1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND COMPANY

Product Name: Woodace Preen Plus  
EPA No: 961-370  

Recommended use:  
This product is a mixed herbicide for landscape use.

Supplier/Manufacturer  
Lebanon Seaboard Corporation  
1600 East Cumberland Street  
Lebanon PA 17042  
Tel: (800) 233-0628 (717-273-1685)  
Supplier Email: customerservice@lebsea.com

Emergency telephone number  
800-233-0628  
Chemtrec 1-800-424-9300  
Prosar 888-208-1368

2. HAZARDS IDENTIFICATION

OSHA Signal Word: Warning  
EPA Signal Word: Caution

Hazard Statements and Hazard Categories (See also Section 11):  
H303: May be harmful if swallowed. (Category 5)  
H317: May cause an allergic skin reaction. (Category 1B)  
May irritate the digestive tract if ingested.

Precautionary Statements for handling: (See also Section 7.)  
P261: Avoid breathing dust.  
P272: Contaminated work clothing should not be allowed out of the workplace.  
P280: Wear protective gloves/protective clothing/eye protection/face protection  
P312: Call a POISON CENTER or doctor/physician if you feel unwell.  
P333: If skin irritation or rash occurs, seek medical advice/attention.  
P352: Wash with plenty of soap and water.  
P363: Wash contaminated clothing before reuse.  
Keep out of reach of children.

Precautionary Statements for disposal - Dispose of contents/container to approved landfill, if allowed by state or local laws. Dispose in accordance with all federal, state and local regulations.

Hazard not otherwise classified (HNOC): None

Unknown acute toxicity <3% of the mixture consists of ingredients of unknown toxicity.

3. COMPOSITION/INFORMATION ON INGREDIENTS

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>CAS No.</th>
<th>Weight %</th>
</tr>
</thead>
<tbody>
<tr>
<td>Paper fiber granules (Cellulose)</td>
<td>9004-34-6</td>
<td>90-97</td>
</tr>
<tr>
<td>Trifluralin</td>
<td>1582-09-8</td>
<td>1.5</td>
</tr>
<tr>
<td>Mineral seal oil</td>
<td>64742-46-7</td>
<td>0.3 - 0.5</td>
</tr>
<tr>
<td>Isoxaben</td>
<td>82558-50-7</td>
<td>0.375</td>
</tr>
<tr>
<td>Nonhazardous fillers</td>
<td>Various</td>
<td>Balance</td>
</tr>
</tbody>
</table>
4. FIRST AID MEASURES

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.

Skin Contact  Wash with soap and water. If injury occurs, or if discomfort or irritation persists contact a physician.

Inhalation  If inhaled and discomfort occurs, move to fresh air, and keep person at rest in a position comfortable for breathing. If difficulty in breathing occurs and/or persists, administer oxygen and get medical attention. If medical advice is needed, have product container or label on hand.

Ingestion  Rinse mouth. Drink Plenty of water. If discomfort occurs, seek medical attention. Do not induce vomiting of an unconscious person.

Self-protection of the first aider:  Use any appropriate personal protective equipment as required to avoid breathing dust, and to avoid eye and skin contact.

Most important symptoms and effects, both acute and delayed:

Symptoms:  Dust irritation with nasal discomfort, or skin irritation possible.

Indication of any immediate medical attention and special treatment needed:  Treat Symptoms.

5. FIRE FIGHTING MEASURES

Suitable extinguishing media  Use extinguishing media suitable to local circumstances and the surrounding environment. Options in this case include water, CO$_2$, ABC Dry Chemical extinguisher, or foam. Avoid stirring up dust with water stream.

Specific hazards arising from the chemical  Thermal decomposition can lead to release of irritating and toxic gases and vapors. In the event of fire, do not breathe fumes.

Expansion data  Sensitivity to mechanical impact:  None

Sensitivity to static discharge:  None

Note: Excessive amounts of any burnable dusts can produce explosive mixtures if allowed to disperse in the air in confined areas where ignition sources occur. Prevent excessive dust dispersal in areas of use, storage, or production.

Protective equipment and precautions for firefighters  As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and standard protective gear.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment, and emergency procedures

Personal Precautions  Use reasonable personal protective equipment as required to prevent contact with eyes or skin and to avoid breathing dust. Remove ignition sources prior to clean-up.

Environmental precautions  Prevent entry into waterways, sewers, basements or confined areas. Do not flush into surface water or sanitary sewer system. See Section 12 for additional ecological information.
Methods for containment  Prevent further leakage or spillage, if safe to do so.

Methods for clean-up  Use reasonable personal protective equipment as required. Cover powder spill with plastic sheet or tarp to minimize spreading and keep powder dry. Take up mechanically, placing in appropriate containers for disposal. Avoid creating dust. Clean contaminated surface thoroughly. Soak up excess with inert absorbent material.

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### 7. HANDLING AND STORAGE

**Safe Handling**  Do not handle until all safety precautions have been read and understood. Obtain special instructions before use. Ensure adequate ventilation, especially in confined areas. Use personal protective equipment as required. Wash hands thoroughly after handling.

**Storage Conditions**  Store locked up. Keep containers tightly closed in a cool, well-ventilated place. Keep away from food, drink, animal feed and potable water supplies. Keep out of the reach of children.

**Incompatible materials**  Avoid strong acids or alkali, or other reactive substances.

---

### 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>ACGIH TLV</th>
<th>OSHA PEL</th>
<th>NIOSH REL*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cellulose (9004-34-6)</td>
<td>10 mg/m$^3$ (TWA)</td>
<td>15 mg/m$^3$ (TWA total)</td>
<td>10 mg/m$^3$ (TWA total)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>5 mg/m$^3$ (TWA respirable)</td>
<td>5 mg/m$^3$ (TWA respirable)</td>
</tr>
<tr>
<td>Trifluralin (1582-09-8)</td>
<td>Not Established</td>
<td>Not Established</td>
<td>Not Established</td>
</tr>
<tr>
<td>Isoxaben (82558-50-7)</td>
<td>Not Established</td>
<td>Not Established</td>
<td>Not Established</td>
</tr>
<tr>
<td>Nuisance Duffs</td>
<td>10 mg/m$^3$ (TWA)</td>
<td>15 mg/m$^3$ (TWA total)</td>
<td>Not Established</td>
</tr>
<tr>
<td></td>
<td></td>
<td>50 mppcf (TWA total)</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>5 mppcf (TWA respirable)</td>
<td></td>
</tr>
</tbody>
</table>

*REL refers to “Recommended Exposure Limits”

Other exposure limits: Protective Action Criteria (US Dept of Energy)
Trifluralin (in air):
- **PAC-1**: 2.3 mg/m$^3$ (Mild, transient health effects)
- **PAC-2**: 26 mg/m$^3$ (Irreversible or serious effects that could impair ability to take protective action)
- **PAC-3**: 78 mg/m$^3$ (Life-threatening health effects)

Engineering controls: Use with adequate ventilation to prevent dust buildup in air.

**Individual protection measures**: Wear protective gloves, protective clothing, eye protection, and face protection.

- **Eye protection**: Safety glasses, or goggles if eye contact is likely
- **Skin and Body Protection**: Wear protective gloves and coveralls.
- **Respiratory Protection**: Dust mask recommended for dusty or misty conditions. If exposure limits are exceeded or irritation is experienced, NIOSH/MSHA approved respiratory protection should be worn. Respiratory protection must be provided in accordance with current local regulations.
- **General Hygiene**: When using product, do not eat, drink or smoke. Wash hands thoroughly after handling. Contaminated work clothing must not be allowed out of the workplace. Wash contaminated clothing before reuse.
9. PHYSICAL AND CHEMICAL PROPERTIES

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Physical state</td>
<td>Solid</td>
</tr>
<tr>
<td>Appearance</td>
<td>Granules</td>
</tr>
<tr>
<td>Color</td>
<td>Mixed, various</td>
</tr>
<tr>
<td>Odor</td>
<td>Slight</td>
</tr>
<tr>
<td>Odor Threshold</td>
<td>No information available</td>
</tr>
<tr>
<td>pH</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Melting point/freezing point</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Boiling point / boiling range</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Flash point</td>
<td>No information available</td>
</tr>
<tr>
<td>Evaporation rate</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Flammability (solid, gas)</td>
<td>No information available</td>
</tr>
<tr>
<td>Flammability Limits in Air</td>
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</tr>
<tr>
<td>Upper flammability limit</td>
<td>No information available</td>
</tr>
<tr>
<td>Lower flammability limit</td>
<td>No information available</td>
</tr>
<tr>
<td>Vapor pressure</td>
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</tr>
<tr>
<td>Vapor density</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Specific Gravity</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Water solubility</td>
<td>Mostly insoluble in water, although some ingredients may dissolve.</td>
</tr>
<tr>
<td>Solubility in other solvents</td>
<td>No information available</td>
</tr>
<tr>
<td>Partition coefficient</td>
<td>No information available</td>
</tr>
<tr>
<td>Autoignition temperature</td>
<td>No information available</td>
</tr>
<tr>
<td>Decomposition temperature</td>
<td>No information available</td>
</tr>
<tr>
<td>Oxidizing properties</td>
<td>Not an oxidizer</td>
</tr>
</tbody>
</table>

10. STABILITY AND REACTIVITY

**Reactivity**
No data available

**Chemical stability**
Stable.

**Possibility of Hazardous Reactions**
May release heat and fumes when mixed in solution with incompatible reactive materials.

**Hazardous polymerization**
Will not occur.

**Conditions to avoid**
High heat, sparks and open flames, as some ingredients may be burnable.

**Incompatible materials**
Strong acids or alkali, or other reactive substances.

**Hazardous Decomposition Products**
May emit toxic fumes under fire conditions, such as Nitrogen oxides (NOx), Ammonia, Oxides of sulfur, Hydrogen chloride and Carbon monoxide.

11. TOXICOLOGICAL INFORMATION

*Routes of exposure:* Ingestion, eyes (contact), skin (contact), dust inhalation
Symptoms
May irritate the digestive tract if ingested in quantity, causing nausea, vomiting and diarrhea.

Sensitization
May cause an allergic skin reaction.

Germ cell mutagenicity
Isoxaben: In vitro genetic toxicity studies were negative. Animal genetic toxicity studies were predominantly negative.
Trifluralin: In vitro genetic toxicity studies were predominantly negative. Animal genetic toxicity studies were predominantly negative.

Carcinogenicity
A low incidence of urinary tract tumors was seen in only 1 of 5 chronic studies in rats with trifluralin. Trifluralin did not produce statistically significant increases in tumors in other studies. EPA has classified trifluralin and isoxaben as Group C, possible human carcinogens (cancer-causing agent). Other agencies have not classified trifluralin as a carcinogen. The manufacturer of trifluralin states that trifluralin is not anticipated to be a carcinogenic risk to man.

Reproductive toxicity
In animal studies, isoxaben has been shown to interfere with reproduction in females, but effects were seen only at doses that caused significant toxicity to the parent animals. Did not cause birth defects in animals; other effects were seen in the fetus only at doses which caused toxic effects to the mother.
Trifluralin did not interfere with reproduction in laboratory animals.

STOT - single exposure
No information available
STOT - repeated exposure
No information available
Chronic toxicity
Lungs-Nuisance dust irritation, Potential skin sensitizer, cancer.
Target Organ Effects
Lungs-Nuisance dust irritation, Skin-irritation, sensitization, rash (in sensitive individuals), Target organs include skin, eyes, liver, kidney, and blood.
Aspiration hazard
No information available

Isoxaben has very low acute toxicity if swallowed. LD$_{50}$, Rat, male and female, > 5,000 mg/kg.

Trifluralin has a low acute toxicity if swallowed. The oral LD$_{50}$ for technical trifluralin in rats is greater than 10,000 mg/kg, in mice is greater than 5,000 mg/kg, and in dogs, rabbits and chickens is greater than 2,000 mg/kg. However, certain formulated products which contain trifluralin may be more toxic than the technical material itself. For example, the oral LD$_{50}$ for Treflan TR-10 in rats is >500 mg/kg. The dermal LD$_{50}$ for technical trifluralin in rabbits is >2,000 mg/kg.

12. ECOLOGICAL INFORMATION

Fertilizers may be harmful to aquatic life with short term effects, causing algal bloom and increased BOD, depending on the amount released.
Trifluralin is very highly toxic to aquatic organisms (including fish and plants) on an acute basis (LC$_{50}$ or EC$_{50}$ <0.1 mg/L in the most sensitive species tested).
Isoxaben is also highly toxic to aquatic organisms on an acute basis.

The herbicide ingredients are toxic to aquatic organisms on an acute basis. Use with care when applying to turf areas adjacent to any bodies of water. Do not apply directed to water, or to areas where surface water is present, or to intertidal areas below the mean high water mark. Drift and runoff from treated turf may adversely affect aquatic organisms in adjacent bodies of water. Do not apply when weather conditions favor drift from treated areas. Do not contaminate water when disposing of equipment washwater.
Application around a cistern or well may result in contamination of groundwater or drinking water, particularly where soils are permeable and water table is shallow.

Persistence and degradability
Trifluralin and isoxaben are expected to biodegrade very slowly in the environment.

Bioaccumulation
Bioconcentration potential of trifluralin is high (BCF > 3000 or Log P$_{ow}$ between 5 and 7).
Bioconcentration potential of isoxaben is low (BCF < 100 or Log P$_{ow}$ < 3).

Other adverse effects
No information available

13. DISPOSAL CONSIDERATIONS

This material, as supplied is not a hazardous waste according to federal regulations (40 CFR 261).
Disposal of wastes: Do not contaminate water, food or feed by storage or disposal. Dispose of wastes at an approved waste disposal facility in accordance with label requirements and with all federal state, and local regulations. Contact your state environmental office for information on approved waste disposal practices and facilities.

This product is a hazardous waste material.
EPA Waste Numbers are applicable for this product’s components.
Dispose of in accordance with Local, State, and Federal regulations.

Contaminated packaging
US Federal: special packaging considerations for pesticide containers. If the container is empty, do not reuse it. Place it in the trash, unless the label specifies a different procedure. Follow local regulations.

14. TRANSPORT INFORMATION

<table>
<thead>
<tr>
<th>DOT:</th>
<th>ADR:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Proper Shipping Name:</td>
<td>Not Regulated</td>
</tr>
<tr>
<td>Hazard Class:</td>
<td>Non Regulated</td>
</tr>
<tr>
<td>IATA:</td>
<td>ADN:</td>
</tr>
<tr>
<td>Proper Shipping Name:</td>
<td>Not Regulated</td>
</tr>
<tr>
<td>Hazard Class:</td>
<td>Non Regulated</td>
</tr>
<tr>
<td>IMDG/IMO</td>
<td>RID:</td>
</tr>
<tr>
<td>Hazard Class:</td>
<td>Not Regulated</td>
</tr>
<tr>
<td>Marine Pollutant</td>
<td>IATA:</td>
</tr>
<tr>
<td></td>
<td>Not Regulated</td>
</tr>
<tr>
<td></td>
<td>TDG:</td>
</tr>
<tr>
<td></td>
<td>Not Regulated</td>
</tr>
<tr>
<td></td>
<td>ICAO:</td>
</tr>
<tr>
<td></td>
<td>Not Regulated</td>
</tr>
<tr>
<td></td>
<td>MEX:</td>
</tr>
<tr>
<td></td>
<td>Not Regulated</td>
</tr>
</tbody>
</table>

15. REGULATORY INFORMATION

General Product Information: This product is not federally regulated as a hazardous material.
Clean Air Act: No data
Clean Water Act:
Permissible concentrations in drinking water (Trifluralin):

- US Federal: 10 µg/L (EPA)
- Arizona: 2 µg/L
- Maine: 45 µg/L
- Florida: 4.5 µg/L
- Wisconsin: 7.5 µg/L
- Canada: 0.045 mg/L (IMAC)

State Right-to-Know Components:
The following components appear on one or more of the following state hazardous substances lists:

<table>
<thead>
<tr>
<th>Component</th>
<th>CAS#</th>
<th>CA</th>
<th>MA</th>
<th>MN</th>
<th>NJ</th>
<th>PA</th>
<th>RI</th>
<th>IL</th>
</tr>
</thead>
<tbody>
<tr>
<td>Trifluralin</td>
<td>1582-09-8</td>
<td>No</td>
<td>No</td>
<td>Mo</td>
<td>Yes</td>
<td>Yes</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>Cellulose</td>
<td>9004-34-6</td>
<td>No</td>
<td>Yes</td>
<td>No</td>
<td>Yes</td>
<td>Yes</td>
<td>No</td>
<td>Yes</td>
</tr>
</tbody>
</table>

Other state regulations may apply. Check individual state requirements.

California Proposition 65: This product contains detectable quantities of chemical(s) known to the State of California to cause cancer.

CERCLA REPORTABLE QUANTITY:
This product contains the following substance(s) listed as "Hazardous Substances" under CERCLA which may require reporting of releases:

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>CAS Number</th>
<th>RQ</th>
<th>% in Product</th>
</tr>
</thead>
</table>
Trifluralin 001582-09-8 10 1.5%

TSCA STATUS: This product is exempt from TSCA Regulation under FIFRA Section 3(2)(G)(ii) when used as a pesticide.

SARA TITLE III:
Section 302, Extremely Hazardous Substances: None
Section 313 Toxic Chemicals: Trifluralin
EPCRA Section 313: Trifluralin de minimus concentration reporting level: 1%

Disclaimer
The information provided in this material safety data sheet is correct to the best of our knowledge, information and belief at the date of its publication, and is based on material classifications in current Safety Data Sheets provided by the ingredient manufacturers. The information given is designed only as guidance for safe handling, use, processing, storage, transportation, disposal, and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.