

Safety Data Sheet (SDS)

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

Issue date 08/03/2018

Reviewed on 08/03/2018

1 Identification

- **Product Identifier**
- **Trade Name:** *microFUEL*
- **Relevant identified uses of the substance or mixture and uses advised against:**
No further relevant information available.
- **Product Description:** A proprietary blend of macro- and micro- nutrients utilized for in-situ bioremediation.
- **Details of the Supplier of the Safety Data Sheet:**
- **Manufacturer/Supplier:**
Innovative Remedial Solutions, Inc.
409 Kelly Street, Panama City Beach, FL 32413
850-832-5361
info@innovativeremediation.com
- **Emergency telephone number:** 850-832-5361

2 Hazard(s) Identification

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



Flame over circle

Ox. Sol. 3 H272 May intensify fire; oxidizer.



Skin Irrit. 2 H315 Causes skin irritation.

Eye Irrit. 2A H319 Causes serious eye irritation.

STOT SE 3 H335 May cause respiratory irritation.

- **Label elements:**

- **GHS label elements**

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

- **Hazard pictograms:**



GHS03 GHS07

- **Signal word:** Warning

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

Trade Secret

Trade Secret

- **Hazard statements:**

H272 May intensify fire; oxidizer.

H315 Causes skin irritation.

H319 Causes serious eye irritation.

H335 May cause respiratory irritation.

- **Precautionary statements:**

P210 Keep away from heat.

P220 Keep/Store away from clothing/combustible materials.

P221 Take any precaution to avoid mixing with combustibles.

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P261	Avoid breathing dust/fume/gas/mist/vapors/spray.
P264	Wash thoroughly after handling.
P271	Use only outdoors or in a well-ventilated area.
P280	Wear protective gloves/protective clothing/eye protection/face protection.
P302+P352	If on skin: Wash with plenty of water.
P304+P340	IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P305+P351+P338	If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P312	Call a poison center/doctor if you feel unwell.
P321	Specific treatment (see supplementary first aid instructions on this Safety Data Sheet).
P362+P364	Take off contaminated clothing and wash it before reuse.
P332+P313	If skin irritation occurs: Get medical advice/attention.
P337+P313	If eye irritation persists: Get medical advice/attention.
P370+P378	In case of fire: Use for extinction: CO ₂ , powder or water spray.
P403+P233	Store in a well-ventilated place. Keep container tightly closed.
P405	Store locked up.
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.

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

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



The substance possesses oxidizing properties.

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

HEALTH	2	Health = 2
FIRE	3	Fire = 3
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:**

RTECS: BR9050000	Trade Secret ⚠ Ox. Sol. 3, H272; ⚠ Skin Irrit. 2, H315; Eye Irrit. 2A, H319; STOT SE 3, H335	70-90%
RTECS: TB 9375000	Trade Secret ⚠ Skin Irrit. 2, H315; Eye Irrit. 2B, H320	15-35%
RTECS: OM 4500000	Trade Secret ⚠ STOT SE 3, H335	2-12%

- **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.

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Trade secret made in accordance with paragraph (i) of §1910.1200 of 29 CFR 1910.1200, the OSHA Hazard Communication Standard and U.S. Code of Federal Regulations.

4 First-Aid Measures

· **Description of first aid measures**

· **After inhalation:**

Remove to fresh air. If not breathing, give artificial respiration or give oxygen by trained personnel. Get immediate medical attention.

In case of unconsciousness place patient stably in side position for transportation.

· **After skin contact:**

Wash with soap and water.

If skin irritation occurs, consult a doctor.

· **After eye contact:**

Rinse opened eye for at least 15 minutes under running water.

Seek immediate medical advice.

· **After swallowing:**

Never give anything by mouth to an unconscious person.

Rinse mouth with water.

Seek immediate medical advice.

· **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:** CO₂, sand, dry chemical.

· **For safety reasons unsuitable extinguishing agents:** No further relevant information.

· **Special hazards arising from the substance or mixture:** No further relevant information available.

· **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.

· **Additional information:** Cool fire exposed containers with water.

6 Accidental Release Measures

· **Personal precautions, protective equipment and emergency procedures:**

Wear protective equipment. Keep unprotected persons away.

Avoid formation of dust.

Avoid breathing dust.

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

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

Sweep up the material.

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.

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· **Protective Action Criteria for Chemicals**

· PAC-1:	
Trade Secret	6.7 mg/m ³
Trade Secret	20 mg/m ³
Trade Secret	20 mg/m ³
· PAC-2:	
Trade Secret	73 mg/m ³
Trade Secret	210 mg/m ³
Trade Secret	220 mg/m ³
· PAC-3:	
Trade Secret	440 mg/m ³
Trade Secret	1,300 mg/m ³
Trade Secret	1,300 mg/m ³

7 Handling and Storage

· **Handling**

· **Precautions for safe handling:**

Ensure good ventilation/exhaustion at the workplace.

Avoid contact with skin, eyes and clothing

Prevent formation of dust.

Keep away from sources of ignition.

· **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:** Store in a cool, dry place.

· **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 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:** Wash hands before breaks and at the end of work.

· **Breathing equipment:**



NIOSH/OSHA or EN approved respiratory protection is recommended for use in airborne concentrations exceeding exposure limits.

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Trade Name: microFUEL
· Protection of hands:


Protective gloves

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation. Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.

Select glove material based on penetration times, rates of diffusion and degradation.

· 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:


Safety glasses with side shields

· Body protection:


Protective work clothing

9 Physical and Chemical Properties

· Information on basic physical and chemical properties
· General Information
· Appearance:

Form: Granulate

Color: White

· Odour: Odorless

· Odor threshold: Not determined.

· pH-value: 7

· Change in condition

Melting point/Melting range: Not determined.

Boiling point/Boiling range: Not determined.

· Flash point: None

· Flammability (solid, gaseous): Not determined.

· Ignition temperature: Not applicable

· Decomposition temperature: Not determined.

· Auto igniting: Product is not self-igniting.

· Danger of explosion: Product does not present an explosion hazard.

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- **Explosion limits:**
 - Lower:** Not determined.
 - Upper:** Not determined.
- **Vapor pressure:** Not applicable.
- **Density @ 20 °C (68 °F):** 1.7519 g/cm³ (14.6196 lbs/gal)
- **Bulk density:** 828 kg/m³
- **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:**
 - VOC content:** 0.00 %
 - Solids content:** 100.0 %
- **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:** Nitrogen Oxides (NO_x)
- **Possibility of hazardous reactions:** No dangerous reactions known.
- **Conditions to avoid:** No further relevant information available.
- **Incompatible materials:** Reducing agents, Powdered metals, Strong acids
- **Hazardous decomposition products:** No dangerous decomposition products known.

11 Toxicological Information

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

· **LD/LC50 values that are relevant for classification:**

Trade Secret		
Oral	LD50	2,217 mg/kg (Rat)
Trade Secret		
Oral	LD50	>5,000 mg/kg (Rat)
Dermal	LD50	>5,000 mg/kg (Rat)
Trade Secret		
Oral	LD50	>2,000 mg/kg (Rat)
Inhalative	LC50/4 h	>2,000 mg/l (Rabbit)
	LC50/96 hours	2,820 mg/l (Pimephales)

- **Primary irritant effect:**
- **On the skin:** Irritating effect

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- **On the eye:** Irritating effect.
- **Additional toxicological information:**
- **Carcinogenic categories:**

· **IARC (International Agency for Research on Cancer):**

None of the ingredients are listed.

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

None of the ingredients are listed.

· **OSHA-Ca (Occupational Safety & Health Administration):**

None of the ingredients are listed.

12 Ecological Information

· **Toxicity:**

· **Aquatic toxicity:**

Trade Secret

EC50 2,700 mg/l (Green algae)

343.56 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.
- **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.
- **Recommended cleansing agent:** Water, if necessary with cleansing agents.

* 14 Transport Information

- **UN-Number:**
- **DOT, ADR/ADN, IMDG, IATA** UN1479
- **UN proper shipping name:**
- **DOT** Oxidizing solid, n.o.s. mixture
- **ADR/ADN** UN1479 Oxidizing solid, n.o.s. mixture
- **IMDG, IATA** OXIDIZING SOLID, N.O.S. mixture

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Trade Name: microFUEL
· Transport hazard class(es):
· DOT


- **Class:** 5.1 Oxidizing substances
- **Label:** 5.1

· ADR/ADN


- **Class:** 5.1 (O2) Oxidizing substances
- **Label:** 5.1

· IMDG, IATA


- **Class:** 5.1 Oxidizing substances
- **Label:** 5.1
- **Packing group:** III
- **DOT, ADR/ADN, IMDG, IATA** Not applicable.
- **Environmental hazards:** Warning: Oxidizing substances
- **Special precautions for user:** 50
- **Danger code (Kemler):** F-A,S-Q
- **EMS Number:** B
- **Stowage Category** SG38 Stow "separated from" ammonium compounds.
- **Segregation Code** SG49 Stow "separated from" cyanides
- SG60 Stow "separated from" peroxides
- SG61 Stow "separated from" powdered metals

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

· Transport/Additional information:

- **DOT**
- **Quantity limitations:** On passenger aircraft/rail: 25 kg
On cargo aircraft only: 100 kg

· 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

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- **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 1479 OXIDIZING SOLID, N.O.S. MIXTURE, 5.1, III

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):
--

Trade Secret

· TSCA (Toxic Substances Control Act):

Trade Secret

Trade Secret

Trade Secret

· 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:

Trade Secret

· New Jersey Special Hazardous Substance List:

Trade Secret

R3

· Pennsylvania Right-to-Know List:

Trade Secret

· Pennsylvania Special Hazardous Substance List:

Trade Secret

E

· Carcinogenic categories:

· EPA (Environmental Protection Agency):

None of the ingredients are listed.

· 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).
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· **Hazard pictograms:**



GHS03 GHS07

· **Signal word:** Warning

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

Trade Secret

Trade Secret

· **Hazard statements:**

H272 May intensify fire; oxidizer.

H315 Causes skin irritation.

H319 Causes serious eye irritation.

H335 May cause respiratory irritation.

· **Precautionary statements:**

P210 Keep away from heat.

P220 Keep/Store away from clothing/combustible materials.

P221 Take any precaution to avoid mixing with combustibles.

P261 Avoid breathing dust/fume/gas/mist/vapors/spray.

P264 Wash thoroughly after handling.

P271 Use only outdoors or in a well-ventilated area.

P280 Wear protective gloves/protective clothing/eye protection/face protection.

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

P304+P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.

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

P312 Call a poison center/doctor if you feel unwell.

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

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

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

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

P370+P378 In case of fire: Use for extinction: CO₂, powder or water spray.

P403+P233 Store in a well-ventilated place. Keep container tightly closed.

P405 Store locked up.

P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

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

· **Date of preparation / last revision:** 08/03/2018 / 4

· **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

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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
Ox. Sol. 3: Oxidizing solids – Category 3
Skin Irrit. 2: Skin corrosion/irritation – Category 2
Eye Irrit. 2A: Serious eye damage/eye irritation – Category 2A
Eye Irrit. 2B: Serious eye damage/eye irritation – Category 2B
STOT SE 3: Specific target organ toxicity (single exposure) – Category 3

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

SDS created by MSDS Authoring Services www.msdsauthoring.com +1-877-204-9106