



i n v e n t

MATERIAL SAFETY DATA SHEET

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Product Identification

Product Name: HP Designjet 788 Black Ink
Commonly used in the following printer(s):
HP H35100, H35500, H45100, H45500
ColorSpan 5400UV Series

Product Number: CH119A
Chemical Name: UV-curable Inkjet Printing Fluid
Chemical Family: Acrylate/Polymer/Pigment Blend
CAS Number: Blend
Intended Uses: Consumer and industrial applications

Company Identification

Hewlett-Packard
11311 K-Tel Drive
Minnetonka, MN 55343 USA

In case of exposure, please contact local Poison Control Center
Emergency phone for spills, leaks, fire, exposure or accident call
CHEMTREC: 1-800-424-9300 or 1-703-527-3887
Product information: (800) 925-0563
Revision Date: 01/01/08

2. HAZARDS IDENTIFICATION

WARNING! CAUSES SEVERE EYE IRRITATION. CAUSES RESPIRATORY TRACT AND SKIN IRRITATION. MAY CAUSE ALLERGIC SKIN REACTION. CONTAINS MATERIAL WHICH CAUSES DAMAGE TO THE FOLLOWING ORGANS: RESPIRATORY TRACT, SKIN, EYE, LENS OR CORNEA. MAY BE HARMFUL IF ABSORBED THROUGH SKIN OR IF SWALLOWED. Do not ingest. Avoid prolonged contact with eyes, skin and clothing. Avoid breathing vapor or mist. Keep container closed. Use only with adequate ventilation. Wash thoroughly after handling. This material is considered hazardous by the OSHA Hazard Communication Standard(29 CFR 1910.1200).

Routes Of Entry: Dermal contact. Eye contact.

Potential Acute Health Effects:

Eyes: Severely irritating to eyes.

Skin: Harmful in contact with skin. Irritating to skin. May cause sensitization by skin contact.

Inhalation: Irritating to respiratory system.

Ingestion: Harmful if swallowed.

Carcinogenic Effects: No known significant effects or critical hazards.

Mutagenic Effects: No known significant effects or critical hazards.

Teratogenicity/Reproductive Toxicity: No known significant effects or critical hazards.
See toxicological information (Section 11).

Medical Conditions Aggravated by Over Exposure: Repeated skin exposure can produce local skin destruction or dermatitis. Repeated or prolonged exposure to the substance

can produce lung damage. Repeated or prolonged contact with spray or mist may produce chronic eye irritation and severe skin irritation. Repeated or prolonged exposure to the substance can produce target organs damage.

Hazardous Material
Identification System:

Health	2
Fire hazard	1
Reactivity	2

3. COMPOSITION/INFORMATION ON INGREDIENTS

COMPONENTS	CAS No.	CONTENTS
Tridecyl Acrylate	3076-04-8	10-25%
Neopentylglycol Propoxylate	84170-74-1	5-10%
Diphenyl(2,4,6-Triphenyl)	75980-60-8	2.5-5%
Multi-Functional Acrylate Ester	60506-81-2	2.5-5%
Polyethylene Glycol 400	26570-48-9	2.5-5%
Ethyl 4-(Dimethylamino)Be	10287-53-3	1-2.5%

4. FIRST AID MEASURES

Eye Contact: Get medical attention immediately. Immediately flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Chemical burns must be treated promptly by a physician.

Skin Contact: Flush contaminated skin with plenty of water. Continue to rinse for at least 10 minutes. Get medical attention. In the event of any complaints or symptoms, avoid further exposure. Remove contaminated clothing and shoes. Wash contaminated clothing thoroughly with water before removing or wear gloves. Wash clothing before reuse. Clean shoes thoroughly before reuse.

Inhalation: Move exposed person to fresh air. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. Keep person warm and at rest. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Get medical attention. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.

Ingestion: Wash out mouth with water. Remove dentures if any. Move exposed person to fresh air. Keep person warm and at rest. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Stop if the exposed person feels sick as vomiting may be dangerous. Do not induce vomiting unless directed to do so by medical personnel. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Get medical attention. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.

Protection of first aid providers: No action shall be taken involving any personal risk or without suitable training.

5. FIRE FIGHTING MEASURES

Flammability of the product: No specific hazard.

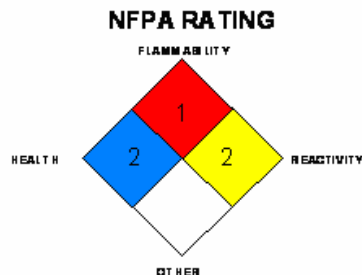
Products of combustion: These products are carbon oxides (CO, CO₂),

nitrogen oxides (NO, NO2 etc.), phosphates.

Extinguishing Media: Suitable: Use an extinguishing agent suitable for the surrounding fire. Not suitable: None known.

Special exposure hazards: Not available.

Special protective equipment for fire-fighters: Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.



6. ACCIDENTAL RELEASE MEASURES

Personal precautions: Immediately contact emergency personnel. Keep unnecessary personnel away. Use suitable protective equipment.

Environmental precautions: Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

7. HANDLING AND STORAGE

Handling: Do not ingest. Avoid contact with eyes, skin and clothing. Keep container closed. Use only with adequate ventilation. Avoid breathing vapor or mist. Wash thoroughly after handling.

Storage: Keep container tightly closed. Keep container in a cool, well-ventilated area.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Consult local authorities for acceptable exposure limits.

Engineering measures: Use only with adequate ventilation. If user operations generate dust, fumes, vapor or mist, use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits.

Eyes: Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts.

Skin: Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

Respiratory: Use a properly fitted, air-purifying or air-fed respirator complying with an approved standard if a risk assessment indicates this is necessary. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator.

Hands: Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary.

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 be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical state: Liquid.

Color: Black.

Boiling/condensation point: The lowest known value is 227.222°C (441°F) (Alkyl Acrylate Ester).

Flash point: The lowest known value is Closed Cup: 100°C (212°F). (Diphenyl(2,4,6-Triphenylbenzoyl)Phosphine Oxide)

Relative density: Weighted average: 1.01 (Water = 1)

Vapor density: The highest known value is >1 (Air = 1) (Alkyl Acrylate Ester).
Weighted average: 1.1 (Air = 1)

Evaporation rate: The highest known value is <1 (Alkyl Acrylate Ester) Weighted average: 0.9 compared with Butyl acetate.

10. STABILITY AND REACTIVITY

Stability and Reactivity: The product is stable.

11. TOXICOLOGICAL INFORMATION

Toxicity Data

<u>Product/Ingredient Name</u>	<u>Test</u>	<u>Result</u>	<u>Route</u>	<u>Species</u>
Alkyl Acrylate Ester	LD50	15000 mg/kg	Oral	Rat
	LD50	5000 mg/kg	Dermal	Rabbit
Ethyl 4-(Dimethylamino)benzoate	LD50	2000 mg/kg	Oral	Rat
	LD50	2000 mg/kg	Dermal	Rabbit

Specific Effects:

Carcinogenic effects: No known significant effects or critical hazards.

Carcinogenicity - Component: Classified + (Proven.) by NIOSH [Carbon Black]. Classified 2B (Possible for humans.) by IARC [Carbon Black]. Classified A4 (Not classifiable for humans or animals.) by ACGIH [Carbon Black]. Classified 4 (Probably not for humans.) by IARC [Caprolactam]. Classified A4 (Not classifiable for humans or animals.) by ACGIH [Caprolactam].

Mutagenic Effects: No known significant effects or critical hazards.

Teratogenicity /: No known significant effects or critical hazards.

Reproductive Toxicity

Sensitization:

Ingestion: No known significant effects or critical hazards.

Inhalation: Irritating to respiratory system.

Eyes: Severely irritating to eyes.

Skin: Irritating to skin. May cause sensitization by skin contact.

12. ECOLOGICAL INFORMATION

Environmental Precautions: Harmful to aquatic organisms. May cause long-term adverse effects in the aquatic environment.

Products of Degradation: These products are carbon oxides (CO, CO₂) and water, nitrogen oxides (NO, NO₂ etc.), phosphates.

Toxicity of the Products of: The products of degradation are less toxic than the product itself.
Biodegradation

13. DISPOSAL CONSIDERATIONS

Waste disposal: The generation of waste should be avoided or minimized wherever possible. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. 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.

Disposal should be in accordance with applicable regional, national and local laws and regulations. Local regulations may be more stringent than regional or national requirements.

The information presented below only applies to the material as supplied. The identification based on characteristic(s) or listing may not apply if the material has been used or otherwise contaminated. It is the responsibility of the waste generator to determine the toxicity and physical properties of the material generated to determine the proper waste identification and disposal methods in compliance with applicable regulations.

Refer to Section 7: HANDLING AND STORAGE and Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION for additional handling information and protection of employees.

14. TRANSPORTATION INFORMATION

DOT Classification

UN Number: Not Available

Proper Shipping Name: Not Available

Class: Not Available

Packing Group: Not Available

General: Not Regulated

15. REGULATORY INFORMATION

HCS Classification: Irritating material
Sensitizing material
Target organ effects

TSCA 8(b) Inventory: Listed

U.S. Federal Regulations:

TSCA 8(b) Inventory: SolaChrome UV Black Ink for CS 5400UV

TSCA 12(b) Annual Export Notification: SolaChrome UV Black Ink for CS 5400UV

SARA 302/304/311/312 Extremely Hazardous Substances: No products were found.

SARA 302/304 Emergency Planning and Notification: No products were found.

SARA 302/304/311/312 Hazardous Chemicals: tridecyl acrylate; carbon black

SARA 311/312 MSDS Distribution - Chemical Inventory - Hazard Identification:

Tridecyl acrylate: immediate (acute) health hazard; Carbon black: immediate (acute) health hazard, delayed (chronic) health hazard

Clean Water Act (CWA) 307: Toluene; C.I. Pigment Blue 15

Clean Water Act (CWA) 311: Toluene

Clean Air Act (CAA) 112 Accidental Release Prevention: No products were found.

Clean Air Act (CAA) 112 Regulated Flammable Substances: No products were found.

Clean Air Act (CAA) 112 Regulated Toxic Substances: No products were found.

SARA 313:

	<u>Product Name</u>	<u>CAS Number</u>	<u>Concentration</u>
Form R - Reporting Requirements:	2-propenoic acid,2-phenoxyethyl ester	48145-04-6	23.53
Supplier Notification:	2-propenoic acid,2-phenoxyethyl ester	48145-04-6	23.53

SARA notifications must not be detached from the MSDS and any copying and redistribution of the MSDS shall include copying and redistribution of the notice attached to copies of the MSDS subsequently redistributed.

State Regulations:

Pennsylvania RTK: Toluene:(environmental hazard,generic environmental hazard);Caprolactam:(generic environmental hazard);C.I. Pigment Blue 15: (environmental hazard,generic environmental hazard);Carbon Black: (generic environmental hazard);2-propenoic acid,2-phenoxyethyl ester:(environmental hazard,generic environmental hazard)

Massachusetts RTK: Toluene; Caprolactam; Carbon Black

New Jersey RTK: Toluene;Caprolactam;C.I. Pigment Blue 15;Carbon Black;2-propenoic acid,2-phenoxyethyl ester

California Prop. 65: WARNING: This product contains a chemical known to the State of California to cause cancer and birth defects or other reproductive harm.

<u>Ingredient Name</u>	<u>Cancer</u>	<u>Reproductive</u>	<u>No significant risk level</u>	<u>Maximum acceptable dosage level</u>
C.I. Pigment Blue 15	Yes.	No.	No.	No.
Toluene	No.	Yes.	No.	7000ug/day (ingestion) 13000 ug/day (inhalation)

EU Regulations:

Hazard Symbol/Symbols:



Risk Phrases: R36/37/38- Irritating to eyes, respiratory system and skin.
R52/53- Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

Safety Phrases: S2- Keep out of the reach of children.
S46- If swallowed, seek medical advice immediately and show this container or label.

International Lists:

Canada Inventory (DSL or NDSL): Listed

16. OTHER INFORMATION

The data in this Material Safety Data Sheet relates only to the specific material designated herein. It does not relate to use in combination with any other material or in any process. The information contained herein is based upon data obtained from the manufacturer and/or recognized technical sources. This information is believed to be correct, but does not purport to be all-inclusive and shall be used only as a guide. Since the condition of handling and use are beyond our control, Hewlett-Packard assumes no liability for loss or injury resulting from the use of this product or the information herein. All chemicals may present unknown health hazards and should be used with caution. No representation or warranties, either expressed or implied, of merchantability, fitness for a particular purpose or any other nature are made hereunto with respect to the information contained herein or the product to which the information refers. It is the user's responsibility to determine the suitability of this information for the adoption of necessary safety precautions and/or compliance with federal, provincial, state, and local laws and regulations.