

**SECTION 1: Product and company identification**

Product name : Turf King™  
Use of the substance/mixture : Herbicide  
Product code : 0322  
Company : Total Solutions  
P.O. Box 240014  
Milwaukee, WI 53224  
T (414) 354-6417  
Emergency number : Chemtec: (800) 424-9300

**SECTION 2: Hazards identification**

**2.1. Classification of the substance or mixture**

**Classification (GHS-US)**

Flam. Liq. 3 H226  
Eye Irrit. 2A H319  
Muta. 1B H340  
Carc. 1B H350  
Asp. Tox. 1 H304

Full text of H-phrases: see section 16

**2.2. Label elements**

**GHS-US labeling**

Hazard pictograms (GHS-US) :



Signal word (GHS-US) :

Danger

Hazard statements (GHS-US) :

Flammable liquid and vapor  
May be fatal if swallowed and enters airways  
Causes serious eye irritation  
May cause genetic defects  
May cause cancer

Precautionary statements (GHS-US) :

Obtain special instructions before use  
Do not handle until all safety precautions have been read and understood  
Keep away from heat, hot surfaces, open flames, sparks. - No smoking  
Keep container tightly closed  
Ground/bond container and receiving equipment  
Use explosion-proof electrical, lighting, ventilating equipment  
Use only non-sparking tools  
Take precautionary measures against static discharge  
Wash thoroughly after handling  
Wear eye protection, protective clothing, protective gloves  
If swallowed: Immediately call a doctor, a POISON CENTER  
If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower  
If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing  
If exposed or concerned: Get medical advice/attention  
Do NOT induce vomiting  
If eye irritation persists: Get medical advice/attention  
In case of fire: Use ABC-powder, alcohol resistant foam, carbon dioxide (CO2) to extinguish  
Store in a well-ventilated place. Keep cool  
Store locked up  
Dispose of contents/container to hazardous or special waste collection point, in accordance with local, regional, national and/or international regulation

**2.3. Other hazards**

No additional information available

**2.4. Unknown acute toxicity (GHS US)**

Not applicable

### SECTION 3: Composition/information on ingredients

#### 3.1. Substance

Not applicable

Full text of H-phrases: see section 16

#### 3.2. Mixture

Name	Product identifier	%	Classification (GHS-US)
Fuel oil, No 4, Gasoil - unspecified, [A distillate oil having a minimum viscosity of 45 SUS at 37,7 °C (100 °F) to a maximum of 125 SUS at 37,7 °C (100 °F).]	(CAS No) 68476-31-3	60 - 100	Asp. Tox. 1, H304
SOLVESSO 100	(CAS No) 64742-95-6	10 - 30	Flam. Liq. 3, H226 Muta. 1B, H340 Carc. 1B, H350 STOT SE 3, H336 STOT SE 3, H335 Asp. Tox. 1, H304
Polyethylene glycol octylphenyl ether	(CAS No) 9036-19-5	3.0 - 7.0	Skin Irrit. 2, H315 Eye Irrit. 2A, H319
Prometon	(CAS No) 1610-18-0	3.0 - 7.0	Acute Tox. 4 (Oral), H302 Acute Tox. 4 (Inhalation), H332 Skin Irrit. 2, H315 Eye Irrit. 2A, H319 STOT SE 3, H335
butan-1-ol, n-butanol	(CAS No) 71-36-3	1.0 - 5.0	Flam. Liq. 3, H226 Acute Tox. 4 (Oral), H302 Skin Irrit. 2, H315 Eye Dam. 1, H318 STOT SE 3, H335 STOT SE 3, H336
2-phenoxyethanol	(CAS No) 122-99-6	0.5 - 1.5	Acute Tox. 4 (Oral), H302
naphthalene	(CAS No) 91-20-3	0.1 - 0.3	Flam. Liq. 4, H227 Acute Tox. 4 (Oral), H302 Carc. 1B, H350 Aquatic Acute 1, H400

### SECTION 4: First aid measures

#### 4.1. Description of first aid measures

- First-aid measures general : If you feel unwell, seek medical advice (show the label where possible). IF exposed or concerned: Get medical advice/attention.
- First-aid measures after inhalation : If breathing is difficult, remove victim to fresh air and keep at rest in a position comfortable for breathing. Call a POISON CENTER or doctor/physician if you feel unwell.
- First-aid measures after skin contact : Take off immediately all contaminated clothing and wash it before reuse. Rinse skin with water/shower. If skin irritation or rash occurs: Get medical advice/attention.
- First-aid measures after eye contact : Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention.
- First-aid measures after ingestion : Immediately call a poison center or doctor/physician. Do NOT induce vomiting.

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

- Symptoms/injuries : If you feel unwell, seek medical advice. May cause damage to organs through prolonged or repeated exposure. May cause genetic defects (through prolonged or repeated exposure). May cause cancer.
- Symptoms/injuries after inhalation : Harmful if inhaled. EXPOSURE TO HIGH CONCENTRATIONS: Central nervous system depression. Irritation of the respiratory tract. Headache. May cause drowsiness or dizziness.
- Symptoms/injuries after skin contact : Causes skin irritation.
- Symptoms/injuries after eye contact : Causes serious eye irritation.
- Symptoms/injuries after ingestion : May be fatal if swallowed and enters airways.

#### 4.3. Indication of any immediate medical attention and special treatment needed

No additional information available

### SECTION 5: Firefighting measures

#### 5.1. Extinguishing media

- Suitable extinguishing media : Dry chemical powder. Carbon dioxide. Alcohol-resistant foam.

#### 5.2. Special hazards arising from the substance or mixture

- Reactivity : On burning: release of toxic and corrosive gases/vapours (nitrous vapours, sulphur oxides, carbon monoxide - carbon dioxide). If the product is involved in a fire, it can release toxic chlorine gases. Reacts violently with (strong) oxidizers.

**5.3. Advice for firefighters**

- Firefighting instructions : Exercise caution when fighting any chemical fire. In case of fire: Evacuate area. Fight fire remotely due to the risk of explosion. Use water spray or fog for cooling exposed containers. Take account of environmentally hazardous firefighting water.
- Protection during firefighting : Do not enter fire area without proper protective equipment, including respiratory protection.

**SECTION 6: Accidental release measures**

**6.1. Personal precautions, protective equipment and emergency procedures**

- General measures : Remove ignition sources. Use special care to avoid static electric charges.

**6.1.1. For non-emergency personnel**

- Protective equipment : Protective goggles. Gloves. Protective clothing.
- Emergency procedures : Evacuate unnecessary personnel. No naked flames or sparks.

**6.1.2. For emergency responders**

- Protective equipment : Equip cleanup crew with proper protection.
- Emergency procedures : Stop leak if safe to do so. Stop release. Ventilate area.

**6.2. Environmental precautions**

Avoid release to the environment. Prevent entry to sewers and public waters.

**6.3. Methods and material for containment and cleaning up**

- For containment : Contain released substance, pump into suitable containers.
- Methods for cleaning up : This material and its container must be disposed of in a safe way, and as per local legislation. Take up liquid spill into inert absorbent material, e.g.: sand/earth. Clean contaminated surfaces with a soap solution.

**6.4. Reference to other sections**

No additional information available

**SECTION 7: Handling and storage**

**7.1. Precautions for safe handling**

- Precautions for safe handling : Comply with the legal requirements. Do not handle until all safety precautions have been read and understood. Do not breathe vapors. Use personal protective equipment as required. Do not eat, drink or smoke when using this product. Do not get in eyes, on skin, or on clothing. Handle and open the container with care. Keep away from sources of ignition - No smoking. Take precautions against electrostatic charges. Obtain special instructions before use. Remove contaminated clothing immediately.
- Hygiene measures : Wash thoroughly after handling. Wash contaminated clothing before reuse.

**7.2. Conditions for safe storage, including any incompatibilities**

- Technical measures : Comply with applicable regulations. Proper grounding procedures to avoid static electricity should be followed.
- Storage conditions : Keep container tightly closed. Keep only in the original container in a cool, well ventilated place away from: sparks, open flames, excessive heat.
- Incompatible products : Oxidizing agent.
- Incompatible materials : Sources of ignition.
- Storage area : Store away from heat. Store in a cool area. Store in a dry area. Store in a well-ventilated place. Keep locked up.
- Special rules on packaging : Keep only in original container. meet the legal requirements.

**SECTION 8: Exposure controls/personal protection**

**8.1. Control parameters**

No additional information available

naphthalene (91-20-3)		
ACGIH	ACGIH TWA (ppm)	10 ppm
ACGIH	ACGIH STEL (ppm)	10 ppm

**8.2. Exposure controls**

Personal protective equipment : Use appropriate personal protective equipment when risk assessment indicates this is necessary. Gloves. Protective clothing. Protective goggles. Safety glasses.



**SECTION 9: Physical and chemical properties**

**9.1. Information on basic physical and chemical properties**

Physical state	: Liquid
Appearance	: Clear, red colored liquid.
Odor	: Petroleum-like.
Odor threshold	: No data available
pH	: No data available
Melting point	: No data available
Freezing point	: No data available
Boiling point	: No data available
Flash point	: 123 °F
Relative evaporation rate (butyl acetate=1)	: No data available
Flammability (solid, gas)	: No data available
Explosion limits	: No data available
Explosive properties	: No data available
Oxidizing properties	: No data available
Vapor pressure	: No data available
Relative density	: No data available
Relative vapor density at 20 °C	: No data available
Specific gravity / density	: 0.87 g/ml
Solubility	: Emulsifies in water.
Log Pow	: No data available
Log Kow	: No data available
Auto-ignition temperature	: No data available
Decomposition temperature	: No data available
Viscosity	: No data available
Viscosity, kinematic	: < 20 cSt
Viscosity, dynamic	: No data available
VOC content	: > 90 %

**SECTION 10: Stability and reactivity**

**10.1. Reactivity**

On burning: release of toxic and corrosive gases/vapours (nitrous vapours, sulphur oxides, carbon monoxide - carbon dioxide). If the product is involved in a fire, it can release toxic chlorine gases. Reacts violently with (strong) oxidizers.

**10.2. Chemical stability**

Combustible liquid. Stable under normal conditions. Risk of explosion if heated under confinement. Heating may cause a fire or explosion.

**10.3. Possibility of hazardous reactions**

Refer to section 10.1 on Reactivity.

**10.4. Conditions to avoid**

No additional information available

**10.5. Incompatible materials**

Oxidizing agents.

**10.6. Hazardous decomposition products**

Thermal decomposition produces: CO, CO<sub>2</sub>, Oxides of nitrogen and other potentially toxic fumes.

**SECTION 11: Toxicological information**

**11.1. Information on toxicological effects**

Acute toxicity : Not classified

<b>naphthalene (91-20-3)</b>	
LD50 oral rat	> 1100 mg/kg (Rat)
LD50 dermal rat	> 2500 mg/kg (Rat)
LD50 dermal rabbit	> 20000 mg/kg (Rabbit)
ATE CLP (oral)	500.000 mg/kg body weight

<b>SOLVESCO 100 (64742-95-6)</b>	
LD50 oral rat	> 2000 mg/kg (Rat)
LD50 dermal rabbit	> 3160 mg/kg (Rabbit)

<b>2-phenoxyethanol (122-99-6)</b>	
ATE CLP (oral)	500.000 mg/kg body weight

<b>butan-1-ol, n-butanol (71-36-3)</b>	
ATE CLP (oral)	500.000 mg/kg body weight

Skin corrosion/irritation : Not classified  
 Serious eye damage/irritation : Causes serious eye irritation.  
 Respiratory or skin sensitization : Not classified  
 Germ cell mutagenicity : May cause genetic defects.  
 Carcinogenicity : May cause cancer.

<b>naphthalene (91-20-3)</b>	
IARC group	2B - Possibly Carcinogenic to Humans
National Toxicology Program (NTP) Status	3 - Reasonably anticipated to be Human Carcinogen

Reproductive toxicity : Not classified  
 Specific target organ toxicity (single exposure) : Not classified  
 Specific target organ toxicity (repeated exposure) : Not classified  
 Aspiration hazard : May be fatal if swallowed and enters airways.  
 Symptoms/injuries after inhalation : Harmful if inhaled. EXPOSURE TO HIGH CONCENTRATIONS: Central nervous system depression. Irritation of the respiratory tract. Headache. May cause drowsiness or dizziness.  
 Symptoms/injuries after skin contact : Causes skin irritation.  
 Symptoms/injuries after eye contact : Causes serious eye irritation.  
 Symptoms/injuries after ingestion : May be fatal if swallowed and enters airways.

## SECTION 12: Ecological information

### 12.1. Toxicity

<b>naphthalene (91-20-3)</b>	
LC50 fish 1	1.99 mg/l (96 h; Pimephales promelas)
EC50 Daphnia 1	2.16 mg/l (48 h; Daphnia magna)
EC50 other aquatic organisms 1	2.96 mg/l (4 h; Selenastrum capricornutum)
LC50 fish 2	0.11 mg/l (96 h; Oncorhynchus mykiss)
TLM fish 1	150 mg/l (96 h; Lepomis macrochirus; Cool water)
TLM fish 2	1.24 ppm (96 h; Oncorhynchus gorbuscha)
Threshold limit algae 1	0.4 mg/l (72 h; Skeletonema costatum; Growth rate)

<b>SOLVESCO 100 (64742-95-6)</b>	
LC50 fish 1	18 mg/l (Pisces)
EC50 Daphnia 1	21 mg/l (Daphnia sp.)
Threshold limit algae 1	1 - 10,Algae

### 12.2. Persistence and degradability

<b>naphthalene (91-20-3)</b>	
Persistence and degradability	Readily biodegradable in water. Forming sediments in water. Biodegradable in the soil. Adsorbs into the soil. Photolysis in the air.
Biochemical oxygen demand (BOD)	0 g O <sub>2</sub> /g substance
Chemical oxygen demand (COD)	0.22 g O <sub>2</sub> /g substance
ThOD	2.99 g O <sub>2</sub> /g substance

SOLVESSO 100 (64742-95-6)	
Persistence and degradability	Readily biodegradable in water.

**12.3. Bioaccumulative potential**

naphthalene (91-20-3)	
BCF fish 1	23 - 168 (8 weeks; Cyprinus carpio)
BCF fish 2	40 - 300 (672 h; Oncorhynchus mykiss)
BCF other aquatic organisms 1	331 (360 h; Ostreidae)
BCF other aquatic organisms 2	130 (24 h; Chlorella sp.)
Log Pow	3.30 (Experimental value)
Bioaccumulative potential	Low potential for bioaccumulation (BCF < 500).
SOLVESSO 100 (64742-95-6)	
Log Pow	> 3

**SECTION 13: Disposal considerations**

**13.1. Waste treatment methods**

Waste disposal recommendations : Dispose of contents/container to comply with local/regional/national regulations.

**SECTION 14: Transport information**

**Department of Transportation (DOT)**

UN-No.(DOT) : UN1993  
 Proper Shipping Name (DOT) : Flammable liquids, n.o.s. (Aliphatic Hydrocarbons)  
 Transport hazard class(es) (DOT) : 3 - Class 3 - Flammable and combustible liquid 49 CFR 173.120  
 Hazard labels (DOT) : 3 - Flammable liquid



Packing group (DOT) : III - Minor Danger  
 DOT Packaging Non Bulk (49 CFR 173.xxx) : 203  
 DOT Packaging Bulk (49 CFR 173.xxx) : 242  
 DOT Symbols : G - Identifies PSN requiring a technical name  
 DOT Special Provisions (49 CFR 172.102) : B1,B52,IB3,T4,TP1,TP29  
 DOT Packaging Exceptions (49 CFR 173.xxx) : 150  
 DOT Quantity Limitations Passenger aircraft/rail (49 CFR 173.27) : 60 L  
 DOT Quantity Limitations Cargo aircraft only (49 CFR 175.75) : 220 L  
 DOT Vessel Stowage Location : A

**Additional information**

Other information : When transported by ground in non-bulk containers, this product utilizes the exception found under 49 CFR 173.150.

**ADR**

No additional information available

**Transport by sea**

No additional information available

**Air transport**

No additional information available

**SECTION 15: Regulatory information**

All components of this product are listed, or excluded from listing, on the United States Environmental Protection Agency Toxic Substances Control Act (TSCA) inventory.

Chemical(s) subject to the reporting requirements of Section 313 or Title III of the Superfund Amendments and Reauthorization Act (SARA) of 1986 and 40 CFR Part 372.

naphthalene	CAS No 91-20-3	0.1 - 0.3
-------------	----------------	-----------

butan-1-ol, n-butanol	CAS No 71-36-3	1.0 - 5.0
-----------------------	----------------	-----------

naphthalene (91-20-3)	
Listed on SARA Section 313 (Specific toxic chemical listings)	
RQ (Reportable quantity, section 304 of EPA's List of Lists)	100 lb

butan-1-ol, n-butanol (71-36-3)	
Listed on SARA Section 313 (Specific toxic chemical listings)	
RQ (Reportable quantity, section 304 of EPA's List of Lists)	5000 lb

California Proposition 65 - This product contains, or may contain, trace quantities of a substance(s) known to the state of California to cause cancer and/or reproductive toxicity

This chemical is a pesticide product registered by the Environmental Protection Agency and is subject to certain labelling requirements under federal pesticide law. These requirements differ from the classification criteria and hazard information required for safety data sheets, and for workplace labels of non-pesticide chemicals. Following is the hazard information as required on the pesticide label:

CAUTION: Harmful if absorbed through skin. Harmful if swallowed. Causes moderate eye irritation. Avoid contact with skin, eyes, or clothing. Wash thoroughly with soap and water after handling and before eating, drinking, chewing gum, using tobacco, or using the toilet. Remove and wash contaminated clothing before reuse.

### SECTION 16: Other information

Training advice : Normal use of this product shall imply use in accordance with the instructions on the packaging.

Full text of H-phrases:

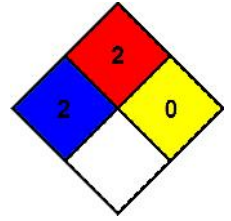
Acute Tox. 4 (Inhalation)	Acute toxicity (inhalation) Category 4
Acute Tox. 4 (Oral)	Acute toxicity (oral) Category 4
Aquatic Acute 1	Hazardous to the aquatic environment - Acute Hazard Category 1
Asp. Tox. 1	Aspiration hazard Category 1
Carc. 1B	Carcinogenicity Category 1B
Eye Dam. 1	Serious eye damage/eye irritation Category 1
Eye Irrit. 2A	Serious eye damage/eye irritation Category 2A
Flam. Liq. 3	Flammable liquids Category 3
Flam. Liq. 4	Flammable liquids Category 4
Muta. 1B	Germ cell mutagenicity Category 1B
Skin Irrit. 2	Skin corrosion/irritation Category 2
STOT SE 3	Specific target organ toxicity (single exposure) Category 3
STOT SE 3	Specific target organ toxicity (single exposure) Category 3
H226	Flammable liquid and vapor
H227	Combustible liquid
H302	Harmful if swallowed
H304	May be fatal if swallowed and enters airways
H315	Causes skin irritation
H318	Causes serious eye damage
H319	Causes serious eye irritation
H332	Harmful if inhaled
H335	May cause respiratory irritation
H336	May cause drowsiness or dizziness
H340	May cause genetic defects
H350	May cause cancer
H400	Very toxic to aquatic life

# Turf King™

## Safety Data Sheet

**TOTAL**  
**SOLUTIONS™**

- NFPA health hazard : 2 - Intense or continued exposure could cause temporary incapacitation or possible residual injury unless prompt medical attention is given.
- NFPA fire hazard : 2 - Must be moderately heated or exposed to relatively high temperature before ignition can occur.
- NFPA reactivity : 0 - Normally stable, even under fire exposure conditions, and are not reactive with water.



Prepared by: Technical Department

*This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product. No warranty is expressed or implied regarding the accuracy of this data or the results obtained from the use thereof. Our company assumes no responsibility for personal injury or property damage to the vendee, users or third parties caused by the material. Such vendees or users assume all risks associated with the use of this material.*