

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

### Product Identifier

**Product Name** Reference Filling Solution

**Product Number(s)** 510011

**Pure substance/mixture** Mixture

### Relevant identified uses of the substance or mixture and uses advised against

**Recommended Use** Use as laboratory reagent

**Uses advised against** No Information available

### Manufacturer/Supplier

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**Made in** USA

**Emergency Telephone** 24 Hour Emergency Phone Number  
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(collect calls accepted)

**2. HAZARDS IDENTIFICATION**

**Classification**

**OSHA Regulatory Status**

This chemical is considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200)


Skin Corrosion/irritation	Category 2
Serious Eye Damage/Eye Irritation	Category 2A
Carcinogenicity	Category 1B
Reproductive Toxicity	Category 1B

**Label Elements**

**Emergency Overview**

**Danger**

**Hazard Statements**  
 Causes skin irritation  
 Causes serious eye irritation  
 May cause cancer  
 May damage fertility or the unborn child



**Appearance** Dark brown      **Physical State** Liquid      **Odor** Odorless

Safety data sheet available on request

**Precautionary Statements**

Do not handle until all safety information has been read and understood.

**Prevention**

- Obtain special instructions before use
- Do not handle until all safety precautions have been read and understood
- Use personal protective equipment as required
- Wash face, hands and any exposed skin thoroughly after handling
- Wear eye/face protection

**Response**

- IF exposed or concerned: Get medical attention/advice
- Specific treatment (see supplemental instructions on the administration of antidotes on this label)
- 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
- Take off contaminated clothing and wash before reuse

**Storage**

Store locked up

**Disposal**

Dispose of contents/container to an approved waste disposal plant

**Hazards not otherwise classified (HNOC)**

No information available

**Other Information**

No information available

Unknown Acute Toxicity 45.05 % of the mixture consists of ingredients of unknown toxicity.

**3. COMPOSITION/INFORMATION ON INGREDIENTS**

Component	CAS-No	Weight %	Trade Secret
Potassium Iodide	7681-11-0	40 - 50%	*
Potassium Hydroxide	1310-58-3	0 - 10%	*
Boric Acid	10043-35-3	0 - 10%	*
Iodine	7553-56-2	0 - 10%	*

\*The exact percentage (concentration) of composition has been withheld as a trade secret.

**4. FIRST AID MEASURES****First aid measures**

<b>General Advice</b>	Use first aid treatment according to the nature of the injury. Get medical attention immediately if symptoms occur. Show this safety data sheet to the doctor in attendance.
<b>Eye Contact</b>	Rinse thoroughly with plenty of water, also under the eyelids. Obtain medical attention.
<b>Skin Contact</b>	Wash off immediately with soap and plenty of water for at least 15 minutes while removing all contaminated clothing and shoes. If skin reactions occur, contact a physician.
<b>Inhalation</b>	Move to fresh air. If breathing is difficult, give oxygen. If symptoms persist, obtain medical attention.
<b>Ingestion</b>	Clean mouth with water and drink afterwards plenty of water. Do not induce vomiting. Call a physician or Poison Control Center immediately.
<b>Protection of First-aiders</b>	Use personal protective equipment. See Section 8 for more detail. Do not use mouth-to-mouth method if victim ingested or inhaled the substance; induce artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device.

**Most important symptoms and effects, both acute and delayed****Most important symptoms/effects** No information available**Indication of any immediate medical attention and special treatment needed****Notes to Physician** Treat symptomatically**5. FIRE-FIGHTING MEASURES****Suitable Extinguishing Media**

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

**Unsuitable Extinguishing Media**

No information available

**Specific Hazards Arising from the Chemical**

No information available

**Explosion Data**

**Sensitivity to Mechanical Impact** None

**Sensitivity to Static Discharge** None

**Protective Equipment and Precautions for Firefighters**

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

**6. ACCIDENTAL RELEASE MEASURES**

**Personal Precautions, Protective Equipment and Emergency Procedures**

**Personal Precautions**

Use personal protective equipment. Refer to Section 8. Evacuate personnel to safe areas.

**Environmental Precautions**

Beware of vapors accumulating to form explosive concentrations. Vapors can accumulate in low areas.

**Methods and Material for Containment and Cleaning Up**

**Methods for Containment**

Prevent further leakage or spillage if safe to do so.

**Methods for Cleaning Up**

Soak up with inert absorbent material. Pick up and transfer to properly labeled containers.

**7. HANDLING AND STORAGE**

**Precautions for Safe Handling**

**Handling**

To avoid risks to human health and the environment, comply with the instructions for use  
 Wear personal protective equipment  
 Avoid breathing dust/fume/gas/mist/vapours/spray  
 Ensure adequate ventilation, especially in confined areas

**Conditions for Safe Storage, Including any Incompatibilities**

**Storage**

Keep container tightly closed in a dry and well-ventilated place  
 Store at room temperature in the original container  
 Keep away from direct sunlight

**Incompatible Products**

No information available

**8. EXPOSURE CONTROLS/PERSONAL PROTECTION**

**Control parameters**

**Exposure Guidelines**

Component	ACGIH TLV	OSHA PEL	NIOSH IDLH
Potassium Iodide 7681-11-0	TWA: 0.01 ppm	-	-
Potassium Hydroxide 1310-58-3	Ceiling: 2 mg/m <sup>3</sup>	(Vacated) Ceiling: 2 mg/m <sup>3</sup>	Ceiling: 2 mg/m <sup>3</sup>
Boric Acid 10043-35-3	TWA: 2 mg/m <sup>3</sup> STEL: 6 mg/m <sup>3</sup>	-	-
Iodine 7553-56-2	TWA: 0.01 ppm STEL: 0.1 ppm	Ceiling: 0.1 ppm Ceiling: 1 mg/m <sup>3</sup> (Vacated) Ceiling: 0.1 ppm (Vacated) Ceiling: 1 mg/m <sup>3</sup>	IDLH: 2 ppm Ceiling: 0.1 ppm Ceiling: 1 mg/m <sup>3</sup>

**Appropriate engineering controls**

**Engineering Measures**

Showers  
 Eyewash stations  
 Ventilation systems

**Individual protection measures, such as personal protective equipment**

<b>Eye/face Protection</b>	Wear chemical splash goggles. If splashes are likely to occur, wear: Face-shield.
<b>Skin and Body Protection</b>	Wear protective gloves/clothing.
<b>Respiratory Protection</b>	None required under normal usage. In case of inadequate ventilation wear respiratory protection.
<b>Hygiene Measures</b>	Handle in accordance with good industrial hygiene and safety practice.

**9. PHYSICAL AND CHEMICAL PROPERTIES****Information on basic physical and chemical properties**

<b>Physical State</b>	Liquid
<b>Appearance</b>	Dark brown
<b>Odor</b>	Odorless
<b>Odor Threshold</b>	No information available
<b>pH Range</b>	6.4 -7.6

<u>Property</u>	<u>Values</u>	<u>Remarks • Method</u>
<b>Melting point/freezing point</b>	No information available	
<b>Boiling Point/Range</b>	~ 100 °C / 212 °F	
<b>Flash Point (High in °C)</b>	N/A	
<b>Evaporation Rate</b>	No information available	
<b>Flammability (solid, gas)</b>	No information available	
<b>Flammability Limit in Air</b>		
<b>Upper flammability limit:</b>	No information available	
<b>Lower flammability limit:</b>	No information available	
<b>Vapor pressure</b>	No information available	
<b>Vapor Density</b>	No information available	
<b>Specific Gravity</b>	No information available	
<b>Water Solubility</b>	Soluble in water	
<b>Solubility in other solvents</b>	No information available	
<b>Partition coefficient</b>	No information available	
<b>Autoignition Temperature</b>		
<b>Decomposition Temperature</b>	No information available	
<b>Kinematic Viscosity</b>	No information available	
<b>Dynamic viscosity</b>	No information available	
<b>Explosive Properties</b>	No information available	
<b>Oxidizing Properties</b>	No information available	

**Other Information**

<b>Softening Point</b>	No information available
<b>Molecular Weight</b>	No information available
<b>VOC Content(%)</b>	No information available
<b>Density</b>	No Information available
<b>Bulk Density</b>	No information available

**10. STABILITY AND REACTIVITY****Reactivity**

No Information available

**Chemical Stability**

Stable under normal conditions

**Possibility of Hazardous Reactions**

None under normal processing

**Conditions to Avoid**

Extremes of temperature and direct sunlight

**Incompatible Materials**

No information available

**Hazardous Decomposition Products**

Thermal decomposition can lead to release of irritating gases and vapors

**11. TOXICOLOGICAL INFORMATION****Information on likely routes of exposure**

<b>Inhalation</b>	No information available
<b>Eye Contact</b>	No information available
<b>Skin Contact</b>	No information available
<b>Ingestion</b>	No information available

Component	LD50 Oral	LD50 Dermal	LC50 Inhalation
Potassium Hydroxide 1310-58-3	284 mg/kg ( Rat )	-	-
Boric Acid 10043-35-3	= 2660 mg/kg ( Rat )	> 2000 mg/kg ( Rabbit )	> 0.16 mg/L ( Rat ) 4 h
Iodine 7553-56-2	14 g/kg ( Rat )	-	-

**Information on Toxicological Effects****Symptoms** No information available**Delayed and immediate effects as well as chronic effects from short and long-term exposure****Sensitization** No information available**Mutagenic Effects** No information available**Carcinogenicity** No information available.**Reproductive Effects** No information available**STOT - single exposure** No information available**STOT - repeated exposure** No information available**Aspiration hazard** No information available**Numerical measures of toxicity - Product Information****Unknown Acute Toxicity** 45.05 % of the mixture consists of ingredients of unknown toxicity.

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

ATEmix (oral) 9754 mg/kg

**12. ECOLOGICAL INFORMATION****Ecotoxicity**

45.05% of the mixture consists of component(s) of unknown hazards to the aquatic environment

Component	Freshwater Algae	Freshwater Fish	Water Flea
Potassium Hydroxide 1310-58-3	-	80 mg/L LC50 96 h	-
Boric Acid 10043-35-3	-	1020: 72 h Carassius auratus mg/L LC50 flow-through	115 - 153: 48 h Daphnia magna mg/L EC50

**Persistence and Degradability**

No information available

**Bioaccumulation/ Accumulation**

No information available

**Mobility**

Component	log Pow
Potassium Hydroxide 1310-58-3	0.83
Boric Acid 10043-35-3	-0.757

**Other adverse effects**

No information available

**13. DISPOSAL CONSIDERATIONS**

**Waste treatment methods**

**Waste Disposal Methods**

Disposal should be in accordance with applicable regional, national and local laws and regulations.

**Contaminated Packaging**

Improper disposal or reuse of this container may be dangerous and illegal.

Component	CAWAST
Potassium Hydroxide 1310-58-3	Toxic Corrosive
Boric Acid 10043-35-3	Toxic

**14. TRANSPORT INFORMATION**

- DOT** Not regulated
- TDG** Not regulated
- MEX** Not regulated
- ICAO** Not regulated
- IATA** Not regulated
- IMDG/IMO** Not regulated
- RID** Not regulated
- ADR** Not regulated
- ADN** Not regulated

**15. REGULATORY INFORMATION**

**International Inventories**

<b>USINV</b>	Complies
<b>CANINV</b>	Complies
<b>EINECS/ELINCS</b>	Complies
<b>ENCS</b>	Does not Comply
<b>IECSC</b>	Complies
<b>KECL</b>	Complies
<b>PICCS</b>	Complies
<b>AICS</b>	Complies

**USINV/ TSCA** - United States Toxic Substances Control Act Section 8(b) Inventory  
**CANINV/ DSL/NDL** - Canadian Domestic Substances List/Non-Domestic Substances List  
**EINECS/ELINCS** - European Inventory of Existing Commercial Chemical Substances/EU List of Notified Chemical Substances  
**ENCS** - Japanese Existing and New Chemical Substances  
**IECSC** - Chinese Inventory of Existing Chemical Substances  
**KECL** - Korean Existing and Evaluated Chemical Substances  
**PICCS** - Philippines Inventory of Chemicals and Chemical Substances  
**AICS** - Australian Inventory of Chemical Substances

**U.S. Federal Regulations**

**SARA 313**

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product does not contain any chemicals which are subject to the reporting requirements of the Act and Title 40n of the Code of Federal Regulations, Part 372.

**SARA 311/312 Hazardous Categorization**

<b>Acute Health Hazard</b>	No
<b>Chronic Health Hazard</b>	No
<b>Fire Hazard</b>	No
<b>Sudden Release of Pressure Hazard</b>	No
<b>Reactive Hazard</b>	No

**Clean Water Act**

Component	CWA - Reportable Quantities	CWA - Toxic Pollutants	CWA - Priority Pollutants	CWA - Hazardous Substances
Potassium Hydroxide 1310-58-3	1000 lb	-	-	X

**CERCLA**

This material, as supplied, contains one or more substances regulated as a hazardous substance under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302)

Component	Hazardous Substances RQs	CERCLA EHS RQs	RQ
Potassium Hydroxide 1310-58-3	1000 lb	-	RQ 1000 lb final RQ RQ 454 kg final RQ

**U.S. State Regulations**

**California Proposition 65**

This product does not contain any Proposition 65 chemicals

**State Right-to-Know**

Component	New Jersey	Massachusetts	Pennsylvania
Potassium Hydroxide 1310-58-3	X	X	X
Iodine 7553-56-2	X	X	X



**U.S. EPA Label Information**

No information available

**16. OTHER INFORMATION**

<b>Prepared By</b>	Environmental, Health and Safety
<b>Prepared For</b>	Thermo Fisher Scientific Inc.©
<b>Issue Date</b>	No information available
<b>Revision Date</b>	18-May-2015
<b>Expiration Date</b>	SDS is valid 3 years from revision date. Contact wai.techservbev@thermofisher.com for the latest revision.
<b>Reason for revision</b>	Update to CLP Format

**Disclaimer**

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**End of Safety Data Sheet**