

**1. Identification**

**Product identifier** KODAK T-MAX Developer

**Other means of identification**

**SDS number** PCD 8023

**Product code** 1058718

**Recommended use** Photographic processing chemical. (developer/activator).

**Recommended restrictions** For industrial use only.

**Manufacturer/Importer/Supplier/Distributor information**

**Supplier** Kodak Alaris Inc

**Address** 336 Initiative Drive  
Rochester, NY 14624

**e-mail** EHS-Questions@Kodakalaris.com

**Emergency telephone number** 1-800-424-9300 OR +1 703-741-5970

**2. Hazard(s) identification**

**Physical hazards** Not classified.

**Health hazards**

Serious eye damage/eye irritation	Category 2
Sensitization, skin	Category 1
Germ cell mutagenicity	Category 2
Carcinogenicity	Category 2
Reproductive toxicity	Category 1B
Specific target organ toxicity, repeated exposure (oral)	Category 2 (kidney)

**Environmental hazards** Not classified.

**OSHA defined hazards** Not classified.

**Label elements**



**Signal word** Danger

**Hazard statement** May cause an allergic skin reaction. Causes serious eye irritation. Suspected of causing genetic defects. Suspected of causing cancer. May damage fertility or the unborn child. May cause damage to organs (kidney) through prolonged or repeated exposure by ingestion.

**Precautionary statement**

**Prevention** Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Do not breathe mist or vapor. Wash thoroughly after handling. Contaminated work clothing must not be allowed out of the workplace. Wear protective gloves/protective clothing/eye protection/face protection.

**Response** If on skin: Wash with plenty of water. If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If exposed or concerned: Get medical advice/attention. If skin irritation or rash occurs: Get medical advice/attention. If eye irritation persists: Get medical advice/attention. Wash contaminated clothing before reuse.

**Storage** Store locked up.

**Disposal** Dispose of contents/container in accordance with local/regional/national/international regulations.

**Hazard(s) not otherwise classified (HNOC)** None known.

Supplemental information None.

### 3. Composition/information on ingredients

#### Mixtures

Chemical name	Common name and synonyms	CAS number	%
Potassium sulphite		10117-38-1	5 - < 10
Diethylene glycol		111-46-6	1 - < 3
Hydroquinone		123-31-9	1 - < 3
Potassium hydroxide		1310-58-3	0.1 - 1
Sodium tetraborate, pentahydrate		12179-04-3	0.1 - 1

All concentrations are in percent by weight. Chemical ranges are provided in lieu of exact percentages, which are withheld as trade secrets.

### 4. First-aid measures

<b>Inhalation</b>	Move to fresh air. Call a physician if symptoms develop or persist.
<b>Skin contact</b>	Remove contaminated clothing immediately and wash skin with soap and water. In case of eczema or other skin disorders: Seek medical attention and take along these instructions.
<b>Eye contact</b>	Immediately flush eyes with plenty of water for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Get medical attention if irritation develops and persists.
<b>Ingestion</b>	Rinse mouth. Get medical attention if symptoms occur.
<b>Most important symptoms/effects, acute and delayed</b>	Severe eye irritation. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. May cause an allergic skin reaction. Dermatitis. Rash. Edema. Prolonged exposure may cause chronic effects.
<b>Indication of immediate medical attention and special treatment needed</b>	Provide general supportive measures and treat symptomatically. Keep victim under observation. Symptoms may be delayed.
<b>General information</b>	IF exposed or concerned: Get medical advice/attention. If you feel unwell, seek medical advice (show the label where possible). Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves. Show this safety data sheet to the doctor in attendance. Wash contaminated clothing before reuse.

### 5. Fire-fighting measures

<b>Suitable extinguishing media</b>	Water spray. Alcohol resistant foam. Dry chemical powder. Carbon dioxide (CO <sub>2</sub> ).
<b>Unsuitable extinguishing media</b>	Do not use water jet as an extinguisher, as this will spread the fire.
<b>Specific hazards arising from the chemical</b>	During fire, gases hazardous to health may be formed. Carbon oxides. Nitrogen oxides (NO <sub>x</sub> ). Sulfur oxides.
<b>Special protective equipment and precautions for firefighters</b>	Wear self-contained breathing apparatus and protective clothing. Fire or excessive heat may produce hazardous decomposition products.
<b>Fire fighting equipment/instructions</b>	Move containers from fire area if you can do so without risk.
<b>Specific methods</b>	Use standard firefighting procedures and consider the hazards of other involved materials.
<b>General fire hazards</b>	No unusual fire or explosion hazards noted.

### 6. Accidental release measures

<b>Personal precautions, protective equipment and emergency procedures</b>	Keep unnecessary personnel away. Keep people away from and upwind of spill/leak. Wear appropriate protective equipment and clothing during clean-up. Do not breathe mist or vapor. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Ensure adequate ventilation. Local authorities should be advised if significant spillages cannot be contained. For personal protection, see section 8 of the SDS.
<b>Methods and materials for containment and cleaning up</b>	Large Spills: Stop the flow of material, if this is without risk. Dike the spilled material, where this is possible. Absorb in vermiculite, dry sand or earth and place into containers. Following product recovery, flush area with water.  Small Spills: Wipe up with absorbent material (e.g. cloth, fleece). Clean surface thoroughly to remove residual contamination.  Never return spills to original containers for re-use. Put material in suitable, covered, labeled containers. For waste disposal, see section 13 of the SDS.
<b>Environmental precautions</b>	Avoid discharge into drains, water courses or onto the ground.

## 7. Handling and storage

### Precautions for safe handling

Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Avoid contact with eyes, skin, and clothing. Avoid prolonged exposure. Pregnant or breastfeeding women must not handle this product. Should be handled in closed systems, if possible. Provide adequate ventilation. Wear appropriate personal protective equipment. Observe good industrial hygiene practices.

### Conditions for safe storage, including any incompatibilities

Store locked up. Store in tightly closed container. Store away from incompatible materials (see Section 10 of the SDS).

## 8. Exposure controls/personal protection

### Occupational exposure limits

The following constituents are the only constituents of the product which have a PEL, TLV or other recommended exposure limit. At this time, the other constituents have no known exposure limits.

#### US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000)

Components	Type	Value
Hydroquinone (CAS 123-31-9)	PEL	2 mg/m <sup>3</sup>

#### US. ACGIH Threshold Limit Values

Components	Type	Value	Form
Hydroquinone (CAS 123-31-9)	TWA	1 mg/m <sup>3</sup>	
Potassium hydroxide (CAS 1310-58-3)	Ceiling	2 mg/m <sup>3</sup>	
Sodium tetraborate, pentahydrate (CAS 12179-04-3)	STEL	6 mg/m <sup>3</sup>	Inhalable fraction.
	TWA	2 mg/m <sup>3</sup>	Inhalable fraction.

#### US. NIOSH: Pocket Guide to Chemical Hazards

Components	Type	Value
Hydroquinone (CAS 123-31-9)	Ceiling	2 mg/m <sup>3</sup>
Potassium hydroxide (CAS 1310-58-3)	Ceiling	2 mg/m <sup>3</sup>
Sodium tetraborate, pentahydrate (CAS 12179-04-3)	TWA	1 mg/m <sup>3</sup>

#### US. Workplace Environmental Exposure Level (WEEL) Guides

Components	Type	Value
Diethylene glycol (CAS 111-46-6)	TWA	10 mg/m <sup>3</sup>

### Biological limit values

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

### Appropriate engineering controls

Good general ventilation (typically 10 air changes per hour) should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level. Provide eyewash station.

### Individual protection measures, such as personal protective equipment

#### Eye/face protection

Wear safety glasses with side shields (or goggles) and a face shield.

#### Skin protection

##### Hand protection

Wear appropriate chemical resistant gloves.

##### Other

Wear appropriate chemical resistant clothing. Use of an impervious apron is recommended.

#### Respiratory protection

In case of insufficient ventilation, wear suitable respiratory equipment.

#### Thermal hazards

Wear appropriate thermal protective clothing, when necessary.

**General hygiene considerations**

Observe any medical surveillance requirements. 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. Contaminated work clothing should not be allowed out of the workplace.

**9. Physical and chemical properties****Appearance**

**Physical state** Liquid.

**Form** Liquid.

**Color** Tan

**Odor** Not available.

**Odor threshold** Not available.

**pH** 9.7

**Melting point/freezing point** Not available.

**Initial boiling point and boiling range** Not available.

**Flash point** Not available.

**Evaporation rate** Not available.

**Flammability (solid, gas)** Not applicable.

**Upper/lower flammability or explosive limits**

**Flammability limit - lower (%)** Not available.

**Flammability limit - upper (%)** Not available.

**Explosive limit - lower (%)** Not available.

**Explosive limit - upper (%)** Not available.

**Vapor pressure** Not available.

**Vapor density** Not available.

**Relative density** Not available.

**Solubility(ies)**

**Solubility (water)** Not available.

**Partition coefficient (n-octanol/water)** Not available.

**Auto-ignition temperature** Not available.

**Decomposition temperature** Not available.

**Viscosity** Not available.

**Other information**

**Explosive properties** Not explosive.

**Oxidizing properties** Not oxidizing.

**Specific gravity** 1.07

**10. Stability and reactivity**

**Reactivity** The product is stable and non-reactive under normal conditions of use, storage and transport.

**Chemical stability** Material is stable under normal conditions.

**Possibility of hazardous reactions** Hazardous polymerization does not occur.

**Conditions to avoid** Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. Contact with incompatible materials.

**Incompatible materials** Strong oxidizing agents.

**Hazardous decomposition products** No hazardous decomposition products are known.

## 11. Toxicological information

### Information on likely routes of exposure

<b>Inhalation</b>	Prolonged inhalation may be harmful. In contact with strong acids or if heated, sulphites may liberate sulphur dioxide gas. Some asthmatics or hypersensitive individuals may experience difficulty breathing.
<b>Skin contact</b>	May cause an allergic skin reaction.
<b>Eye contact</b>	Causes serious eye irritation.
<b>Ingestion</b>	May cause damage to organs through prolonged or repeated exposure by ingestion.

**Symptoms related to the physical, chemical and toxicological characteristics** Severe eye irritation. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. May cause an allergic skin reaction. Dermatitis. Rash. Edema.

### Information on toxicological effects

**Acute toxicity** Not known.

Components	Species	Test Results
Diethylene glycol (CAS 111-46-6)		
<b>Acute</b>		
<b>Dermal</b>		
LD50	Rabbit	11890 mg/kg
<b>Oral</b>		
LD50	Rat	12570 mg/kg
Potassium sulphite (CAS 10117-38-1)		
<b>Acute</b>		
<b>Dermal</b>		
LD50	Guinea pig	> 20000 mg/kg
Sodium tetraborate, pentahydrate (CAS 12179-04-3)		
<b>Acute</b>		
<b>Dermal</b>		
LD50	Rabbit	> 1055 mg/kg
<b>Inhalation</b>		
LC50	Rat	> 0.002 mg/l, 4 Hours
<b>Oral</b>		
LD50	Rat	2660 mg/kg

**Skin corrosion/irritation** Prolonged skin contact may cause temporary irritation.

**Serious eye damage/eye irritation** Causes serious eye irritation.

### Respiratory or skin sensitization

#### ACGIH sensitization

HYDROQUINONE (CAS 123-31-9)

Dermal sensitization

**Respiratory sensitization** Not a respiratory sensitizer.

**Skin sensitization** May cause an allergic skin reaction.

**Germ cell mutagenicity** Suspected of causing genetic defects.

**Carcinogenicity** Suspected of causing cancer.

#### IARC Monographs. Overall Evaluation of Carcinogenicity

Hydroquinone (CAS 123-31-9)

3 Not classifiable as to carcinogenicity to humans.

#### OSHA Specifically Regulated Substances (29 CFR 1910.1001-1052)

Not regulated.

#### US. National Toxicology Program (NTP) Report on Carcinogens

Not listed.

**Reproductive toxicity** May damage fertility or the unborn child.

**Specific target organ toxicity - single exposure** Not classified.

<b>Specific target organ toxicity - repeated exposure</b>	May cause damage to organs (kidney) through prolonged or repeated exposure by ingestion.
<b>Aspiration hazard</b>	Not an aspiration hazard.
<b>Chronic effects</b>	May cause damage to organs through prolonged or repeated exposure. Prolonged inhalation may be harmful.

## 12. Ecological information

**Ecotoxicity** Toxic to aquatic life.

Components	Species		Test Results
Hydroquinone (CAS 123-31-9)			
<b>Aquatic</b>			
Crustacea	EC50	Water flea (Daphnia magna)	0.12 - 0.15 mg/l, 48 hours
Fish	LC50	Rainbow trout, donaldson trout (Oncorhynchus mykiss)	0.044 mg/l, 96 hours
Potassium hydroxide (CAS 1310-58-3)			
<b>Aquatic</b>			
Fish	LC50	Western mosquitofish (Gambusia affinis)	80 mg/l, 96 hours
Sodium tetraborate, pentahydrate (CAS 12179-04-3)			
<b>Aquatic</b>			
Fish	LC50	Western mosquitofish (Gambusia affinis)	104 mg/l, 96 hours

**Persistence and degradability** No data is available on the degradability of this product.

### Bioaccumulative potential

<b>Partition coefficient n-octanol / water (log Kow)</b>	
Hydroquinone	0.59

**Mobility in soil** No data available.

**Other adverse effects** No other adverse environmental effects (e.g. ozone depletion, photochemical ozone creation potential, endocrine disruption, global warming potential) are expected from this component.

## 13. Disposal considerations

<b>Disposal instructions</b>	Collect and reclaim or dispose in sealed containers at licensed waste disposal site. Dispose of contents/container in accordance with local/regional/national/international regulations.
<b>Local disposal regulations</b>	Dispose in accordance with all applicable regulations.
<b>Hazardous waste code</b>	The waste code should be assigned in discussion between the user, the producer and the waste disposal company.
<b>Waste from residues / unused products</b>	Dispose of in accordance with local regulations. Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe manner (see: Disposal instructions).
<b>Contaminated packaging</b>	Since emptied containers may retain product residue, follow label warnings even after container is emptied. Empty containers should be taken to an approved waste handling site for recycling or disposal.

## 14. Transport information

### DOT

Not regulated as dangerous goods.

### IATA

Not regulated as dangerous goods.

### IMDG

Not regulated as dangerous goods.

**Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code** Not established.

## 15. Regulatory information

**US federal regulations** This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

**TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)**

Not regulated.

**CERCLA Hazardous Substance List (40 CFR 302.4)**

Hydroquinone (CAS 123-31-9) Listed.

Potassium hydroxide (CAS 1310-58-3) Listed.

**SARA 304 Emergency release notification**

Hydroquinone (CAS 123-31-9) 100 LBS

**OSHA Specifically Regulated Substances (29 CFR 1910.1001-1052)**

Not regulated.

**Superfund Amendments and Reauthorization Act of 1986 (SARA)****SARA 302 Extremely hazardous substance**

Chemical name	CAS number	Reportable quantity (pounds)	Threshold planning quantity (pounds)	Threshold planning quantity, lower value (pounds)	Threshold planning quantity, upper value (pounds)
Hydroquinone	123-31-9	100		500	10000
<b>Classified hazard categories</b>	Serious eye damage or eye irritation Respiratory or skin sensitization Germ cell mutagenicity Carcinogenicity Reproductive toxicity Specific target organ toxicity (single or repeated exposure)				

**SARA 313 (TRI reporting)**

Chemical name	CAS number	% by wt.
Hydroquinone	123-31-9	1 - < 3

**Other federal regulations****Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs) List**

Hydroquinone (CAS 123-31-9)

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

Not regulated.

**Safe Drinking Water Act (SDWA)** Not regulated.**US state regulations****California Proposition 65**California Safe Drinking Water and Toxic Enforcement Act of 2016 (Proposition 65): This material is not known to contain any chemicals currently listed as carcinogens or reproductive toxins. For more information go to [www.P65Warnings.ca.gov](http://www.P65Warnings.ca.gov).**US. California. Candidate Chemicals List. Safer Consumer Products Regulations (Cal. Code Regs, tit. 22, 69502.3, subd. (a))**

Sodium tetraborate, pentahydrate (CAS 12179-04-3)

**International Inventories**

Country(s) or region	Inventory name	On inventory (yes/no)*
Australia	Australian Inventory of Chemical Substances (AICS)	No
Canada	Domestic Substances List (DSL)	No
Canada	Non-Domestic Substances List (NDSL)	No
China	Inventory of Existing Chemical Substances in China (IECSC)	Yes
Europe	European Inventory of Existing Commercial Chemical Substances (EINECS)	Yes
Europe	European List of Notified Chemical Substances (ELINCS)	No
Japan	Inventory of Existing and New Chemical Substances (ENCS)	Yes
Korea	Existing Chemicals List (ECL)	No
New Zealand	New Zealand Inventory	Yes
Philippines	Philippine Inventory of Chemicals and Chemical Substances (PICCS)	Yes
Taiwan	Taiwan Chemical Substance Inventory (TCSI)	Yes

Country(s) or region	Inventory name	On inventory (yes/no)*
United States & Puerto Rico	Toxic Substances Control Act (TSCA) Inventory	No

\*A "Yes" indicates that all components of this product comply with the inventory requirements administered by the governing country(s)  
A "No" indicates that one or more components of the product are not listed or exempt from listing on the inventory administered by the governing country(s).

## 16. Other information, including date of preparation or last revision

Issue date	05-17-2019
Revision date	06-20-2019
Version #	02
HMIS® ratings	Health: 2* Flammability: 1 Physical hazard: 0
NFPA ratings	Health: 2 Flammability: 1 Instability: 0

### NFPA ratings



### List of abbreviations

IARC Monographs. Overall Evaluation of Carcinogenicity  
CAS: Chemical Abstract Service.  
PBT: Persistent, bioaccumulative, toxic.  
vPvB: very Persistent, very Bioaccumulative.  
DNEL: Derived No Effect Level.  
PNEC: Predicted No Effect Concentration.  
TWA: Time Weighted Average.  
STEL: Short-term Exposure Limit.  
LD50: Lethal Dose 50%.  
LC50: Lethal Concentration 50%.  
EC50: Effective Concentration 50%.

### Disclaimer

Kodak Alaris cannot anticipate all conditions under which this information and its product, or the products of other manufacturers in combination with its product, may be used. It is the user's responsibility to ensure safe conditions for handling, storage and disposal of the product, and to assume liability for loss, injury, damage or expense due to improper use. The information in the sheet was written based on the best knowledge and experience currently available.

### Revision information

Composition / Information on Ingredients: Disclosure Overrides