

SAFETY DATA SHEET

Issuing Date: 03-Dec-2015

Version 1

QR-D1 Developer & Replenisher

1. PRODUCT AND COMPANY IDENTIFICATION

Product Name QR-D1 Developer & Replenisher

Product code 900011990

Product Use Developer for Graphic Arts Industry.

Manufactured by FUJIFILM Hunt Chemicals U.S.A., Inc.
40 Boroline Road
Allendale, NJ 07401-0320

Distributed in the USA by FUJIFILM North American Corporation,
Graphic Systems Division
200 Summit Lake Drive
Valhalla, NY 10595-1356

Distributed in Canada by FUJIFILM Canada, Inc.
600 Suffolk Ct.
Mississauga, Ontario L5R 4G4

Distributed Internationally by FUJIFILM Hunt Chemicals U.S.A., Inc.
40 Boroline Road
Allendale, NJ 07401-0320

SDSs are available at the following website(s): <http://www.fujifilmusa.com/msds>

Company Phone Number U.S.A: 800-473-3854 Canada: 800-263-5018

Emergency Telephone Transport-CHEMTREC Inside NA: 800-424-9300
Transport CHEMTREC Outside NA: 703-527-3887
Transport-CANUTEC Inside Canada: 613-996-6666
Medical Emergency (24 hour): 877-935-7387

E-mail EHS@fujifilm.com

2. HAZARDS IDENTIFICATION

Classification

Acute Toxicity - Oral	Category 4
Skin corrosion/irritation	Category 2
Serious eye damage/eye irritation	Category 1
Skin sensitization	Category 1

Germ Cell Mutagenicity	Category 2
Carcinogenicity	Category 2
Reproductive Toxicity	Category 2
Specific target organ toxicity (repeated exposure)	Category 2

GHS Label elements, including precautionary statements

Danger

Hazard Statements

Harmful if swallowed
 Causes skin irritation
 Causes serious eye damage
 May cause an allergic skin reaction
 Suspected of causing genetic defects
 Suspected of causing cancer
 Suspected of damaging fertility or the unborn child
 May cause damage to organs through prolonged or repeated exposure



Precautionary Statements

Prevention

Obtain special instructions before use
 Do not handle until all safety precautions have been read and understood
 Use personal protective equipment as required
 Wash face, hands and any exposed skin thoroughly after handling
 Do not eat, drink or smoke when using this product
 Do not breathe dust/fume/gas/mist/vapors/spray
 Contaminated work clothing should not be allowed out of the workplace
 Wear protective gloves

Response

Immediately call a POISON CENTER or doctor/physician
 IF exposed or concerned: Get medical advice/attention
 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing
 Immediately call a POISON CENTER or doctor/physician
 IF ON SKIN: Wash with plenty of soap and water
 If skin irritation or rash occurs: Get medical advice/attention

Storage

Store locked up

Disposal

Dispose of contents/container to an approved waste disposal plant

Hazards not otherwise classified (HNOC)

Not classified

Other hazards

Toxic to aquatic life with long lasting effects
 Very toxic to aquatic life

Unknown Acute Toxicity

1.29594% of the mixture consists of ingredient(s) of unknown toxicity

3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Name	CAS No	Weight-%
POTASSIUM CARBONATE	584-08-7	7-13%
HYDROQUINONE	123-31-9	3-7%
DIETHYLENE GLYCOL	111-46-6	3-7%
POTASSIUM HYDROXIDE	1310-58-3	1-5%
DTPA	67-43-6	0.1-1%

4. FIRST AID MEASURES

First aid measures for different exposure routes

General advice	Immediate medical attention is required.
Eye contact	Keep eye wide open while rinsing. Do not rub affected area. Call a physician immediately. In case of contact with substance, immediately flush eyes with running water for at least 30 minutes.
Skin contact	IF ON SKIN: Wash with plenty of soap and water. If skin irritation or rash occurs: Get medical advice/attention.
Inhalation	IF INHALED: Remove to fresh air and keep at rest in a position comfortable for breathing. Call a POISON CENTER or doctor/physician if you feel unwell.
Ingestion	IF SWALLOWED: Rinse mouth. Do NOT induce vomiting. Immediately call a POISON CENTER or doctor/ physician.
Protection of First-aiders	Use personal protective equipment. Avoid contact with skin, eyes or clothing.

Most important symptoms/effects, acute and delayed

Burning feeling and temporary redness. May cause allergic skin reaction. May cause redness, itching, and pain.

Indication of immediate medical attention and special treatment needed, if necessary

Product is a corrosive material. Use of gastric lavage or emesis is contraindicated. Possible perforation of stomach or esophagus should be investigated. Do not give chemical antidotes. Asphyxia from glottal edema may occur. Marked decrease in blood pressure may occur with moist rales, frothy sputum, and high pulse pressure. Treat symptomatically.

5. FIRE-FIGHTING MEASURES

Suitable Extinguishing Media

Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

Unsuitable Extinguishing Media

None known.

Specific hazards arising from the chemical

The product causes burns of eyes, skin and mucous membranes. Thermal decomposition can lead to release of irritating gases and vapors. In the event of fire and/or explosion do not breathe fumes. May cause sensitization by skin contact.

Hazardous Combustion Products

Carbon oxides. Oxides of sulfur. Potassium oxides.

Explosion Data**Sensitivity to Mechanical Impact** none**Sensitivity to Static Discharge** none**Protective Equipment and Precautions for Firefighters**

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

Use personal protective equipment. Avoid contact with skin, eyes or clothing. Evacuate personnel to safe areas. Keep people away from and upwind of spill/leak.

Environmental precautions

Do not allow material to contaminate ground water system. Do not flush into surface water or sanitary sewer system. Prevent product from entering drains.

Methods and materials for containment and cleaning up

Methods for Containment Prevent further leakage or spillage if safe to do so.

Methods for cleaning up Use personal protective equipment. Cover liquid spill with sand, earth or other noncombustible absorbent material. Take up mechanically, placing in appropriate containers for disposal. Clean contaminated surface thoroughly. After cleaning, flush away traces with water.

Other information Refer to protective measures listed in Sections 7 and 8.

7. HANDLING AND STORAGE

Precautions for safe handling

Wear personal protective equipment. Avoid breathing vapors or mists. Avoid contact with skin, eyes or clothing. Handle product only in closed system or provide appropriate exhaust ventilation at machinery. In case of insufficient ventilation, wear suitable respiratory equipment. Avoid exposure during pregnancy.

Conditions for safe storage, including any incompatibilities

Keep containers tightly closed in a dry, cool and well-ventilated place. Keep in properly labeled containers.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters**Exposure Guidelines**

Chemical Name	ACGIH TLV	OSHA PEL	NIOSH IDLH	AIHA - Workplace Environmental Exposure Levels (WEELs) - TWAs
HYDROQUINONE	TWA: 1 mg/m ³	TWA: 2 mg/m ³ (vacated) TWA: 2 mg/m ³	IDLH: 50 mg/m ³ Ceiling: 2 mg/m ³ 15 min	
DIETHYLENE GLYCOL				10 mg/m ³ TWA

POTASSIUM HYDROXIDE	Ceiling: 2 mg/m ³	(vacated) Ceiling: 2 mg/m ³	Ceiling: 2 mg/m ³	
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Exposure controls

Engineering Measures Ventilation systems

Individual protection measures, such as personal protective equipment

Eye/Face Protection Tightly fitting safety goggles. Face-shield.

Skin and body protection Wear protective gloves/clothing.

Respiratory protection If exposure limits are exceeded or irritation is experienced, NIOSH/MSHA approved respiratory protection should be worn. Positive-pressure supplied air respirators may be required for high airborne contaminant concentrations. Respiratory protection must be provided in accordance with current local regulations.

General Hygiene Considerations When using do not eat, drink or smoke. Wear suitable gloves and eye/face protection. Take off contaminated clothing and wash before reuse. Contaminated work clothing should not be allowed out of the workplace. Regular cleaning of equipment, work area and clothing is recommended. For environmental protection, remove and wash all contaminated protective equipment before re-use.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	clear, pale yellow	Odor	Slight
Odor Threshold	Not available	Physical State @20°C	Liquid
pH	10.77	Molecular Weight	Not available
Specific Gravity	1.27	Autoignition temperature	Not available
Flash point	> 201 °F / > 94 °C	Boiling point / boiling range	> 212 °F / > 100 °C
Decomposition temperature	Not available	Freezing Point	Not available
Melting point / melting range	Not available		
Flammability Limit in Air	Not available		
Oxidizing Properties	Not available	Explosive Properties	Not available
Solubility	Soluble in water	Partition coefficient	Not available
Evaporation rate	Not available	Vapor Pressure	Not available
Vapor density	Not available	Density	Not available
VOC (lb/gal)	0	VOC (g/l)	0
Dynamic viscosity	Not available		

10. STABILITY AND REACTIVITY

Reactivity

Stable under recommended storage conditions.

Chemical stability

Stable under recommended storage conditions.

Possibility of hazardous reactions

None under normal processing.

Conditions to Avoid

Excessive heat. Freezing. Exposure to air or moisture over prolonged periods.

Incompatible Materials

Strong oxidizing agents. Strong acids. Strong bases.

Hazardous Decomposition Products

Thermal decomposition can lead to release of irritating gases and vapors.

11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure

Product Information

Acute toxicity

Inhalation

Inhalation of vapors in high concentration may cause irritation of respiratory system.

Eyes

Causes burns. Risk of serious damage to eyes.

Skin

Irritating to skin. Repeated or prolonged skin contact may cause allergic reactions with susceptible persons.

Ingestion

Harmful if swallowed.

Component Information

Chemical Name	Oral LD50	Dermal LD50	LC50 (lethal concentration)
POTASSIUM CARBONATE	= 1870 mg/kg (Rat)		
HYDROQUINONE	= 298 mg/kg (Rat)	= 74800 mg/kg (Rabbit)	
DIETHYLENE GLYCOL	= 12565 mg/kg (Rat)	= 11890 mg/kg (Rabbit)	
POTASSIUM HYDROXIDE	214 mg/kg (Rat)		

Information on toxicological effects

No information available.

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Irritation

Causes severe irritation and or burns.

Corrosivity

Corrosive to eyes.

Sensitization

May cause sensitization by skin contact.

Mutagenic Effects

Contains a known or suspected mutagen.

Reproductive Toxicity

Suspected of damaging fertility or the unborn child.

Carcinogenicity

None known.

Chemical Name	ACGIH	IARC	NTP	OSHA
HYDROQUINONE	A3	Group 3		

ACGIH: (American Conference of Governmental Industrial Hygienists)

A1 - Known Human Carcinogen

A2 - Suspected Human Carcinogen

A3 - Animal Carcinogen

A4 - Not Classifiable as a Human Carcinogen

NTP: (National Toxicity Program)

Known - Known Carcinogen

Reasonably Anticipated - Reasonably Anticipated to be a Human Carcinogen

IARC: (International Agency for Research on Cancer)

Group 1: Carcinogenic to humans

Group 2A: Probably carcinogenic to humans

Group 2B: Possibly carcinogenic to humans

Group 3: Not classifiable as to its carcinogenicity to humans

OSHA: (Occupational Safety & Health Administration)

X - Present

STOT - single exposure

No information available.

STOT - repeated exposure

Causes damage to organs through prolonged or repeated exposure. Kidney.

Target Organ Effects

Central nervous system (CNS), Eyes, Respiratory system, Skin, Reproductive system, Kidney.

Aspiration hazard No information available.

Numerical measures of toxicity - Product Information

The following values are calculated based on chapter 3.1 of the GHS document .

ATEmix (oral) 1863 mg/kg
ATEmix (dermal) 15684 mg/kg

ATE: Acute toxicity estimate

12. ECOLOGICAL INFORMATION

Ecotoxicity

Toxic to aquatic life with long lasting effects. .

Chemical Name	Algae toxicity	Toxicity to fish	Toxicity to microorganisms	Toxicity to daphnia and other aquatic invertebrates
HYDROQUINONE		Pimephales promelas: 0.1 - 0.18 mg/L at 96 h Pimephales promelas: 0.044 mg/L at 96 h		
DIETHYLENE GLYCOL		Pimephales promelas: 75200 mg/L at 96 h		

Persistence and degradability

No information available.

Bioaccumulation

Chemical Name	Octanol Water Partition Coefficient (log pow)
HYDROQUINONE	0.5
DIETHYLENE GLYCOL	-1.98
POTASSIUM HYDROXIDE	0.65 0.83

Mobility

No information available.

Other adverse effects

No information available.

13. DISPOSAL CONSIDERATIONS

Waste Disposal Methods

Dispose of in accordance with local regulations.

Contaminated packaging

Do not re-use empty containers.

14. TRANSPORT INFORMATION

<u>DOT</u>	Not regulated
<u>TDG</u>	Not regulated
<u>MEX</u>	Not regulated
<u>ICAO</u>	Not regulated
<u>IATA</u>	Not regulated
<u>IMDG</u>	Not regulated
<u>ADR/RID</u>	Not regulated
<u>ADN</u>	Not regulated

15. REGULATORY INFORMATION

International Inventories

TSCA	Yes
DSL/NDSL	No
PICCS	No
EINECS/ELINCS	No
ENCS	No
IECSC	Yes
KECL	No
AICS	No

***Yes - All component(s) of this product are included or are exempt from listing on the inventory.**

***No - Indicates the component(s) of this product are either not listed or have not been determined to be listed on the inventory.**

TSCA - United States Toxic Substances Control Act Section 8(b) Inventory

DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances List

EINECS/ELINCS - European Inventory of Existing Chemical Substances/European List of Notified Chemical Substances

ENCS - Japan Existing and New Chemical Substances

IECSC - China Inventory of Existing Chemical Substances

KECL - Korean Existing and Evaluated Chemical Substances

PICCS - Philippines Inventory of Chemicals and Chemical Substances

AICS - Australian Inventory of Chemical Substances

U.S. Federal Regulations

TSCA Sections 4, 5 and 12(b)

This product does not contain any chemicals regulated by TSCA Sections 4, 5 or 12(b).

SARA 313

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product contains a chemical or chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372:

Chemical Name	CAS No	SARA 313 - Threshold Values %	Weight-%
HYDROQUINONE	123-31-9	1.0	3-7%

SARA 311/312 Hazard Categories

Acute Health Hazard	Yes
Chronic Health Hazard	Yes
Fire Hazard	no
Sudden Release of Pressure Hazard	no
Reactive Hazard	no

Clean Water Act

This product contains the following substances which are regulated pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42):.

Chemical Name	CWA - Reportable Quantities	CWA - Toxic Pollutants	CWA - Priority Pollutants	CWA - Hazardous Substances
POTASSIUM HYDROXIDE	1000 lb			X

CERCLA

This material, as supplied, contains one or more substances regulated as a hazardous substance under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302):.

Chemical Name	Hazardous Substances RQs	Extremely Hazardous Substances RQs	RQ
HYDROQUINONE	100	100 lb	RQ 100 lb final RQ RQ 45.4 kg final RQ
POTASSIUM HYDROXIDE	1000		RQ 1000 lb final RQ RQ 454 kg final RQ

U.S. State Regulations**California Proposition 65**

This product does not contain any Proposition 65 chemicals.

U.S. State Right-to-Know Regulations

Chemical Name	Massachusetts	New Jersey	Pennsylvania	Illinois	Rhode Island
HYDROQUINONE	X	X	X	X	X
DIETHYLENE GLYCOL			X		X
POTASSIUM HYDROXIDE	X	X	X		X

International Regulations**Canada - NDSL**

This product does not contain any NDSL chemicals.

Mexico - Grade

Slight risk, Grade 1

Mexico - Carcinogen Status and Exposure Limits**Other Regulations**

No information available

16. OTHER INFORMATION

NFPA	Health Hazard 3	Flammability 1	Instability 0	Physical and chemical hazards -
HMIS	Health Hazard 3*	Flammability 1	Physical Hazard 0	Personal protection B

Prepared By FUJIFILM Environment, Health and Safety, phone: 800-473-3854

Revision Date 03-Dec-2015

Revision Note No information available

Disclaimer **The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.**

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