



Conforms to OSHA Hazard Communication Standard (HCS) (29 CFR 1910.1200 / revised 2012)

SAFETY DATA SHEET

KODAK C41 RA Bleach Replenisher NR

SECTION 1: IDENTIFICATION

1.1. Product identifier

Trade name: KODAK C41 RA Bleach Replenisher NR
Obtain special instructions before use.

Product no.: 5199021

1.2. Relevant identified uses of the substance or mixture and uses advised against

▼ Relevant identified uses of the substance or mixture: Photo chemical for developing color negative film.

Uses advised against : None known.

1.3. Details of the supplier of the safety data sheet

Company and address: **Photo Systems Inc.**
7190 Huron River Drive
MI 48130 Dexter
USA
Tel: +1 (734) 424-9625
Fax: +1-734-580-2199
www.photosys.com

For further information about this product email EHS-Questions @photosys.com

Manufacturer: **Photo Systems Inc.**
7190 Huron River Drive
MI 48130 Dexter
USA
Tel: +1 (734) 424-9625
Fax: +1-734-580-2199
www.photosys.com

Contact person: Jake Bolt

E-mail: jake@photosys.com

SDS date: 7/10/2024

SDS Version: 1.0

Date of previous version: 2/29/2024 (1.0)

1.4. Emergency telephone number

Contact the poison control at 1-800-222-1222 (24/7) or use the webPOISONCONTROL® (trriage.webpoisoncontrol.org) to get specific guidance for your case
See also section 4 "First aid measures".



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SECTION 2: HAZARD(S) IDENTIFICATION

OSHA/HCS status

This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200)

2.1. Classification of the substance or mixture

Skin Corr. 1B; H314, Causes severe skin burns and eye damage.
Eye Dam. 1; H318, Causes serious eye damage.
STOT SE 1; H370, Causes damage to organs.

2.2. Label elements

Hazard pictogram(s):



Signal word:

Danger

Hazard statement(s):

Causes severe skin burns and eye damage. (H314)
Causes damage to organs. (H370)

Precautionary statement(s):

General:

If medical advice is needed, have product container or label at hand. (P101)
Keep out of reach of children. (P102)

Prevention:

Do not breathe vapour/mist. (P260)
Do not eat, drink or smoke when using this product. (P270)
Wear protective gloves/protective clothing/eye protection/face protection. (P280)

Response:

IF SWALLOWED: Rinse mouth. Do NOT induce vomiting. (P301+P330+P331)
IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water. (P303+P361+P353)
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. (P305+P351+P338)
IF exposed or concerned: Call a POISON CENTER/doctor (P308+P311)
Immediately call a POISON CENTER/doctor. (P310)
Specific treatment (see instructions on this label). (P321)

Storage:

Store locked up. (P405)

Disposal:

Dispose of contents/container in accordance with local regulation (P501)

Additional labelling:

Not applicable.

2.3. Other hazards

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS



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3.1. Substances

Not applicable. This product is a mixture.

3.2. Mixtures

Product/substance	Identifiers	% w/w	Classification	Note
Ammonium hydroxide 29% solution	CAS No.: 1336-21-6	5-10%	Skin Corr. 1B, H314 STOT SE 3, H335	
1,3-Diaminopropane- N,N,N',N'-tetraacetic acid	CAS No.: 1939-36-2	5-10%	Acute Tox. 4, H302 Eye Dam. 1, H318 Repr. 2, H361	
Succinic acid	CAS No.: 110-15-6	5-10%	Eye Dam. 1, H318	
Iron(III) nitrate nonahydrate	CAS No.: 7782-61-8	5-10%	Ox. Liq. 2, H272 Ox. Sol. 3, H272 Skin Irrit. 2, H315 Eye Irrit. 2, H319 STOT SE 3, H335	
Ammonium bromide	CAS No.: 12124-97-9	5-10%	Eye Irrit. 2, H319	
Nitric Acid	CAS No.: 7697-37-2	<1%	Ox. Gas 1, H270 Met. Corr. 1, H290 Skin Corr. 1A, H314 Eye Dam. 1, H318 Acute Tox. 3, H331 STOT SE 3, H335	

Where the concentration of an ingredient is expressed as a range the exact concentration has been withheld as a trade secret.

See full text of H-phrases in section 16. Occupational exposure limits are listed in section 8, if these are available.

Other information

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SECTION 4: FIRST-AID MEASURES

4.1. Description of first aid measures

General information:

If breathing is irregular, drowsiness, loss of consciousness or cramps: Call 911 and give immediate treatment (first aid).

Contact a doctor if in doubt about the injured person's condition or if the symptoms persist. Never give an unconscious person water or other drink.

Inhalation:

Upon breathing difficulties or irritation of the respiratory



- Skin contact:** tract: Bring the person into fresh air and stay with him/her. Get medical attention if symptoms occur.
Immediately flush skin with plenty of water. Remove contaminated clothing. Get medical attention in if symptoms occur or in case of eczema or other skin disorders.
- Eye contact:** If in eyes: Flush eyes with plenty of water or salt water (20-30 °C) for at least 30 minutes and continue until irritation stops. Remove contact lenses. Make sure you flush under the upper and lower eyelids. Seek medical assistance immediately and continue flushing during transport.
- Ingestion:** Never give anything by mouth to an unconscious person. No NOT induce vomiting. Rinse mouth. If vomiting occurs, keep head low so that stomach content does not get into the lungs. Get medical attention immediately.
- Burns:** Not applicable.

4.2. Most important symptoms and effects, both acute and delayed

Most important known symptoms and effects are described in the labeling (see Section 2.2 and in Section 11.)

This product may cause irritation upon exposure to skin and eyes. Symptoms may include redness, tearing, stinging, and blurred vision. Skin irritation. May cause redness and pain.

4.3. Indication of any immediate medical attention and special treatment needed

IF exposed or concerned:

Get immediate medical advice/attention.

Information to medics

Bring this safety data sheet or the label from this product.

SECTION 5: FIRE-FIGHTING MEASURES

5.1. Extinguishing media

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

5.2. Special hazards arising from the substance or mixture

Carbon oxides. Ammonia. Chloramine. Hydrogen bromide. Nitrogen oxides (NOx). Oxides of iron.

5.3. Advice for firefighters

Wear self-contained breathing apparatus and protective clothing to prevent contact. Upon direct exposure contact the Poison Help Line on 1-800-222-1222 (24/7) in order to obtain further advice.

SECTION 6: ACCIDENTAL RELEASE MEASURES

6.1. Personal precautions, protective equipment and emergency procedures

Keep unnecessary personnel away. Use personnel protective equipment and clothing recommended in Section 8.

Avoid direct contact with spilled substances.

Ensure adequate ventilation, especially in confined areas.



Contaminated areas may be slippery.

6.2. Environmental precautions

Prevent product from entering drains, water courses or onto the ground.
Avoid discharge to lakes, streams, sewers, etc.
Keep unauthorized persons away from the spill

6.3. Methods and material for containment and cleaning up

Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations.

Wherever possible cleaning should be performed with normal cleaning agents. Avoid use of solvents.

6.4. Reference to other sections

See section 13 "Disposal considerations" on handling of waste.
See section 8 "Exposure controls/personal protection" for protective measures.

SECTION 7: HANDLING AND STORAGE

7.1. 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. Do not taste or swallow. Avoid contact with skin and clothing. Avoid prolonged exposure. When using, Do not eat, drink or smoke. Provide adequate ventilation. Wear appropriate personal protective equipment. Wash hands thoroughly after handling.

Avoid direct contact with the product.

Smoking, drinking and consumption of food is not allowed in the work area.

See section 8 "Exposure controls/personal protection" for information on personal protection.

7.2. Conditions for safe storage, including any incompatibilities

Containers that have been opened must be carefully resealed and kept upright to prevent leakage.

Recommended storage material: Keep only in original packaging.
Container with a resistant inner liner.

Liquid class: Combustible Liquid / Class IIIB (NFPA 30)

Storage temperature: Dry, cool and well ventilated

Incompatible materials: Strong oxidizing agents
Combustible materials
Reducing agents
Bases
Sodium hypochlorite (bleach)
Metal

7.3. Specific end use(s)

This product should only be used for applications quoted in section 1.2.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1. Control parameters

Occupational Exposure Limits



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Nitric Acid
 Short term exposure limit (STEL) (ACGIH TLV) (ppm): 4
 Short term exposure limit (STEL) (NIOSH REL) (ppm): 4
 Long term exposure limit (OSHA Table Z-1) (mg/m³): 5
 Long term exposure limit (OSHA Table Z-1) (ppm): 2
 Long term exposure limit (ACGIH TLV) (ppm): 2

Part 1910 - Occupational Safety and Health Standards (29 CFR 1910.1000 TABLE Z-1 - Limits for Air Contaminants)

8.2. Exposure controls

Good ventilations (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. Compliance with the given occupational exposure limits values should be controlled on a regular basis.

General recommendations: Smoking, drinking and consumption of food is not allowed in the work area.

Exposure scenarios: There are no exposure scenarios implemented for this product.

Exposure limits: Professional users are subjected to the legally set maximum concentrations for occupational exposure. See occupational hygiene limit values above.

Appropriate technical measures: The formation of vapours must be kept at a minimum and below current limit values (see above). Installation of a local exhaust system if normal air flow in the work room is not sufficient is recommended. Ensure eyewash and emergency showers are clearly marked. Ensure that eyewash stations and safety showers are located within easy reach. Apply standard precautions during use of the product. Avoid inhalation of vapours.


Hygiene measures: In between use of the product and at the end of the working day all exposed areas of the body must be washed thoroughly. Pay special attention to hands, forearms and face.

Measures to avoid environmental exposure: Keep damming materials near the workplace. If possible, collect spillage during work.

Individual protection measures, such as personal protective equipment

Generally: Use only protective equipment with a recognized certification mark, e.g. the UL mark.


Respiratory Equipment:

Type	Class	Colour	Standards	
organic vapor/P95	P95			


Skin protection:




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Recommended	Type/Category	Standards	
Dedicated work clothing should be worn.	-	-	

Hand protection:

Material	Glove thickness (mm)	Breakthrough time (min.)	Standards	
Gloves	-	-	EN374	

Eye protection:

Type	Standards	
Wear vapor-tight chemical goggle and a face shield.		

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

9.1. Information on basic physical and chemical properties

Physical state:	Liquid
Colour:	Dark green
Odour:	None
Odour threshold (ppm):	No data available
pH:	4
Density (g/cm³):	Testing not relevant or not possible due to the nature of the product. -
Relative density:	1.16
Kinematic viscosity:	No data available
Particle characteristics:	Not applicable - product is a liquid

Phase changes

Melting point (°F):	No data available
Softening point/range (°F):	Does not apply to liquids.
Boiling point (°F):	212
Boiling point (°C):	100
Vapour pressure:	18 mmHg
Relative vapour density:	0.6
Decomposition temperature (°F):	No data available

Data on fire and explosion hazards

Flash point (°F):	200
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Flash point (°C):	93.3
Flammability (°F):	Not applicable
Auto-ignition temperature (°F):	No data available
Explosion limits (% v/v):	Testing not relevant or not possible due to the nature of the product.

Solubility

Solubility in water:	Completely soluble
n-octanol/water coefficient (LogKow):	Testing not relevant or not possible due to the nature of the product.
Solubility in fat (g/L):	Testing not relevant or not possible due to the nature of the product.

9.2. Other information

Dust explosion class:	St0 (No explosion)
Evaporation rate (n-butylacetate = 100):	No data available
Other physical and chemical parameters:	No data available.
Oxidizing properties:	Not applicable

SECTION 10: STABILITY AND REACTIVITY

10.1. Reactivity

This product is stable and non-reactive under normal conditions of use, storage and transport. May be corrosive to metals.

10.2. Chemical stability

The product is stable under the conditions, noted in section 7 "Handling and storage".

10.3. Possibility of hazardous reactions

Hazardous polymerization does not occur.

10.4. Conditions to avoid

Keep away from heat.
Extremes of temperature
Contact with incompatible materials.

10.5. Incompatible materials

Strong oxidizing agents
Bases
Sodium hypochlorite (bleach)
Reducing agents
Combustible materials
Contact with sodium hypochlorite (bleach) may form chloramine (toxic gas). Material can react violently with combustible materials or strong reducing agents.

10.6. Hazardous decomposition products

Carbon oxides. Ammonia. Chloramine. Hydrogen bromide. Nitrogen oxides (NOx). Oxides of iron.



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SECTION 11: TOXICOLOGICAL INFORMATION

11.1. Information on toxicological effects

Acute toxicity

May cause irritation to the respiratory system. Prolonged inhalation may be harmful.

Skin corrosion/irritation

Prolonged skin contact may cause temporary irritation.

Serious eye damage/irritation

Causes serious eye damage.

Respiratory sensitisation

Not a respiratory sensitizer.

Skin sensitisation

This product is not expected to cause skin sensitization.

Germ cell mutagenicity

No data available to indicate product or any components present at greater than 1% are mutagenic or genotoxic.

Carcinogenicity

Not classified as to carcinogenicity to humans.

Reproductive toxicity

This product is not expected to cause reproductive or developmental effects.

STOT-single exposure

May cause damage to organs (blood).

STOT-repeated exposure

Not classified.

Aspiration hazard

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

Long term effects

Prolonged inhalation may be harmful. Prolonged exposure may cause chronic effects.

Other information

None known.

SECTION 12: ECOLOGICAL INFORMATION

12.1. Toxicity

This 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.

12.2. Persistence and degradability

Not readily biodegradable.

12.3. Bioaccumulative potential

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

12.4. Mobility in soil



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No data available.

12.5. Results of PBT and vPvB assessment

This mixture/product does not contain any substances known to fulfil the criteria for PBT and vPvB classification.

12.6. 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.

SECTION 13: DISPOSAL CONSIDERATIONS

Waste treatment methods

Waste Treatment Methods: Product waste material must be disposed of in accordance with the national and local regulations. handle uncleaned containers like the product itself.

RCRA Hazardous waste ("P" and "U" list) (40 CFR 261)



None of the components are listed

Specific labelling

Contaminated packing


Packaging containing residues of the product must be disposed of similarly to the product.

SECTION 14: TRANSPORT INFORMATION

	14.1 UN / ID	14.2 UN proper shipping name	14.3 Hazard class(es)	14.4 PG*	14.5 Env**	Other information:
DOT	UN1760	CORROSIVE LIQUID, N.O.S. (Ammonium bromide)	Transport hazard class: 8 Label: 8 Classification code: C9 	III	No	Limited quantities: 5 L Tunnel restriction code: (E) See below for additional information.
IMDG	UN1760	CORROSIVE LIQUID, N.O.S. (Ammonium bromide)	Transport hazard class: 8 Label: 8 Classification code: C9 	III	No	Limited quantities: 5 L EmS: F-A S-B See below for additional information.
IATA	UN1760	CORROSIVE LIQUID, N.O.S. (Ammonium bromide)	Transport hazard class: 8 Label: 8 Classification code: C9	III	No	See below for additional information.



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14.1 UN / ID	14.2 UN proper shipping name	14.3 Hazard class(es)	14.4 PG*	14.5 Env**	Other information:
					

* Packing group

** Environmental hazards

Additional information

LIMITED QUANTITY EXEMPTION

Not dangerous goods according to DOT, IATA and IMDG.

NOT REGULATED AS A DANGEROUS GOOD - Due to Limited Quantity Exemptions. This product is packaged in 5 L bottles.

14.6. Special precautions for user

Not applicable.

14.7. Transport in bulk according to Annex II of Marpol and the IBC Code

No data available.

SECTION 15: REGULATORY INFORMATION

15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture

15.2. U.S. Federal regulations

TSCA (the non-confidential portion):

Ammonium hydroxide 29% solution is listed
 1,3-Diaminopropane-N,N,N',N'-tetraacdtic acid is listed
 Succinc acid is listed
 Ammonium bromide is listed
 Nitric Acid is listed

Clean Air Act:

Nitric Acid is regulated by section 112(r) with a reportable quantity (RQ) of: 15000 pounds

EPCRA Section 302:

Nitric Acid is regulated with a Treshold Planning Quantity (TPQ) of: 1000 pounds

EPCRA Section 304:

Nitric Acid is regulated with a Reportable Quantity (RQ) of: 1000 pounds

EPCRA section 313:

Ammonium hydroxide 29% solution is listed
 Nitric Acid is listed

CERCLA:

Ammonium hydroxide 29% solution is regulated with a Reportable Quantity (RQ) of: 1000 pounds
 Nitric Acid is regulated with a Reportable Quantity (RQ) of: 1000 pounds

State regulations

California / Prop. 65:

None of the components are listed

Massachusetts / Right To Know Act:

Ammonium hydroxide 29% solution is listed
 Ammonium bromide is listed
 Nitric Acid is listed



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New Jersey / Right To Know Act: Ammonium hydroxide 29% solution / Substance number: 0103
Ammonium hydroxide 29% solution is on the Special Health Hazard Substance List

—
Nitric Acid / Substance number: 1356
Nitric Acid is on the Special Health Hazard Substance List

New York / Right To Know Act:

—
Ammonium hydroxide 29% solution is listed
Ammonium hydroxide 29% solution is regulated with a Reportable Quantity (RQ) of: 1000 pounds
Ammonium hydroxide 29% solution is regulated with a Treshold Reporting Quantity (TRQ) of: 100 pounds

—
Nitric Acid is listed
Nitric Acid is regulated with a Reportable Quantity (RQ) of: 1000 pounds
Nitric Acid is regulated with a Treshold Reporting Quantity (TRQ) of: 10 pounds
Nitric Acid is regulated with a Treshold Planning Quantity (TPQ) of: 1000 pounds

Pennsylvania / Right To Know Act:

—
Ammonium hydroxide 29% solution is listed
Ammonium hydroxide 29% solution is hazardous to the environment (E)

—
Ammonium bromide is listed

—
Nitric Acid is listed
Nitric Acid is hazardous to the environment (E)

NFPA

Health hazard: 3
Fire hazard: 1
Instability hazard: 1

15.4. Restrictions for application

No special.

15.5. Demands for specific education

No specific requirements.

15.6. Additional information

If this product is sold in retail, it must be delivered with child-resistant fastening.

15.7. Chemical safety assessment

No

15.8. Sources

OSHA Hazard Communication Standard (29 CFR 1910.1200)

SECTION 16: OTHER INFORMATION



Conforms to OSHA Hazard Communication Standard (HCS) (29 CFR 1910.1200 / revised 2012)

Full text of H-phrases as mentioned in section 3

- H270, May cause or intensify fire; oxidiser.
- H272, May intensify fire; oxidiser.
- H290, May be corrosive to metals.
- H302, Harmful if swallowed.
- H314, Causes severe skin burns and eye damage.
- H315, Causes skin irritation.
- H318, Causes serious eye damage.
- H319, Causes serious eye irritation.
- H331, Toxic if inhaled.
- H335, May cause respiratory irritation.
- H361, Suspected of damaging fertility or the unborn child.

The full text of identified uses as mentioned in section 1

None known.

Abbreviations and acronyms

- ACGIH = American Conference of Governmental Industrial Hygienists
- ADN = European Provisions concerning the International Carriage of Dangerous Goods by Inland Waterway
- ADR = The European Agreement concerning the International Carriage of Dangerous Goods by Road
- ATE = Acute Toxicity Estimate
- BCF = Bioconcentration Factor
- CAS = Chemical Abstracts Service
- CERCLA = Comprehensive Environmental Response Compensation and Liability Act
- DOT = Department of Transportation
- EINECS = European Inventory of Existing Commercial chemical Substances
- EPCRA = Emergency Planning and Community Right-To-Know Act
- GHS = Globally Harmonized System of Classification and Labelling of Chemicals
- HCIS = Hazardous Chemical Information System
- HNOC = Hazards Not Otherwise Classified
- IARC = International Agency for Research on Cancer
- IATA = International Air Transport Association
- IMDG = International Maritime Dangerous Goods
- LogPow = logarithm of the octanol/water partition coefficient
- MARPOL = International Convention for the Prevention of Pollution From Ships, 1973 as modified by the Protocol of 1978. ("Marpol" = marine pollution)
- NFPA = National Fire Protection Association
- NIOSH = National Institute for Occupational Safety and Health
- OECD = Organisation for Economic Co-operation and Development
- OSHA = Occupational Safety and Health Administration
- PBT = Persistent, Bioaccumulative and Toxic
- RCRA = Resource Conservation and Recovery Act
- RID = The Regulations concerning the International Carriage of Dangerous Goods by Rail
- RRN = REACH Registration Number
- SARA = Superfund Amendments and Reauthorization Act
- SCL = A specific concentration limit.
- STEL = Short-term exposure limits
- STOT-RE = Specific Target Organ Toxicity - Repeated Exposure
- STOT-SE = Specific Target Organ Toxicity - Single Exposure
- TSCA = The Toxic Substances Control Act
- TWA = Time weighted average



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UN = United Nations

UVBC = Unknown or variable composition, complex reaction products or of biological materials

VOC = Volatile Organic Compound

vPvB = Very Persistent and Very Bioaccumulative

Additional information

The classification of the mixture in regard of health hazards is in accordance with the calculation methods given by HCS (29 CFR 1910.1200).

The safety data sheet is validated by

Validated by Photo Systems Inc./cf

▼ Other

DISCLAIMER: The information contained in this Safety Data Sheet is correct to the best of our knowledge and experience at the time of publication. However, no warranty is expressed or implied regarding the accuracy of this data nor the results to be obtained from the use thereof. It is the user's responsibility to assure the proper use, storage, and disposal of these materials to ensure the safety and health of the user and to protect the environment.

Country-language: US-en