



MATERIAL SAFETY DATA SHEET

1. Chemical product and company identification

A. Product name Q2273A

B. Recommended use and Limitations on use
Recommended use Inkjet printing

C. Supplier information
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2. Hazards identification

A. Hazard category/Classification
Physical hazards Not classified.
Health hazards Not classified.
Environmental hazards Not classified.

B. Warning label items including precautionary statement
• **Pictogram** None.
• **Signal word** None.
• **Hazard statement** None.
• **Precautionary statement** None.

C. Other hazards not included in the hazard category criteria (e.g. dust explosion hazard) Carbon black in this preparation, due to its bound form, does not present this carcinogenic risk. Carbon black is classified by the IARC as a Group 2B carcinogen (the substance is possibly carcinogenic to humans). Potential routes of overexposure to this product are skin and eye contact. Inhalation of vapor and ingestion are not expected to be significant routes of exposure for this product under normal use conditions. Complete toxicity data are not available for this specific formulation. None of the other ingredients in this preparation are classified as carcinogens according to ACGIH, EU, IARC, MAK, NTP or OSHA.

Supplemental information None.

3. Composition/information on ingredients

Chemical identity	Common and alternative names	CAS number	ID number	Content in percent (%)
Water		7732-18-5	KE-35400	80-95
2-pyrrolidone		616-45-5	KE-29978	<5
Carbon black		1333-86-4	KE-04682	<5

Composition comments This ink supply contains an aqueous ink formulation.

4. First aid measures

A. In case of eye contact Do not rub eyes. Immediately flush with large amounts of clean, warm water (low pressure) for at least 15 minutes or until particles are removed. If irritation persists get medical attention.

B. In case of skin contact Wash affected areas thoroughly with mild soap and water. Get medical attention if irritation develops or persists.

C. In case of inhalation	Remove to fresh air. If symptoms persist, get medical attention.
D. In case of swallowing	If ingestion of a large amount does occur, seek medical attention.
E. Note to physician	Not available.

5. Fire-fighting measures

A. Suitable (and unsuitable) extinguishing media

Suitable extinguishing media	Dry chemical, CO ₂ , water spray or regular foam.
Unsuitable extinguishing media	None known.

B. Specific hazards arising from the chemical (example: hazardous combustion products) Not available.

C. Specific methods of fire-fighting Not available.

Specific methods None established.

6. Accidental release measures

A. Personal precautions, protective equipment and emergency measures Wear appropriate personal protective equipment.

B. Environmental precautions Do not let product enter drains. Do not flush into surface water or sanitary sewer system.

C. Methods and materials for containment and cleaning up Dike the spilled material, where this is possible. Absorb with inert absorbent such as dry clay, sand or diatomaceous earth, commercial sorbents, or recover using pumps.

7. Handling and storage

A. Precautions for safe handling Avoid contact with skin, eyes and clothing.

B. Conditions for safe storage (including any incompatibilities) Keep out of the reach of children. Keep away from excessive heat or cold.

8. Exposure controls/personal protection

A. Exposure limit values, biological limit values, etc

Korea. OELs. Standards for Exposure to Chemical Substances and Physically Hazardous Factors

Components	Type	Value
Carbon black (CAS 1333-86-4)	TWA	3.5 mg/m ³

US. ACGIH Threshold Limit Values

Components	Type	Value	Form
Carbon black (CAS 1333-86-4)	TWA	3 mg/m ³	Inhalable fraction.

Biological limit values No biological exposure limits noted for the ingredient(s).

Exposure guidelines Exposure limits have not been established for this product.

B. Appropriate engineering controls Use in a well ventilated area. Provide adequate ventilation.

C. Personal protective equipment

- **Respiratory protection** For use other than intended use (such as in the event of a large spill), goggles and respirators may be required.
- **Eye protection** Not required under intended use.
- **Hand protection** Not available.
- **Body protection** Protected gloves not required under intended use.

Hygiene measures Handle in accordance with good industrial hygiene and safety practice.

9. Physical and chemical properties

A. Appearance

Physical state	Liquid.
Form	Not available.
Color	Black.

B. Odor Not available.

C. Odor threshold	Not available.
D. pH	7.8 - 8.4
E. Melting point/freezing point	Not available.
F. Boiling point, initial boiling point, and boiling range	Not determined
G. Flash point	> 200.0 °F (> 93.3 °C) Pensky-Martens Closed Cup
H. Evaporation rate	Not determined
I. Flammability (solid, gas)	Not available.
J. Upper/lower limit on flammability or explosive limits	
Flammability limit - lower (%)	Not determined
Flammability limit - upper (%)	Not available.
Explosive limit - lower (%)	Not available.
Explosive limit - upper (%)	Not available.
K. Vapor pressure	Not determined
L. Solubility	
Solubility (water)	Soluble in water
M. Vapor density	Not available.
N. Specific gravity	Not available.
O. n-octanol/water partition coefficient	Not available.
P. Auto-ignition temperature	Not available.
Q. Decomposition temperature	Not available.
R. Viscosity	>= 2 cp
S. Molecular weight	Not available.
Other data	
Oxidizing properties	Not determined
VOC	< 40 g/l

10. Stability and reactivity

A. Stability and hazardous reaction potential	
Stability	Stable under recommended storage conditions.
Hazardous reaction potential	Will not occur.
B. Conditions to avoid (e.g. static discharge, shock or vibration, etc)	Not available.
C. Incompatible materials	Incompatible with strong bases and oxidizing agents.
D. Hazardous decomposition products	Upon decomposition, this product may yield gaseous nitrogen oxides, carbon monoxide, carbon dioxide and/or low molecular weight hydrocarbons.

11. Toxicological information

A. Information on likely routes of exposure	
• Respiratory organs	Under normal conditions of intended use, this material is not expected to be an inhalation hazard.
• Skin	Contact with skin may result in mild irritation.
• Eyes	Contact with eyes may result in mild irritation.
• Mouth	Health injuries are not known or expected under normal use.
B. Information on health hazards	
• Acute toxicity (list all possible routes of exposure)	Based on available data, the classification criteria are not met.

Components	Species	Test Results
2-pyrrolidone (CAS 616-45-5)		
Acute		
Oral		
LD50	Rat	> 5000 mg/kg

Components	Species	Test Results
Carbon black (CAS 1333-86-4)		
Acute		
Oral		
LD50	Rat	> 10000 mg/kg
• Corrosivity or irritation to the skin	Based on available data, the classification criteria are not met.	
• Serious eye damage/eye irritation	Based on available data, the classification criteria are not met.	
• Respiratory sensitization	Based on available data, the classification criteria are not met.	
• Skin sensitization	Based on available data, the classification criteria are not met.	
• Carcinogenic properties /Carcinogenicity	Based on available data, the classification criteria are not met.	
Carbon black is classified as a carcinogen by the IARC (possibly carcinogenic to humans, Group 2B) and by the State of California under Proposition 65. In their evaluations of carbon black, both organizations indicate that exposure to carbon black, per se, does not occur when it remains bound within a product matrix, specifically, rubber, ink, or paint. Carbon black is present only in a bound form in this preparation.		
IARC Monographs. Overall Evaluation of Carcinogenicity		
Carbon black (CAS 1333-86-4)	2B Possibly carcinogenic to humans.	
• Mutagenic properties /Mutagenicity	Based on available data, the classification criteria are not met.	
• Reproductive toxicity	Based on available data, the classification criteria are not met.	
• Specific target organ toxicity - single exposure	Based on available data, the classification criteria are not met.	
• Specific target organ toxicity - repeated exposure	Based on available data, the classification criteria are not met.	
• Aspiration hazard	Based on available data, the classification criteria are not met.	

12. Ecological information

A. Ecotoxicity

Product	Species	Test Results
Q2273A		
Aquatic		
<i>Acute</i>		
Fish	LC50	Fathead minnow (<i>Pimephales promelas</i>) > 750 mg/l, 96 hours
Components	Species	Test Results

2-pyrrolidone (CAS 616-45-5)

Aquatic		
Crustacea	EC50	Water flea (<i>Daphnia pulex</i>) 13.21 mg/l, 48 hours

B. Persistence/degradability Not available.

C. Bioaccumulative potential

Octanol/water partition coefficient log Kow
2-pyrrolidone -0.85

D. Mobility in soil Not available.

E. Other adverse effects Not available.

13. Disposal considerations

- A. Method of disposal** Do not allow this material to drain into sewers/water supplies. Dispose of waste material according to Local, State, Federal, and Provincial Environmental Regulations.
- HP's Planet Partners (trademark) supplies recycling program enables simple, convenient recycling of HP original inkjet and LaserJet supplies. For more information and to determine if this service is available in your location, please visit <http://www.hp.com/recycle>.
- B. Disposal considerations (including disposal of contaminated containers or packaging)** Not available.

14. Transport information

DOT

Not regulated as dangerous goods.

IATA

Not regulated as dangerous goods.

IMDG

Not regulated as dangerous goods.

ADR

Not regulated as dangerous goods.

Further information Not a dangerous good under DOT, IATA, ADR, IMDG, or RID.

15. Regulatory information

A. Restrictions under the Industrial Safety and Health Law

Harmful Substances Prohibited from Manufacturing

Not regulated.

Harmful Substances Requiring Permission for Manufacture or Use

Not regulated.

Controlled Hazardous Substances

Not regulated.

Harmful Substances Requiring Special Medical Examination

Not regulated.

Workplace Environmental Monitoring Harmful Materials

Not regulated.

Occupational Exposure Limit

CARBON BLACK (CAS 1333-86-4)

B. Restrictions under the Chemicals Control Law (Previously Toxic Chemicals Control Law)

Accidental Release Prevention Substances

Not regulated.

Observational Chemicals

Not regulated.

C. Restrictions under the Dangerous Substance Safety Management Act

D. Restrictions under the Wastes Control Act

Halogenated Materials in Waste Organic Solvents

Not regulated.

Hazardous Substances

Not regulated.

E. Restrictions under other foreign or domestic laws

Clean Air Conservation Act

Air Pollutants

Not regulated.

Specific Air Pollutants

Not regulated.

Act on the Registration and Evaluation of Chemicals

Banned Toxic Chemicals

Not regulated.

Designated Existing Chemicals Subject to Registration (PEC) (MoE No. 2015-92)

Not listed.

Restricted Chemical Substances

Not regulated.

Toxic Chemicals

Not regulated.

Regulatory information All chemical substances in this HP product have been notified or are exempt from notification under chemical substances notification laws in the following countries: US (TSCA), EU (EINECS/ELINCS), Switzerland, Canada (DSL/NDSL), Australia, Japan, Philippines, South Korea, New Zealand, and China.

16. Other information

A. Source of information Not available.

B. Issue date 12-May-2015

C. Number of revisions and date of most recent revision

04-Jan-2019 (03 revision)

D. Other

Not available.

Disclaimer

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Revision information

Regulatory information: Regulatory information

Other information: Disclaimer

Explanation of abbreviations

ACGIH	American Conference of Governmental Industrial Hygienists
CAS	Chemical Abstracts Service
CERCLA	Comprehensive Environmental Response Compensation and Liability Act
CFR	Code of Federal Regulations
COC	Cleveland Open Cup
DOT	Department of Transportation
EPCRA	Emergency Planning and Community Right-to-Know Act (aka SARA)
IARC	International Agency for Research on Cancer
NIOSH	National Institute for Occupational Safety and Health
NTP	National Toxicology Program
OSHA	Occupational Safety and Health Administration
PEL	Permissible Exposure Limit
RCRA	Resource Conservation and Recovery Act
REC	Recommended
REL	Recommended Exposure Limit
SARA	Superfund Amendments and Reauthorization Act of 1986
STEL	Short-Term Exposure Limit
TCLP	Toxicity Characteristics Leaching Procedure
TLV	Threshold Limit Value
TSCA	Toxic Substances Control Act
VOC	Volatile Organic Compounds