Safety Data Sheet

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

Product Name：# 9220 JOBO E-6 Color Positive kit First developer

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.： J9220-01

2. Hazards identification

Not applicable to classification to GHS Labelling

Precautionary statements:

Prevention: Wear protective gloves/ eye protection/ face protection. Avoid breathing 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. Avoid release to the environment.

Response: Specific treatment (see supplemental first aid instructions on this label). 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. Wash contaminated clothing before reuse.

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

3. Composition/information on ingredients

Components - (CAS-No.)	Weight percent
Water (7732-18-5)	50-70
Potassium carbonate (548-08-7)	5 – 15
Sodium sulfite (7757-83-7)	5 – 15
Potassium Hydroquinone sulfonate(21799-87-1)	5 - 15
Triethylene Glycol (112-27-6)	5 - 15
Sodium Thiocyanate (540-72-7)	< 1

4. First aid measures

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

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. Take off contaminated clothing and wash before reuse. Contaminated work clothing should not be allowed out of the workplace.

Ingestion: IF SWALLOWED: Call a POISON CENTER or doctor/ physician if you feel unwell. 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 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: Avoid breathing dust/ fume/ gas/ mist/ vapours/ spray. Do not get in eyes and avoid contact with skin and clothing. Use only with adequate ventilation. 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.

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

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

Colour: Colorless

Odour: Odorless

Specific gravity: 1.29

Vapour pressure: No data available

Vapour density: No data available

Boiling point/boiling range: No data available

Water solubility: No data available

pH: 9.9

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: Acids. Contact with strong acids liberates sulphur dioxide.

Hazardous decomposition products: Sulphur oxides

11. Toxicological information

Effects of Exposure

General advice:

Contains: Potassium Hydroquinonesulfonate. There is insufficient evidence for classifying hydroquinone as a suspected carcinogenic or mutagenic substance in humans.

Contains: Sodium bromide. Ingestion of bromide salts can cause nausea, vomiting, headache, irritability, delirium, memory loss, decreased appetite, joint pain, hallucinations, stupor, coma, and acne like rash on face, legs, and trunk.

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

Eyes: Causes serious eye irritation.

Skin: May cause allergic skin reaction based on human experience. May cause skin depigmentation. Prolonged or repeated skin contact may cause irritation.

Ingestion: Harmful if swallowed.

Numerical measures of toxicity - Product Information

Oral LD50 (male 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): 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

Not regulated for all modes of transportation.

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	None listed
NLP	None listed
AICS	Not all listed
IECS	Not all listed
ENCS	Not all listed
ECI	Not all listed
NZIoC	Not all listed
PICCS	Not 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

9220 JOBO E-6 Color Positive kit First developer

Volume per unit：500ml

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：# 9220 JOBO E-6 Color Positive kit Reversal bath

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.： J9220-02

2. Hazards identification

Hazard class	Hazard category
Specific target organ systemic toxicity - single exposure	Category 3
Specific target organ systemic toxicity - repeated exposure	Category 2
Hazardous top the Aquatic Environmental	Category 2

GHS-Labelling

Contains:

Stannous chloride (7772-99-8), Propionic acid sodium salt.(137-40-6)

Symbol(s):

Signal word: Warning

Hazard statements: May be corrosive to metals. May cause allergy or asthma symptoms or breathing difficulties if inhaled.

Precautionary statements:

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

Response: 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. If eye irritation persists: Get medical advice/ attention. Absorb spillage to prevent material damage.

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 - 2, Flammability - 1, Physical Hazard - 0

NFPA Hazard Ratings: Health - 2, 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(17732-18-5)	45 - 65
Propionic acid sodium salt(137-40-6)	20 – 30
Organic Phosphoric Acid sodium Salt(20592-85-2)	< 5
Trisodium Phosphate(10101-89-0)	5 - 15
Stannous chloride (7772-99-8)	< 3

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. 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: 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 water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

Special hazards arising from the substance or mixture

Hazardous Combustion Products: Carbon oxides

Special Fire-Fighting Procedures: Wear self-contained breathing apparatus and protective clothing.

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 breathing mist or vapour at concentrations greater than the exposure limits. 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.

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
Stannous chloride	ACGIH	Time weighted average	2 mg/m3 Expressed as Sn Remarks: except tin hydride

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

Odor: Odorless

Specific gravity: 1.24

Vapour pressure: No data available

Vapour density: No data available

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

Water solubility: complete

pH: 6.1

Flash point: Non flammable

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 oxidizing agents, Metals.

Hazardous decomposition products: None under normal conditions of use.

11. Toxicological information

Effects of Exposure

General advice:

Contains: Stannous chloride. Chronic inhalation of tin dust or fumes can cause benign pneumoconiosis.

Numerical measures of toxicity - Product Information

Oral LD50 (rat): ＞2000mg/kg （ATEmix）

ATE: Acute toxicity estimate

Data for Stannous chloride (CAS 7772-99-8):

Acute Toxicity Data:

Oral LD50 (Rat): 2,300 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: 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	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	Not 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

9220 JOBO E-6 Color Positive kit Reversal bath

Volume per unit：125ml

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.

Material Safety Data Sheet

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

Product Name：# 9220 JOBO E-6 Color Positive 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.： J9220-03

2. Hazards identification

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

Hazard class	Hazard category
Skin irritation	Category 1
Serious eye damage/eye irritation	Category 1
specific target organ systemic toxicity - single exposure	Category2

CONTAINS: Tripotassium phosphate (7778-53-2), alkali hydroxide (proprietary), Sodium sulphite (7757-83-7)

DANGER!

CAUSES SKIN AND EYE BURNS

HARMFUL IF SWALLOWED

DUST, MIST OR VAPOUR IRRITATING TO THE EYES AND RESPIRATORY TRACT

3. Composition/information on ingredients

Components - (CAS-No.)	Weight percent
Water (7732-18-5)	60 - 80
Tripotassium phosphate (7778-53-2)	5 - 15
Sodium organic phosphonate (20592-85-2)	< 5
Sodium sulfite (7757-83-7)	< 5

Triethylene glycol (112-27-6)	5-15
Potassium Hydroxde(1310-58-3)	< 3

4. First aid measures

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

Eyes: Immediately flush the contaminated eye(s) with water for at least 60 minutes, while holding the eyelid(s) open. If a contact lens is present, DO NOT delay irrigation or attempt to remove the lens. Neutral saline solution may be used as soon as it is available. DO NOT INTERRUPT FLUSHING. Contact a physician or poison control center immediately. Continue flushing the eye(s) until the physician advises to stop. If necessary, continue flushing during transport to an emergency care facility.

Skin: In case of contact, immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Call a physician or poison control centre immediately. 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.

Notes to physician:

Treatment: Strong alkalis bind tissue protein. Following initial flushing of the eye with water, continued irrigation of the eye with saline is recommended. Treatment should be continued until pH of tears reaches neutral.

5. Fire-fighting measures

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

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

Hazardous Combustion Products: None (noncombustible), (see also Hazardous Decomposition Products sections.)

Unusual Fire and Explosion Hazards: None.

6. Accidental release measures

Absorb spill with inert material, then place in a chemical waste container. Clean surface thoroughly to remove residual contamination.

7. Handling and storage

Personal precautions: Do not breathe mist or vapour at concentrations greater than the exposure

limits. Do not get in eyes, on skin, or on 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.

Storage: 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
alkali hydroxide	ACGIH	Ceiling Limit Value	2 mg/m3

Ventilation: 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.

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

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

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

9. Physical and chemical properties

Physical form: liquid

Colour: pale yellow

Odour: no specific odor

Specific gravity: 1.21

Vapour pressure: no data available

Vapour density: no data available

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

Water solubility: completely soluble

pH: >13

Flash point: does not flash

10. Stability and reactivity

Stability: Stable under normal conditions.
Incompatibility: Acids, Metals. Contact with strong acids liberates sulphur dioxide.
Hazardous decomposition products: Sulphur oxides, Oxides of phosphorus, potassium oxide
Hazardous Polymerization: Hazardous polymerisation does not occur.

11. Toxicological information

Effects of Exposure
Inhalation: Airborne dust/mist/vapor irritating. 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 eye burns. Airborne dust/mist/vapor irritating.
Skin: Causes skin burns.
Ingestion: Harmful if swallowed. May cause burns of the gastrointestinal tract 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 estimate.
Oral LD50 (rat): ＞300mg/kg （ATEmix）
ATE: Acute toxicity estimate

Data for alkali hydroxide:
Acute Toxicity Data:
Oral LD50 (rat): 284mg/kg
Skin irritation: severe

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 applicable

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:	UN3266
	Proper shipping name:	Alkaline SOLUTION
	Class:	8
	Packaging group:	III
IMDG:	UN number:	UN3266
	Proper shipping name:	Alkaline SOLUTION
	Class:	8
	Packaging group:	III
ADN:	UN number:	UN3266
	Proper shipping name:	Alkaline SOLUTION
	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 None listed

NLP None listed

AICS Not all listed

IECS Not all listed

ENCS Not all listed

ECI Not all listed

NZIoC Not all listed

PICCS Not 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

9220 JOBO E-6 Color Positive kit Color developer part A

Volume per unit：500ml

The data above 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：# 9220 JOBO E-6 Color Positive 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.： J9220-04

2. Hazards identification

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

Hazard class	Hazard category	Route of exposure
Skin corrosion	Category 1	--
Serious eye damage	Category 1	--

GHS-Labelling

Contains:

4-(N-ethyl-N-2-methanesulphonylaminoethyl)-2-methylphenylenediamine sesquisulphate monohydrate (25646-71-3),Sodium bisulfite (7631-90-5)

Symbol(s):

Signal word: Warning

Hazard statements: May be corrosive to metals. Harmful if swallowed. Causes skin irritation. Causes serious eye irritation. May cause an allergic skin reaction. May cause damage to organs. (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. Do not eat, drink or smoke when using this product. Contaminated work clothing should not be allowed out of the workplace.

Response: IF exposed or if you feel unwell: 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. Take off contaminated clothing and wash before reuse. Absorb spillage to prevent material damage. Rinse mouth.

Storage: Store in a well-ventilated place. Keep container tightly closed.

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

Other hazards which do not result in classification:

Can decompose at elevated temperatures.

3. Composition/information on ingredients

Components – (CAS-No.)	Weight percent
Water （7732-18-5）	45 - 65
4-(N-ethyl-N-2-methanesulphonylaminoethyl)-2-methylphenylenediamine sesquisulphate monohydrate (25646-71-3)	40 - 50
Sodium bisulfite (7631-90-5)	0.1 – 0.9

4. First aid measures

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

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. Take off contaminated clothing and wash before reuse.

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

Special hazards arising from the substance or mixture

Hazardous Combustion Products: Carbon oxides, Sulphur 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: Fire or high temperatures may 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. Do not get in eyes, on skin, or on clothing.

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: 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
Sulfurous acid gas (7446-09-5)	EK HPG	TWA	5.2 mg/m3

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.

9. Physical and chemical properties

Physical form: liquid

Colour: Yellow
Odour: sulphur dioxide
Specific gravity: 1.18
Vapour pressure: No data available
Vapour density: No data available
Boiling point/boiling range: > 100 °C (> 212.0 °F)
Melting point/range: No data available
Water solubility: completely soluble
pH: < 1
Flash point: No flammable
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: Not fully evaluated. Materials containing similar structural groups can decompose if heated.
Possibility of hazardous reactions: Hazardous polymerisation does not occur.
Conditions to avoid: No data available
Incompatible materials: Strong oxidizing agents, Strong bases. Contact with strong acids liberates sulphur dioxide.
Hazardous decomposition products: Nitrogen oxides (NOx), Sulphur oxides

11. Toxicological information
Effects of Exposure
General advice:
Inhalation: May be harmful if inhaled. Airborne dust/mist/vapor irritating. Liberates sulphur dioxide gas which can cause irritation to the respiratory tract. Some asthmatics or hypersensitive individuals

may experience difficulty breathing.

Eyes: Causes serious eye irritation. Airborne dust/mist/vapor irritating.

Skin: Harmful in contact with skin. Causes skin irritation. May cause allergic skin reaction based on human experience.

Ingestion: Harmful if swallowed. May cause irritation of the gastrointestinal tract if swallowed. Some asthmatics or sulfite-sensitive individuals may experience wheezing, chest tightness, stomach upset, hives, faintness, weakness and diarrhea.

Product Information

Oral LD50 (rat): ＞600mg/kg （ATEmix）

ATE: Acute toxicity estimate

Data for 4-(N-ethyl-N-2-methanesulphonylaminoethyl)-2-methylphenylenediamine sesquisulphate monohydrate (CAS 25646-71-3):

Oral LD50 (rat): ＞400mg/kg （ATEmix）

ATE: Acute toxicity estimate

Data for Sodium sulfite (CAS 7757-83-7):

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

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

IATA:	UN number:	UN3264
	Proper shipping name:	CORROSIVE LIQUID, ACIDIC, IN ORGANIC,

		N.O.S. (4-(N-ethyl-N-2-methanesulphonylaminoethyl)-2-methylphenylenediamine sesquisulphate monohydrate)
	Class:	8
	Packaging group:	III
IMDG:	UN number:	UN3264
	Proper shipping name:	CORROSIVE LIQUID, ACIDIC, INORGANIC, N.O.S. (4-(N-ethyl-N-2-methanesulphonylaminoethyl)-2-methylphenylenediamine sesquisulphate monohydrate)
	Class:	8
	Packaging group:	III
ADN:	UN number:	UN3264
	Proper shipping name:	CORROSIVE LIQUID, ACIDIC, INORGANIC, N.O.S.(4-(N-ethyl-N-2methanesulphonylaminoethyl)-2- methylphenylenediamine sesquisulphate monohydrate)
	Class:	8
	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
TSCA 12(b)	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

9220 JOBO E-6 Color Positive kit Color developer part B

Volume per unit：50ml

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.

Material Safety Data Sheet

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

Product Name：# 9220 JOBO E-6 Color Positive kit Conditioner

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.： J9220-05

2. Hazards identification

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

CONTAINS: Sodium formaldehyde bisulphite (870-72-4), 1-Thioglycerol (96-27-5), Ethylenediaminetetraacetic acid (60-00-4)

WARNING!

MAY LIBERATE SULFUR DIOXIDE

MAY BE HARMFUL IF SWALLOWED

MAY CAUSE ALLERGIC SKIN REACTION

3. Composition/information on ingredients

Components - (CAS-No.)	Weight percent
Water(7732-18-5)	70 - 90
Sodium formaldehyde bisulfite (870-72-4)	5 - 15
Ethylene diamine tetraacetic acid (60-00-4)	5 - 15
Potassium sulftie (10117-38-1)	1 - 10
1-Thioglycerol (96-27-5)	< 1

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. If easy to do, remove contact lens, if worn. Get medical attention if symptoms occur.

Skin: In case of contact, immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. 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. Never give anything by mouth to an

unconscious person. Call a physician or poison control centre immediately.

5. Fire-fighting measures

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

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

Hazardous Combustion Products: None (noncombustible), (see also Hazardous Decomposition Products sections.)

Unusual Fire and Explosion Hazards: None.

6. Accidental release measures

Absorb spill with inert material, then place in a chemical waste container. Clean surface thoroughly to remove residual contamination.

7. Handling and storage

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: No special technical protective measures required.

Storage: Keep container tightly closed. Keep away from incompatible substances (see Incompatibility section.)

8. Exposure controls/personal protection

Occupational exposure controls: Not established

Ventilation: 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.

Respiratory protection: None should be needed.

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

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

9. Physical and chemical properties

Physical form: liquid

Color: colorless

Odor: odorless

Specific gravity: 1.17

Vapour pressure: No date available

Vapour density: No date available

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

Water solubility: complete

pH: 6

Flash point: does not flash

10. Stability and reactivity

Stability: Stable under normal conditions.

Incompatibility: Strong oxidizing agents, Strong bases, Acids, Metals. Contact with strong acids may liberate sulphur dioxide. Contact with strong acids may liberate formaldehyde. Contact with strong bases may liberate formaldehyde.

Hazardous decomposition products: formaldehyde, Sulphur oxides

Hazardous Polymerization: Hazardous polymerisation does not occur.

11. Toxicological information

Effects of Exposure

General advice:

Contains: Sodium formaldehyde bisulfite. Although this chemical is only slightly toxic inlaboratory animals, contact with acid in the stomach may result in release of formaldehyde which can cause irritation of the gastrointestinal tract.

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

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

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

Skin: May cause allergic skin reaction. Prolonged or repeated skin contact may cause irritation.

Ingestion: May be 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

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.

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	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

9220 JOBO E-6 Color Positive kit Conditioner

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.

Material Safety Data Sheet

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

Product Name：# 9220 JOBO E-6 Color Positive 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.： J9220-06

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	--

CONTAINS: Ammonium ferric ethylenediaminetetraacetic acid (21265-50-9), Ammonium bromide (12124-97-9),

DANGER!

CONTAINS AN OXIDIZING MATERIAL.

HARMFUL IF INHALED OR SWALLOWED

CAUSES SKIN AND EYE BURNS

MIST OR VAPOR IRRITATING TO EYES AND RESPIRATORY TRACT

CAN CAUSE LUNG DAMAGE

3. Composition/information on ingredients

Components - (CAS-No.)	Weight percent
Water （7737-18-5）	55 - 75
Ammonium ferric ethylenediaminetetraacetic acid (21265-50-9)	20 – 30
Ammonium bromide (12124-97-9)	10 - 20

Ammonium nitrate (6484-52-2)	1 - 10

4. First aid measures

Inhalation: Get medical attention immediately even if symptoms of respiratory tract irritation are mild or quickly subside as lung injury may have occurred.

Eyes: Immediately flush the contaminated eye(s) with water for at least 60 minutes, while holding the eyelid(s) open. If a contact lens is present, DO NOT delay irrigation or attempt to remove the lens. Neutral saline solution may be used as soon as it is available. DO NOT INTERRUPT FLUSHING. Contact a physician or poison control center immediately. Continue flushing the eye(s) until the physician advises to stop. If necessary, continue flushing during transport to an emergency care facility.

Skin: In case of contact, immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Call a physician or poison control centre immediately. 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. Fire-fighting measures

Extinguishing Media: Water spray, Carbon dioxide (CO2), Dry chemical, Foam.

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

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

Unusual Fire and Explosion Hazards: Mixture contains an oxidizing material and may increase the burning rate of combustible materials. Dried product residue can act as an oxidizer.

6. Accidental release measures

Absorb spill with inert material, then place in a chemical waste container. Clean surface thoroughly to remove residual contamination.

7. Handling and storage

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

Prevention of Fire and Explosion: Keep from contact with oxidizing materials. Keep away from combustible materials. Remove and wash contaminated clothing promptly.

Storage: 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
Ammonium ferric ethylenediaminetetraacetic acid	ACGIH	time weighted average	No data available

Ventilation: 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.

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

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

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

9. Physical and chemical properties

Physical form: liquid

Color: dark-red

Odor: Ammonia odor

Specific gravity: 1.23

Vapour pressure: no data available

Vapour density: no data available

Boiling point/boiling range: no data available

Water solubility: no data available

pH: 5.5

Flash point: no data available

10. Stability and reactivity

Stability: Stable under normal conditions.

Incompatibility: Strong bases, sodium hypochlorite (bleach), Oxidizing agents, Combustible material, strong reducing agents. Contact with sodium hypochlorite (bleach) may form chloramine (toxic gas).

Contact with base liberates flammable material. Contact with base liberates ammonia. Material can react violently with combustible materials or reducing agents.
Hazardous decomposition products: Ammonia, chloramine, nitrogen oxides (NOx), hydrogen bromide
Hazardous Polymerization: Hazardous polymerisation does not occur.

11. Toxicological information

Effects of Exposure
General advice:
Contains: Ammonium ferric ethylenediaminetetraacetic acid. This compound can chelate metals and may alter calcium and other cation balances.
Contains: Ammonium bromide. Ingestion of bromide salts can cause nausea, vomiting, headache, irritability, delirium, memory loss, decreased appetite, joint pain, hallucinations, stupor, coma, and acne like rash on face, legs, and trunk.
Inhalation: Harmful if inhaled. Airborne dust/mist/vapor irritating.
Eyes: Causes eye burns. Airborne dust/mist/vapor irritating.
Skin: Causes skin burns.
Ingestion: Harmful if swallowed. May cause burns of the gastrointestinal tract if swallowed.

Numerical measures of toxicity - Product Information
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): No data available
Toxicity to daphnia (EC50): No data available
Toxicity to algae (IC50): No data 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, N.O.S. (Ammonium ferric ethylenediaminetetraacetic acid, Ammonium bromide)
	Class	8
	Packaging group	III
IMDG	UN number	UN1760
	Proper shipping name	CORROSIVE LIQUID, N.O.S. (Ammonium ferric ethylenediaminetetraacetic acid, Ammonium bromide)
	Class	8
	Packaging group	III
AND:	UN number	UN1760
	Proper shipping name	CORROSIVE LIQUIDS, N.O.S. (Ammonium ferric ethylenediaminetetraacetic acid, Ammonium bromide)
	Class	8
	Packaging group	III

15. Regulatory information

Notification status

Regulatory List	**Notification status**
TSCA	All listed
DSL	Not all listed
NDSL	Listed
EINECS	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

9220 JOBO E-6 Color Positive kit Bleach

Volume per unit：650ml

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.

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

Material Safety Data Sheet

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

Product Name：# 9220 JOBO E-6 Color Positive 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.： J9220-07

2. Hazards identification

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

CONTAINS: Ammonium thiosulphate (7783-18-8), Sodium sulphite (7757-83-7)

WARNING!

DRIED PRODUCT RESIDUE CAN ACT AS A REDUCING AGENT

MAY BE HARMFUL IF SWALLOWED

3. Composition/information on ingredients

Components - (CAS-No.)	Weight percent
Water (7732-18-5)	40- 60
Ammonium thiosulfate (7783-18-8)	35 - 45
Sodium sulfite (7757-83-7)	5 - 15

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.

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.

5. Fire-fighting measures

Extinguishing Media: Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide. Flush with plenty of water.

Special Fire-Fighting Procedures: Wear self-contained breathing apparatus and protective clothing.

Fire or excessive heat may produce hazardous decomposition products.
Hazardous Combustion Products: Carbon oxides, nitrogen oxides (NOx), Sulphur oxides, (see also Hazardous Decomposition Products sections.)
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

Absorb spill with vermiculite or other inert material. Collect in a noncombustible container for prompt disposal. Clean surface thoroughly to remove residual contamination.
For Large Spills: Flush with plenty of water.

7. Handling and storage

Personal precautions: Avoid breathing mist or vapour at concentrations greater than the exposure limits. 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.
Storage: 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 Sodium bisulfite	Regulatory List	Value Type time weighted average	Value
Sodium bisulfite	ACGIH		No date setting

Ventilation: 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.
Respiratory protection: None should be needed.
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.

9. Physical and chemical properties

Physical form: liquid

Color: colorless

Odor: Ammonia oder

Specific gravity: 1.31

Vapour pressure : No data available

Vapour density: No data available

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

Water solubility: complete

pH: 6.2

Flash point: Non flammable

10. Stability and reactivity

Stability: Stable under normal conditions.

Incompatibility: 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)

Hazardous Polymerization: Hazardous polymerisation does not occur

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. This material has a low potential to cause allergic skin reactions; however, cases of human skin sensitization have been reported.

Ingestion: May be 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

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.

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

9220 JOBO E-6 Color Positive kit Fixer

Volume per unit：325ml

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.

sed 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：# 9220 JOBO E-6 Color Positive 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.： J9220-08

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

9220 JOBO E-6 Color Positive 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.