

**Safety Data Sheet (SDS)**

OSHA HazCom Standard 29 CFR 1910.1200(g) and GHS Rev 03.

Issue date 03/06/2019

Reviewed on 03/06/2019

**1 Identification**

- **Product Identifier**
- **Trade Name:** DermaPlex+
- **Relevant identified uses of the substance or mixture and uses advised against:**
- **Product Description:** Fertilizer
- **Details of the Supplier of the Safety Data Sheet:**
- **Manufacturer/Supplier:**  
Redox Chemicals LLC  
130 South 100 West  
PO Box 129  
Burley, ID 83318  
Phone: 208-678-2610  
Fax: 208-677-3609
- **Emergency telephone number:** 208-678-2610

**2 Hazard(s) Identification**

- **Classification of the substance or mixture:**



Skin Irrit. 2 H315 Causes skin irritation.

Eye Irrit. 2B H320 Causes eye irritation.

- **Label elements:**
- **GHS label elements**  
The product is classified and labeled according to the Globally Harmonized System (GHS).
- **Hazard pictograms:**



GHS07

- **Signal word:** Warning
- **Hazard-determining components of labeling:**  
Dipotassium Oxide
- **Hazard statements:**  
H315+H320 Causes skin and eye irritation.
- **Precautionary statements:**  
P264 Wash thoroughly after handling.  
P280 Wear protective gloves.  
P302+P352 If on skin: Wash with plenty of water.  
P321 Specific treatment (see supplementary first aid instructions on this Safety Data Sheet).  
P305+P351+P338 If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.  
P332+P313 If skin irritation occurs: Get medical advice/attention.  
P362+P364 Take off contaminated clothing and wash it before reuse.  
P337+P313 If eye irritation persists: Get medical advice/attention.
- **Unknown acute toxicity:**  
This value refers to knowledge of known, established toxicological or ecotoxicological values.  
7 % of the mixture consists of component(s) of unknown toxicity.

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- **Classification system:** NFPA/HMIS Definitions: 0-Least, 1-Slight, 2-Moderate, 3-High, 4-Extreme
- **NFPA ratings (scale 0 - 4)**



- **HMIS-ratings (scale 0 - 4)**

HEALTH	1	Health = *1
FIRE	0	Fire = 0
REACTIVITY	0	Physical Hazard = 0

- **Hazard(s) not otherwise classified (HNOC):** None known

### 3 Composition/Information on Ingredients

- **Chemical characterization: Mixtures**
- **Description:** Mixture of substances listed below with non-hazardous additions.

- **Dangerous Components:**

CAS: 12136-45-7	Dipotassium Oxide ⚠ Water-react. 3, H261; ⚠ Skin Corr. 1A, H314; Eye Dam. 1, H318	2-12%
CAS: 7727-37-9 RTECS: QW 9700000	Nitrogen ⚠ Press. Gas, H280; Simple Asphyxiant	≤2.5%

- **Additional information:**

The exact percentages of the ingredients of this mixture are considered to be proprietary and are withheld in accordance with the provisions of paragraph (i) of §1910.1200 of 29 CFR 1910.1200 Trade Secrets.

### 4 First-Aid Measures

- **Description of first aid measures**
- **After inhalation:** In case of unconsciousness place patient stably in the side position for transportation.
- **After skin contact:**  
Immediately wash with water and soap and rinse thoroughly.  
If skin irritation occurs, consult a doctor.
- **After eye contact:**  
If easy to do so, remove contact lenses if worn.  
If eye irritation occurs, consult a doctor.  
Rinse opened eye for several minutes under running water.
- **After swallowing:** If swallowed and symptoms occur, consult a doctor.
- **Information for doctor**
- **Most important symptoms and effects, both acute and delayed:** No further relevant information available.
- **Indication of any immediate medical attention and special treatment needed:**  
No further relevant information available.

### 5 Fire-Fighting Measures

- **Extinguishing media**
- **Suitable extinguishing agents:** Use fire fighting measures that suit the environment.
- **For safety reasons unsuitable extinguishing agents:** No further relevant information.
- **Special hazards arising from the substance or mixture:** No further relevant information available.

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- **Advice for firefighters**

- **Special protective equipment for firefighters:**

As in any fire, wear self-contained breathing apparatus pressure-demand (NIOSH approved or equivalent) and full protective gear to prevent contact with skin and eyes.

### 6 Accidental Release Measures

- **Personal precautions, protective equipment and emergency procedures:** Not required.

- **Environmental precautions:** Do not allow to enter sewers/surface or ground water.

- **Methods and material for containment and cleaning up:**

Absorb with liquid-binding material (i.e. sand, diatomite, acid binders, universal binders, sawdust).

Ensure adequate ventilation.

Dispose of the collected material according to regulations.

- **Reference to other sections:**

See Section 7 for information on safe handling.

See Section 8 for information on personal protection equipment.

See Section 13 for disposal information.

- **Protective Action Criteria for Chemicals**

- **PAC-1:**

12136-45-7	Dipotassium Oxide	0.18 mg/m <sup>3</sup>
7727-37-9	Nitrogen	7.96E+05 ppm
7440-50-8	Copper	3 mg/m <sup>3</sup>
7439-89-6	Iron	3.2 mg/m <sup>3</sup>
7440-23-5	Sodium	13 mg/m <sup>3</sup>
7439-96-5	Manganese	3 mg/m <sup>3</sup>
7439-95-4	Magnesium	18 mg/m <sup>3</sup>
1314-56-3	Phosphorus Pentoxide	1 mg/m <sup>3</sup>

- **PAC-2:**

12136-45-7	Dipotassium Oxide	2 mg/m <sup>3</sup>
7727-37-9	Nitrogen	8.32E+05 ppm
7440-50-8	Copper	33 mg/m <sup>3</sup>
7439-89-6	Iron	35 mg/m <sup>3</sup>
7440-23-5	Sodium	140 mg/m <sup>3</sup>
7439-96-5	Manganese	5 mg/m <sup>3</sup>
7439-95-4	Magnesium	200 mg/m <sup>3</sup>
1314-56-3	Phosphorus Pentoxide	10 mg/m <sup>3</sup>

- **PAC-3:**

12136-45-7	Dipotassium Oxide	54 mg/m <sup>3</sup>
7727-37-9	Nitrogen	8.69E+05 ppm
7440-50-8	Copper	200 mg/m <sup>3</sup>
7439-89-6	Iron	150 mg/m <sup>3</sup>
7440-23-5	Sodium	870 mg/m <sup>3</sup>
7439-96-5	Manganese	1,800 mg/m <sup>3</sup>
7439-95-4	Magnesium	1,200 mg/m <sup>3</sup>
1314-56-3	Phosphorus Pentoxide	50 mg/m <sup>3</sup>

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### 7 Handling and Storage

- **Handling**
- **Precautions for safe handling:**  
Ensure good ventilation/exhaustion at the workplace.  
Prevent formation of aerosols.
- **Information about protection against explosions and fires:** No special measures required.
- **Conditions for safe storage, including any incompatibilities**
- **Storage**
- **Requirements to be met by storerooms and receptacles:** No special requirements.
- **Information about storage in one common storage facility:** Not required.
- **Further information about storage conditions:** Keep receptacle tightly sealed.
- **Specific end use(s):** No further relevant information available.

### 8 Exposure Controls/Personal Protection

- **Additional information about design of technical systems:** No further data; see section 7.
- **Control parameters:**
- **Components with occupational exposure limits:**  
The following constituents are the only constituents of the product which have a PEL, TLV or other recommended exposure limit.  
At this time, the remaining constituents have no known exposure limits.

<b>7727-37-9 Nitrogen</b>	
TLV	withdrawn TLV, see App. F; simple asphyxiant
<b>7440-50-8 Copper</b>	
PEL	Long-term value: 1* 0.1** mg/m <sup>3</sup> as Cu *dusts and mists **fume
REL	Long-term value: 1* 0.1** mg/m <sup>3</sup> as Cu *dusts and mists **fume
TLV	Long-term value: 1* 0.2** mg/m <sup>3</sup> *dusts and mists; **fume; as Cu

- **Additional information:** The lists that were valid during the creation of this SDS were used as basis.
- **Exposure controls:**
- **Personal protective equipment**
- **General protective and hygienic measures:**  
The usual precautionary measures for handling chemicals should be followed.  
Keep away from foodstuffs, beverages and feed.  
Immediately remove all soiled and contaminated clothing and wash before reuse.  
Wash hands before breaks and at the end of work.  
Avoid contact with the eyes and skin.
- **Breathing equipment:** Not required.
- **Protection of hands:**



Protective gloves

- **Material of gloves:**  
The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material cannot be calculated in advance and has therefore to be checked prior to the

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application.

· **Penetration time of glove material:**

The exact break-through time has to be determined and observed by the manufacturer of the protective gloves.

· **Eye protection:**

Tightly sealed goggles

· **Limitation and supervision of exposure into the environment:** None**9 Physical and Chemical Properties**· **Information on basic physical and chemical properties**· **General Information**· **Appearance:****Form:**

Liquid

**Color:**

Light grey

· **Odor:**

Characteristic

· **Odor threshold:**

Not determined.

· **pH-value:**

Not applicable.

· **Change in condition****Melting point/Melting range:**

Not determined.

**Boiling point/Boiling range:**

≥2,550 °C (≥4,622 °F)

· **Flash point:**

None

· **Flammability (solid, gaseous):**

Not applicable.

· **Ignition temperature:**

≥700 °C (≥1,292 °F)

· **Decomposition temperature:**

Not determined.

· **Auto igniting:**

Product is not self-igniting.

· **Danger of explosion:**

Product does not present an explosion hazard.

· **Explosion limits:****Lower:**

Not determined.

**Upper:**

Not determined.

· **Vapor pressure:**

Not determined.

· **Density @ 20 °C (68 °F):**2.5541 g/cm<sup>3</sup> (21.314 lbs/gal)· **Relative density:**

Not determined.

· **Vapor density:**

Not determined.

· **Evaporation rate:**

Not determined.

· **Solubility in / Miscibility with:****Water:**

Miscible

· **Partition coefficient (n-octanol/water):** Not determined.· **Viscosity:****Dynamic:**

Not determined.

**Kinematic:**

Not determined.

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- **Solvent content:**
  - Water:** 85.0 %
  - VOC content:** 0.00 %
- **Solids content:** 11.3 %
- **Other information:** No further relevant information available.

### 10 Stability and Reactivity

- **Reactivity:** No further relevant information available.
- **Chemical stability:** Stable under normal conditions.
- **Thermal decomposition / conditions to be avoided:** No decomposition if used according to specifications.
- **Possibility of hazardous reactions:** No dangerous reactions known.
- **Conditions to avoid:** No further relevant information available.
- **Incompatible materials:** No further relevant information available.
- **Hazardous decomposition products:** No dangerous decomposition products known.

### 11 Toxicological Information

- **Information on toxicological effects:**
- **Acute toxicity:**

<b>LD/LC50 values that are relevant for classification:</b>		
<b>7439-89-6 Iron</b>		
Oral	LD50	7,500 mg/kg (Rat)

- **Primary irritant effect:**
- **On the skin:** Irritant to skin and mucous membranes.
- **On the eye:** Irritating effect.
- **Additional toxicological information:**  
The product shows the following dangers according to internally approved calculation methods for preparations:  
Irritant

- **Carcinogenic categories:**

<b>IARC (International Agency for Research on Cancer):</b>
None of the ingredients are listed.

- **NTP (National Toxicology Program):**

None of the ingredients are listed.
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- **OSHA-Ca (Occupational Safety & Health Administration):**

None of the ingredients are listed.
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### 12 Ecological Information

- **Toxicity:**

<b>Aquatic toxicity:</b>
<b>7440-50-8 Copper</b>
EC50   0.04-0.05 mg/l (Water flea)

- **Persistence and degradability:** No further relevant information available.
- **Behavior in environmental systems:**
- **Bioaccumulative potential:** No further relevant information available.
- **Mobility in soil:** No further relevant information available.

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· **Additional ecological information:**

· **General notes:**

Do not allow undiluted product or product that has not been neutralized to reach ground water, water course or sewage system.

· **Results of PBT and vPvB assessment:**

· **PBT:** Not applicable.

· **vPvB:** Not applicable.

· **Other adverse effects:** No further relevant information available.

### 13 Disposal Considerations

· **Waste treatment methods**

· **Recommendation:**

Observe all federal, state and local environmental regulations when disposing of this material.

· **Uncleaned packaging**

· **Recommendation:** Disposal must be made according to official regulations.

### 14 Transport Information

· **UN-Number:**

· **DOT, ADR/ADN, ADN, IMDG, IATA** Non-Regulated Material

· **UN proper shipping name:**

· **DOT, ADR/ADN, ADN, IMDG, IATA** Non-Regulated Material

· **Transport hazard class(es):**

· **DOT, ADR/ADN, ADN, IMDG, IATA**

· **Class:** Non-Regulated Material

· **Packing group:**

· **DOT, ADR/ADN, IMDG, IATA** Non-Regulated Material

· **Environmental hazards:** Not applicable.

· **Special precautions for user:** Not applicable.

· **Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code:** Not applicable.

· **UN "Model Regulation":** Non-Regulated Material

### 15 Regulatory Information

· **Safety, health and environmental regulations/legislation specific for the substance or mixture:**

· **SARA (Superfund Amendments and Reauthorization):**

· **Section 355 (extremely hazardous substances):**

1314-56-3	Phosphorus Pentoxide
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· **Section 313 (Specific toxic chemical listings):**

7440-50-8	Copper
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7439-96-5	Manganese
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7440-66-2	Zinc
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· **TSCA (Toxic Substances Control Act):**

12136-45-7	Dipotassium Oxide
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7727-37-9	Nitrogen
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7440-50-8	Copper
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7439-89-6	Iron
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7440-23-5	Sodium
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7440-70-2	Calcium	
7439-96-5	Manganese	
7439-95-4	Magnesium	
1314-56-3	Phosphorus Pentoxide	
7732-18-5	Water, distilled water, deionized water	
<b>· Hazardous Air Pollutants</b>		
7439-96-5	Manganese	
<b>· California Proposition 65:</b>		
<b>· Chemicals known to cause cancer:</b>		
None of the ingredients are listed.		
<b>· Chemicals known to cause reproductive toxicity for females:</b>		
None of the ingredients are listed.		
<b>· Chemicals known to cause reproductive toxicity for males:</b>		
None of the ingredients are listed.		
<b>· Chemicals known to cause developmental toxicity:</b>		
None of the ingredients are listed.		
<b>· New Jersey Right-to-Know List:</b>		
12136-45-7	Dipotassium Oxide	
7727-37-9	Nitrogen	
7440-50-8	Copper	
7440-23-5	Sodium	
7440-70-2	Calcium	
7439-96-5	Manganese	
7439-95-4	Magnesium	
1314-56-3	Phosphorus Pentoxide	
7440-66-2	Zinc	
<b>· New Jersey Special Hazardous Substance List:</b>		
12136-45-7	Dipotassium Oxide	CO, R2
7440-23-5	Sodium	F3, R2
7440-70-2	Calcium	R2
7439-96-5	Manganese	F3, R1
1314-56-3	Phosphorus Pentoxide	CO, R2
7440-66-2	Zinc	F3, R1
<b>· Pennsylvania Right-to-Know List:</b>		
7727-37-9	Nitrogen	
7440-50-8	Copper	
7440-23-5	Sodium	
7440-70-2	Calcium	
7439-96-5	Manganese	
7439-95-4	Magnesium	
1314-56-3	Phosphorus Pentoxide	
7440-66-2	Zinc	

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· <b>Pennsylvania Special Hazardous Substance List:</b>		
7440-50-8	Copper	E
7440-23-5	Sodium	E
7439-96-5	Manganese	E
1314-56-3	Phosphorus Pentoxide	E
7440-66-2	Zinc	E

· **Carcinogenic categories:**

· <b>EPA (Environmental Protection Agency):</b>		
1319-33-1	Boron	I
7440-50-8	Copper	D
7439-96-5	Manganese	D
7440-66-2	Zinc	D

· **TLV (Threshold Limit Value established by ACGIH):**

None of the ingredients are listed.

· **NIOSH-Ca (National Institute for Occupational Safety and Health):**

None of the ingredients are listed.

· **GHS label elements**

The product is classified and labeled according to the Globally Harmonized System (GHS).

· **Hazard pictograms:**



GHS07

· **Signal word:** Warning

· **Hazard-determining components of labeling:**

Dipotassium Oxide

· **Hazard statements:**

H315+H320 Causes skin and eye irritation.

· **Precautionary statements:**

P264 Wash thoroughly after handling.

P280 Wear protective gloves.

P302+P352 If on skin: Wash with plenty of water.

P321 Specific treatment (see supplementary first aid instructions on this Safety Data Sheet).

P305+P351+P338 If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P332+P313 If skin irritation occurs: Get medical advice/attention.

P362+P364 Take off contaminated clothing and wash it before reuse.

P337+P313 If eye irritation persists: Get medical advice/attention.

· **National regulations:**

None of the ingredients are listed.

· **Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

### 16 Other Information

The information and recommendations in this safety data sheet are, to the best of our knowledge, accurate as of the date of issue. Nothing herein shall be deemed to create warranty, expressed or implied, and shall not establish a legally valid contractual relationship. It is the responsibility of the user to determine applicability of

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this information and the suitability of the material or product for any particular purpose.

· **Date of preparation / last revision:** 03/06/2019 / -

· **Abbreviations and acronyms:**

ADR: The European Agreement concerning the International Carriage of Dangerous Goods by Road  
ADN: The European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways  
IMDG: International Maritime Code for Dangerous Goods  
DOT: US Department of Transportation  
IATA: International Air Transport Association  
ACGIH: American Conference of Governmental Industrial Hygienists  
EINECS: European Inventory of Existing Commercial Chemical Substances  
ELINCS: European List of Notified Chemical Substances  
CAS: Chemical Abstracts Service (division of the American Chemical Society)  
NFPA: National Fire Protection Association (USA)  
HMIS: Hazardous Materials Identification System (USA)  
VOC: Volatile Organic Compounds (USA, EU)  
LC50: Lethal concentration, 50 percent  
LD50: Lethal dose, 50 percent  
PBT: Persistent, Bioaccumulative and Toxic  
vPvB: very Persistent and very Bioaccumulative  
NIOSH: National Institute for Occupational Safety and Health  
OSHA: Occupational Safety & Health Administration  
TLV: Threshold Limit Value  
PEL: Permissible Exposure Limit  
REL: Recommended Exposure Limit  
Press. Gas: Gases under pressure – Dissolved gas  
Water-react. 3: Substances and mixtures which in contact with water emit flammable gases – Category 3  
Skin Corr. 1A: Skin corrosion/irritation – Category 1A  
Skin Irrit. 2: Skin corrosion/irritation – Category 2  
Eye Dam. 1: Serious eye damage/eye irritation – Category 1  
Eye Irrit. 2B: Serious eye damage/eye irritation – Category 2B

· **\* Data compared to the previous version altered.**

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