Safety Data Sheet

1. Identification of the substance/mixture and of the company/undertaking

Product Name： # 9240 JOBO C-41 Color Negative Kit Color developer part A

Name of Manufacturer： JOBO International GmbH

Adress： Kölner Straße 58a·51645 Gummersbach Germany

Name of Section：Johannes Bockemuehl

Phone Number： +49 (0) 2261 - 545-35

MSDS No.： J9240-01

2. Hazards identification

Hazard class	Hazard category	Route of exposure
Not a dangerous substance according to GHS.	Not hazardous according to GHS/Hazard Communication regulations.	--

Response: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/ attention. IF ON SKIN: Wash with plenty of soap and water. If skin irritation occurs: Get medical advice/ attention.

Storage: Store in a well-ventilated place. Keep cool.

Disposal: Dispose of contents/container in accordance with local/regional/national/international regulation.

Other hazards which do not result in classification:

MAY LIBERATE SULFUR DIOXIDE

3. Composition/information on ingredients

Components - (CAS-No.)	Weight percent
Water（7732-18-5）	55-75
Potassium carbonate (584-08-7)	25 – 35
Sodium sulfite (7757-83-7)	1 – 10
Diethylenetriamine pentaacetic acid, pentasodium salt (140-01-2)	1 – 10

4. First aid measures

Inhalation: If inhaled, remove to fresh air. Get medical attention if symptoms occur.

Eyes: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/ attention.

Skin: IF ON SKIN: Wash with plenty of soap and water. If skin irritation occurs: Get medical advice/ attention.
Ingestion: Get medical attention if symptoms occur.
Most important symptoms and effects, both acute and delayed: No information available.
Indication of any immediate medical attention and special treatment needed:
Treatment: No information available.

5. Firefighting measures

Extinguishing Media: Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
Special hazards arising from the substance or mixture
Hazardous Combustion Products: None (noncombustible), (see also Hazardous Decomposition Products sections.)
Special Fire-Fighting Procedures: Wear self-contained breathing apparatus and protective clothing. Fire or excessive heat may produce hazardous decomposition products.
Unusual Fire and Explosion Hazards: None.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures: Refer to protective measures listed in sections 7 and 8.
Methods and materials for containment and cleaning up: Absorb spill with vermiculite or other inert material, then place in a container for chemical waste. Clean surface thoroughly to remove residual contamination.
Environmental precautions: No information available.

7. Handling and storage

Precautions for safe handling
Personal precautions: Do not breathe mist or vapour at concentrations greater than the exposure limits. Avoid contact with eyes, skin, and clothing. Keep container tightly closed. Use only with adequate ventilation. Wash thoroughly after handling. Do not eat, drink or smoke when using this product.
Prevention of Fire and Explosion: No special technical protective measures required.
Conditions for safe storage, including any incompatibilities: Keep container tightly closed. Keep away from incompatible substances (see Incompatibility section.)

8. Exposure controls/personal protection

Occupational exposure controls

Chemical Name	Regulatory List	Value Type	Value
Sodium bisulphite	ACGIH	time weighted average	No data available

Appropriate engineering controls: Use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. Controls should be sufficient so that applicable occupational exposure limits are not exceeded.

Individual protection measures, such as personal protective equipment

Eye protection: Wear eye/face protection.

Hand protection: Wear protective gloves.

Respiratory protection: If engineering controls do not maintain airborne concentrations below recommended exposure limits, an approved respirator must be worn.

9. Physical and chemical properties

Physical form: liquid

Color: Colorless

Odor: Odorless

Specific gravity: 1.22

Vapour pressure: No data available

Vapour density: No data available

Boiling point/boiling range: 100.0 °C (212.0 °F)

Melting point/range: No data available

Water solubility: No data available

pH: 11

Flash point: does not flash

Evaporation rate: No data available

Upper explosion limit: No data available

Lower explosion limit: No data available

Partition coefficient: n-octanol/water: No data available

Auto-ignition temperature: No data available

Decomposition temperature: No data available

Viscosity: No data available

Explosive properties: No data available

Oxidizing properties: No data available

10. Stability and reactivity

Reactivity: No data available

Chemical stability: Stable under normal conditions.

Possibility of hazardous reactions: Hazardous polymerisation does not occur.

Conditions to avoid: No data available

Incompatible materials: None with common materials and contaminants with which the material may reasonably come into contact.

Hazardous decomposition products: Nitrogen oxides (NOx), Sulphur oxides

11. Toxicological information

Effects of Exposure

General advice:

Inhalation: Expected to be a low hazard for recommended handling.

Eyes: Causes serious eye irritation.

Skin: Causes skin irritation.

Ingestion: Expected to be a low ingestion hazard.

Numerical measures of toxicity - Product Information

Oral LD50 (rat): ＞2000mg/kg （ATEmix）

ATE: Acute toxicity estimate

12. Ecological information

The following properties are ESTIMATED from the components of the preparations.

Potential Toxicity:

Toxicity to fish (LC50):	Not classified
Persistence and degradability:	Readily biodegradable.
Bioaccumulative potential	No data available
Mobility in soil	No information available.

13. Disposal considerations

Discharge, treatment, or disposal may be subject to federal, state, commonwealth, provincial, or local laws. Since emptied containers retain product residue, follow label warnings even after container is emptied.

14. Transport information

Not regulated for all modes of transportation.

15. Regulatory information

Notification status

Regulatory List	**Notification status**
TSCA	All listed
DSL	All listed
NDSL	None listed
EINECS	All listed
ELINCS	None listed
NLP	None listed
AICS	All listed
IECS	All listed
ENCS	All listed
ECI	All listed
NZIoC	All listed
PICCS	All listed

"Not all listed" indicates one or more component is either not on the public Inventory or is subject to exemption requirements.

16. Other information

9240 JOBO C-41 Color Negative Kit Color developer part A

Volume per unit：250ml

The data below reflects current legislative requirements whereas the product in your possession may carry a different version of the label depending on the date of manufacture.

Safety Data Sheet

1. Identification of the substance/mixture and of the company/undertaking

Product Name： # 9240 JOBO C-41 Color Negative Kit Color developer part B

Name of Manufacturer： JOBO International GmbH

Adress： Kölner Straße 58a･51645 Gummersbach Germany

Name of Section：Johannes Bockemuehl

Phone Number： +49 (0) 2261 - 545-35

MSDS No.： J9240-02

2. Hazards identification

Hazard class	Hazard category	Route of exposure
Not a dangerous substance according to GHS.	Not hazardous according to GHS/Hazard Communication regulations.	--

GHS-Labelling

Contains:

Bis(hydroxylammonium) sulfate (10039-54-0)

Symbol(s):

Hazard statements: May be corrosive to metals. Harmful if swallowed. Causes skin irritation. Causes serious eye irritation. May cause an allergic skin reaction. Precautionary statements:

Prevention: Keep only in original container. Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Wear protective gloves/protective clothing/eye protection/face protection. Do not breathe dust/ fume/ gas/ mist/ vapours/ spray. Wash thoroughly after handling. Do not eat, drink or smoke when using this product. Contaminated work clothing should not be allowed out of the workplace.

Response: Absorb spillage to prevent material damage. IF exposed: 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. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/ attention. IF SWALLOWED: Call a POISON CENTER or doctor/ physician if you feel unwell. Rinse mouth. Take off contaminated clothing and wash before reuse.

Storage: Store in corrosive resistant aluminium container with a resistant inner liner.

Disposal: Dispose of contents/container in accordance with local/regional/national/international regulation.

Other hazards which do not result in classification:

Heat sensitive - can decompose if heated.
CONTENTS MAY DEVELOP PRESSURE UPON PROLONGED EXPOSURE TO HEAT
Dried product residue can act as a reducing agent.

3. Composition/information on ingredients

Components - (CAS-No.)	Weight percent
Water (7732-18-5)	70-90
Bis(hydroxylammonium) sulfate (10039-54-0)	7

4. First aid measures

Inhalation: IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention if symptoms occur.
Eyes: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/ attention.
Skin: IF ON SKIN: Wash with plenty of soap and water. Get medical attention if symptoms occur. Wash contaminated clothing before re-use. Destroy or thoroughly clean contaminated shoes.
Ingestion: If swallowed, DO NOT induce vomiting. Call a physician or poison control centre immediately. Never give anything by mouth to an unconscious person.

5. Firefighting measures

Extinguishing Media: Use extinguishing measures that are appropriate to local circumstances and the surrounding environment. Use water spray to cool unopened containers.
Special hazards arising from the substance or mixture
Hazardous Combustion Products: None (noncombustible), (see also Hazardous Decomposition Products sections.)
Special Fire-Fighting Procedures: Wear self-contained breathing apparatus and protective clothing. Fire or excessive heat may produce hazardous decomposition products.
Unusual Fire and Explosion Hazards: Mixture contains a strong reducing agent. Reacts violently with oxidizing materials. Dried product residue can act as a reducing agent. Elevated temperature can cause decomposition. May cause spontaneous heating and ignition when absorbed on combustible, porous material (e.g. rags, paper, sawdust, cotton, clothing).

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures: Refer to protective measures listed in sections 7 and 8.
Methods and materials for containment and cleaning up: Absorb spill with vermiculite or other inert

material, then place in a container for chemical waste. Collect in a noncombustible container for prompt disposal. Clean surface thoroughly to remove residual contamination.
Environmental precautions: Flush with plenty of water. Do not store in metal containers.
For Large Spills: Flush with plenty of water. Do not store in metal containers.

7. Handling and storage

Precautions for safe handling
Personal precautions: Avoid prolonged or repeated breathing of mist or vapour. Avoid contact with eyes, skin, and clothing. Use only with adequate ventilation. Wash thoroughly after handling. Do not eat, drink or smoke when using this product.
Prevention of Fire and Explosion: Keep away from heat and flame. Keep from any contact with metals. Remove and wash contaminated clothing promptly. Exercise caution if heating, especially in a closed container. Keep from contact with oxidizing materials, highly oxygenated or halogenated solvents, organic compounds containing reducible functional groups.
Conditions for safe storage, including any incompatibilities: Store in original container. Do not store in metal containers. Contents may develop pressure upon prolonged exposure to heat. Store in cool place. Keep container tightly closed to prevent the loss of water. Keep away from incompatible substances (see Incompatibility section.)

8. Exposure controls/personal protection

Occupational exposure controls: Not established
Appropriate engineering controls: Good general ventilation should be used. Ventilation should be sufficient so that applicable occupational exposure limits are not exceeded. Ventilation rates should be matched to conditions. Supplementary local exhaust ventilation, closed systems, or respiratory protection may be needed in special circumstances.
Individual protection measures, such as personal protective equipment
Eye protection: Wear safety glasses with side shields (or goggles).
Hand protection: Wear impervious gloves and protective clothing appropriate for the risk of exposure.
Respiratory protection: None should be needed.

9. Physical and chemical properties

Physical form: liquid
Color: clear
Odor: odorless
Specific gravity: 1.11

Vapour pressure (at 20.0 °C (68.0 °F)): 24 mbar (18.0 mm Hg)
Vapour density: No data available
Boiling point/boiling range: ≒100℃ (212° F)
Water solubility: complete
pH: 3.5
Flash point: does not flash
Evaporation rate: No data available
Flammability (Solid; gas): No data available
Upper explosion limit: No data available
Lower explosion limit: No data available
Partition coefficient: n-octanol/water: No data available
Auto-ignition temperature: No data available
Decomposition temperature: No data available
Viscosity: No data available
Explosive properties: No data available
Oxidizing properties: No data available

10. Stability and reactivity

Reactivity: No data available
Chemical stability: Stable in glass and plastic containers, however, becomes unstable in contact with metals. Materials containing similar structural groups can decompose if heated above 110°C (230°F). Safe handling temperatures are dependent on specific conditions of use and are typically substantially below the onset temperature. Consult your technical safety experts.
Possibility of hazardous reactions: Hazardous polymerisation does not occur.
Conditions to avoid: No data available
Incompatible materials: Acids, Halogenated compounds, Metals, Strong oxidizing agents.
Hazardous decomposition products: Ammonia, Nitrogen oxides (NOx), Sulphur oxides

11. Toxicological information

Effects of Exposure
General advice:
Contains: Bis(hydroxylammonium) sulfate. Can cause blood disorders. Can cause cyanosis. There is limited evidence of carcinogenicity in lifetime oral studies in rats.
Inhalation: Expected to be a low hazard for recommended handling.
Eyes: Causes serious eye irritation.
Skin: Harmful if absorbed through skin. Causes skin irritation. May cause allergic skin reaction

based on human experience.

Ingestion: Harmful if swallowed. Causes damage to organs if swallowed.

Acute Toxicity Data:

Oral LD50 (rat): ＞5000mg/kg （ATEmix）

ATE: Acute toxicity estimate

Data for Bis(hydroxylammonium) sulfate (CAS 10039-54-0):

Numerical measures of toxicity - Product Information

Oral LD50 (male Rat): 842 mg/kg

Dermal LD50 (Rabbit): 100mg/kg

Skin irritation: strong

Eye irritation: slight

12. Ecological information

The following properties are ESTIMATED from the components of the preparations.

Potential Toxicity:

Toxicity to fish (LC50):	Not classified
Persistence and degradability:	Readily biodegradable
Bioaccumulative potential	No data available
Mobility in soil	No information available.

13. Disposal considerations

Discharge, treatment, or disposal may be subject to federal, state, commonwealth, provincial, or local laws. Since emptied containers retain product residue, follow label warnings even after container is emptied.

14. Transport information

Not regulated for all modes of transportation.

15. Regulatory information

Notification status

Regulatory List	**Notification status**
TSCA	All listed
DSL	All listed
NDSL	None listed

EINECS	All listed
ELINCS	None listed
NLP	None listed
AICS	All listed
IECS	All listed
ENCS	All listed
ECI	All listed
NZIoC	All listed
PICCS	All listed

"Not all listed" indicates one or more component is either not on the public Inventory or is subject to exemption requirements.

16. Other information

9240 JOBO C-41 Color Negative Kit Color developer part B

Volume per unit：75ml

The data below reflects current legislative requirements whereas the product in your possession may carry a different version of the label depending on the date of manufacture.

based on correct mixing and use of the product according to instructions.

Safety Data Sheet

1. Identification of the substance/mixture and of the company/undertaking

Product Name： # 9240 JOBO C-41 Color Negative Kit Color developer part C

Name of Manufacturer： JOBO International GmbH

Adress： Kölner Straße 58a·51645 Gummersbach Germany

Name of Section：Johannes Bockemuehl

Phone Number： +49 (0) 2261 - 545-35

MSDS No.： J9240-03

2. Hazards identification

Classification of the chemical in accordance with paragraph (d) of 29 CFR 1910.1200:

Acute Toxicity - Oral	Category 3
Skin corrosion/irritation	Category 2
Serious eye damage/eye irritation	Category 2
Skin sensitization	Category 1
Specific target organ toxicity (repeated exposure)	Category 2

GHS-Labelling

Contains:

4-(N-ethyl-N-2-hydroxyethyl)-2-methylphenylenediamine sulfate (25646-77-9)

Symbol(s):

Signal word: Danger

Hazard statements: May be corrosive to metals. Toxic if swallowed. Causes skin irritation. Causes serious eye irritation. May cause an allergic skin reaction. May cause damage to organs. (Kidney.) May cause damage to organs through prolonged or repeated exposure. (Kidney.)

Precautionary statements:

Prevention: Keep only in original container. Wear protective gloves/eye protection/face protection. Do not breathe dust/ fume/ gas/ mist/ vapours/ spray. Wash thoroughly after handling. Contaminated work clothing should not be allowed out of the workplace. Do not eat, drink or smoke when using this product.

Response: Absorb spillage to prevent material damage. IF exposed or if you feel unwell: Call a POISON CENTER or doctor/ physician. IF IN EYES: Rinse cautiously with water for several

minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/ attention. IF ON SKIN: Wash with plenty of soap and water. If skin irritation or rash occurs: Get medical advice/ attention. Take off contaminated clothing and wash before reuse. IF SWALLOWED: Immediately call a POISON CENTER or doctor/ physician. Rinse mouth.
Storage: Store in corrosive resistant container with resistant inliner.
Disposal: Dispose of contents/container in accordance with local/regional/national/international regulation.
Other hazards which do not result in classification:
Heat sensitive - can decompose if heated.
MAY LIBERATE SULFUR DIOXIDE
HMIS III Hazard Ratings: Health - 2*, Flammability - 1, Physical Hazard - 1
NFPA Hazard Ratings: Health - 3, Flammability - 1, Instability - 1
NOTE: HMIS III and NFPA 704 (2007) hazard indexes involve data review and interpretation that may vary among companies. They are intended only for rapid, general identification of the magnitude of the potential hazards. To adequately address safe handling, ALL information in this MSDS must be considered.

3. Composition/information on ingredients

Components - (CAS-No.)	Weight percent
Water	85 - 90
4-(N-ethyl-N-2-hydroxyethyl)-2-methylphenylenediamine sulfate (25646-77-9)	10 - 15
Sodium bisulphite (7631-90-5)	0.1 – 0.5

4. First aid measures

Inhalation: If inhaled, remove to fresh air. Get medical attention if symptoms occur.
Eyes: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/ attention.
Skin: IF ON SKIN: Wash with plenty of soap and water. If skin irritation or rash occurs: Get medical advice/ attention. Take off contaminated clothing and wash before reuse.
Ingestion: IF SWALLOWED: Immediately call a POISON CENTER or doctor/ physician. Rinse mouth.
Most important symptoms and effects, both acute and delayed: No information available.
Indication of any immediate medical attention and special treatment needed:
Treatment: No information available.

5. Firefighting measures

Extinguishing Media: Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide. Use water spray to cool unopened containers.

Special hazards arising from the substance or mixture

Hazardous Combustion Products: Carbon oxides, Nitrogen oxides (NOx), Sulphur oxides, (see also Hazardous Decomposition Products sections.)

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

Unusual Fire and Explosion Hazards: Elevated temperature can cause decomposition.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures: Refer to protective measures listed in sections 7 and 8.

Methods and materials for containment and cleaning up: Absorb spill with vermiculite or other inert material, then place in a container for chemical waste. Clean surface thoroughly to remove residual contamination.

Environmental precautions: No information available.

7. Handling and storage

Precautions for safe handling

Personal precautions: Do not breathe mist or vapour at concentrations greater than the exposure limits. Avoid contact with eyes, skin, and clothing. Keep container tightly closed. Use only with adequate ventilation. Wash thoroughly after handling.

Prevention of Fire and Explosion: Keep away from heat and sources of ignition. Keep from contact with oxidizing materials.

Conditions for safe storage, including any incompatibilities: Store in cool place. Keep container tightly closed. Keep away from incompatible substances (see Incompatibility section.)

8. Exposure controls/personal protection

Occupational exposure controls

Appropriate engineering controls: Use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. Controls should be sufficient so that applicable occupational exposure limits are not exceeded.

Individual protection measures, such as personal protective equipment

Eye protection: Wear safety glasses with side shields (or goggles).

Hand protection: Wear impervious gloves and protective clothing appropriate for the risk of

exposure.

Respiratory protection: If engineering controls do not maintain airborne concentrations below recommended exposure limits, an approved respirator must be worn. Respirator type: acid gas If respirators are used, a program should be instituted to assure compliance with applicable federal, state, commonwealth, provincial, or local laws and regulations.

9. Physical and chemical properties

Physical form: liquid

Color: light yellow

Odor: strong sulphur dioxide

Specific gravity: 1.16

Vapour pressure : Not date available

Vapour density: Not date available

Boiling point/boiling range: > 100 °C (> 212.0 °F)

Water solubility: complete

pH: 2.1

Flash point: does not flash

Evaporation rate: No data available

Flammability (Solid; gas): No data available

Upper explosion limit: No data available

Lower explosion limit: No data available

Partition coefficient: n-octanol/water: No data available

Auto-ignition temperature: No data available

Decomposition temperature: No data available

Viscosity: No data available

Explosive properties: No data available

Oxidizing properties: No data available

10. Stability and reactivity

Reactivity: No data available

Chemical stability: Stable under normal conditions. Safe handling temperatures are dependent on specific conditions of use and are typically substantially below the onset temperature. Consult your technical safety experts.

Possibility of hazardous reactions: Hazardous polymerisation does not occur.

Conditions to avoid: No data available

Incompatible materials: Strong oxidizing agents. Contact with strong acids may liberate sulphur

dioxide. Contact with base liberates ammonia.
Hazardous decomposition products: Nitrogen oxides (NOx), Sulphur oxides

11. Toxicological information

Effects of Exposure
General advice:
Contains: 4-(N-ethyl-N-2-hydroxyethyl)-2-methylphenylenediamine sulfate. May cause kidney damage based on animal data.
Inhalation: Expected to be a low hazard for recommended handling. In contact with strong acids or if heated, sulphites may liberate sulphur dioxide gas. Sulphur dioxide gas is irritating to the respiratory tract. Some asthmatics or hypersensitive individuals may experience difficult breathing.
Eyes: Causes serious eye irritation.
Skin: Causes skin irritation. May cause an allergic skin reaction.
Ingestion: Toxic if swallowed. Some asthmatics or sulfite-sensitive individuals may experience wheezing, chest tightness, stomach upset, hives, faintness, weakness and diarrhea.

Numerical measures of toxicity - Product Information
The following values are calculated based on chapter 3.1 of the GHS document .
Oral LD50 (male rat): ＞100mg/kg （ATEmix）
ATE: Acute toxicity estimate

Data for 4-(N-ethyl-N-2-hydroxyethyl)-2-methylphenylenediamine sulfate
(CAS 25646-77-9):
Acute Toxicity Data:
Oral LD50 (rat): 30 - 50 mg/kg
Skin irritation: moderate
Skin Sensitization (human): positive
Skin Sensitization (guinea pig): moderate to strong
Eye irritation (unwashed eyes): moderate

Data for Sodium bisulphite (CAS 7631-90-5):
Acute Toxicity Data:
Oral LD50 (rat): > 1310 mg/kg

12. Ecological information

The following properties are ESTIMATED from the components of the preparations.

Potential Toxicity:

Toxicity to fish (LC50): No data available

Toxicity to daphnia (EC50): No data available

Toxicity to algae (IC50): No data available

Persistence and degradability: Readily biodegradable.

Bioaccumulative potential No data available

Mobility in soil No information available.

13. Disposal considerations

Discharge, treatment, or disposal may be subject to federal, state, commonwealth, provincial, or local laws. Since emptied containers retain product residue, follow label warnings even after container is emptied.

14. Transport information

The information below is provided to assist in documentation. It represents the dangerous goods classification before any regulatory exceptions are taken (e.g. "limited quantity") and therefore may not represent the final classification.

IATA	UN number:	UN3265
	Proper shipping name:	CORROSIVE LIQUID, ACIDIC, ORGANIC, N.O.S.
	Class	8
	Sub-risks	—
	Packaging group	III
IMDG:	UN number:	UN3265
	Proper shipping name	CORROSIVE LIQUID, ACIDIC, ORGANIC, N.O.S.
	Class	8
	Sub-risks	—
	Packaging group	III
ADR:	UN number	UN3265
	Proper shipping name	CORROSIVE LIQUID, ACIDIC, ORGANIC, N.O.S.
	Class	8
	Sub-risks	—
	Packaging group	III

15. Regulatory information

Notification status

Regulatory List	**Notification status**
TSCA	All listed
DSL	All listed
NDSL	None listed
EINECS	All listed
ELINCS	None listed
NLP	None listed
AICS	All listed
IECS	All listed
ENCS	All listed
ECI	All listed
NZIoC	All listed
PICCS	All listed

"Not all listed" indicates one or more component is either not on the public Inventory or is subject to exemption requirements.

16. Other information

9240 JOBO C-41 Color Negative Kit Color developer part C

Volume per unit：25ml

The data below reflects current legislative requirements whereas the product in your possession may carry a different version of the label depending on the date of manufacture.

Safety Data Sheet

1. Identification of the substance/mixture and of the company/undertaking

Product Name： # 9240 JOBO C-41 Color Negative Kit Bleach

Name of Manufacturer： JOBO International GmbH

Adress： Kölner Straße 58a·51645 Gummersbach Germany

Name of Section：Johannes Bockemuehl

Phone Number： +49 (0) 2261 - 545-35

MSDS No.： J9240-04

2. Hazards identification

Classification of the chemical in accordance with paragraph (d) of 29 CFR 1910.1200:

Hazard class	Hazard category	Route of exposure
Corrosive to metals	Category 1	--
Skin corrosion/irritation	Category 2	--
Serious eye damage/eye irritation	Category 2A	--

GHS-Labelling

Symbol(s):

Signal word: Danger

Hazard statements: May be corrosive to metals. Causes serious eye damage. Causes skin irritation. May cause allergy or asthma symptoms or breathing difficulties if inhaled.

Precautionary statements:

Prevention: Keep only in original container. In case of inadequate ventilation wear respiratory protection. Wear protective gloves/ eye protection/ face protection. Avoid breathing dust/ fume/ gas/ mist/ vapours/ spray. Wash thoroughly after handling.

Response: Absorb spillage to prevent material damage. IF INHALED: If breathing is difficult, remove victim to fresh air and keep at rest in a position comfortable for breathing. If experiencing respiratory symptoms: Call a POISON CENTER or doctor/ physician. 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 occurs: Get medical advice/ attention. Take off contaminated clothing and

wash it before reuse.

Storage: Store in corrosive resistant container with resistant inliner.

Disposal: Dispose of contents/container in accordance with local/regional/national/international regulation.

HMIS III Hazard Ratings: Health - 3, Flammability - 1, Physical Hazard - 0

NFPA Hazard Ratings: Health - 3, Flammability - 1, Instability - 0

NOTE: HMIS III and NFPA 704 (2007) hazard indexes involve data review and interpretation that may vary among companies. They are intended only for rapid, general identification of the magnitude of the potential hazards. To adequately address safe handling, ALL information in this MSDS must be considered.

3. Composition/information on ingredients

Components - (CAS-No.)	Weight percent
Water（7732-18-5）	40-60
Ammonium Bromide (12124-97-9)	20-30
Ammonium nitrate (6484-52-2)	1 – 10
Ferric ammonium ethylenediaminetetraacetic acid (21265-50-9)	10 - 20
Aminopolycarboxylate	1-5

4. First aid measures

Inhalation: IF INHALED: If breathing is difficult, remove victim to fresh air and keep at rest in a position comfortable for breathing. If experiencing respiratory symptoms: Call a POISON CENTER or doctor/ physician.

Eyes: 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.

Skin: IF ON SKIN: Gently wash with plenty of soap and water. If skin irritation occurs: Get medical advice/ attention. Take off contaminated clothing and wash before reuse.

Ingestion: Get medical attention if symptoms occur.

Most important symptoms and effects, both acute and delayed: If signs and symptoms of cyanosis are present, treat for methemoglobinemia.

Indication of any immediate medical attention and special treatment needed:

Treatment: No information available.

5. Firefighting measures

Extinguishing Media: Water spray, Alcohol-resistant foam, Dry chemical, Carbon dioxide (CO2).

Special hazards arising from the substance or mixture

Hazardous Combustion Products: Carbon oxides, Nitrogen oxides (NOx), (see also Hazardous Decomposition Products sections.)

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

Unusual Fire and Explosion Hazards: None.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures: Refer to protective measures listed in sections 7 and 8.

Methods and materials for containment and cleaning up: Absorb spill with vermiculite or other inert material, then place in a container for chemical waste. Clean surface thoroughly to remove residual contamination.

Environmental precautions: No information available.

7. Handling and storage

Precautions for safe handling

Personal precautions: Do not get in eyes and avoid contact with skin and clothing. Avoid breathing dust/ fume/ gas/ mist/ vapours/ spray. Avoid contact with eyes, skin, and clothing. Wash thoroughly after handling. Do not eat, drink or smoke when using this product.

Prevention of Fire and Explosion: Keep from contact with oxidizing materials.

Conditions for safe storage, including any incompatibilities: Keep container tightly closed. Keep away from incompatible substances (see Incompatibility section.)

8. Exposure controls/personal protection

Appropriate engineering controls: Good general ventilation should be used. Ventilation should be sufficient so that applicable occupational exposure limits are not exceeded. Ventilation rates should be matched to conditions. Supplementary local exhaust ventilation, closed systems, or respiratory protection may be needed in special circumstances.

Individual protection measures, such as personal protective equipment

Eye protection: Wear eye/face protection.

Hand protection: Wear protective gloves.

Respiratory protection: If engineering controls do not maintain airborne concentrations below recommended exposure limits, an approved respirator must be worn. Respirator type: full-face organic vapour cartridge. A respirator must be worn if hazardous decomposition products are likely to be or have been released. Respirator type: full-face positive-pressure air-supplied. See Stability

and

Reactivity Section. If respirators are used, a program should be instituted to assure compliance with applicable federal, state, commonwealth, provincial, or local laws and regulations.

9. Physical and chemical properties

Physical form: liquid

Color: Dark-Red

Odor: ammonia odor

Specific gravity: 1.3

Vapour pressure: No data available

Boiling point/boiling range: > 100 °C (> 212.0 °F)

Water solubility: complete

pH: 5.5

Flash point: does not flash

Evaporation rate: No data available

Flammability (Solid; gas): No data available

Upper explosion limit: No data available

Lower explosion limit: No data available

Partition coefficient: n-octanol/water: No data available

Auto-ignition temperature: No data available

Decomposition temperature: No data available

Viscosity: No data available

Explosive properties: No data available

Oxidizing properties: No data available

10. Stability and reactivity

Reactivity: No data available

Chemical stability: Stable under normal conditions.

Possibility of hazardous reactions: Hazardous polymerisation does not occur.

Conditions to avoid: No data available

Incompatible materials: Strong bases, sodium hypochlorite (bleach), Oxidizing agents. Contact with sodium hypochlorite (bleach) may form chloramine (toxic gas).

Hazardous decomposition products: Ammonia, chloramine, Nitrogen oxides (NOx)

11. Toxicological information

Effects of Exposure

General advice:

Contains: Ferric ammonium ethylenediaminetetraacetic acid. This compound can chelate metals and may alter calcium and other cation balances.

Contains: Ammonium nitrate. Under some circumstances methemoglobinemia may occur when nitrates are converted by bacteria in the stomach to nitrites. May cause blood disorders based on animal data.

Inhalation: May cause allergy or asthma symptoms or breathing difficulties if inhaled.

Eyes: Causes serious eye damage.

Skin: Causes skin irritation.

Numerical measures of toxicity - Product Information

The following values are calculated estimate.

Oral LD50 (rat): ＞2000mg/kg （ATEmix）

ATE: Acute toxicity estimate

Data for Ammonium nitrate (CAS 6484-52-2):

Acute Toxicity Data:

Oral LD50 (rat): 2800mg/kg

12. Ecological information

The following properties are ESTIMATED from the components of the preparations.

Potential Toxicity:

Toxicity to fish (LC50): Not classified

Bioaccumulative potential No data available

Mobility in soil No information available.

13. Disposal considerations

Discharge, treatment, or disposal may be subject to federal, state, commonwealth, provincial, or local laws. Since emptied containers retain product residue, follow label warnings even after container is emptied.

14. Transport information

IATA	UN number	UN1760
	Proper shipping name	CORROSIVE LIQUID,
	Class	8
	Packaging group	III

IMDG	UN number	UN1760
	Proper shipping name	CORROSIVE LIQUID,
	Class	8
	Packaging group	III
ADN:	UN number:	UN1760
	Proper shipping name	CORROSIVE LIQUID,
	Class	8
	Packaging group	III

15. Regulatory information

Notification status

Regulatory List	**Notification status**
TSCA	Not all listed
DSL	Not all listed
NDSL	None listed
EINECS	Not all listed
ELINCS	Listed
NLP	None listed
AICS	All listed
IECS	All listed
ENCS	Not all listed
ECI	Not all listed
NZIoC	All listed
PICCS	All listed

"Not all listed" indicates one or more component is either not on the public Inventory or is subject to exemption requirements.

16. Other information

9240 JOBO C-41 Color Negative Kit Bleach

Volume per unit：625ml

The data below reflects current legislative requirements whereas the product in your possession may carry a different version of the label depending on the date of manufacture.

Safety Data Sheet

1. Identification of the substance/mixture and of the company/undertaking

Product Name： # 9240 JOBO C-41 Color Negative Kit Fixer

Name of Manufacturer： JOBO International GmbH

Adress： Kölner Straße 58a･51645 Gummersbach Germany

Name of Section：Johannes Bockemuehl

Phone Number： +49 (0) 2261 - 545-35

MSDS No.： J9240-05

2. Hazards identification

Hazard class	Hazard category	Route of exposure
Acute toxicity	Not Classified	Oral

GHS-Labelling

Contains:

Ammonium thiosulfate (7783-18-8), Ammonium sulfite (10196-04-0)

Symbol(s):

Hazard statements: Harmful if swallowed.

Precautionary statements:

Prevention: Wash thoroughly after handling. Do not eat, drink or smoke when using this product.

Response: IF SWALLOWED: Call a POISON CENTER or doctor/ physician if you feel unwell. Rinse mouth.

Storage: Store in a well-ventilated place. Keep cool.

Disposal: Dispose of contents/container in accordance with local/regional/national/international regulation.

Other hazards which do not result in classification:

Dried product residue can act as a reducing agent.

3. Composition/information on ingredients

Components - (CAS-No.)	Weight percent
Water (7732-18-5)	40-60
Ammonium thiosulfate (7783-18-8)	40-50
Ammonium sulfite (10196-04-0)	1 – 10

4. First aid measures

Inhalation: If symptomatic, move to fresh air. Get medical attention if symptoms occur.
Eyes: Any material that contacts the eye should be washed out immediately with water. Get medical attention if symptoms occur. If easy to do, remove contact lens, if worn.
Skin: Wash off with soap and water. Get medical attention if symptoms occur.
Ingestion: If swallowed, DO NOT induce vomiting. Call a physician or poison control centre immediately. Never give anything by mouth to an unconscious person.
Most important symptoms and effects, both acute and delayed: No information available.
Indication of any immediate medical attention and special treatment needed:
Treatment: No information available.

5. Firefighting measures

Extinguishing Media: Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide. Flush with plenty of water.
Special hazards arising from the substance or mixture
Hazardous Combustion Products: Carbon oxides, Nitrogen oxides (NOx), Sulphur oxides, (see also Hazardous Decomposition Products sections.)
Special Fire-Fighting Procedures: Wear self-contained breathing apparatus and protective clothing. Fire or excessive heat may produce hazardous decomposition products.
Unusual Fire and Explosion Hazards: Dried product residue can act as a reducing agent. Reacts violently with oxidizing materials. May cause spontaneous heating and ignition when absorbed on combustible, porous material (e.g. rags, paper, sawdust, cotton, clothing).

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures: Refer to protective measures listed in sections 7 and 8.
Methods and materials for containment and cleaning up: Absorb spill with vermiculite or other inert material. Collect in a noncombustible container for prompt disposal. Clean surface thoroughly to remove residual contamination.
Environmental precautions: Flush with plenty of water.
For Large Spills: Flush with plenty of water.

7. Handling and storage

Precautions for safe handling
Personal precautions: Avoid breathing mist or vapour. Avoid contact with eyes, skin, and clothing. Use only with adequate ventilation. Wash thoroughly after handling. Do not eat, drink or smoke when using this product.

Prevention of Fire and Explosion: Keep from contact with oxidizing materials, highly oxygenated or halogenated solvents, organic compounds containing reducible functional groups. Remove and wash contaminated clothing promptly.

Conditions for safe storage, including any incompatibilities: Store in original container. Keep container tightly closed to prevent the loss of water. Keep away from incompatible substances (see Incompatibility section.)

8. Exposure controls/personal protection

Occupational exposure controls

Chemical Name	Regulatory List	Value Type	Value
Sodium bisulfite	ACGIH	time weighted average	No data available

Appropriate engineering controls: Good general ventilation should be used. Ventilation should be sufficient so that applicable occupational exposure limits are not exceeded. Ventilation rates should be matched to conditions. Supplementary local exhaust ventilation, closed systems, or respiratory protection may be needed in special circumstances.

Individual protection measures, such as personal protective equipment

Eye protection: Wear safety glasses with side shields (or goggles).

Hand protection: For operations where prolonged or repeated skin contact may occur, impervious gloves should be worn.

Respiratory protection: None should be needed. If engineering controls do not maintain airborne concentrations below recommended exposure limits, an approved respirator must be worn. Respirator type: acid gas If respirators are used, a program should be instituted to assure compliance with applicable federal, state, commonwealth, provincial, or local laws and regulations.

9. Physical and chemical properties

Physical form: liquid

Color: light yellow

Odor: Ammonia odor

Specific gravity: 1.27

Vapour pressure: No data available

Vapour density: No data available

Boiling point/boiling range: > 100 °C (> 212.0 °F)

Water solubility: complete

pH: 6.6

Flash point: does not flash

Evaporation rate: No data available

Flammability (Solid; gas): No data available
Upper explosion limit: No data available
Lower explosion limit: No data available
Partition coefficient: n-octanol/water: No data available
Auto-ignition temperature: No data available
Decomposition temperature: No data available
Viscosity: No data available
Explosive properties: No data available
Oxidizing properties: No data available

10. Stability and reactivity

Reactivity: No data available
Chemical stability: Stable under normal conditions. Safe handling temperatures are dependent on specific conditions of use and are typically substantially below the onset temperature. Consult your technical safety experts.
Possibility of hazardous reactions: Hazardous polymerisation does not occur.
Conditions to avoid: No data available
Incompatible materials: Acids, Strong bases, sodium hypochlorite (bleach), Halogenated compounds, Oxidizing agents. Contact with strong acids liberates sulphur dioxide. Contact with sodium hypochlorite
(bleach) may form chloramine (toxic gas). Contact with base liberates flammable material. Contact with base liberates ammonia.
Hazardous decomposition products: Ammonia, chloramine, Sulphur oxides, Nitrogen oxides (NOx)

11. Toxicological information

Effects of Exposure
Inhalation: Expected to be a low hazard for recommended handling. In contact with strong acids or if heated, sulphites may liberate sulphur dioxide gas. Sulphur dioxide gas is irritating to the respiratory tract. Some asthmatics or hypersensitive individuals may experience difficult breathing.
Eyes: No specific hazard known. May cause transient irritation.
Skin: Expected to be a low hazard for recommended handling.
Ingestion: Harmful if swallowed. Some asthmatics or sulfite-sensitive individuals may experience wheezing, chest tightness, stomach upset, hives, faintness, weakness and diarrhea.

Numerical measures of toxicity - Product Information
Oral LD50 (rat): ＞2000mg/kg （ATEmix）

ATE: Acute toxicity estimate

Data for Ammonium thiosulfate (CAS 7783-18-8):
Acute Toxicity Data:
Oral LD50 (male rat): 500 - 5,000 mg/kg
Inhalation (rat): 2260 mg/m3 / 4 hr
Eye irritation: none

12. Ecological information

The following properties are ESTIMATED from the components of the preparations.
Potential Toxicity:

Toxicity to fish (LC50):	No data available
Toxicity to daphnia (EC50):	No data available
Toxicity to algae (IC50):	No data available
Persistence and degradability:	Not readily biodegradable.
Bioaccumulative potential	No data available
Mobility in soil	No information available.

13. Disposal considerations

Discharge, treatment, or disposal may be subject to federal, state, commonwealth, provincial, or local laws. Since emptied containers retain product residue, follow label warnings even after container is emptied.

14. Transport information

Not regulated for all modes of transportation.

15. Regulatory information

Notification status

Regulatory List	**Notification status**
TSCA	Not all listed
DSL	All listed
NDSL	None listed
EINECS	Not all listed
ELINCS	None listed
NLP	None listed
AICS	All listed

IECS	All listed
ENCS	Not all listed
ECI	Not all listed
NZIoC	All listed
PICCS	All listed

"Not all listed" indicates one or more component is either not on the public Inventory or is subject to exemption requirements.

16. Other information

9240 JOBO C-41 Color Negative Kit Fixer

Volume per unit：525ml

The data below reflects current legislative requirements whereas the product in your possession may carry a different version of the label depending on the date of manufacture.

based on correct mixing and use of the product according to instructions.

Safety Data Sheet

1. Identification of the substance/mixture and of the company/undertaking

Product Name： # 9240 JOBO C-41 Color Negative Kit Stabilizer

Name of Manufacturer： JOBO International GmbH

Adress： Kölner Straße 58a·51645 Gummersbach Germany

Name of Section：Johannes Bockemuehl

Phone Number： +49 (0) 2261 - 545-35

MSDS No.： J9240-06

2. Hazards identification

Hazard class	Hazard category
Serious eye damage/eye irritation	Category 2B
Specific target organ toxicity (repeated exposure)	Category 1

GHS-Labelling

Signal word: DANGER

Contains:

Components either non-hazardous or below regulatory thresholds (proprietary)

Hazard statements: Not hazardous according to GHS/Hazard Communication regulations.

3. Composition/information on ingredients

Components - (CAS-No.)	Weight percent
Water(7732-18-5)	50-70
Ethylene glycol (107-21-1)	10-20
Thazolines（2634-33-5）	1-5
Polyoxyethylene alkyl ether（84133-50-6）	2-5

4. First aid measures

Inhalation: If inhaled, remove to fresh air. Get medical attention if symptoms occur.

Eyes: Any material that contacts the eye should be washed out immediately with water. Get medical attention if symptoms occur. If easy to do, remove contact lens, if worn.
Skin: Wash off with soap and water. Get medical attention if symptoms occur.
Ingestion: Get medical attention if symptoms occur.
Most important symptoms and effects, both acute and delayed: No information available.
Indication of any immediate medical attention and special treatment needed:
Treatment: No information available.

5. Firefighting measures

Extinguishing Media: Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
Special hazards arising from the substance or mixture
Hazardous Combustion Products: None (noncombustible)
Special Fire-Fighting Procedures: None (noncombustible)
Unusual Fire and Explosion Hazards: None.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures: Refer to protective measures listed in sections 7 and 8.
Methods and materials for containment and cleaning up: Absorb spill with vermiculite or other inert material, then place in a container for chemical waste. Clean surface thoroughly to remove residual contamination.
Environmental precautions: No information available.

7. Handling and storage

Precautions for safe handling
Personal precautions: Avoid prolonged or repeated breathing of mist or vapour. Avoid contact with eyes, skin, and clothing. Use only with adequate ventilation. Wash thoroughly after handling. Do not eat, drink or smoke when using this product.
Prevention of Fire and Explosion: No special technical protective measures required.
Conditions for safe storage, including any incompatibilities: Keep container tightly closed.

8. Exposure controls/personal protection

Occupational exposure controls: Not established
Appropriate engineering controls: Good general ventilation should be used. Ventilation should be sufficient so that applicable occupational exposure limits are not exceeded. Ventilation rates should

be matched to conditions. Supplementary local exhaust ventilation, closed systems, or respiratory protection may be needed in special circumstances.

Individual protection measures, such as personal protective equipment

Eye protection: Wear safety glasses with side shields (or goggles).

Hand protection: For operations where prolonged or repeated skin contact may occur, impervious gloves should be worn.

Respiratory protection: None should be needed.

9. Physical and chemical properties

Physical form: liquid

Color: colorless

Odor: odorless

Specific gravity: 1.03

Vapour pressure No data available

Vapour density: No data available

Boiling point/boiling range: > 100 °C (> 212.0 °F)

Water solubility: complete

pH: 8.1

Flash point: does not flash

Evaporation rate: No data available

Flammability (Solid; gas): No data available

Upper explosion limit: No data available

Lower explosion limit: No data available

Partition coefficient: n-octanol/water: No data available

Auto-ignition temperature: No data available

Decomposition temperature: No data available

Viscosity: No data available

Explosive properties: No data available

Oxidizing properties: No data available

10. Stability and reactivity

Reactivity: No data available

Chemical stability: Stable under normal conditions.

Possibility of hazardous reactions: Hazardous polymerisation does not occur.

Conditions to avoid: No data available

Incompatible materials: None with common materials and contaminants with which the material

may reasonably come into contact.

Hazardous decomposition products: None under normal conditions of use.

11. Toxicological information

Effects of Exposure

Inhalation: Expected to be a low hazard for recommended handling.

Eyes: No specific hazard known. May cause transient irritation.

Skin: Expected to be a low hazard for recommended handling.

Ingestion: Expected to be a low ingestion hazard.

Numerical measures of toxicity - Product Information

Oral LD50 (rat): ＞5000mg/kg （ATEmix）

ATE: Acute toxicity estimate

12. Ecological information

The following properties are ESTIMATED from the components of the preparations.

Potential Toxicity:

Toxicity to fish (LC50):	No data available
Toxicity to daphnia (EC50):	No data available
Toxicity to algae (IC50):	No data available
Bioaccumulative potential	No data available
Mobility in soil	No information available.

13. Disposal considerations

Discharge, treatment, or disposal may be subject to federal, state, commonwealth, provincial, or local laws. Since emptied containers retain product residue, follow label warnings even after container is emptied.

14. Transport information

Not regulated for all modes of transportation.

15. Regulatory information

Notification status

Regulatory List	**Notification status**
TSCA	All listed

DSL	Not all listed
NDSL	Listed
EINECS	Not all listed
ELINCS	None listed
NLP	Listed
AICS	All listed
IECS	All listed
ENCS	Not all listed
ECI	All listed
NZIoC	All listed
PICCS	All listed

"Not all listed" indicates one or more component is either not on the public Inventory or is subject to exemption requirements.

16. Other information

9240 JOBO C-41 Color Negative Kit Stabilizer

Volume per unit：25ml

The data below reflects current legislative requirements whereas the product in your possession may carry a different version of the label depending on the date of manufacture.