

Material Number / Product Name:

A.B. Dick C-DEV Concentrated Film Developer

Associated Product Codes / Catalog Numbers:

55060, 55065, 55060

Product size as shipped: 4X5-Qt., 5-Gal, 55-Gal**1 PRODUCT AND COMPANY IDENTIFICATION**

Presstek, Inc
55 Executive Drive
Hudson N.H. 03051

Emergency Telephone (24 Hrs.):

Transport-CHEMTREC inside NA: 800-424-9300
Transport-CHEMTREC outside NA: 703-527-3887

Non-emergency Telephone:

Telephone Number for Product Inquiry:
603-595-7000

Intended Use: Photographic developer
processing

2 HAZARDS IDENTIFICATION**Emergency Overview**

Physical State: Liquid

Color: Clear and colorless

Odor: Odorless

WARNING!

Harmful if swallowed. May cause allergic respiratory reaction. May cause allergic skin reaction.
Causes skin, eye and respiratory tract irritation.

Potential Health Effects

Inhalation: May cause allergic respiratory reaction. May cause respiratory tract irritation.

Eye Contact: Causes eye irritation. Exposed individuals may experience eye tearing, redness, and discomfort.

Skin Contact: Causes skin irritation. May cause allergic skin reaction.

Ingestion: Harmful if swallowed. Causes digestive tract irritation.

Chronic Health Effects: May cause allergic respiratory and skin reactions. May cause damage to organs: Kidneys. Liver.

Target Organ(s): | Digestive tract | Eye | Kidney | Liver | Lung | Skin |

Potential Physical / Chemical Effects: This product is not flammable.

OSHA Regulatory Status: This product is hazardous according to OSHA 29CFR 1910.1200.

Environment: The product contains a substance which is very toxic to aquatic organisms.

3 COMPOSITION / INFORMATION ON INGREDIENTS

General Information: The product is a mixture.

Chemical Name	CAS-No.	Concentration*
Water	7732-18-5	60 - 80%
Potassium sulfite	10117-38-1	7 - 15%
†Hydroquinone	123-31-9	3 - 7%
†Sodium sulfite	7757-83-7	5 - 10%
†Potassium carbonate	584-08-7	3 - 7%
†Diethylene glycol	111-46-6	1 - 5%
†Sodium hydroxide	1310-73-2	1 - 5%

* All concentrations are in percent by weight unless ingredient is a gas. Gas concentrations are in percent by volume.
 † This chemical is hazardous according to OSHA/WHMIS criteria.

4 FIRST AID MEASURES

Inhalation: Move into fresh air and keep at rest. Get medical attention if any discomfort continues.

Eye Contact: Immediately flush with plenty of water for at least 15 minutes. If easy to do, remove contact lenses. Get medical attention.

Skin Contact: Wash with soap and water. Get medical attention if symptoms occur.

Ingestion: Rinse mouth thoroughly with water and give large amounts of milk or water, if person is conscious. Do not induce vomiting. If vomiting occurs, the head should be kept low so that stomach vomit doesn't enter the lungs. Get immediate medical attention.

5 FIRE-FIGHTING MEASURES

Extinguishing Media: Use fire-extinguishing media appropriate for surrounding materials.

Unsuitable Extinguishing Media: None.

Special Fire Fighting Procedures: Use standard firefighting procedures and consider the hazards of other involved materials.

Unusual Fire & Explosion Hazards: None known.

Hazardous Combustion Products: Ammonia, Carbon Oxides, Potassium oxides, Sodium Oxide, Sulfur Oxides

Protective Measures: Selection of respiratory protection for fire fighting: follow the general fire precautions indicated in the workplace. Self-contained breathing apparatus and full protective clothing must be worn in case of fire.

Flammability Class: NFPA Rating Fire = 1.

6 ACCIDENTAL RELEASE MEASURES

Personal Precautions: Ventilate the area. Avoid inhalation of vapors and contact with skin and eyes. Wear appropriate personal protective equipment. See Section 8 of the MSDS for Personal Protective Equipment.

Spill Cleanup Methods: Absorb spillage with suitable absorbent material. Collect and dispose of spillage as indicated in section 13 of the MSDS.

Environmental Precautions: Avoid discharge into drains, water courses or onto the ground.

7 HANDLING AND STORAGE

Handling: Avoid contact with eyes, skin, and clothing. Avoid breathing vapor. Do not taste or swallow. Wear approved safety goggles. Wear protective gloves and appropriate clothing to prevent skin contact. Wash at the end of each work shift and before eating, smoking and using the toilet. Observe good industrial hygiene practices.

Storage: Store in a cool and well-ventilated place. Keep container closed when not in use. Store away from incompatible materials.

8 EXPOSURE CONTROLS / PERSONAL PROTECTION

Exposure Limits:

Chemical Name	Source	Type	Exposure Limits	Notes
Diethylene glycol	US. AIHA WEEL	TWA	10 mg/m ³	
Hydroquinone	US. ACGIH TLV	TWA	1 mg/m ³	
Hydroquinone	US. NIOSH Guide	IDLH	50 mg/m ³	
Hydroquinone	US. OSHA Z-1 PEL	TWA	2 mg/m ³	
Sodium hydroxide	US. ACGIH TLV	Ceiling	2 mg/m ³	
Sodium hydroxide	US. NIOSH Guide	IDLH	10 mg/m ³	
Sodium hydroxide	US. OSHA Z-1 PEL	TWA	2 mg/m ³	

Consult Canadian Provincial Regulations and/or Mexican Regulations on exposure limits, if applicable.

Engineering Controls: Provide adequate ventilation. Observe occupational exposure limits and minimize the risk of exposure to a minimum. Eye wash facilities and emergency shower must be

available when handling this product.

Respiratory Protection: If engineering controls do not maintain airborne concentrations below recommended exposure limits (where applicable) or to an acceptable level (in countries where exposure limits have not been established), an approved respirator must be worn. In the United States of America, if respirators are used, a program should be instituted to assure compliance with OSHA Standard 63 FR 1152, January 8, 1998. Respirator type: Air-purifying respirator with an appropriate, government approved (where applicable), air-purifying filter, cartridge or canister. Contact health and safety professional or manufacturer for specific information.

Eye Protection: Wear safety glasses with side shields (or goggles).

Hand Protection: Wear protective gloves. Be aware that the liquid may penetrate the gloves. Frequent change is advisable.

Skin Protection: Protective clothing should be chemical/oil resistant.

Hygiene Measures: Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants.

Environmental Exposure Controls: Environmental manager must be informed of all major spillages.

9	PHYSICAL AND CHEMICAL PROPERTIES
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Color: Clear and colorless

Odor: Odorless

Odor Threshold: No data available.

Physical State: Liquid

pH: 10.6 (Approximate)

Melting Point: No data available.

Freezing Point: No data available.

Boiling Point: >100°C (212°F)

Flash Point: No data available.

Evaporation Rate: No data available.

Flammability Limit - Upper (%): No data available.

Flammability Limit - Lower (%): No data available.

Vapor Pressure: No data available.

Vapor Density (Air=1): No data available.

Specific Gravity: 1.24 (20°C) (water=1)

Solubility in Water: Completely Soluble

Solubility (Other): No data available.

Partition Coefficient (n-Octanol/water): No data available.

Autoignition Temperature: No data available.

Decomposition Temperature: No data available.

Volatile Organic Compounds (VOC): 0 lbs/gal

Percent Volatile: 68 %w

10	STABILITY AND REACTIVITY
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Stability: Stable under normal temperature conditions.

Conditions to Avoid: Excessive heat.

Incompatible Materials: Strong acids. Strong oxidizing agents.

Hazardous Decomposition Products:

At Elevated Temperatures:	Ammonia, Carbon Oxides, Potassium oxides, Sodium Oxide, Sulfur Oxides
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Possibility of Hazardous Reactions: Will not occur.

11	TOXICOLOGICAL INFORMATION
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Specified Substance(s)

Acute Toxicity:

Chemical Name	Test Results
Hydroquinone	Dermal LD50 (Guinea Pig): 1000 mg/kg
Hydroquinone	Oral LD50 (Rat): 320 mg/kg
Diethylene glycol	Dermal LD50 (Rabbit): 11890 mg/kg
Diethylene glycol	Oral LD50 (Rat): 12565 mg/kg
Potassium carbonate	Oral LD50 (Rat): 1870 mg/kg
Sodium sulfite	Oral LD50 (Rat): 3560 mg/kg

Listed Carcinogens:

Chemical Name	IARC	NTP	OSHA	ACGIH
Hydroquinone	3	Not Listed	Not Listed	A3

IARC: 1 = Carcinogenic to Humans; 2A = Probably Carcinogenic to Humans; 2B = Possibly Carcinogenic to Humans; 3 = Not classifiable as to carcinogenicity to humans; 4 = Probably not carcinogenic to humans; Not listed = Not evaluated by IARC.

ACGIH: A1 = Confirmed Human Carcinogen; A2 = Suspected Human Carcinogen; A3 = Confirmed Animal Carcinogen; A4 = Not classifiable as a human carcinogen; A5 = Not suspected to be a human carcinogen; Not listed = Not evaluated by ACGIH.

Product Information

Acute Toxicity: Causes skin, eye and respiratory tract irritation. Harmful if swallowed.

Chronic Toxicity: May cause allergic respiratory and skin reactions. May cause damage to organs: Kidneys. Liver.

12	ECOLOGICAL INFORMATION
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Ecotoxicity: The product contains a substance which is very toxic to aquatic organisms.

Mobility: The product is water soluble and may spread in water systems.

Persistence and Degradability: No data available.

Bioaccumulation Potential: No data available.

13	DISPOSAL CONSIDERATIONS
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General Information: Dispose of waste and residues in accordance with local authority requirements.

Disposal Instructions: Disposal recommendations are based on material as supplied. Disposal must be in accordance with current applicable laws and regulations, and material characteristics at time of disposal.

RCRA Information: Not regulated.

14	TRANSPORT INFORMATION
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DOT Not regulated.

TDG Not regulated.

IATA Not regulated.

IMDG Not regulated.

15	REGULATORY INFORMATION
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Canadian Controlled Products Regulations: This product has been classified according to the hazard criteria of the Canadian Controlled Products Regulations, Section 33, and the MSDS contains all required information.

WHMIS Classification: D1B, D2A, D2B

Mexican Dangerous Statement: This product is dangerous according to Mexican regulations.

Inventory Status

This product or all components are listed or exempt from listing on the following inventory: DSL, TSCA

US Regulations

CERCLA Hazardous Substance List (40 CFR 302.4):

Chemical Name	RQ
Hydroquinone	100 lbs

SARA Title III

Section 302 Extremely Hazardous Substances (40 CFR 355, Appendix A):

Chemical Name	RQ	TPQ
Hydroquinone	100 lbs	

Section 311/312 (40 CFR 370):

Acute (Immediate) Chronic (Delayed) Fire Reactive Pressure Generating

Section 313 Toxic Release Inventory (40 CFR 372):

Chemical Name	CAS-No.	Reporting threshold for other users	Reporting threshold for manufacturing and processing
Hydroquinone	123-31-9	10000 lbs	25000 lbs

For reporting purposes: the De Minimis Concentration for a toxic chemical in a mixture is 0.1% for carcinogens as defined in 29 CFR 1910.1200(d)(4) or 1% for others.

Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130):

Not regulated.

Clean Water Act Section 311 Hazardous Substances (40 CFR 117.3): Not regulated.

Drug Enforcement Act: Not regulated.

TSCA

TSCA Section 4(a) Final Test Rules & Testing Consent Orders: Not regulated.

TSCA Section 5(a)(2) Final Significant New Use Rules (SNURs) (40CFR 721, Subpt. E): Not regulated.

TSCA Section 5(e) PMN-Substance Consent Orders: Not regulated.

TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D): Not regulated.

State Regulations

Massachusetts Right-To-Know List: Hydroquinone; Sodium hydroxide

Michigan Critical Materials List (Michigan Natural Resources and Environmental Protection Act (Act. 451 of 1994)): Not regulated.

Minnesota Hazardous Substances List: Diethylene glycol; Sodium hydroxide

New Jersey Right-To-Know List: Hydroquinone; Sodium hydroxide

Pennsylvania Right-To-Know List: Diethylene glycol; Hydroquinone; Sodium hydroxide

Rhode Island Right-To-Know List: Diethylene glycol; Hydroquinone; Sodium hydroxide

16	OTHER INFORMATION
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HAZARD RATINGS

	Health Hazard	Fire Hazard	Instability	Special Hazard
NFPA	2	1	0	--

	Health Hazard	Flammability	Physical Hazard	Personal Protection
HMIS	2*	1	0	C

Hazard rating: 0 - Minimal; 1 - Slight; 2 - Moderate; 3 - Serious; 4 - Severe * - Chronic Health Effect
 Personal Protection codes: C - Safety Glasses, Gloves, Apron

Issue Date: 18-May-2011

Supersedes Date:

Disclaimer: This information is provided without warranty. The information is believed to be correct. This information should be used to make an independent determination of the methods to safeguard workers and the environment.