

## Safety Data Sheet (SDS)

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

Issue date 03/23/2017

Reviewed on 03/23/2017

### 1 Identification

- **Product Identifier**
- **Trade name: V-55**
- **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:**



GHS09 Environment

Aquatic Chronic 2 H411 Toxic to aquatic life with long lasting effects.



GHS07

Skin Irrit. 2 H315 Causes skin irritation.

Eye Irrit. 2B H320 Causes eye irritation.

Aquatic Acute 2 H401 Toxic to aquatic life.

- **Label elements:**

- **GHS label elements**

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

- **Hazard pictograms:**



GHS07 GHS09

- **Signal word:** Warning

- **Hazard statements:**

H315+H320 Causes skin and eye irritation.

H401 Toxic to aquatic life.

H411 Toxic to aquatic life with long lasting effects.

- **Precautionary statements:**

P280 Wear protective gloves.

P273 Avoid release to the environment.

P264 Wash thoroughly after handling.

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

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

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P332+P313	If skin irritation occurs: Get medical advice/attention.
P337+P313	If eye irritation persists: Get medical advice/attention.
P302+P352	IF ON SKIN: Wash with plenty of water.
P391	Collect spillage.
P362+P364	Take off contaminated clothing and wash it before reuse.
P501	Dispose of contents/container in accordance with local/regional/national/international regulations.

· **Unknown acute toxicity:**

This value refers to knowledge of known, established toxicological or ecotoxicological values.

29 % of the mixture consists of component(s) of unknown toxicity.

· **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	Reactivity = 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:**

7440-66-2	Zinc ⚠ Aquatic Acute 1, H400; Aquatic Chronic 1, H410; ⚠ Skin Irrit. 2, H315; Eye Irrit. 2B, H320; Combustible Dust	2-12%
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· **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 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.

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### 5 Fire-Fighting Measures

- **Extinguishing media:**
- **Suitable extinguishing agents:**  
CO<sub>2</sub>, extinguishing powder or water spray. Fight larger fires with water spray or alcohol resistant foam.
- **Special hazards arising from the substance or mixture:** No further relevant information available.
- **Advice for firefighters:**
- **Protective equipment:**  
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:**  
Inform respective authorities in case of seepage into water course or sewage system.  
Do not allow to enter sewers/surface or ground water.
- **Methods and material for containment and cleaning up:**  
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:**

7439-98-7	Molybdenum	30 mg/m3
12125-02-9	Ammonium Chloride	20 mg/m3

· **PAC-2:**

7439-98-7	Molybdenum	330 mg/m3
12125-02-9	Ammonium Chloride	54 mg/m3

· **PAC-3:**

7439-98-7	Molybdenum	2,000 mg/m3
12125-02-9	Ammonium Chloride	330 mg/m3

### 7 Handling and Storage

- **Handling**
- **Precautions for safe handling:** No special precautions are necessary if used correctly.
- **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.

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- **Control parameters:**
- **Components with occupational exposure limits:**  
The product does not contain any relevant quantities of materials with critical values that have to be monitored at the workplace.
- **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:**  
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 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

\* **9 Physical and Chemical Properties**

- **Information on basic physical and chemical properties**
- **General Information**
- **Appearance:**

<b>Form:</b>	Granulate
<b>Color:</b>	Black
- **Odor:** Characteristic
- **Odor threshold:** Not determined.
- **pH-value:** Not applicable.
- **Change in condition**

<b>Melting point/Melting range:</b>	Not determined.
<b>Boiling point/Boiling range:</b>	100 °C (212 °F)
- **Flash point:** None
- **Flammability (solid, gaseous):** Not determined.
- **Ignition temperature:** Not applicable

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- **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 applicable.
- **Density:**
  - Relative density:** Not determined.
  - Vapor density:** Not applicable.
  - Evaporation rate:** Not applicable.
- **Solubility in / Miscibility with:**
  - Water:** Soluble.
- **Partition coefficient (n-octanol/water):** Not determined.
- **Viscosity:**
  - Dynamic:** Not applicable.
  - Kinematic:** Not applicable.
- **Solvent content:**
  - Organic solvents:** 0.0 %
  - Water:** 7.9 %
- **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:**
- **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:**

<ul style="list-style-type: none"> <li>· <b>IARC (International Agency for Research on Cancer):</b></li> </ul>
<p>None of the ingredients are listed.</p>

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<ul style="list-style-type: none"> <li>· <b>NTP (National Toxicology Program):</b></li> </ul>
None of the ingredients are listed.
<ul style="list-style-type: none"> <li>· <b>OSHA-Ca (Occupational Safety &amp; Health Administration):</b></li> </ul>
None of the ingredients are listed.

### 12 Ecological Information

- **Toxicity:**
- **Aquatic toxicity:**  
Avoid release into the environment. Runoff from fire control or dilution water may cause pollution.
- **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.
- **Ecotoxicological effects:**
- **Remark:** Toxic for fish
- **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.  
Poisonous for fish and plankton in water bodies.  
Toxic for aquatic organisms
- **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:**  
Must not be disposed of together with household garbage. Do not allow product to reach sewage system. Observe all federal, state and local environmental regulations when disposing of this material.
- **Uncleaned packagings**
- **Recommendation:** Disposal must be made according to official regulations.

### 14 Transport Information

- |  |  |
|--|--|
| <ul style="list-style-type: none"> <li>· <b>UN-Number:</b></li> <li>· <b>DOT</b></li> <li>· <b>ADR/ADN, IMDG, IATA</b></li> <li>· <b>UN proper shipping name:</b></li> <li>· <b>DOT</b></li> <li>· <b>ADR/ADN</b></li> <li>· <b>IMDG</b></li> <li>· <b>IATA</b></li> </ul> | <p>Non-Regulated Material<br/>UN3077</p> <p>Non-Regulated Material<br/>UN3077 Environmentally hazardous substances, solid, n.o.s. (Zinc)<br/>ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (Zinc), MARINE POLLUTANT<br/>ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (Zinc)</p> |
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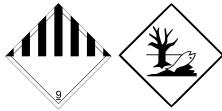
**Trade name: V-55**

· **Transport hazard class(es):**

· **DOT**

· **Class:** Non-Regulated Material

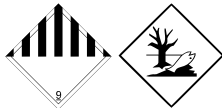
· **ADR/ADN**



· **Class:** 9 (M7) Miscellaneous dangerous substances and articles

· **Label:** 9

· **IMDG, IATA**



· **Class:** 9 Miscellaneous dangerous substances and articles

· **Label:** 9

· **Packing group:**

· **DOT** Non-Regulated Material

· **ADR/ADN, IMDG, IATA** III

· **Environmental hazards:** Product contains environmentally hazardous substances: Zinc

· **Special marking (ADR/ADN):** Symbol (fish and tree)

· **Special marking (IATA):** Symbol (fish and tree)

· **Special precautions for user:** Warning: Miscellaneous dangerous substances and articles

· **Danger code (Kemler):** 90

· **EMS Number:** F-A,S-F

· **Stowage Category** A

· **Stowage Code** SW23 When transported in BK3 bulk container, see 7.6.2.12 and 7.7.3.9.

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

· **Transport/Additional information:**

· **ADR/ADN**

· **Excepted quantities (EQ):** Code: E1  
Maximum net quantity per inner packaging: 30 g  
Maximum net quantity per outer packaging: 1000 g

· **IMDG**

· **Limited quantities (LQ):** 5 kg

· **Excepted quantities (EQ):** Code: E1  
Maximum net quantity per inner packaging: 30 g  
Maximum net quantity per outer packaging: 1000 g

· **UN "Model Regulation":** UN 3077 ENVIRONMENTALLY HAZARDOUS SUBSTANCES, SOLID, N.O.S. (ZINC), 9, III

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### 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):**

None of the ingredients are listed.

· **Section 313 (Specific toxic chemical listings):**

7440-66-2 Zinc

· **TSCA (Toxic Substances Control Act):**

7439-98-7 Molybdenum

12125-02-9 Ammonium Chloride

7732-18-5 Water, distilled water, deionized water

· **California Proposition 65:**

· **Chemicals known to cause cancer:**

None of the ingredients are listed.

· **Chemicals known to cause reproductive toxicity for females:**

None of the ingredients are listed.

· **Chemicals known to cause reproductive toxicity for males:**

None of the ingredients are listed.

· **Chemicals known to cause developmental toxicity:**

None of the ingredients are listed.

· **New Jersey Right-to-Know List:**

7440-66-2 Zinc

7439-98-7 Molybdenum

12125-02-9 Ammonium Chloride

· **New Jersey Special Hazardous Substance List:**

7440-66-2 Zinc

F3, R1

· **Pennsylvania Right-to-Know List:**

7440-66-2 Zinc

7439-98-7 Molybdenum

12125-02-9 Ammonium Chloride

· **Pennsylvania Special Hazardous Substance List:**

7440-66-2 Zinc

E

12125-02-9 Ammonium Chloride

E

· **Carcinogenic categories:**

· **EPA (Environmental Protection Agency):**

1319-33-1 Boron

I

7440-66-2 Zinc

D

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

7439-98-7 Molybdenum

A3

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

None of the ingredients are listed.



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**Trade name: V-55****GHS label elements**

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

**Hazard pictograms:**

GHS07 GHS09

**Signal word:** Warning**Hazard statements:**

- H315+H320 Causes skin and eye irritation.
- H401 Toxic to aquatic life.
- H411 Toxic to aquatic life with long lasting effects.

**Precautionary statements:**

- P280 Wear protective gloves.
- P273 Avoid release to the environment.
- P264 Wash thoroughly after handling.
- P305+P351+P338 If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
- P321 Specific treatment (see supplementary first aid instructions on this Safety Data Sheet).
- P332+P313 If skin irritation occurs: Get medical advice/attention.
- P337+P313 If eye irritation persists: Get medical advice/attention.
- P302+P352 IF ON SKIN: Wash with plenty of water.
- P391 Collect spillage.
- P362+P364 Take off contaminated clothing and wash it before reuse.
- P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

**National regulations:**

The product is subject to be classified according with the latest version of the regulations on hazardous substances.

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

**Date of preparation / last revision:** 03/23/2017 / 1

**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)
- PBT: Persistent, Bioaccumulative and Toxic
- vPvB: very Persistent and very Bioaccumulative
- NIOSH: National Institute for Occupational Safety and Health
- OSHA: Occupational Safety & Health Administration

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TLV: Threshold Limit Value

PEL: Permissible Exposure Limit

REL: Recommended Exposure Limit

Skin Irrit. 2: Skin corrosion/irritation – Category 2

Eye Irrit. 2B: Serious eye damage/eye irritation – Category 2B

Aquatic Acute 1: Hazardous to the aquatic environment - acute aquatic hazard – Category 1

Aquatic Acute 2: Hazardous to the aquatic environment - acute aquatic hazard – Category 2

Aquatic Chronic 1: Hazardous to the aquatic environment - long-term aquatic hazard – Category 1

Aquatic Chronic 2: Hazardous to the aquatic environment - long-term aquatic hazard – Category 2

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

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