

LTS RESEARCH LABORATORIES, INC.  
MATERIAL SAFETY DATA SHEET  
POTASSIUM OXIDE

GENERAL

MANUFACTURER/SUPPLIER: LTS RESEARCH LABORATORIES, INC.

COMPANY'S STREET: 37 RAMLAND ROAD  
COMPANY'S CITY: ORANGEBURG  
COMPANY'S STATE: NEW YORK  
COMPANY'S ZIP CODE: 10962  
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COMPANY'S EMERGENCY TEL. #: 800-424-9300 (LOCAL)  
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COMPANY'S TEL #: 845-494-2940  
DATE MSDS PREPARED: 12/15/10  
DATE MSDS REVISED: 11/05/12

1. PRODUCT IDENTIFICATION

PRODUCT NAME: POTASSIUM OXIDE  
FORMULA: KO<sub>2</sub>  
CAS #: 12030-88-5

2. PHYSICAL AND CHEMICAL CHARACTERISTICS

BOILING POINT: DECOMPOSES  
MELTING POINT: 400°C  
SPECIFIC GRAVITY (H<sub>2</sub>O=1): 2.14  
VAPOR DENSITY: N/A  
VAPOR PRESSURE: N/A  
EVAPORATION RATE: N/A  
% VOLATILES: N/A  
SOLUBILITY IN H<sub>2</sub>O: REACTS VIOLENTLY  
APPEARANCE AND ODOR: WHITE TO YELLOW PIECES, POWDER, TARGET.  
ODORLESS

3. HAZARD IDENTIFICATION

HAZARD DESCRIPTION: C CORROSIVE  
O OXIDIZING  
RISK PHRASES: 8 CONTACT WITH COMBUSTIBLE MATERIAL MAY CAUSE  
FIRE  
14 REACTS VIOLENTLY WITH WATER  
34 CAUSES BURNS  
HMIS RATINGS:  
HEALTH: 3  
FLAMMABILITY: 0  
REACTIVITY: 2

4. FIRE FIGHTING MEASURES

FLASH POINT: N/A  
AUTOIGNITION TEMPERATURE: N/A  
FLAMMABLE LIMITS:  
UPPER: N/A  
LOWER: N/A  
EXTINGUISHING MEDIA: WATER SPRAY  
SPECIAL HAZARDS: THIS SUBSTANCE IS AN OXIDIZER AND ITS HEAT OF  
REACTION WITH REDUCING AGENTS OR COMBUSTIBLES  
MAY CAUSE IGNITION.

## 5. HEALTH HAZARD INFORMATION

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### ACUTE EFFECTS:

SKIN:

CORROSIVE EFFECT ON SKIN AND MUCOUS MEMBRANES  
STRONG CORROSIVE EFFECT

EYE:

### CHRONIC EFFECTS:

CORROSIVE MATERIALS ARE ACUTELY DESTRUCTIVE TO THE RESPIRATORY TRACT, EYES, SKIN, AND DIGESTIVE TRACT. EYE CONTACT MAY RESULT IN PERMANENT DAMAGE AND COMPLETE VISION LOSS. INHALATION MAY RESULT IN RESPIRATORY EFFECTS SUCH AS INFLAMMATION, EDEMA, AND CHEMICAL PNEUMONITIS. MAY CAUSE COUGHIN, WHEEZING, LARYNGITIS, SHORTNESS OF BREATH, HEADACHE, NAUSEA AND VOMITING. INGESTION MAY CAUSE DAMAGE TO THE MOUTH, THROAT, AND ESOPHAGUS. MAY CAUSE SKIN BURNS OR IRRITATION DEPENDING ON THE SEVERITY OF THE EXPOSURE. SWALLOWING WILL LEAD TO A STRONG CORROSIVE EFFECT ON THE MOUTH AND THROAT AND TO THE DANGER OF PERFORATION OF THE ESOPHAGUS AND STOMACH.

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## 6. STABILITY

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### STABILITY:

STABLE

### CONDITIONS TO AVOID:

NONE

### MATERIAL TO AVOID:

REDUCING AGENTS, EASILY OXIDIZED MATERIALS, ORGANIC MATERIALS, WATER/MOISTURE, ALKALI METLAS, ACIDS, METAL POWDER, ALCOHOLS

### DANGEROUS REACTIONS:

REACTS WITH REDUCING AGENTS AND FLAMMABLE SUBSTANCES  
REACTS VIOLENTLY WITH WATER

### HAZARDOUS

### DECOMPOSITION PRODUCTS:

CORROSIVE GASES/VAPORS

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## 7. EMERGENCY AND FIRST AID PROCEDURES:

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### INHALATION:

REMOVE TO FRESH AIR AND PROVIDE ARTIFICIAL RESPIRATION IF NECESSARY. SEEK IMMEDIATE MEDICAL ADVICE.

### INGESTION:

SEEK IMMEDIATE MEDICAL ATTENTION.

### SKIN:

WASH SKIN THOROUGHLY WITH MILD SOAP AND WATER. RINSE THOROUGHLY. SEEK IMMEDIATE MEDICAL ADVICE.

### EYE:

FLUSH EYES WITH PLENTY OF WATER. SEEK IMMEDIATE MEDICAL ADVICE.

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## 8. HANDLING AND STORAGE

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### HANDLING & STORAGE:

STORE IN A COOL, DRY PLACE IN TIGHTLY SEALED CONTAINERS. ENSURE GOOD VENTILATION. NO SPECIAL REQUIREMENTS ARE NECESSARY IF USED CORRECTLY.

### FIRE/EXPLOSION PREVENTION:

SUBSTANCE CAN REDUCE THE IGNITION TEMPERATURE OF FLAMMABLE SUBSTANCES.  
THIS SUBSTANCE IS AN OXIDIZER AND ITS HEAT OF REACTION WITH REDUCING AGENTS OR COMBUSTIBLES MAY CAUSE IGNITION

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## 9. SPILL OR LEAK PROCEDURES

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### STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED:

RESPIRATION:

WEAR NIOSH APPROVED DUST-MIST VAPOR RESPIRATOR.

VENTILATION:	LOCAL EXHAUST TO MAINTAIN CONCENTRATION AT OR BELOW THE PEL, TLV.
PROTECTIVE GLOVES:	RUBBER GLOVES.
EYE PROTECTION:	SAFETY GLASSES
PROTECTIVE CLOTHING:	PROTECTIVE GEAR SUITABLE TO PREVENT CONTAMINATION.
WASTE DISPOSAL METHOD:	DISPOSE OF IN ACCORDANCE WITH LOCAL, STATE AND FEDERAL REGULATIONS.

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#### 10. TOXICITY DATA

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CARCINOGENICITY:	NO CLASSIFICATION DATA ON CARCINOGENIC PROPERTIES OF THIS MATERIAL IS AVAILABLE FROM THE EPA, IARC, NTP, OSHA, OR ACGIH.
ADDITIONAL INFORMATION:	TO THE BEST OF OUR KNOWLEDGE THE ACUTE AND CHRONIC TOXICITY OF THIS SUBSTANCE IS NOT FULLY KNOWN.

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#### 11. TRANSPORTATION DATA

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UN NUMBER:	2466
HAZARD CLASS:	5.1
PACKING GROUP:	II
PROPER SHIPPING NAME:	POTASSIUM OXIDE
ADR//RID CLASS:	5.1
IMDG CLASS:	5.1
ICAO/IATA CLASS:	5.1

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#### 12. OTHER INFORMATION

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THIS SAFETY DATA SHEET SHOULD BE USED IN CONJUNCTION WITH TECHNICAL SHEETS. IT DOES NOT REPLACE THEM. THE INFORMATION GIVEN IS BASED ON OUR KNOWLEDGE OF THIS PRODUCT, AT THE TIME OF PUBLICATION. IT IS GIVEN IN GOOD FAITH. THE ATTENTION OF THE USER IS DRAWN TO THE POSSIBLE RISKS INCURRED BY USING THE PRODUCT FOR ANY OTHER PURPOSE OTHER THAN THAT FOR WHICH IT WAS INTENDED. THIS DOES NOT IN ANY WAY EXCUSE THE USER FROM KNOWING AND APPLYING ALL THE REGULATIONS GOVERNING HIS ACTIVITY. IT IS THE SOLE RESPONSIBILITY OF THE USER TO TAKE ALL PRECAUTIONS REQUIRED IN HANDLING THE PRODUCT. THE AIM OF THE MANDATORY REGULATIONS MENTIONED IS TO HELP THE USER TO FULFILL HIS OBLIGATIONS REGARDING THE USE OF HAZARDOUS PRODUCTS.