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MSDS No: M00616

## SAFETY DATA SHEET

### 1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND OF THE COMPANY/UNDERTAKING

**Product Name:** pPb -2 Fixer Solution  
**Catalog Number:** 2368655

HACH LANGE GmbH  
Willstätterstrasse 11  
40549 Düsseldorf, Germany  
+49 -(0)211 -52880

Emergency Telephone Numbers:  
(Poison Information Center Main)  
(+49 (0) 6131 19240) 24 HR

**SDS Number:** M00616  
**Chemical Name:** Not applicable  
**Chemical Formula:** Not applicable  
**Chemical Family:** Not applicable  
**Use of the substance/preparation:** Determination of lead  
**CAS No.:** Not applicable  
**Hazard:** May cause irritation.  
**Date of MSDS Preparation:**  
**Day:** 12  
**Month:** 01  
**Year:** 2006

**Additional Emergency Response Numbers:** Austria: +49 (0)6131 19240, Belgium: +32 -(0)70 -245245, France: +33 (0)1 -40370404, Italy: +39 -026101029, Netherlands: +31 -(0)30 -2748888, Switzerland: +41 -(0)1 -2515151

### 2. COMPOSITION / INFORMATION ON INGREDIENTS

#### Imidazole

**EEC Number:** 2060192  
**CAS No.:** 288 -32 -4  
**Percent Range:** 1,0 - 10,0  
**Percent Range Units:** weight / volume  
**Ingredient EEC Symbol:** Not applicable  
**Ingredient R phrase(s) (R phrase details given in Heading 16):** Not applicable  
**TLV:** Not established  
**PEL:** Not established  
**EU Occupational Exposure Limits:** 3 mg/m<sup>3</sup>, Inhalable dust

#### Demineralized Water

**EEC Number:** 2317912  
**CAS No.:** 7732185  
**Percent Range:** 50,0 - 60,0  
**Percent Range Units:** volume / volume  
**Ingredient EEC Symbol:** Not applicable  
**Ingredient R phrase(s) (R phrase details given in Heading 16):** Not applicable  
**TLV:** Not established  
**PEL:** Not established  
**EU Occupational Exposure Limits:** Not established

#### Potassium Nitrate

**EEC Number:** 2318188  
**CAS No.:** 775791  
**Percent Range:** 1,0 - 10,0

**Percent Range Units:** weight / volume  
**Ingredient EEC Symbol:** Not applicable  
**Ingredient R phrase(s) (R phrase details given in Heading 16):** Not applicable  
**TLV:** Not established  
**PEL:** Not established  
**EU Occupational Exposure Limits:** 3 mg/m<sup>3</sup>, Inhalable dust

**Tris-(Hydroxymethyl) -Aminomethane**

**EEC Number:** 2010644  
**CAS No.:** 786  
**Percent Range:** 20,0 - 30,0  
**Percent Range Units:** weight / volume  
**Ingredient EEC Symbol:** Not applicable  
**Ingredient R phrase(s) (R phrase details given in Heading 16):** Not applicable  
**TLV:** Not established  
**PEL:** Not established  
**EU Occupational Exposure Limits:** 3 mg/m<sup>3</sup>, Inhalable dust

**Succinic Acid**

**EEC Number:** 2037404  
**CAS No.:** 110-15-6  
**Percent Range:** 1,0 - 10,0  
**Percent Range Units:** weight / volume  
**Ingredient EEC Symbol:** Not applicable  
**Ingredient R phrase(s) (R phrase details given in Heading 16):** Not applicable  
**TLV:** Not established  
**PEL:** Not established  
**EU Occupational Exposure Limits:** 3 mg/m<sup>3</sup>, Inhalable dust

**Tartaric Acid**

**EEC Number:** 2017660  
**CAS No.:** 8769  
**Percent Range:** 1,0 - 5,0  
**Percent Range Units:** weight / volume  
**Ingredient EEC Symbol:** Not applicable  
**Ingredient R phrase(s) (R phrase details given in Heading 16):** Not applicable  
**TLV:** Not established  
**PEL:** Not established  
**EU Occupational Exposure Limits:** 3 mg/m<sup>3</sup>, Inhalable dust

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### 3. HAZARDS IDENTIFICATION

**Emergency Overview:**

**Appearance:** Yellow liquid  
**Odor:** None  
**EU Symbols:** Not applicable  
**R PHRASES:** Not applicable

**Protective Equipment:**

**Potential Health Effects:**

**Eye Contact (EC):** May cause irritation  
**Skin Contact (EC):** May cause irritation  
**Skin Absorption (EC):** None Reported  
**Target Organs (SA E):** None Reported  
**Ingestion (EC):** Very large doses may cause: gastrointestinal tract irritation abdominal pain nausea vomiting diarrhea weakness hypoglycemia collapse  
**Target Organs (Ing E):** None Reported  
**Inhalation:** No effects anticipated  
**Target Organs (Inh E):** Not applicable  
**Medical Conditions Aggravated:** Pre-existing: Eye conditions Skin conditions  
**Chronic Effects:** Chronic overexposure may cause anemia kidney damage

**Cancer / Reproductive Toxicity Information:**

This product does NOT contain any IARC listed chemicals.

**Additional Cancer / Reproductive Toxicity Information:** None reported  
**Toxicologically Synergistic Products:** None reported

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#### 4. FIRST AID MEASURES

**Eye Contact:** Immediately flush eyes with water for 15 minutes. Call physician.  
**Skin Contact (First Aid):** Wash skin with plenty of water. Call physician if irritation develops.  
**Ingestion (First Aid):** Give large quantities of water. Call physician immediately.  
**Inhalation:** None required.

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#### 5. FIRE FIGHTING MEASURES

**Flammable Properties:** Material will not burn.  
**Hazardous Combustion Products:** This material will not burn.  
**Fire / Explosion Hazards:** This product will not burn or explode.  
**Static Discharge:** None reported.  
**Mechanical Impact:** None reported  
**Extinguishing Media:** Use media appropriate to surrounding fire conditions  
**Extinguishing Media NOT To Be Used:** Not applicable  
**Fire Fighting Instruction:** As in any fire, wear self-contained breathing apparatus pressure-demand and full protective gear.

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#### 6. ACCIDENTAL RELEASE MEASURES

**Spill Response Notice:**  
Only persons properly qualified to respond to an emergency involving hazardous substances should respond to a spill involving chemicals. See Section 13, Special Instructions for disposal assistance.  
**Containment Technique:** Absorb spilled liquid with non-reactive sorbent material. Stop spilled material from being released to the environment.  
**Clean-up Technique:** Absorb spilled liquid with non-reactive sorbent material. Sweep up material. Place material in a plastic bag. Mark bag 'Non-hazardous trash', and dispose of as normal refuse. Decontaminate the area of the spill with a soap solution.  
**Evacuation Procedure:** Evacuate as needed to perform spill clean-up. If conditions warrant, increase the size of the evacuation.

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#### 7. HANDLING AND STORAGE

**Handling:** Avoid contact with eyes skin Wash thoroughly after handling. Maintain general industrial hygiene practices when using this product.  
**Storage:** Keep container tightly closed when not in use. Protect from: heat  
**Special Packaging Instructions:** Not applicable  
**Use of the substance/preparation:** Determination of lead

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#### 8. EXPOSURE CONTROLS / PROTECTIVE EQUIPMENT

**Engineering Controls:** Have an eyewash station nearby. Maintain general industrial hygiene practices when using this product.  
**Personal Protective Equipment:**  
**Eye Protection:** safety glasses with top and side shields  
**Skin / Hand Protection:** disposable latex gloves  
**Inhalation Protection:** adequate ventilation  
**Precautionary Measures:** Avoid contact with: eyes skin Wash thoroughly after handling. Protect from: heat  
**TLV:** Not established  
**PEL:** Not established  
**EU Occupational Exposure Limits:** Not established

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## 9. PHYSICAL / CHEMICAL PROPERTIES

**Appearance:** Yellow liquid  
**Physical State:** Liquid  
**Odor:** None  
**pH:** 8,1  
**Vapor Pressure:** Not determined  
**Vapor Density (air = 1):** Not determined  
**Boiling Point:** 99° C (210° F)  
**Melting Point:** -12° C (10° F)  
**Flash Point:** Not applicable  
**Method:** Not applicable  
**Autoignition Temperature:** Not determined  
**Flammability Limits:**  
**Lower Explosion Limits:** Not applicable  
**Upper Explosion Limits:** Not applicable  
**Specific Gravity (water = 1):** 1,165  
**Evaporation Rate (water = 1):** 0,593  
**Volatile Organic Compounds Content:** Not determined  
**Partition Coefficient (n -octanol / water):** Not applicable  
**Solubility:**  
**Water:** Soluble  
**Acid:** Soluble  
**Other:** Not determined  
**Metal Corrosivity:**  
**Steel:** 0,000 in/yr  
**Aluminum:** 0,020 in/yr

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## 10. STABILITY / REACTIVITY

**Chemical Stability:** Stable when stored under proper conditions.  
**Conditions to Avoid:** Extreme temperatures  
**Reactivity / Incompatibility:** Incompatible with: acids copper brass aluminum reducers  
**Hazardous Decomposition:** Heating to decomposition releases: carbon monoxide carbon dioxide nitrogen oxides potassium oxide  
**Hazardous Polymerization:** Will not occur.

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## 11. TOXICOLOGICAL INFORMATION

**Product Toxicological Data:**  
**LD50:** None reported  
**LC50:** None reported  
**Dermal Toxicity Data:** None reported  
**Skin and Eye Irritation Data:** None reported  
**Mutation Data:** None reported  
**Reproductive Effects Data:** Potassium Nitrate: Oral rat TDLo = 22 g/kg Fertility - other measures of fertility, Oral rat TDLo = 598 mg/kg Effects on Newborn - behavioral, Oral rabbit TDLo = 6505 mg/kg - Fertility abortion, Oral guinea pig TDLo 15 g/kg Effects on Newborn stillbirth  
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**Ingredient Toxicological Data:** Tris -(Hydroxymethyl) -aminomethane: Oral rat LD50 = 5900 mg/kg; Potassium Nitrate: Oral rat LD50 = 3750 mg/kg; Succinic Acid: Oral rat LD50 = 2260 mg/kg; Imidazole: Oral rat LD50 = 220 mg/kg; Tartaric Acid: Oral dog LD50 = 5g/kg

This product does NOT contain any IARC listed chemicals.

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## 12. ECOLOGICAL INFORMATION

**Product Ecological Information:** --  
No ecological data available for this product.  
**Ingredient Ecological Information:** --

No ecological data available for the ingredients of this product.

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### 13. DISPOSAL CONSIDERATIONS

**NOTICE (Disposal):** These disposal guidelines are based on federal regulations and may be superseded by more stringent state or local requirements. Please consult your local environmental regulators for more information. In Europe: Chemical and analysis solutions must be disposed of in compliance with the respective national regulations. Product packaging must be disposed of in compliance with the country-specific regulations or must be passed to a packaging return system.

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### 14. TRANSPORT INFORMATION

**I.C.A.O.:**

**I.C.A.O. Proper Shipping Name:** Not Currently Regulated

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**ICAO Hazard Class:** NA

**ICAO Subsidiary Risk:** NA

**ICAO UN/ID Number:** NA

**ICAO Packing Group:** NA

**I.M.O.:**

**I.M.O. Proper Shipping Name:** Not Currently Regulated

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**I.M.O. Hazard Class:** NA

**I.M.O. Subsidiary Risk:** NA

**I.M.O. UN Number:** NA

**I.M.O. Packing Group:** NA

**A.D.R.:**

**A.D.R. Proper Shipping Name:** Not Currently Regulated

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**A.D.R. Hazard Class:** NA

**A.D.R. Subsidiary Risk:** NA

**A.D.R. UN -Number:** NA

**A.D.R. Packing Group:** NA

**Additional Information:** This product may be shipped as part of a chemical kit composed of various compatible dangerous goods for analytical or testing purposes. This kit would have the following classification: Proper Shipping Name: Chemical Kit Hazard Class: 9 UN Number 3316

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### 15. REGULATORY INFORMATION

**National Inventories:**

**EEC Inventory Status:** All ingredients used to make this product are listed on EINECS / ELINCS.

**EEC Number:** Not applicable

**EEC LABEL COPY:**

**EU Symbols:** Not applicable

**R PHRASES:** Not applicable

**S PHRASES:** Not applicable

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### 16. OTHER INFORMATION

**References:** Air Contaminants, Federal Register, Vol. 54, No. 12. Thursday, January 19, 1989. pp. 2332 -2983. TLV's Threshold Limit Values and Biological Exposure Indices for 1992 -1993. American Conference of Governmental Industrial Hygienists, 1992. Technical Judgment. In-house information. Vendor Information.

**R PHRASES:** Not applicable

**Use of the substance/preparation:** Determination of lead

**Revision Summary:** Updates in Section(s) 14,

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**Legend:**

NA - Not Applicable	w/w - weight/weight
ND - Not Determined	w/v - weight/volume
NV - Not Available	v/v - volume/volume

**USER RESPONSIBILITY:** Each user should read and understand this information and incorporate it in individual site safety programs in accordance with applicable hazard communication standards and regulations.

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