

Safety Data Sheet

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

Product Name : # 9260 JOBO ECN-2 Developing Kit Pre 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. : J9260-01

2. Hazards identification

POTENTIAL HEALTH EFFECTS

Eye Contact: Causes severe irritation.

Inhalation: May cause irritation mucous membranes and to upper respiratory tract.

Ingestion: May cause irritation to gastrointestinal track. Some asthmatics or sulfite-sensitive persons may experience wheezing, chest tightness, stomach upset, hives, faintness, weakness, and diarrhea.

Skin Contact: May cause irritation or reddening.

Signs And Symptoms Of Exposure:

Eye irritation, respiratory irritation, dermatitis, difficulty breathing, abdominal pain, skin irritation, mucus membrane irritation, coughing, nausea, and diarrhea.

3. Composition/information on ingredients

Components - (CAS-No.)	Weight percent
SODIUM SULFATE (Anhydrous) (7757-82-6)	70-90
SODIUM BORATE (Dehydrated) (1303-96-4)	10-30

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

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. 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

Appearance : White powder

Odor: No odor.

Solubility In Water: Complete

Boiling Point: Not applicable

Vapor Pressure: Not applicable

Specific Gravity: Not applicable

Melting Point: N.E.

Freezing Point: N.E.

Percent Volatile: 0

Evaporation Rate: Not applicable

pH: 9.25 (10% aq.)

Vapor Density: Not applicable

Molecular Weight: N.E. Pounds Per Gallon: N.E.

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: Sulphur oxides

11. Toxicological information

Effects of Exposure

General advice:

Contains: Disodium tetraborate decahydrate. Animal feeding studies in rat, mouse and dog, at high doses, have demonstrated effects on fertility and testes. Studies with the chemically related boric acid in the rat, mouse and rabbit, at high doses, demonstrate developmental effects on the fetus, including fetal weight loss and minor skeletal variations. The doses administered were many times in excess of those to which humans would normally be exposed. Human epidemiological studies show no increase in pulmonary disease in occupational populations with chronic exposures to boric acid

dust and sodium borate dust. A recent epidemiological study under the conditions of normal occupational exposure to borate dusts indicated no effect on fertility.

To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

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.

12. Ecological information

Toxicity No data available

Persistence and degradability

The methods for determining biodegradability are not applicable to inorganic substances.

Bioaccumulative potential

Due to the distribution coefficient n-octanol/water, accumulation in organisms is not expected.

Mobility in soil 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

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

9260 JOBO ECN-2 Developing Kit Pre bath

Weight per unit : 300g

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 : # 9260 JOBO ECN-2 Developing 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. : J9260-02

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 irritation	Category 2	--
Serious eye damage/eye irritation	Category 2A	--

GHS-Labeling

Contains:

Sodium carbonate (497-19-8), Sodium bisulphite (7631-90-5)

Symbol(s):

Signal word: Warning

Hazard statements: Causes skin irritation. Causes serious eye damage.

Precautionary statements:

Prevention: Wear protective gloves/ eye protection/ face protection. Wash thoroughly after handling.

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

HMIS III Hazard Ratings: Health - 2, Flammability - 0, Physical Hazard - 0

NFPA Hazard Ratings: Health - 3, Flammability - 0, 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
Sodium carbonate (497-19-8)	2-10
Sodium sulfite (7757-83-7)	< 1

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

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. 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: No data available

Odor: No data available

Specific gravity: 1.07

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: 10.6

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.

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 (NO_x), Sulphur oxides

11. Toxicological information

Effects of Exposure

General advice:

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: Causes skin irritation.

Ingestion: Expected to be a low ingestion hazard.

Data for Sodium carbonate (497-19-8)

Acute Oral: LD₅₀ (rat) = 2800 mg/kg.

Acute Inhalation: LC₅₀ (rat) = 2.3 mg/L.

Eyes: Irritating (rabbit, EPA 16 CFR 1500.42); Highly irritating (rabbit, Equivalent to OECD 405).

Skin: Not irritating (rabbit, OECD 404).

Carcinogenicity: Not listed as a carcinogen or potential carcinogen by the National Toxicology Program (NTP),

the International Agency for Research on Cancer (IARC), or the U.S. Occupational Safety and Health Administration (OSHA).

12. Ecological information

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

Potential Toxicity:

Toxicity to fish (LC50):	> 100 mg/l
Toxicity to daphnia (EC50):	> 100 mg/l
Toxicity to algae (EC50):	10 - 100 mg/l
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

9260 **JOBO** ECN-2 Developing Kit Color developer part A
J9260-02
February 02, 2022

9260 JOBO ECN-2 Developing 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 : # 9260 JOBO ECN-2 Developing 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. : J9260-03

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-Labeling

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.

MAY LIBERATE SULFUR DIOXIDE

HMIS III Hazard Ratings: Health – 2*, Flammability – 0, Physical Hazard – 0

NFPA Hazard Ratings: Health – 3, Flammability – 0, 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	70 - 90
4-(N-ethyl-N-2-methanesulphonylaminoethyl)-2-methylphenylenediamine sesquisulphate monohydrate (25646-71-3)	10 - 30
Sodium bisulfite (7631-90-5)	< 0.5

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
4-(N-ethyl-N-2methanesulphonylaminoethyl)-2-methylphenylenediamine sesquisulphate monohydrate	EK HPG	Time Weighted Average (TWA):	1.0 mg/m ³

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

Colour: Yellow

Odour: sulphur dioxide

Specific gravity: 1.07

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: 1.1

Flash point: > 93.33 °C (> 200.0 °F)

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 (NO_x), Sulphur oxides

11. Toxicological information

Effects of Exposure

General advice:

Contains: 4-(N-ethyl-N-2-methanesulphonylaminoethyl)-2-methylphenylenediamine sesquisulphate monohydrate. May cause kidney damage based on animal data.

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.

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

Numerical measures of toxicity - Product Information

The following values are calculated based on chapter 3.1 of the GHS document .

Oral LD50 (male rat): > 300mg/kg (ATEmix)

ATE: Acute toxicity estimate

Skin irritation: moderate (repeated skin application)

Skin Sensitization (Guinea pig): moderate

Skin Sensitization (human): positive

Eye irritation (unwashed eyes): moderate

Eye irritation (washed eyes): slight

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): 1 - 10 mg/l

Toxicity to daphnia (EC50): Daphnia (water flea): 1 - 10 mg/l

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

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:	UN3264
	Proper shipping name:	CORROSIVE LIQUID, ACIDIC, 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, ORGANIC, N.O.S. (4-(N-ethyl-N-2-methanesulphonylaminoethyl)-2-methylphenylenediamine sesquisulphate monohydrate)
	Class:	8

	Packaging group:	III
US DOT:	UN number:	UN3264
	Proper shipping name:	CORROSIVE LIQUID, ACIDIC, ORGANIC, 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

9260 JOBO ECN-2 Developing Kit Color developer part B

Weight per unit : 50ml

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. PRODUCT AND COMPANY IDENTIFICATION

Product Name : # 9260 JOBO ECN-2 Developing Kit Stop 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. : J9260-04

2. HAZARDS IDENTIFICATION

GHS classification

Health hazards

Serious eye damage/eye irritation :

Category 2A

Environmental Hazards

Not classified

Physical Hazards

Not classified

GHS Label Elements

Symbol(s)



Signal Word :Warning

Hazard statements: Causes serious eye irritation.

Precautionary statements: Wash skin thoroughly after handling. Wear eye protection/ face protection.

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. Supplemental

Hazard Statements none

3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance/Mixture :	Mixture		
<u>INGREDIENT</u>		<u>WT. %</u>	<u>CAS. No</u>
Water		50-60%	7732-18-5
Citric Acid Monohydrate		40-50%	5949-29-1
<u>Sodium hydroxide</u>		< 5%	<u>1310-73-2</u>

4. FIRST—AID MEASURES

- Inhalation : Remove patient from exposure, keep warm and at rest Obtain medical attention if ill effects occur
- Skin Contact : Remove contaminated clothing
Wash skin with water
If symptoms develop, obtain medical attention
- Eye Contact : Irrigate with eyewash solution or clean water, holding the eyelids apart, for at least 10 minutes
Obtain medical attention if ill effects occur
- Ingestion : Wash out mouth with water
Obtain medical attention if ill effects occur

5. FIRE AND EXPLOSION HAZARD DATA

- Extinguishing media
Suitable extinguishing media: Water spray. Polyvalent foam. BC powder. Carbon dioxide.
Firefighting instructions:
Do not enter fire area without proper protective equipment, including respiratory protection

6. ACCIDENTAL RELEASE MEASURES

- Personal Precautions : Avoid contact with skin and eyes.
Environmental precaution : Do not release to the environment
Method and materials for contaminant and cleaning up :
Absorb spillages in sand, earth or any suitable absorbent material.
Transfer to a container for disposal

7. HANLDING AND STORAGE

- Handling :
Avoid opening drums in unventilated areas to avoid concentrated vapors.

Avoid breathing vapors.

Avoid contact with skin and eyes.

Storage :

Keep away from frost

Store between 5 °C and 40 °C

Stir well before use

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Exposure Control :

Avoid contact with skin and eyes.

Do not breathe vapor/spray.

Use only in well-ventilated areas.

Personal Protection Equipment :

Respiratory Protection : Wear suitable respiratory protective equipment.

Protective Gloves : Use of gloves is recommended.

Eye Protection : Safety goggles.

Skin Protection : Wear suitable protective clothing.

Ventilation : General room ventilation adequate.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance :	Colorless
Odor :	Odorless
Flash Point :	Not Determined
Auto-ignition Temperature :	No Data
Explosion limit :	No Data
Solubility in Water :	Miscible with water
pH-Value Conc.Solution	2.05
Specific Gravity :	1.16 (25°C)

10. STABILITY AND REACTIVITY

Reactivity On heating:

Release of corrosive/combustible gases/vapors (acetic acid vapors).

Incompatible materials:

May react violently with alkalis.

May react with bases, copper, silver, mercury,
magnesium, zinc and their alloys.

Hazardous decomposition products: Carbon dioxide. Carbon monoxide.

11. TOXICOLOGICAL INFORMATION

This chemical formulation has not been tested for health effects. Exposure effects listed are based on existing health data for the individual components that comprise the mixture.

Toxicological Information on Ingredients:

Citric Acid Monohydrate (Cas.No 5949-29-1)

Inhalation May cause irritation of respiratory tract.

Eye contact Causes serious eye irritation.

Skin contact Prolonged contact may cause redness and
irritation.

Ingestion Ingestion may cause stomach discomfort.

Unknown acute toxicity Not Applicable.

ORAL (LD50) 3000 mg/kg (rat)

12. ECOLOGICAL INFORMATION

No data on possible environmental effect have been found.

13. DISPOSAL CONSIDERATION

Disposal methods : This material and its container must be disposed of in a safe way.

Dispose according to a country and local rule.

14. INFORMATION OF TRANSPORT

Not regulated for all modes of transportation.

15. REGULATORY INFORMATION

Follow all regulations in your country.

16. OTHER INFORMATION

9260 JOBO ECN-2 Developing Kit Stop bath
Volume per unit : 100ml

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 : # 9260 JOBO ECN-2 Developing Kit Bleach 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. : J9260-05

2. Hazards identification

2.1 Classification of the substance or mixture

Classification according to Regulation (EC) No 1272/2008

Not a hazardous substance or mixture according to Regulation (EC) No. 1272/2008

2.2 Label elements

Not a hazardous substance or mixture according to Regulation (EC) No. 1272/2008

Supplemental Hazard information (EU)

EUH032 Contact with acids liberates very toxic gas.

2.3 Other hazards

This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher. Contact with acids liberates very toxic gas.

3. Composition/information on ingredients

Components - (CAS-No.)	Weight percent
Potassium hexacyanoferrate(III) (13746-66-2)	>95

4. First aid measures

Inhalation: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical advice/attention if you feel unwell.

Skin contact: Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower. If skin irritation or rash occurs: Get medical advice/attention.

Eye contact: 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.

Ingestion: Get medical advice/attention if you feel unwell. Rinse mouth.
Protection of first-aiders: A rescuer should wear personal protective equipment, such as rubber gloves and air-tight goggles.

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 (NO_x), 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

Engineering controls:	Install a closed system or local exhaust as possible so that workers should not be exposed directly. Also install safety shower and eye bath.
Control parameters:	Not set up
Personal protective equipment	
Respiratory protection:	Dust respirator. Follow local and national regulations.
Hand protection:	Protective gloves.
Eye protection:	Safety glasses. A face-shield, if the situation requires.
Skin and body protection:	Protective clothing. Protective boots, if the situation requires

9. Physical and chemical properties

Appearance Form:	crystalline
Color	Orange
Odour	Odorless
Melting point/freezingpoint	No data available
pH	6.5 (5%aq.)
Flash point	Not applicable
Flammability (solid, gas)	No data available
Relative density	1.890 g/cm ³
Water solubility	329 g/l at 20 °C - completely soluble
Auto-ignition temperature	No data available
Decomposition temperature	No data available
Explosive properties	No data available
Oxidizing properties	No data available

10. Stability and reactivity

Stability	Reactivity No data available
Chemical stability	Stable under recommended storage conditions.
Hazardous reactions	
	None under normal processing
Conditions to avoid	Extremes of temperature and direct sunlight
Incompatible materials	No information available
Hazardous decomposition products	Halides

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.

12. Ecological information

12.1 Toxicity

Toxicity to fish	LC50 - Oncorhynchus mykiss (rainbow trout) -869 mg/l - 96 h(Tripotassium hexacyanoferrate)
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Toxicity to daphnia and other aquatic invertebrates

EC50 - Daphnia magna (Water flea) - 549 mg/l -48 h(Tripotassium hexacyanoferrate)

12.2 Persistence and degradability	No data available
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12.3 Bioaccumulative potential	No data available
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12.4 Mobility in soil	No data available(Tripotassium hexacyanoferrate)
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12.5 Results of PBT and vPvB assessment

This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

12.6 Other adverse effects	No data available
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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

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

This safety datasheet complies with the requirements of Regulation (EC) No. 1907/2006.

15.2 Chemical safety assessment

For this product a chemical safety assessment was not carried out

16. Other information

9260 JOBO ECN-2 Developing Kit Bleach part-A

Weight per unit : 100g

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 : # 9260 JOBO ECN-2 Developing Kit Bleach 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. : J9260-06

2. Hazards identification

PHYSICAL HAZARDS	Not classified
HEALTH HAZARDS	Not classified
ENVIRONMENTAL HAZARDS	Not classified
Label elements	
Pictograms or hazard symbols	None
Signal word	No signal word
Hazard statements	None
Precautionary statements	None

3. Composition/information on ingredients

Components - (CAS-No.)	Weight percent
Water	70-90
Sodium Bromide (7647-15-6)	10-30

4. First aid measures

Inhalation: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical advice/attention if you feel unwell.

Skin contact: Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower. If skin irritation or rash occurs: Get medical advice/attention.

Eye contact: 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.

Ingestion: Get medical advice/attention if you feel unwell. Rinse mouth.

Protection of first-aiders: A rescuer should wear personal protective equipment, such as rubber

gloves and air-tight goggles.

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 (NO_x), 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

Engineering controls: Install a closed system or local exhaust as possible so that workers should not be exposed directly. Also install safety shower and eye bath.

Control parameters: Not set up

Personal protective equipment

Respiratory protection: Dust respirator. Follow local and national regulations.

Hand protection: Protective gloves.

Eye protection: Safety glasses. A face-shield, if the situation requires.

Skin and body protection: Protective clothing. Protective boots, if the situation requires

9. Physical and chemical properties

Physical form: liquid

Color: Colourless

Odor: Odorless

Specific gravity: 1.19

Vapour pressure (at 20.0 °C (68.0 °F)): 24 mbar (18.0 mm Hg)

Vapour density: 0.6

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

Water solubility: complete

pH: 7

10. Stability and reactivity

Stability Reactivity No data available

Chemical stability Stable under recommended storage conditions.

Hazardous reactions None under normal processing

Conditions to avoid Extremes of temperature and direct sunlight

Incompatible materials No information available

Hazardous decomposition products Halides

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.

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

International Inventories

EINECS/ELINCS	Listed
TSCA	Listed

Japanese regulations

Fire Service Act	Not applicable
Industrial Safety and Health Act	Not applicable
Regulations for the carriage and storage of dangerous goods in ship	Not applicable
Civil Aeronautics Law	Not applicable
Pollutant Release and Transfer	Not applicable
Export Trade Control Order	Not applicable

16. Other information

9260 JOBO ECN-2 Developing Kit Bleach part B

Volume per unit : 250ml

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 : # 9260 JOBO ECN-2 Developing 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. : J9260-07

2. Hazards identification

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

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

GHS-Labeling

Contains:

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

Symbol(s):

Signal word: Warning

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	40-60
Ammonium thiosulphate (7783-18-8)	40-50

Ammonium sulphite (10196-04-0)	1 – 10
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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 (NO_x), 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 bisulphite	ACGIH	time weighted average	5 mg/m ³

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 (at 20.0 °C (68.0 °F)): 24 mbar (18.0 mm Hg)

Vapour density: 0.6

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

The following values are calculated based on chapter 3.1 of the GHS document .

Oral LD50 (male rat): >2000mg/kg (ATEmix)

ATE: Acute toxicity estimate

Data for Ammonium thiosulphate (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

9260 JOBO ECN-2 Developing Kit Fixer

Volume per unit : 525ml

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 : # 9260 JOBO ECN-2 Developing Kit Stabilizer

Name of Manufacturer : JOBO International GmbH

Address : Kölner Straße 58a · 51645 Gummersbach Germany

Name of Section : Johannes Bockemuehl

Phone Number : +49 (0) 2261 - 545-35

MSDS No. : J9260-08

2. Hazards identification

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

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

GHS-Labeling



Signal word: DANGER

Contains:

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

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

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

NFPA Hazard Ratings: Health - 1, Flammability - 0, 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)	80-90
Ethylene glycol (107-21-1)	10-20

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: light yellow

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): > 100 mg/l

Toxicity to daphnia (EC50): > 100 mg/l

Toxicity to algae (IC50): > 100 mg/l

Toxicity to other organisms (EC50): > 100 mg/l

Persistence and degradability: Readily biodegradable.

Chemical Oxygen Demand (COD): ca. 0.5 g/l

Biochemical Oxygen Demand (BOD): ca. 0.2 g/l

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

9260 JOBO ECN-2 Developing Kit Stabilizer

Volume per unit : 25ml

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.