

Safety Data Sheet (SDS)

OSHA HazCom Standard 29 CFR 1910.1200(g) revised in 2012 and GHS Rev 03.

Issue date 12/19/2023

Reviewed on 12/19/2023

* 1 Identification

- **Product Identifier**
- **Trade Name:** Terraflow 6-0-5
- **Relevant identified uses of the substance or mixture and uses advised against:**
- **Product Description:** Organic N-P-K fertilizer solution
- **Details of the Supplier of the Safety Data Sheet:**
- **Manufacturer/Supplier:**
Terraflow Organics LLC
14601 Keel St.
Plymouth, MI 48170
P: (844) 934-4378
- **Emergency telephone number:** (800) 424-9300

2 Hazard(s) Identification

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



Corrosion

Corrosive to Metals 1 H290 May be corrosive to metals.
Skin Corrosion 1A H314 Causes severe skin burns and eye damage.
Eye Damage 1 H318 Causes serious eye damage.



Acute Toxicity - Oral 4 H302 Harmful if swallowed.

- **Label elements:**
- **Hazard pictograms:**



- **Signal word:** Danger
- **Hazard statements:**
H290 May be corrosive to metals.
H302 Harmful if swallowed.
H314 Causes severe skin burns and eye damage.
- **Precautionary statements:**
P234 Keep only in original container.
P260 Do not breathe dusts or mists.
P264 Wash thoroughly after handling.
P270 Do not eat, drink or smoke when using this product.
P280 Wear protective gloves/protective clothing/eye protection/face protection.
P301+P312 If swallowed: Call a poison center/doctor if you feel unwell.
P301+P330+P331 If swallowed: Rinse mouth. Do NOT induce vomiting.
P303+P361+P353 If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.

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- 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.
- P310 Immediately call a poison center/doctor.
- P321 Specific treatment (see supplementary first aid instructions on this Safety Data Sheet).
- P363 Wash contaminated clothing before reuse.
- P390 Absorb spillage to prevent material damage.
- P405 Store locked up.
- P406 Store in corrosive resistant container with a resistant inner liner.
- 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.
6 % 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)**



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

* 3 Composition/Information on Ingredients

· **Chemical characterization: Substance**

· **Description:** Mixture of substances listed below with non-hazardous additions.

· **Dangerous Components:**

CAS: 7757-79-1 RTECS: TT 3700000	Potassium Nitrate ⚠ Oxidizing Solids 2, H272	5-6%
CAS: 7783-28-0 RTECS: TB 9375000	Diammonium phosphate ⚠ Skin Irritation 2, H315; Eye Irritation 2B, H320	0.1-0.5%

· **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**

· **General information:** Immediately remove any clothing soiled by the product.

· **After inhalation:** Move to fresh air and keep comfortable, seek medical attention if unwell.

· **After skin contact:**

Immediately wash with water and soap and rinse thoroughly.

If skin irritation occurs, consult a doctor.

Wash with soap and water.

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- **After eye contact:**
Immediately flush with water for 15-20 minutes, remove contact lenses if present and easy to do – continue rinsing. Seek medical attention if irritation persists
- **After swallowing:**
Immediately call POISON CONTROL and seek medical attention. Rinse mouth.
DO NOT INDUCE VOMITING unless directed by a medical professional.
- **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:** Treat symptomatically.

5 Fire-Fighting Measures

- **Extinguishing media**
- **Suitable extinguishing agents:**
Use fire fighting measures that suit the environment.
Water fog. Foam. Dry chemical powder. Carbon dioxide (CO₂).
- **For safety reasons unsuitable extinguishing agents:** No further relevant information.
- **Special hazards arising from the substance or mixture:**
When heated to decomposition, this product will emit toxic oxides and fumes.
- **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:**
Wear protective equipment. Keep unprotected persons away.
Remove ignition and heat sources. Do not use cellulose or expanded polymeric absorbents. Contain material and place in containers for use as intended, or discard according to Federal, State and Local regulations.
- **Environmental precautions:** Dilute with plenty of water.
- **Methods and material for containment and cleaning up:**
Absorb with liquid-binding material (i.e. sand, diatomite, acid binders, universal binders, sawdust).
Use neutralizing agent.
Dispose of contaminated material as waste according to section 13.
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.

· **PAC-1:**

7757-79-1	Potassium Nitrate	9 mg/m ³
7783-28-0	Diammonium phosphate	20 mg/m ³

· **PAC-2:**

7757-79-1	Potassium Nitrate	100 mg/m ³
7783-28-0	Diammonium phosphate	210 mg/m ³

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· PAC-3:		
7757-79-1	Potassium Nitrate	600 mg/m ³
7783-28-0	Diammonium phosphate	1,300 mg/m ³

7 Handling and Storage

- **Handling**
- **Precautions for safe handling:**
 - Ensure good ventilation/exhaustion at the workplace.
 - Prevent formation of aerosols.
 - Wash hands after handling material. Do not eat, drink or smoke while handling the material. Do not get in eyes or on skin, do not breathe vapors/mists. Not intended for human consumption.
- **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, well ventilated area away from incompatible materials.
- **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:**
 - 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:**



NIOSH-approved dust masks or filter face coverings are recommended for use in areas with poor ventilation or where dust removal does not maintain permissible exposure limits.

- **Protection of hands:**



Protective gloves

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.

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· **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

· **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: Black

· **Odor:** Slight ammonia

· **Odor threshold:** Not determined.

· **pH-value @ 20 °C (68 °F):** 12.5

· **Change in condition**

Melting point/Melting range: Not determined.

Boiling point/Boiling range: ≥400 °C (≥752 °F)

· **Flash point:** None

· **Flammability (solid, gaseous):** Not applicable.

· **Auto igniting:** Not applicable

· **Decomposition temperature:** Not determined.

· **Ignition temperature:** 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):** ≥1.6472-≤2.6399 g/cm³ (≥13.7459-≤22.03 lbs/gal)

· **Relative density:** Not determined.

· **Vapor density:** Not determined.

· **Evaporation rate:** Not determined.

· **Solubility in / Miscibility with:**

Water: Fully miscible.

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- **Partition coefficient (n-octanol/water):** Not determined.
- **Viscosity:**
 - Dynamic:** Not determined.
 - Kinematic:** Not determined.
- **Solvent content:**
 - VOC content:** 0.00 %
 - Solids content:** 5.1-6.5 %
- **Other information:** No further relevant information available.

10 Stability and Reactivity

- **Reactivity:** No further relevant information available.
- **Chemical stability:** Product is 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:** Heat
- **Incompatible materials:** Heavy metals and their salts, acrolein, nitromethane, acrylic acid, chlorosulfonic acid, dimethyl sulfate, halogens, propylene oxide, sulfuric acid, volatile acids and strong mineral acids.
- **Hazardous decomposition products:** Toxic oxides

* 11 Toxicological Information

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

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

7757-79-1 Potassium Nitrate

Oral	LD50	3,750 mg/kg (Rat)
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- **Primary irritant effect:**
- **On the skin:** Strong caustic effect on skin and mucous membranes.
- **On the eye:** Strong irritant with the danger of severe eye injury. Corrosive effect. Causes serious eye irritation.
- **Additional toxicological information:** The product shows the following dangers according to internally approved calculation methods for preparations:
Harmful
Corrosive
Swallowing will lead to a corrosive effect on mouth and throat and to the danger of perforation of esophagus and stomach.

- **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.

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

None of the ingredients are listed.

* 12 Ecological Information

· **Toxicity:**

· **Aquatic toxicity:**

7757-79-1 Potassium Nitrate

EC50 226 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:**

Must not reach bodies of water or drainage ditch undiluted or unneutralized.

Rinse off of bigger amounts into drains or the aquatic environment may lead to increased pH-values. A high pH-value harms aquatic organisms. In the dilution of the use-level the pH-value is considerably reduced, so that after the use of the product the aqueous waste, emptied into drains, is only low water-dangerous.

· **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 waste. Do not allow product to reach sewage system. 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**

UN2672

· **UN proper shipping name:**

· **DOT**

Ammonia solution

· **ADR/ADN**

UN2672 AMMONIA SOLUTION

· **IMDG, IATA**

AMMONIA SOLUTION

· **Transport hazard class(es):**

· **DOT**



· **Class:**

8 Corrosive substances

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· **Label:** 8

· **ADR/ADN**



· **Class:** 8 (C5) Corrosive substances
 · **Label:** 8

· **IMDG, IATA**



· **Class:** 8 Corrosive substances
 · **Label:** 8
 · **Packing group:**
 · **DOT, ADR/ADN, IMDG, IATA** Non-Regulated Material
 · **Environmental hazards:** Not applicable.
 · **Special precautions for user:** Warning: Corrosive substances
 · **Hazard identification number (Kemler code):** 80
 · **EMS Number:** F-A,S-B
 · **Segregation groups:** (SGG18) Alkalis
 · **Stowage Category** A
 · **Stowage Code** SW2 Clear of living quarters.
 SW5 If under deck, stow in a mechanically ventilated space.
 SG35 Stow "separated from" SGG1-acids
 · **Segregation Code**
 · **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 ml
 Maximum net quantity per outer packaging: 1000 ml
 UN 2672 AMMONIA SOLUTION, 8

· **UN "Model Regulation":**

*** 15 Regulatory Information**

· **Safety, health and environmental regulations/legislation specific for the substance or mixture:**
 No further relevant information available.

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

· **Section 355 (extremely hazardous substances):**
 None of the ingredients are listed.

· **Section 313 (Specific toxic chemical listings):**
 7757-79-1 Potassium Nitrate

· **TSCA (Toxic Substances Control Act):**
 All components have the value ACTIVE.

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· Hazardous Air Pollutants
None of the ingredients are listed.
· 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:
7757-79-1 Potassium Nitrate
· New Jersey Special Hazardous Substance List:
None of the ingredients are listed.
· Pennsylvania Right-to-Know List:
7757-79-1 Potassium Nitrate
· Pennsylvania Special Hazardous Substance List:
None of the ingredients are listed.
· 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).

· **Hazard pictograms:**



· **Signal word:** Danger

· **Hazard statements:**

H290 May be corrosive to metals.

H302 Harmful if swallowed.

H314 Causes severe skin burns and eye damage.

· **Precautionary statements:**

P234 Keep only in original container.

P260 Do not breathe dusts or mists.

P264 Wash thoroughly after handling.

P270 Do not eat, drink or smoke when using this product.

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P280	Wear protective gloves/protective clothing/eye protection/face protection.
P301+P312	If swallowed: Call a poison center/doctor if you feel unwell.
P301+P330+P331	If swallowed: Rinse mouth. Do NOT induce vomiting.
P303+P361+P353	If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.
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.
P310	Immediately call a poison center/doctor.
P321	Specific treatment (see supplementary first aid instructions on this Safety Data Sheet).
P363	Wash contaminated clothing before reuse.
P390	Absorb spillage to prevent material damage.
P405	Store locked up.
P406	Store in corrosive resistant container with a resistant inner liner.
P501	Dispose of contents/container in accordance with local/regional/national/international regulations.

· National regulations:

The product is not subject to be labelled according with the prevailing 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.

· Contact:

· 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
- 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)
- HMSI: 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
- Oxidizing Solids 2: Oxidizing solids – Category 2
- Corrosive to Metals 1: Corrosive to metals – Category 1
- Acute Toxicity - Oral 4: Acute toxicity – Category 4
- Skin Corrosion 1A: Skin corrosion/irritation – Category 1A
- Skin Irritation 2: Skin corrosion/irritation – Category 2
- Eye Damage 1: Serious eye damage/eye irritation – Category 1
- Eye Irritation 2B: Serious eye damage/eye irritation – Category 2B

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

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