CATALOG NO 07-0028

PHOTOGRAPHERS' FORMULARY

REPLACEMENT CHEMICALS FOR PLATINUM AND PALLADIUM PRINTING

This kit contains 227 Grams of Potassium Oxalate which is to be to prepare 700 ml's of developer solution. Directions for the use of the potassium oxalate developer are given in the Formulary instructions for platinum/palladium printing kits.If you need a copy of either of these instructions please request them or visit our website at www.photoformulary.com under technical information and download them.

Chemical Safety

All Chemicals are dangerous and must be treated with respect.

Potassium Oxalate: This compound is an anticoagulant (prevents blood clotting) and a poison. Since this chemcial is used as the developer for both platinum/palladium printing it can easily come into contact with your skin. It is strongly advised that you use tongs to develop platinum/palladium prints or waer rubber gloves if you feel you need to handle the prints during development. Should ppotassium oxalate solution come into contact with your skin, wash immediately with soap and water.

The user assumes all risks upon accepting this chemical. If for any reason you do not wish to assume all risks, please return the chemical for a full refund.

Please consult with local sewer and water authorities regarding the proper disposal of darkroom chemicals in your area.

Mixing The Developer

This kit contains 227 grams of solid potassium oxalate. Place the solid in a mixing container, add 700 ml's od distilled water and stir the solution. Transfer to the storage container. Not all of the solid will disolve. The saturated potassium oxalate solution is the developer.

COLUMBUS CHEMICAL INDUSTRIES INC.

Safety Data Sheet

Potassium Oxalate, Monohydrate Crystal, ACS

1. PRODUCT AND COMPANY IDENTIFICATION

Product Name: Potassium Oxalate, Monohydrate Crystal, ACS

Synonyms/Generic Names: Ethanoic acid potassium salt; Oxalic acid dipotassium salt monohydrate

Product Number: 4410

Product Use: Industrial, Manufacturing or Laboratory use

Manufacturer: Columbus Chemical Industries, Inc.
N4335 Temkin Rd.
Columbus, WI. 53925

For More Information Call: 920-623-2140 (Monday-Friday 8:00-4:30)

In Case of Emergency Call: CHEMTREC - 800-424-9300 or 703-527-3887 (24 Hours/Day, 7 Days/Week)

2. HAZARDS IDENTIFICATION

OSHA Hazards: Target organ effect, Teratogen

Target Organs: Kidney, Nerves, Blood, Eyes

Signal Words: Warning

Pictograms:

GHS Classification

Acute toxicity, Oral	Category 4
Acute toxicity, Dermal	Category 4
Skin irritation	Category 2
Eye irritation	Category 2A

GHS Label Elements, including precautionary statements:

Hazard Statements:

H302+H312	Harmful if swallowed or in contact with skin.
H315	Causes skin irritation.
H319	Causes serious eye irritation.

Precautionary Statements:

P305+P351+P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do so. Continue rinsing.
P280	Wear protective gloves/protective clothing.

Potential Health Effects

Eyes	May causes eye irritation.
Inhalation	May be harmful if inhaled. May causes respiratory tract irritation.
Skin	May be harmful if absorbed through skin. May causes skin irritation.
Ingestion	May be harmful if ingested.

NFPA Ratings

Health	2
Flammability	1
Reactivity	0
Specific hazard	Not Available

HMIS Ratings

Health	2
Fire	1
Reactivity	0
Personal	E

3. COMPOSITION/INFORMATION ON INGREDIENTS

Component	Weight %	CAS #	EINECS# / ELINCS#	Formula	Molecular Weight
Potassium Oxalate	100	6487-48-5	209-506-8	$K_2C_2O_4+H_2O$	184.23 g/mol

4. FIRST-AID INFORMATION

Eyes	In case of eye contact, rinse with plenty of water and seek medical attention.
Inhalation	Move casualty to fresh air and keep at rest. If breathing is difficult, give oxygen. If not breathing, give artificial respiration. Get medical attention.
Skin	Immediately flush with plenty of water for at least 15 minutes while removing contaminated clothing and wash using soap. Get medical attention.
Ingestion	**Do Not Induce Vomiting!** Never give anything by mouth to an unconscious person. If conscious, wash out mouth with water. Get medical attention.

5. FIREFIGHTING MEASURES

Suitable (and unsuitable) extinguishing media	Product is not flammable. Use appropriate media for adjacent fire.
Special protective equipment and precautions for firefighters	Wear self-contained, approved breathing apparatus and full protective clothing, including eye protection and boots.
Specific hazards arising from the chemical	Emits toxic fumes (carbon oxides and potassium oxides) under fire conditions. See also Stability and Reactivity section.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures	See section 8 for recommendations on the use of personal protective equipment.
Environmental precautions	Prevent spillage from entering drains. Any release to the environment may be subject to a federal/national or local reporting requirements.
Methods and materials for containment and cleaning up	Pick up and arrange disposal without creating dust. Clean surfaces thoroughly with water to remove residual contamination. Dispose of all waste and cleanup materials in accordance with regulations.

7. HANDLING AND STORAGE

Precautions for safe handling
See section 8 for recommendations on the use of personal protective equipment. Use with adequate ventilation. Wash thoroughly after using. Keep container closed when not in use. Avoid formation of dusts.

Conditions for safe storage, including any incompatibilities
Store in cool, dry, well-ventilated area. Protect against moisture and light. Maintain adequate ventilation. Wash thoroughly after handling. Hygroscopic, keep tightly closed.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Occupational exposure controls: Contains no substances with occupational exposure limit values.

Personal Protection

Eyes	Chemical safety goggles.
Inhalation	Provide local exhaust, preferably mechanical. If exposure levels are excessive, use an approved respirator.
Skin	Appropriate chemical-resistant gloves, apron, shoes.
Other	Not Available

Other Recommendations
Provide eyewash stations, quick-drench showers and washing facilities accessible to areas of use and handling. Have supplies and equipment for neutralization and running water available.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance (physical state, color, etc.)	White crystalline powder
Odor	Odorless
Odor threshold	Not Available
pH	7.0 - 8.5 at 50 g/l at 25°C (77°F)
Melting point/freezing point	356°C (673°F)
Initial boiling point and boiling range	Not Available
Flash point	Not Available
Evaporation rate	Not Available
Flammability (solid, gas)	Not Available
Upper/lower flammability or explosive limit	Not Available
Vapor pressure	Not Available
Vapor density	Not Available
Relative density	2.127 g/cm^3
Solubility (ies)	Soluble: 30g in 100g water
Partition coefficient: n-octanol/water	Not Available
Auto-ignition temperature	Not Available
Decomposition temperature	Not Available

10. STABILITY AND REACTIVITY

Chemical Stability	Stable
Possibility of Hazardous Reactions	Will not occur.
Conditions to Avoid	Heat, incompatibilities.
Incompatible Materials	Oxidizing agents, acids, alkalis, silver compounds, hypochlorates and chlorites
Hazardous Decomposition Products	Potassium oxides, carbon oxides.

11. TOXICOLOGICAL INFORMATION

Acute Toxicity

Skin	Not Available
Eyes	Not Available
Respiratory	Not Available
Ingestion	Not Available

Carcinogenicity

IARC	No components of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.
ACGIH	No components of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by ACGIH.
NTP	No components of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.
OSHA	No components of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.

Signs & Symptoms of Exposure

Skin	Causes skin irritation/inflammation and possible skin lesions/ulcerations and burns. Skin lesions begin with cracking of the skin and the formation of slow-healing ulcers. It may be harmful if absorbed through skin.
Eyes	Causes eye irritation and possible eye/corneal injury/burns. Symptoms may include blurred vision, redness, pain and possibly severe tissue burns.
Respiratory	Causes irritation of the respiratory tract, mucous membranes, and lungs, ulceration of the mucous membranes. Exposure can cause coughing, spasm, inflammation and edema of the larynx, and bronchi, chemical pneumonitis, pulmonary edema, chest pains, burning sensation, wheezing, and difficulty breathing. Inhalation can cause systematic poisoning.
Ingestion	May be harmful if ingested. Causes digestive irritation and possible burns. Symptoms may include ulceration of the mouth, headache, nausea, vomiting, diarrhea, excess salivation. May affect behavior/central nervous system (lethargy, ataxia, nervousness, weakness, muscle tremors, convulsions, staggering, and depression).

Chronic Toxicity	Not Available
Teratogenicity	Possible risk of congenital malformation in the fetus.
Mutagenicity	Not Available
Embryotoxicity	Not Available
Specific Target Organ Toxicity	Not Available

12. ECOLOGICAL INFORMATION

Ecotoxicity

Aquatic Vertebrate	Not Available
Aquatic Invertebrate	Not Available
Terrestrial	Not Available

Persistence and Degradability	Not Available
Bioaccumulative Potential	Not Available
Mobility in Soil	Not Available
PBT and vPvB Assessment	Not Available
Other Adverse Effects	Not Available

13. DISPOSAL CONSIDERATIONS

Waste Residues	Users should review their operations in terms of the applicable federal/national or local regulations and consult with appropriate regulatory agencies if necessary before disposing of waste product container.
Product Containers	Users should review their operations in terms of the applicable federal/national or local regulations and consult with appropriate regulatory agencies if necessary before disposing of waste product container.

The information offered in section 13 is for the product as shipped. Use and/or alterations to the product may significantly change the characteristics of the material and alter the waste classification and proper disposal methods.

14. TRANSPORTATION INFORMATION

US DOT	Not Dangerous Goods
TDG	Not Dangerous Goods
IMDG	Not Dangerous Goods
Marine Pollutant	No
IATA/ICAO	Not Dangerous Goods

15. REGULATORY INFORMATION

TSCA Inventory Status	All ingredients are listed on the TSCA inventory.
DSCL (EEC)	All ingredients are listed on the DSCL inventory.
California Proposition 65	Not Listed
SARA 302	Not Listed
SARA 304	Not Listed
SARA 311	Potassium Oxalate
SARA 312	Potassium Oxalate
SARA 313	Not listed
WHMIS Canada	Class D-1B- Toxic material causing immediate and serious toxic effects (TOXIC).

16. OTHER INFORMATION

Revision	Date
Revision 1	07-25-2011
Revision 2	06-05-2012