluegill sunfish)	56 mg/l - 96 h
Daphnia and other aquatic invertebrates	static test EC50	Daphnia magna (Water flea)	>500 mg/l - 48 h
Algae	IC50	Desmodesmus subspicatus (green algae)	1.000 mg/l - 72 h
Bacteria	EC20	activated sludge	4.518 mg/l – 40 hours

12.2 Persistence and degradability

Data are not available.

12.3 Bioaccumulative potential

Does not significantly accumulate in organisms.

12.4 Mobility in soil

Data are not available.

12.5 Results of PBT and vPvB assessment

According to the results of its assessment, this substance is not a PBT or a vPvB

12.6 Endocrine disrupting

Does not contain an endocrine disruptor (EDC) in a concentration of $\geq 0,1\%$.

properties

12.7 Other adverse effects Data are not available.

Section 13. Disposal considerations

13.1 Waste treatment methods

Product Dispose of waste material in accordance with local, state and federal pollution regulations.

Contaminated packaging When disposing of an empty container, dispose after removing contents materials completely. Only store in correctly labelled containers.

Section 14. Transport information

14.1 UN number

ADR/RID: - **AND:-** **IMDG:** - **IATA:** -

14.2 UN proper shipping name

ADR/RID: Not dangerous goods **AND:** Not dangerous goods **IMDG:** Not dangerous goods **IATA:** Not dangerous goods

14.3 Transport hazard class(es)

ADR/RID: - **AND:** - **IMDG:** - **IATA:** -

14.4 Packing group

ADR/RID: - **AND:** - **IMDG:** - **IATA:** -

14.5 Environmental hazards

ADR/RID: None **AND:** None **IMDG:** None **IATA:** None

14.6 Special precautions for user

Not applicable

14.7 Maritime transport in bulk according to IMO instruments

Not applicable

Section 15 - Regulatory Information

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

EU legislation Regulation (EC) No 1907/2006 of the European Parliament and of the Council of 18 December 2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH) (as amended).

Guidance Workplace Exposure Limits EH40. Safety Data Sheets for Substances and Preparations.

15.2. Chemical safety assessment No chemical safety assessment has been carried out.

Section 16 - Other Information

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