

SAFETY DATA SHEET

This SDS complies with 29 CFR 1910.1200 (Hazard Communication Standard)
IMPORTANT: Read this SDS before handling & disposing of this product. Pass this information on to employees, customers, and users of this product.

1. Identification

1.1. Product identifier

Product Identity	Tornado Plus
Alternate Names	Tornado Plus
Product Code	450-03

1.2. Relevant identified uses of the substance or mixture and uses advised against

Intended use	Laundry Break & Detergent
Application Method	See Label Instructions

1.3. Details of the supplier of the safety data sheet

Company Name	United Formulas
	601 6th St SW, Unit 5
	Great Falls, MT 59404
Emergency	Infotrac: 1 800-535-5053
24 hour Emergency Telephone No.	Emergency: (406) 727-4144

Customer Service: United Formulas

2. Hazard(s) identification

2.1. Classification of the substance or mixture

Acute Tox. 5;H302	Harmful if swallowed. (Not adopted by US OSHA)
Skin Corr. 1A;H314	Causes severe skin burns and eye damage.
Eye Dam. 1;H318	Causes serious eye damage.
Carc. 2;H351	Suspected of causing cancer.

2.2. Label elements

Using the Toxicity Data listed in section 11 and 12 the product is labeled as follows.



Danger

H302 Harmful if swallowed.

H314 Causes severe skin burns and eye damage.

H318 Causes serious eye damage.

H351 Suspected of causing cancer.

[Prevention]:

P201 Obtain special instructions before use.

P202 Do not handle until all safety precautions have been read and understood.

P260 Do not breathe mist / vapors / spray.

P264 Wash thoroughly after handling.

P280 Wear protective gloves / eye protection / face protection.

P281 Use personal protective equipment as required.

[Response]:

P301+330+331 IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.

P303+361+353 IF ON SKIN (or hair): Remove / Take off immediately all contaminated clothing. Rinse skin with water / shower.

P304+312 IF INHALED: Call a POISON CENTER or doctor / physician if you feel unwell.

P305+351+338 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 or doctor / physician.

P312 Call a POISON CENTER or doctor / physician if you feel unwell.

P308+313 IF exposed or concerned: Get medical advice / attention.

P340 Remove person to fresh air and keep at rest in a position comfortable for breathing.

P363 Wash contaminated clothing before reuse.

[Storage]:

P405 Store locked up.

[Disposal]:

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

3. Composition/information on ingredients

This product contains the following substances that present a hazard within the meaning of the relevant State and Federal Hazardous Substances regulations.

Ingredient/Chemical Designations	Weight %	GHS Classification	Notes
Nitrotriacetic acid, trisodium salt monohydrate CAS Number: 0018662-53-8	10 - 25	Acute Tox. 4;H302 Skin Irrit. 2;H315 Carc. 2;H351	[1]
Potassium hydroxide. CAS Number: 0001310-58-3	10 - 25	Acute Tox. 4;H302 Skin Corr. 1A;H314	[1][2]
Surfactant CAS Number: Proprietary	1.0 - 10	Skin Irrit. 2;H315 Eye Irrit. 2;H319	[1]

In accordance with paragraph (i) of §1910.1200, the specific chemical identity and/or exact percentage (concentration) of composition has been withheld as a trade secret.

[1] Substance classified with a health or environmental hazard.

[2] Substance with a workplace exposure limit.

[3] PBT-substance or vPvB-substance.

*The full texts of the phrases are shown in Section 16.

4. First aid measures

4.1. Description of first aid measures

General	In all cases of doubt, or when symptoms persist, seek medical attention. Never give anything by mouth to an unconscious person.
Inhalation	Remove to fresh air, keep patient warm and at rest. If breathing is irregular or stopped, give artificial respiration. If unconscious place in the recovery position and obtain immediate medical attention. Give nothing by mouth.
Eyes	Irrigate copiously with clean water for at least 15 minutes, holding the eyelids apart and seek medical attention.
Skin	Remove contaminated clothing. Wash skin thoroughly with soap and water or use a recognized skin cleanser.
Ingestion	Do NOT induce vomiting. Dilute product by giving large quantities of water or milk. Call your nearest poison control center for further action and seek medical attention immediately.

4.2. Most important symptoms and effects, both acute and delayed

Overview	<p>Routes of Exposure:</p> <p>Inhalation: Dusts and mists may cause severe burning and tissue damage to respiratory tract.</p> <p>Skin Contact: May cause severe irritation or burning of tissues.</p> <p>Eye Contact: Causes severe tissue damage, possible leading to blindness.</p> <p>Ingestion: Causes severe burning and tissue damage to mucous membranes of the mouth, throat, esophagus and stomach and potential complete perforation of tissues.</p> <p>Signs and Symptoms of Exposure: Burning and irritation in all areas of exposure.</p> <p>Medical Conditions Generally Aggravated by Exposure: Allergies and skin sensitivity.</p> <p>Possible cancer hazard. Contains an ingredient which may cause cancer based on animal data (See Section 3 and Section 15 for each ingredient). Risk of cancer depends on duration and level of exposure.</p> <p>See section 2 for further details.</p>
Eyes	Causes serious eye damage.
Skin	Causes severe skin burns and eye damage.
Ingestion	May be harmful if swallowed. (Not adopted by US OSHA)

5. Fire-fighting measures

5.1. Extinguishing media

Water

5.2. Special hazards arising from the substance or mixture

Hazardous decomposition: May produce carbon monoxide upon burning, Potassium oxides.

Do not breathe mist / vapors / spray.

5.3. Advice for fire-fighters

None, but fire fighters should be aware that this product is corrosive and extremely slippery when spilled.

ERG Guide No. ----

6. Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Put on appropriate personal protective equipment (see section 8).

6.2. Environmental precautions

Do not allow spills to enter drains or waterways.

Use good personal hygiene practices. Wash hands before eating, drinking, smoking or using toilet. Promptly remove soiled clothing and wash thoroughly before reuse.

6.3. Methods and material for containment and cleaning up

Mop up with water.

Dispose of in accordance with local, state and federal regulations.

7. Handling and storage

7.1. Precautions for safe handling

See section 2 for further details. - [Prevention]:

7.2. Conditions for safe storage, including any incompatibilities

Handle containers carefully to prevent damage and spillage.

Incompatible materials: Incompatible with strong oxidizers, leather and halogenated compounds. Product will react with 'soft' metals such as aluminum, tin, magnesium, and zinc releasing flammable hydrogen gas.

See section 2 for further details. - [Storage]:

7.3. Specific end use(s)

Laundry Detergent

8. Exposure controls and personal protection

8.1. Control parameters

Exposure

CAS No.	Ingredient	Source	Value
0018662-53-8	Nitrilotriacetic acid, trisodium salt monohydrate	OSHA	No Established Limit
		ACGIH	No Established Limit
		NIOSH	No Established Limit
		Supplier	No Established Limit
0001310-58-3	Potassium hydroxide.	OSHA	No Established Limit
		ACGIH	Ceiling: 2 mg/m ³
		NIOSH	C 2 mg/m ³
		Supplier	No Established Limit
Proprietary	Surfactant	OSHA	No Established Limit
		ACGIH	No Established Limit
		NIOSH	No Established Limit
		Supplier	No Established Limit

Carcinogen Data

CAS No.	Ingredient	Source	Value
0018662-53-8	Nitrilotriacetic acid, trisodium salt monohydrate	OSHA	Select Carcinogen: No
		NTP	Known: No; Suspected: No
		IARC	Group 1: No; Group 2a: No; Group 2b: Yes; Group 3: No; Group 4: No;
0001310-58-3	Potassium hydroxide.	OSHA	Select Carcinogen: No
		NTP	Known: No; Suspected: No
		IARC	Group 1: No; Group 2a: No; Group 2b: No; Group 3: No; Group 4: No;
Proprietary	Surfactant	OSHA	Select Carcinogen: No
		NTP	Known: No; Suspected: No
		IARC	Group 1: No; Group 2a: No; Group 2b: No; Group 3: No; Group 4: No;

8.2. Exposure controls**Respiratory**

If workers are exposed to concentrations above the exposure limit they must use the appropriate, certified respirators.

Eyes

Chemical goggles as recommended by ANSI-Z87.1.

Skin

Chemical resistant clothing such as coveralls/apron and boots should be worn. Wear gloves. Gloves must be resistant to corrosive materials. Nitrile or PVC gloves are suitable. Do not use cotton or leather gloves.

Engineering Controls

Provide adequate ventilation. Where reasonably practicable this should be achieved by the use of local exhaust ventilation and good general extraction. If these are not sufficient to maintain concentrations of particulates and any vapor below occupational exposure limits suitable respiratory protection must be worn.

Other Work Practices

Use good personal hygiene practices. Wash hands before eating, drinking, smoking or using toilet. Promptly remove soiled clothing and wash thoroughly before reuse.

See section 2 for further details. - [Prevention]:

9. Physical and chemical properties

Appearance	Cloudy Blue Liquid
Odor	None
Odor threshold	Not Measured
pH	>12.5
Melting point / freezing point	Not applicable
Initial boiling point and boiling range	215 - 230°F
Flash Point	Non-flammable
Evaporation rate (Ether = 1)	Not available
Flammability (solid, gas)	Not Applicable
Upper/lower flammability or explosive limits	Lower Explosive Limit: Not applicable Upper Explosive Limit: Not applicable
Vapor pressure (Pa)	Not available
Vapor Density	Not available
Specific Gravity	1.22 g/ml
Solubility in Water	Complete
Partition coefficient n-octanol/water (Log Kow)	Not Measured

Auto-ignition temperature	Not applicable
Decomposition temperature	Not available
Viscosity (cSt)	Not available
VOC Content	Not available

9.2. Other information

No other relevant information.

10. Stability and reactivity

10.1. Reactivity

Hazardous Polymerization will not occur.

10.2. Chemical stability

Stable under normal circumstances.

10.3. Possibility of hazardous reactions

Incompatible with strong oxidizers, leather and halogenated compounds. Product will react with 'soft' metals such as aluminum, tin, magnesium, and zinc releasing flammable hydrogen gas.

10.4. Conditions to avoid

Strong Oxidizers see above.

10.5. Incompatible materials

Incompatible with strong oxidizers, leather and halogenated compounds. Product will react with 'soft' metals such as aluminum, tin, magnesium, and zinc releasing flammable hydrogen gas.

10.6. Hazardous decomposition products

May produce carbon monoxide upon burning.

11. Toxicological information

Acute toxicity

Ingredient	Oral LD50, mg/kg	Skin LD50, mg/kg	Inhalation Vapor LC50, mg/L/4hr	Inhalation Dust/Mist LC50, mg/L/4hr	Inhalation Gas LC50, ppm
Nitilotriacetic acid, trisodium salt monohydrate - (18662-53-8)	1,000.00, Rat - Category: 4	No data available	No data available	No data available	No data available
Potassium hydroxide. - (1310-58-3)	365.00, Rat - Category: 4	No data available	No data available	No data available	No data available
Surfactant B - (Proprietary)	No data available	No data available	No data available	No data available	No data available

Note: When no route specific LD50 data is available for an acute toxin, the converted acute toxicity point estimate was used in the calculation of the product's ATE (Acute Toxicity Estimate).

Classification	Category	Hazard Description
Acute toxicity (oral)	5	May be harmful if swallowed. (Not adopted by US OSHA)
Acute toxicity (dermal)	---	Not Applicable
Acute toxicity (inhalation)	---	Not Applicable

Skin corrosion/irritation	1	Causes severe skin burns and eye damage.
Serious eye damage/irritation	1	Causes serious eye damage.
Respiratory sensitization	---	Not Applicable
Skin sensitization	---	Not Applicable
Germ cell mutagenicity	---	Not Applicable
Carcinogenicity	2	Suspected of causing cancer.
Reproductive toxicity	---	Not Applicable
STOT-single exposure	---	Not Applicable
STOT-repeated exposure	---	Not Applicable
Aspiration hazard	---	Not Applicable

12. Ecological information

12.1. Toxicity

No additional information provided for this product. See Section 3 for chemical specific data.

Aquatic Ecotoxicity

Ingredient	96 hr LC50 fish, mg/l	48 hr EC50 crustacea, mg/l	ErC50 algae, mg/l
Nitritotriacetic acid, trisodium salt monohydrate - (18662-53-8)	Not Available	Not Available	Not Available
Potassium hydroxide. - (1310-58-3)	Not Available	Not Available	Not Available
Surfactant B - (Proprietary)	Not Available	Not Available	Not Available

12.2. Persistence and degradability

There is no data available on the preparation itself.

12.3. Bioaccumulative potential

Not Measured

12.4. Mobility in soil

No data available.

12.5. Results of PBT and vPvB assessment

This product contains no PBT/vPvB chemicals.

12.6. Other adverse effects

No data available.

13. Disposal considerations

13.1. Waste treatment methods

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

14. Transport information

	DOT (Domestic Surface Transportation)	IMO / IMDG (Ocean Transportation)	ICAO/IATA
14.1. UN number	UN1814	UN1814	UN1814
14.2. UN proper shipping name	UN1814, Compounds, cleaning liquid, (Potassium Hydroxide), Solution 8, PG II	Compounds, cleaning liquid,	Compounds, cleaning liquid,
14.3. Transport hazard class(es)	DOT Hazard Class: 8	IMDG: Not Applicable Sub Class: Not Applicable	Air Class: Not Applicable
14.4. Packing group	II	II	II
14.5. Environmental hazards			
IMDG	Marine Pollutant: No		
14.6. Special precautions for user	No further information		

15. Regulatory information

Regulatory Overview	The regulatory data in Section 15 is not intended to be all-inclusive, only selected regulations are represented.
Toxic Substance Control Act (TSCA)	All components of this material are either listed or exempt from listing on the TSCA Inventory.
WHMIS Classification	D2B E
US EPA Tier II Hazards	Fire: No Sudden Release of Pressure: No Reactive: No Immediate (Acute): Yes Delayed (Chronic): Yes
EPCRA 311/312 Chemicals and RQs:	Potassium hydroxide. (1,000.00)
EPCRA 302 Extremely Hazardous:	To the best of our knowledge, there are no chemicals at levels which require reporting under this statute.
EPCRA 313 Toxic Chemicals:	To the best of our knowledge, there are no chemicals at levels which require reporting under this statute.
Proposition 65 - Carcinogens (>0.0%):	Nitrilotriacetic acid, trisodium salt monohydrate
Proposition 65 - Developmental Toxins (>0.0%):	To the best of our knowledge, there are no chemicals at levels which require reporting under this statute.
Proposition 65 - Female Repro Toxins (>0.0%):	To the best of our knowledge, there are no chemicals at levels which require reporting under this statute.
Proposition 65 - Male Repro Toxins (>0.0%):	To the best of our knowledge, there are no chemicals at levels which require reporting under this statute.
New Jersey RTK Substances (>1%) :	Potassium hydroxide.

Pennsylvania RTK Substances (>1%) :

Potassium hydroxide.

16. Other information

The information and recommendations contained herein are based upon data believed to be correct. However, no guarantee or warranty of any kind, expressed or implied, is made with respect to the information contained herein. We accept no responsibility and disclaim all liability for any harmful effects which may be caused by exposure to our products. Customers/users of this product must comply with all applicable health and safety laws, regulations, and orders.

The full text of the phrases appearing in section 3 is:

H302 Harmful if swallowed.

H314 Causes severe skin burns and eye damage.

H315 Causes skin irritation.

H319 Causes serious eye irritation.

H351 Suspected of causing cancer.

This is the first version in the GHS SDS format. Listings of changes from previous versions in other formats are not applicable.

The information herein is presented in good faith and believed to be correct as of the date hereof. However, Diamond Products, Inc., makes no representation as to the completeness and accuracy thereof. Users must make their own determination as to the suitability of the product for their purposes prior to use. No representations or warranties, either express or implied, of merchantability, fitness for a particular purpose or of any other nature with respect to the product or the information herein is made hereunder. Diamond Products, Inc., shall in no event be responsible for any damages of whatsoever nature directly or indirectly resulting from the publication or use of or reliance upon information contained herein.

End of Document