

1. Identification

| | |
|---|--|
| Product identifier | KODAK HC-110 Developer |
| Other means of identification | |
| SDS number | PCD 8035 |
| Product code | 1058692 |
| Recommended use | Photographic processing chemical. (developer/activator). |
| Recommended restrictions | For industrial use only. |
| Manufacturer/Importer/Supplier/Distributor information | |
| Supplier | Sino Promise Group |
| Address | 336 Initiative Drive Rochester, NY 14624 |
| e-mail | EHS-Questions@sinopromise.com |
| Emergency telephone number | 1-800-424-9300 OR +1 703-527-3887 |

2. Hazard(s) identification

| | | |
|------------------------------|--|---------------------|
| Physical hazards | Not classified. | |
| Health hazards | Skin corrosion/irritation | Category 2 |
| | Serious eye damage/eye irritation | Category 1 |
| | 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 | Causes skin irritation. May cause an allergic skin reaction. Causes serious eye damage. 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. Immediately call a poison center/doctor. If skin irritation or rash occurs: Get medical advice/attention. Take off contaminated clothing and wash 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 | % |
|--|--------------------------|------------|-----------|
| Hydroquinone | | 123-31-9 | 10 - < 20 |
| Potassium sulphite | | 10117-38-1 | 10 - < 20 |
| Diethylene glycol | | 111-46-6 | 5 - < 10 |
| Sodium tetraborate, pentahydrate | | 12179-04-3 | 1 - < 3 |
| 4-hydroxymethyl-4-methyl-1-phenyl-3-pyrazolidinone | | 13047-13-7 | 0.1 - 1 |
| Diethanolamine | | 111-42-2 | 0.1 - 1 |
| Potassium hydroxide | | 1310-58-3 | 0.1 - 1 |
| 1,2-Benzenediol | | 120-80-9 | 0 - 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

Inhalation

Move to fresh air. Call a physician if symptoms develop or persist.

Skin contact

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. Wash contaminated clothing before reuse.

Eye contact

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 immediately.

Ingestion

Rinse mouth. Get medical attention if symptoms occur.

Most important symptoms/effects, acute and delayed

Severe eye irritation. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. Permanent eye damage including blindness could result. Skin irritation. May cause redness and pain. May cause an allergic skin reaction. Dermatitis. Rash. Edema. Prolonged exposure may cause chronic effects.

Indication of immediate medical attention and special treatment needed

Provide general supportive measures and treat symptomatically. Keep victim under observation. Symptoms may be delayed.

General information

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

Suitable extinguishing media

Water spray. Alcohol resistant foam. Dry chemicals. Carbon dioxide (CO₂). Flush with plenty of water.

Unsuitable extinguishing media

Do not use water jet as an extinguisher, as this will spread the fire.

Specific hazards arising from the chemical

During fire, gases hazardous to health may be formed.

Special protective equipment and precautions for firefighters

Wear self-contained breathing apparatus and protective clothing. Fire or excessive heat may produce hazardous decomposition products.

Fire fighting equipment/instructions

Move containers from fire area if you can do so without risk.

Specific methods

Use standard firefighting procedures and consider the hazards of other involved materials.

General fire hazards

No unusual fire or explosion hazards noted.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

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.

Methods and materials for containment and cleaning up

Use water spray to reduce vapors or divert vapor cloud drift.

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.

Environmental precautions

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. Do not get this material in contact with eyes. 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 ³ |

US. ACGIH Threshold Limit Values

| Components | Type | Value | Form |
|---|---------|---------------------|-------------------------------|
| 1,2-Benzenediol (CAS 120-80-9) | TWA | 5 ppm | |
| Diethanolamine (CAS 111-42-2) | TWA | 1 mg/m ³ | Inhalable fraction and vapor. |
| Hydroquinone (CAS 123-31-9) | TWA | 1 mg/m ³ | |
| Potassium hydroxide (CAS 1310-58-3) | Ceiling | 2 mg/m ³ | |
| Sodium tetraborate, pentahydrate (CAS 12179-04-3) | STEL | 6 mg/m ³ | Inhalable fraction. |
| | TWA | 2 mg/m ³ | Inhalable fraction. |

US. NIOSH: Pocket Guide to Chemical Hazards

| Components | Type | Value |
|---|---------|----------------------|
| 1,2-Benzenediol (CAS 120-80-9) | TWA | 20 mg/m ³ |
| | | 5 ppm |
| Diethanolamine (CAS 111-42-2) | TWA | 15 mg/m ³ |
| | | 3 ppm |
| Hydroquinone (CAS 123-31-9) | Ceiling | 2 mg/m ³ |
| Potassium hydroxide (CAS 1310-58-3) | Ceiling | 2 mg/m ³ |
| Sodium tetraborate, pentahydrate (CAS 12179-04-3) | TWA | 1 mg/m ³ |

US. Workplace Environmental Exposure Level (WEEL) Guides

| Components | Type | Value |
|----------------------------------|------|----------|
| Diethylene glycol (CAS 111-46-6) | TWA | 10 mg/m3 |

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

Exposure guidelines

US - California OELs: Skin designation

| | |
|--------------------------------|-----------------------------------|
| 1,2-Benzenediol (CAS 120-80-9) | Can be absorbed through the skin. |
| Diethanolamine (CAS 111-42-2) | Can be absorbed through the skin. |

US - Minnesota Haz Subs: Skin designation applies

| | |
|--------------------------------|---------------------------|
| 1,2-Benzenediol (CAS 120-80-9) | Skin designation applies. |
|--------------------------------|---------------------------|

US - Tennessee OELs: Skin designation

| | |
|--------------------------------|-----------------------------------|
| 1,2-Benzenediol (CAS 120-80-9) | Can be absorbed through the skin. |
|--------------------------------|-----------------------------------|

US ACGIH Threshold Limit Values: Skin designation

| | |
|--------------------------------|-----------------------------------|
| 1,2-Benzenediol (CAS 120-80-9) | Can be absorbed through the skin. |
| Diethanolamine (CAS 111-42-2) | Can be absorbed through the skin. |

US NIOSH Pocket Guide to Chemical Hazards: Skin designation

| | |
|--------------------------------|-----------------------------------|
| 1,2-Benzenediol (CAS 120-80-9) | Can be absorbed through the skin. |
|--------------------------------|-----------------------------------|

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 and safety shower.

Individual protection measures, such as personal protective equipment

Eye/face protection Chemical respirator with organic vapor cartridge and full facepiece.

Skin protection

Hand protection Wear appropriate chemical resistant gloves.

Other

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

Respiratory protection

Chemical respirator with organic vapor cartridge and full facepiece.

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 Yellow

Odor Not available.

Odor threshold Not available.

pH 9.9

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 | 1.26 |

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 acids. Strong oxidizing agents. Aluminum. Ammonia. |
| Hazardous decomposition products | Sulfur oxides. Nitrogen oxides (NOx). |

11. Toxicological information

Information on likely routes of exposure

| | |
|---------------------|---|
| Inhalation | Prolonged inhalation may be harmful. |
| Skin contact | Causes skin irritation. May cause an allergic skin reaction. |
| Eye contact | Causes serious eye damage. |
| Ingestion | 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. Permanent eye damage including blindness could result. Skin irritation. May cause redness and pain. May cause an allergic skin reaction. Dermatitis. Rash. Edema.

Information on toxicological effects

Acute toxicity Based on available data, the classification criteria are not met.

| Components | Species | Test Results |
|----------------------------------|----------------|---------------------|
| Diethanolamine (CAS 111-42-2) | | |
| Acute | | |
| Dermal | | |
| LD50 | Rabbit | 12980 mg/kg |
| Diethylene glycol (CAS 111-46-6) | | |
| Acute | | |
| Dermal | | |
| LD50 | Rabbit | 11890 mg/kg |
| Oral | | |
| LD50 | Rat | 12570 mg/kg |

| Components | Species | Test Results |
|---|---|-----------------------|
| Potassium sulphite (CAS 10117-38-1) | | |
| Acute | | |
| Dermal | | |
| LD50 | Guinea pig | > 20000 mg/kg |
| Sodium tetraborate, pentahydrate (CAS 12179-04-3) | | |
| Acute | | |
| Dermal | | |
| LD50 | Rabbit | > 1055 mg/kg |
| Inhalation | | |
| LC50 | Rat | > 0.002 mg/l, 4 Hours |
| Oral | | |
| LD50 | Rat | 2660 mg/kg |
| Skin corrosion/irritation | Causes skin irritation. | |
| Serious eye damage/eye irritation | Causes serious eye damage. | |
| 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 | | |
| 1,2-Benzenediol (CAS 120-80-9) | 2B Possibly carcinogenic to humans. | |
| Diethanolamine (CAS 111-42-2) | 2B Possibly carcinogenic to humans. | |
| Hydroquinone (CAS 123-31-9) | 3 Not classifiable as to carcinogenicity to humans. | |
| Potassium sulphite (CAS 10117-38-1) | 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. | |
| Specific target organ toxicity - repeated exposure | May cause damage to organs (kidney) through prolonged or repeated exposure by ingestion. | |
| Aspiration hazard | Not an aspiration hazard. | |
| Chronic effects | May cause damage to organs through prolonged or repeated exposure. Prolonged inhalation may be harmful. Prolonged exposure may cause chronic effects. | |

12. Ecological information

Ecotoxicity The product is not classified as environmentally hazardous. However, this does not exclude the possibility that large or frequent spills can have a harmful or damaging effect on the environment.

| Components | Species | Test Results |
|--------------------------------|---------|---|
| 1,2-Benzenediol (CAS 120-80-9) | | |
| Aquatic | | |
| Fish | LC50 | Fathead minnow (Pimephales promelas) 3.5 mg/l, 96 hours |
| Diethanolamine (CAS 111-42-2) | | |
| Aquatic | | |
| Crustacea | EC50 | Water flea (Ceriodaphnia dubia) 61.8 - 86.04 mg/l, 48 hours |
| Fish | LC50 | Fathead minnow (Pimephales promelas) 100 mg/l, 96 hours |

| Components | Species | | Test Results |
|---|---------|---|----------------------------|
| Hydroquinone (CAS 123-31-9) | | | |
| Aquatic | | | |
| 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) | | | |
| Aquatic | | | |
| Fish | LC50 | Western mosquitofish (Gambusia affinis) | 80 mg/l, 96 hours |
| Sodium tetraborate, pentahydrate (CAS 12179-04-3) | | | |
| Aquatic | | | |
| Fish | LC50 | Western mosquitofish (Gambusia affinis) | 104 mg/l, 96 hours |

Persistence and degradability No data is available on the degradability of any ingredients in the mixture.

Bioaccumulative potential

Partition coefficient n-octanol / water (log Kow)

| | |
|-----------------|-------|
| 1,2-Benzenediol | 0.88 |
| Diethanolamine | -1.43 |
| Hydroquinone | 0.59 |

Mobility in soil No data available.

Other adverse effects The product contains volatile organic compounds which have a photochemical ozone creation potential.

13. Disposal considerations

Disposal instructions Collect and reclaim or dispose in sealed containers at licensed waste disposal site. Incinerate the material under controlled conditions in an approved incinerator. Dispose of contents/container in accordance with local/regional/national/international regulations.

Local disposal regulations Dispose in accordance with all applicable regulations.

Hazardous waste code D002: Waste Corrosive material [pH <=2 or =>12.5, or corrosive to steel]
The waste code should be assigned in discussion between the user, the producer and the waste disposal company.

Waste from residues / unused products 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).

Contaminated packaging 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)

| | |
|--------------------------------|---------|
| 1,2-Benzenediol (CAS 120-80-9) | Listed. |
| Diethanolamine (CAS 111-42-2) | Listed. |

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 |
| Classified hazard categories | Acute toxicity (any route of exposure) Skin corrosion or irritation 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 | 10 - < 20 |

Other federal regulations

Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs) List

1,2-Benzenediol (CAS 120-80-9)
Diethanolamine (CAS 111-42-2)
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



WARNING: This product can expose you to chemicals including Diethanolamine, which is known to the State of California to cause cancer. For more information go to www.P65Warnings.ca.gov.

California Proposition 65 - CRT: Listed date/Carcinogenic substance

1,2-Benzenediol (CAS 120-80-9) Listed: July 15, 2003
Diethanolamine (CAS 111-42-2) Listed: June 22, 2012

US. California. Candidate Chemicals List. Safer Consumer Products Regulations (Cal. Code Regs, tit. 22, 69502.3, subd. (a))

1,2-Benzenediol (CAS 120-80-9)
Diethanolamine (CAS 111-42-2)
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 |

| Country(s) or region | Inventory name | On inventory (yes/no)* |
|-----------------------------|---|------------------------|
| New Zealand | New Zealand Inventory | Yes |
| Philippines | Philippine Inventory of Chemicals and Chemical Substances (PICCS) | Yes |
| Taiwan | Taiwan Chemical Substance Inventory (TCSI) | Yes |
| 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 | 05-21-2019 |
| Revision date | 01-04-2021 |
| Version # | 04 |
| HMIS® ratings | Health: 3* Flammability: 0 Physical hazard: 0 |
| NFPA ratings | Health: 3 Flammability: 0 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

Sino Promise Group 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

Product and Company Identification: Product and Company Identification