

**I. Product and Supplier Information**

Product Name: Conductivity Calibration Standards 4066, 4067, 4068, 4069  
 4173, 4174, 4176, 4177, 4178, 4179, 4566, 4567, 4568, 4569, 4573  
 MSDS Number: CC 4066 Rev 2  
 Publication Date: Oct. 09, 2006  
 Product Purpose: Conductivity standard  
 Replaces: Jun. 14, 2006  
 Product Synonyms: Electrolyte solution  
 Chemical Family or Formula: Not applicable

Supplier: Control Company Phone: 281-482-1714  
 Drawer 58307 Fax: 281-482-9448  
 Houston, TX 77258 email: [sales@control3.com](mailto:sales@control3.com)

Product Information: 281-482-1714

Transportation Emergency: NA

CPR STATEMENT: This product has been classified in accordance with the hazard criteria of the Canadian Controlled Products Regulations (CPR) and the MSDS contains all the information required by the CPR.

**II. Composition and Information on Ingredients**

CAS #	SARA 313 On? Dm*	Material or Component	%	RQ#	Exposure Limits		
					TWA*	STEL*	WEEL*
7447-40-7	No NA	Potassium Chloride	<8	None	Not established		NA
71-23-8	No No	n-Propanol	<2	None	200 ppm	400 ppm	NA
7732-18-5	No No	Water	>90	None	Not established		NA

Note: The purpose of this MSDS is to provide safe handling, shipping and disposal information for users of the product. It is not intended to, nor does it, provide complete or extensive toxicological data on the product or its components. Users who require this information are referred to primary suppliers of the ingredients of interest. No component is listed in "Threshold and Biological Exposure Indices for 2005" from ACGIH except as noted above.

Components listed in Title III Sec. 313 (EPCRA) are indicated by "Yes" above.

\*TWA= Time Weighted Average; STEL= Short Term Exposure Limit; WEEL= Workplace Employee Exposure Level

NE= Not Established A4= Not Classifiable as a Human Carcinogen BEI+ Biological Exposure Index exists for this mater  
 Dm= De minimus A3 = Confirmed Animal carcinogen with Unknown Relevance to Humans.

**III. Hazards Identification****OSHA Hazard Classification:**

Not a hazard.

**Routes of Entry:** Skin, eyes, Inhalation, ingestion

**Chemical Interactions:** Electrolytic nature of these solutions may cause slight transient eye irritation.  
 Electrolytic nature of these solutions may enhance corrosion of various metals.

**Medical Conditions Aggravated:**

No information.

**Human Threshold Response Data**

**Odor Threshold:** Not established

**Irritation Threshold:** Not established

**Hazard Category Classifications and Ratings**

Hazard Categories:	Health	Fire	Pressure	Reactivity	Reference 49 CFR 171.8, OSHA 29 CFR 1910.1200 and SARA 302/311/312/313.
Immediate	Yes	No	No	No	
Delayed	No	No	No	No	
HMIS Hazard Ratings: Health 1 Fire 0 Instability 0 Other NA					
NFPA 704 Hazard Ratings: Health 1 Flammability 0 Reactivity 0 Special NA					
Hazard Ratings: Least: 0 Slight: 1 Moderate: 2 High: 3 Extreme: 4					

Notice: HMIS and NFPA ratings involve the subjective evaluation of the hazardous aspects of individual components, and can differ between preparers. They are intended and useful only as a rapid, general identification of the approximate magnitude of the specific hazards rated.

**Immediate (Acute) Health Effects**

## Inhalation Toxicity:

Not a significant hazard.

## Inhalation Irritation:

Not a significant hazard.

## Skin Contact:

Not a significant hazard.

## Skin Absorption:

Not a significant hazard.

## Eye Contact

Liquid may cause transient eye irritation, tearing and a burning sensation.

## Ingestion Irritation:

Not a significant hazard. See Sec. XI.

## Ingestion Toxicity:

Not a significant hazard. See Sec. XI.

## Acute Target Organ Toxicity:

Not a significant hazard.

**Prolonged (Chronic) Health Effects**

## Carcinogenicity:

None.

## Reproductive and Developmental Toxicity:

No known effects on humans. Mutagenic effects observed on bacteria and laboratory animals.

## Sensitization:

None known.

## Inhalation:

Not a significant hazard.

## Skin Contact:

Prolonged or repeated skin exposure may cause chapping or dermatitis, similar to water.

## Skin Absorption:

Not a significant hazard.

## Ingestion:

Not a significant hazard.

## General :

Not a significant hazard.

## Chronic Target Organ Toxicity:

None.

## Supplemental Health Hazard Information:

No additional health information available.

**IV. First Aid**

## Inhalation:

Remove individual to fresh air. If not breathing, give artificial respiration or oxygen as appropriate. Seek medical attention at once.

## Skin Contact:

Flush skin with water for 15 minutes and remove contaminated clothing. Wash shoes and clothing before reuse.

## Eyes:

Immediately flush eyes with plenty of water for at least 15 minutes while holding eyelids apart.

## Ingestion:

Immediately drink water to dilute. Induce vomiting. Consult a physician immediately.

Never give anything by mouth to an unconscious person.

**V. Fire Fighting Measures**

## Flammability Summary (OSHA):

Not flammable.

## Flammable Properties:

Flash Point: None

Autoignition Temperature: ND

Upper Flammable/Explosive Limit, % in a NA

Lower Flammable/Explosive Limit, % in a NA

## Fire/Explosion Hazards:

Not a hazard.

## Extinguishing Media:

Does not support combustion. Use equipment appropriate to the main cause of the fire.

Do not allow contaminated water to enter sewers or waterways.

## Fire Fighting Instructions:

Use water to cool containers.

## Hazardous Combustion Products:

Hydrochloric acid vapors may be formed in a fire.

**VI. Accidental Release Measures****Personal Protection for Emergency Situations:**

Contain the release and eliminate its source if this can be done safely.

**Spill Mitigation Procedures**

## Air Release:

Not a hazardous event.

## Water Release:

This material is soluble in water. Contain all liquid for treatment and/or disposal as a (potential) hazardous waste. Notify all downstream users of possible contamination.

## Land Release:

Create a dike or trench to contain materials. Absorb spill with inert material (e.g., dry sand, clay, earth or commercial absorbent), then place in a chemical waste container.

Contain all contaminated water for disposal and/or treatment.

## Additional Spill Information:

Stop source of spill as soon as possible and notify appropriate personnel. Utilize emergency response personal protection equipment prior to the start of any response. Evacuate all non-essential personnel.

Dispose of spill residues per guidelines under Section XIII, Disposal Considerations.

**VII. Handling and Storage**

## Handling:

Do not take internally. Avoid contact with skin, eyes and clothing. Upon contact with skin or eyes, wash with water. Avoid breathing vapor, mist or gas.

## Storage

Keep container closed when not in use.

## Shelf Life Limitations:

See label or certificate of analysis for shelf life if applicable.

## Incompatible Materials for Storage:

Refer to Section X, "Incompatible Materials."

**VIII. Exposure Controls and Personal Protection**

## Ventilation:

Normal workplace ventilation is satisfactory.

## Protective Equipment for Routine Use of Product

Respiratory Protection:

Not required.

Respirator Type(s):

Not required.

Skin: Wear impervious gloves (butyl rubber, Viton, e.g.) to avoid skin contact. Follow good industrial hygiene practices.

Eyes: Use chemical safety glasses with side shields, safety goggles and/or a full face shield where splashing is possible.

Protective Clothing Type: Impervious

Other: None

Exposure Limit Data : See Section II

Chemical Name: NIOSH Level Immediately Dangerous to Life or Health:

No data on product.

## IX. Physical Data

Physical State: Liquid

Color: Colorless

Odor: Nil

Molecular Weight: Not applicable

pH (@ 25 Deg. C): Not determined

Octanol/Water Coeff: No data

Solubility in Water: 100%

Bulk Density: Not applicable

Specific Gravity: Variable

Vapor Density (Air = 1): Not determined

Vapor Pressure: (@ 20 Deg. C): Not determined

Evaporation Rate (Butyl acetate =1 NA

Volatiles % by vol.: Not applicable

Boiling Point: Not determined

Freezing Point: Not determined

## X. Stability and Reactivity

### Stability and Reactivity Summary:

Stable under normal conditions.

### Reactive Properties:

Sensitivity to mechanical shock: None

Hazardous Polymerization: Will not occur

Conditions to Avoid: High temperatures, exposure to heat.

Chemical Incompatibility: See Sec. III.

Incompatible materials: May speed corrosion of some metals and alloys.

Hazardous Decomposition Products: Hydrochloric acid may be formed if the product burns.

Decomposition Temperature: No data

Product May Be Unstable At Temperatures Above: No data

## XI. Toxicological Information

Component Animal Toxicology:	Potassium Chloride	Isopropanol
Oral LD50 mg/kg value:	383 (mus); 2600 (rat); 2500 (gpg)	3600 (mus), 5045 (rat) 6410 (rbt) 4797 (dog)
Dermal LD50 mg/kg value:	No data.	12800 (rbt)
Inhalation LC50 ppm value:	No data.	16000/8hr (rat)
Skin Irritation:		

This material is expected to be non to slightly irritating.

Eye Irritation:

This material is expected to be moderately irritating.

Reproductive and Developmental Toxicity:

Has been found in animal studies.

Component Data:

All data refer to potassium chloride.

Mutagenicity: Has been found in animal studies.

Carcinogenicity: No rating.

## XII. Ecological Information

**Ecological Toxicity Values:**

No relevant data found.

Environmental fate: No potential for food chain concentration.

Environmental Toxicity: No data.

## XIII. Disposal Considerations

CARE MUST BE TAKEN TO PREVENT ENVIRONMENTAL CONTAMINATION FROM THE USE OF THIS MATERIAL  
THE USER OF THIS MATERIAL HAS THE RESPONSIBILITY TO DISPOSE OF UNUSED MATERIAL, RESIDUES  
AND CONTAINERS IN COMPLIANCE WITH ALL RELEVANT LOCAL, STATE AND FEDERAL LAWS

Waste Disposal Summary:

Product as supplied does not qualify as a hazardous waste.

Potential US EPA Waste Codes:

None

Disposal Methods:

Dispose of in accordance with local, state and federal regulations.

Components subject to land ban restrictions:

No components subject to land ban restrictions.

## XIV. Transportation Information

Proper Shipping Name, Hazard Class, UN/NA Number Packing Group, Emergency Response Guide Number	
US Domestic DOT:	Not regulated
Labels required per 49 CFR 172.101:	Not applicable
Size for "Limited quantity" per 49 CFR 173.150-.155:	Not applicable
Reportable Quantity ("RQ") per 49 CFR 172.101:	Not applicable
Passenger aircraft/ rail:	Not applicable
Cargo aircraft only:	Not applicable
Vessel stowage:	Not applicable
Other (%176.84):	Not applicable

## XV. Regulatory Information

UNITED STATES:

TOSCA: Toxic Substances Control Act:

All ingredients listed

SARA: Superfund Amendments and Reauthorization Act, Title III, Sec. 313:

NA

Hazard Categories Sections 311/312 (40 CFR 370.2):

Health:

Acute: None

Chronic: None

Emergency Planning & Community Right to Know (40 CFR 355, App. A):

Sec. 302: Extremely Hazardous Substance - Threshold Planning Quantity (TPQ): Not listed

Sec. 304: EHS RQ: Not listed

CERCLA (40 CFR 355, App. A) Reportable Quantity: Not listed

RCRA Waste (P and U Lists): Not listed

OSHA 40 CFR 1910.1000:

Table Z-1: PEL: Not listed

Skin: Not listed

Table Z-1-A: TWA: Not listed

STEL: Not listed

Ceiling: Not listed

Skin: Not listed

State Right-to-Know Regulations Status of Ingredients

California Prop. 65: Not listed

Pennsylvania: Not listed

New Jersey: Not listed

Massachusetts: Not listed

## **XVI. Additional Information**

MSDS REVISION STATUS:

THIS MATERIAL SAFETY DATA SHEET (MSDS) HAS BEEN PREPARED IN COMPLIANCE WITH THE FEDERAL OSHA HAZARD COMMUNICATION STANDARD, 29 CFR 1910.1200. THE INFORMATION IN THIS MSDS SHOULD BE PROVIDED TO ALL WHO WILL USE, HANDLE, STORE, TRANSPORT, OR OTHERWISE BE EXPOSED TO THIS PRODUCT. WE BELIEVE THIS INFORMATION TO BE RELIABLE AND UP TO DATE AS OF ITS PUBLICATION DATE, BUT MAKE NO WARRANTY THAT IT IS. IF THIS MSDS IS MORE THAN THREE YEARS OLD YOU SHOULD CONTACT THE SUPPLIER TO MAKE CERTAIN THAT THE INFORMATION IS CURRENT.

MSDS data source: Alfa-Aesar 4/16/203