



Material Safety Data Sheet

SECTION 1. IDENTIFICATION

Product Name: Solanil 80EDF HERBICIDE
EPA Registration No.: 94123-2-84237
Recommended Use: Herbicide
Manufacturer: Solera ATO, LLC
 12230 E Del Norte
 Yuma, AZ 85367
 Customer Service (928) 503-1518

FOR MEDICAL EMERGENCIES, CONTACT the National Poison Information Center 1-800-222-1222
FOR CHEMICAL EMERGENCY: Spill, leak, fire, exposure, or accident, call CHEMTREC 1-800-424-9300

SECTION 2. HAZARDS IDENTIFICATION

NOTE: Please refer to Section 11 for detailed toxicological information.

HAZARD CLASSIFICATION

Acute Oral Toxicity: Category 4; Respiratory Sensitization: Category 1; Acute aquatic Toxicity: Category 1; Long-Term Aquatic Toxicity: Category 1

SIGNAL WORD CAUTION

HAZARD STATEMENTS

Harmful if swallowed.
 May cause allergy or asthma symptoms or breathing difficulties if inhaled.
 Very toxic to aquatic life with long lasting effects.

PICTOGRAMS



PRECAUTIONARY STATEMENTS

General : Read label before use. Keep out of reach of children. If medical advice is needed, have product container or label at handling
Prevention : In case of inadequate ventilation wear respiratory protection. Avoid release to the environment. Avoid breathing dust. Do not eat, drink or smoke when using this product. Wash hands thoroughly after handling.
Response : Collect spillage. IF INHALED: If breathing is difficult, remove victim to fresh air and keep at rest in a position comfortable for breathing. If experiencing respiratory symptoms: Call a POISON CENTER or physician. IF SWALLOWED: Call a POISON CENTER or physician if you feel unwell. Rinse mouth.
Storage : Not applicable.
Disposal : Dispose of contents and container in accordance with all local, regional, national and international regulations.

DESCRIPTION OF HAZARDS NOT OTHERWISE CLASSIFIED

None Known

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

<u>Hazardous Component Name</u>	<u>CAS-No.</u>	<u>Average % by Weight</u>
Propanil (ISO) (N-[3,4-diclorophenyl] propanamide)	709-98-8	60 - 100
STEPSPERSE DF-500 (Anionic/Lignosulfonate Blend)	-	5 - 10
Kaolin	1332-58-7	1 - 5

SECTION 4. FIRST AID MEASURES

If swallowed	<ul style="list-style-type: none"> • Call a poison control center or doctor immediately for treatment advice. • Have person sip a glass of water if able to swallow. • Do not induce vomiting unless told to do so by a poison control center or doctor. • Do not give anything by mouth to an unconscious person.
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If on skin or clothing	<ul style="list-style-type: none"> • Take off contaminated clothing. • Rinse skin immediately with plenty of water for 15-20 minutes. • Call a poison control center or doctor for treatment advice.
If in eyes	<ul style="list-style-type: none"> • Hold eye open and rinse slowly and gently with water for 15-20 minutes. • Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye. • Call a poison control center or doctor for treatment advice.
If inhaled	<ul style="list-style-type: none"> • Move person to fresh air. • If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably mouth-to-mouth, if possible. • Call a poison control center or doctor for further treatment advice.
Have the product container or label with you when calling a poison control center or doctor or going for treatment..	

Most important symptoms/effects, acute and delayed

Potential acute health effects

- Eye contact** : No known significant effects or critical hazards.
Inhalation : May cause allergy or asthma symptoms or breathing difficulties if inhaled. Exposure to decomposition products may cause a health hazard. Serious effects may be delayed following exposure.
Skin contact : No known significant effects or critical hazards.
Ingestion : Harmful if swallowed.

Over-exposure signs/symptoms

- Eye contact** : No known significant effects or critical hazards.
Inhalation : Adverse symptoms may include the following: wheezing and breathing difficulties asthma
: No known significant effects or critical hazards.
Skin contact : No known significant effects or critical hazards.
Ingestion : No known significant effects or critical hazards.

Indication of immediate medical attention and special treatment needed, if necessary

- Notes to physician** : In case of inhalation of decomposition products in a fire, symptoms may be delayed.
: The exposed person may need to be kept under medical surveillance for 48 hours.
Specific treatments : No specific treatment.
Protection of first-aiders : No action shall be taken involving any personal risk or without suitable training. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation.

See toxicological information (Section 11)

SECTION 5. FIRE FIGHTING MEASURES

Extinguishing media

- Suitable extinguishing media** : In case of fire, use water spray (fog), foam, dry chemical or CO₂.
Unsuitable extinguishing media : None known.
Specific hazards arising from the chemical : This material is very toxic to aquatic life with long lasting effects. Fire water contaminated with this material must be contained and prevented from being discharged to any waterway, sewer or drain.
Hazardous thermal decomposition products : Decomposition products may include the following materials: carbon dioxide carbon monoxide nitrogen oxides halogenated compounds metal oxide/oxides
Special protective actions for fire-fighters : No special measures are required.
Special protective equipment for fire-fighters : Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

SECTION 6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

For non-emergency personnel

No action shall be taken involving any personal risk or without suitable training. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.

For emergency responders :

If specialized clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For nonemergency personnel".

Environmental Precautions:

Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air). Water polluting material. May be harmful to the environment if released in large quantities. Collect spillage.

Methods and materials for containment and cleaning up

Small spill

Move containers from spill area. Avoid dust generation. Using a vacuum with HEPA filter will reduce dust dispersal. Place spilled material in a designated, labeled waste container. Dispose of via a licensed waste disposal contractor.

Large spill

Move containers from spill area. Approach release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Avoid dust generation. Do not dry sweep. Vacuum dust with equipment fitted with a HEPA filter and place in a closed, labeled waste container. Dispose of via a licensed waste disposal contractor. Note: see Section 1 for emergency contact information and Section 13 for waste disposal.

SECTION 7. HANDLING AND STORAGE

Precautions for safe handling

Protective measures

Put on appropriate personal protective equipment (see Section 8). Persons with a history of asthma, allergies or chronic or recurrent respiratory disease should not be employed in any process in which this product is used. Do not get in eyes or on skin or clothing. Do not ingest. Avoid release to the environment. Use only with adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Empty containers retain product residue and can be hazardous. Do not reuse container.

Advice on general occupational hygiene

Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. See also Section 8 for additional information on hygiene measures. Remove contaminated clothing and protective equipment before entering eating areas.

Conditions for safe storage, including any incompatibilities

Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination.

SECTION 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Control parameters

Occupational exposure limits

Ingredient name	Exposure limits
Kaolin	<p>ACGIH TLV (United States, 3/2015). TWA: 2 mg/m³ 8 hours. Form: Respirable fraction</p> <p>NIOSH REL (United States, 10/2013). TWA: 5 mg/m³ 10 hours. Form: Respirable fraction TWA: 10 mg/m³ 10 hours. Form: Total</p> <p>OSHA PEL (United States, 2/2013). TWA: 5 mg/m³ 8 hours. Form: Respirable fraction</p> <p>TWA: 15 mg/m³ 8 hours. Form: Total dust</p>

Individual protection measures

Appropriate engineering controls	Use only with adequate ventilation. If user operations generate dust, fumes, gas, vapor or mist, use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits.
Environmental exposure controls	Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation.
Hygiene measures	Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.
Eye/face protection	Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: safety glasses with sideshields
Skin protection Hand protection	Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary. Considering the parameters specified by the glove manufacturer, check during use that the gloves are still retaining their protective properties. It should be noted that the time to breakthrough for any glove material may be different for different glove manufacturers. In the case of mixtures, consisting of several substances, the protection time of the gloves cannot be accurately estimated.
Skin protection Body protection	Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.
Skin protection Other skin protection	Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product
Respiratory protection	Use a properly fitted, particulate filter respirator complying with an approved standard if a risk assessment indicates this is necessary. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance

Physical state	: Solid. [Dry flowable powder.]
Color	: Brown.
Odor	: Not Determined.
Melting point	: Not Available
Boiling point	: Not available.
Flash point	: >100°C
Evaporation rate	: Not available.
Flammability (solid, gas)	: Not flammable.
Lower and upper explosive (flammable) limits	: Not flammable. : Not available.
Vapor pressure	: Not available.
Vapor density	: 0.575
Relative density	: Dispersible in water.
Solubility	: Not available.
Partition coefficient: octanol/water	: Not flammable.
Auto-ignition temperature	: Not available.
Decomposition temperature	: Not available.
Viscosity	: Not available.
pH (1% w/v)	: 9.02
Density	: 1.29 g/ml

SECTION 10. STABILITY AND REACTIVITY

Reactivity: Incompatible with sodium hypochlorite

Chemical stability: The product is stable.

Possibility of hazardous reactions: Under normal conditions of storage and use, hazardous reactions will not occur.

Conditions to avoid: No specific data.

Incompatible materials: Reactive or incompatible with the following materials: oxidizing materials, acids and alkalis.

Hazardous decomposition products: Under normal conditions of storage and use, hazardous decomposition products should not be produced.

SECTION 11. TOXICOLOGICAL INFORMATION

Information on toxicological effects Acute toxicity

Product/ingredient name	Result	Species	Dose	Exposure
Propanil (ISO) (N-[3,4-dichlorophenyl] propanamide)	LD50 Dermal	Rabbit	4830 mg/kg	-
	LD50 Dermal	Rat	>5 g/kg	-
	LD50 Oral	Rat	367 mg/kg	-

Irritation/Corrosion: There is no data available.

Sensitization: There is no data available.

Carcinogenicity: There is no data available.

Specific target organ toxicity (single exposure): There is no data available.

Specific target organ toxicity (repeated exposure): There is no data available.

Aspiration hazard: There is no data available.

Information on the likely routes of exposure: Dermal contact. Eye contact. Inhalation. Ingestion

Potential acute health effects

- Eye contact** : No known significant effects or critical hazards.
- Inhalation** : May cause allergy or asthma symptoms or breathing difficulties if inhaled. Exposure to decomposition products may cause a health hazard. Serious effects may be delayed following exposure.
- Skin contact** : No known significant effects or critical hazards.
- Ingestion** : Harmful if swallowed.

Symptoms related to the physical, chemical and toxicological characteristics

- Eye contact** : No known significant effects or critical hazards.
- Inhalation** : Adverse symptoms may include the following: wheezing and breathing difficulties asthma
- Skin contact** : No known significant effects or critical hazards.
- Ingestion** : No known significant effects or critical hazards.

Delayed and immediate effects and also chronic effects from short and long term exposure

Short term exposure

- Potential immediate effects** : No known significant effects or critical hazards.
- Potential delayed effects** : No known significant effects or critical hazards.

Long term exposure

- Potential immediate effects** : No known significant effects or critical hazards.
- Potential delayed effects** : No known significant effects or critical hazards.

Potential chronic health effects

- General** : Once sensitized, a severe allergic reaction may occur when subsequently exposed to very low levels.
- Carcinogenicity** : No known significant effects or critical hazards.
- Mutagenicity** : No known significant effects or critical hazards.
- Teratogenicity** : No known significant effects or critical hazards.
- Developmental effects** : No known significant effects or critical hazards.
- Fertility effects** : No known significant effects or critical hazards.

Numerical measures of toxicity Acute toxicity estimates

Route	ATE value
Oral	446.5 mg/kg
Dermal	5875.9 mg/kg

SECTION 12. ECOLOGICAL INFORMATION

Toxicity

Product/ingredient name	Result	Species	Exposure
Propanil (ISO) (N-[3,4-dichlorophenyl] propanamide)	Acute EC50 0.09 ug/ml Fresh water	Algae - Chlorella pyrenoidosa Exponential growth phase	4 days
	Acute EC50 0.29 mg/L Fresh water	Algae - Scenedesmus acutus	72 hours
	Acute EC50 1.2 ppm Fresh water	Daphnia - Daphnia magna	48 hours
	Acute LC50 1520 µg/L Fresh water	Crustaceans - Ceriodaphnia dubia	48 hours
	Acute LC50 0.43 ppm Fresh water	Fish - Ictalurus punctatus	96 hours
	Chronic EC10 0.12 mg/L Fresh water	Algae - Scenedesmus acutus	72 hours
	Chronic NOEC 0.016 mg/L Fresh water	Daphnia - Daphnia magna - Neonate	21 days
	Chronic NOEC 0.4 ppb	Fish - Pimephales promelas	60 days

Persistence and degradability There is no data available.

Bioaccumulative potential

Product/ingredient name	LogP _{ow}	BCF	Potential
Propanil (ISO) (N-[3,4-dichlorophenyl] propanamide)	3.07	69.18	low

Mobility in soil

Soil/water partition coefficient (K_{oc}) : Not available.

Other adverse effects : No known significant effects or critical hazards.

SECTION 13. DISPOSAL CONSIDERATIONS

Disposal methods

The generation of waste should be avoided or minimized wherever possible. Disposal of this product, solutions and any by-products should comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. This material and its container must be disposed of in a safe way. Care should be taken when handling empty containers that have not been cleaned or rinsed out. Empty containers or liners may retain some product residues. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

SECTION 14. TRANSPORT INFORMATION

DOT

- **NON-BULK CONTAINERS TRANSPORTED DOMESTICALLY BY HIGHWAY**
NOT REGULATED

- **BULK CONTAINERS OR NON-BULK CONTAINERS TRANSPORTED BY INLAND WATERWAYS**

UN NUMBER: 3077

UN PROPER SHIPPING NAME : ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (Propanil)(ISO) (N-[3,4-dichlorophenyl] propanamide)

HAZARD CLASS: 9

PACKING GROUP: III

ENVIRONMENTAL HAZARD: Marine Pollutant

NOTE: The Marine Pollutant Mark is not required when transported on inland waterways in sizes of ≤5kg or ≤5L.

IMDG

UN NUMBER: 3077
UN PROPER SHIPPING NAME : ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (Propanil)(ISO) (N-[3,4-dichlorophenyl] propanamide)
HAZARD CLASS: 9
PACKING GROUP: III
ENVIRONMENTAL HAZARD: Marine Pollutant
NOTE: The Marine Pollutant Mark is not required when transported on inland waterways in sizes of ≤5kg or ≤5L.

IATA

UN NUMBER: 3077
UN PROPER SHIPPING NAME : ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (Propanil)(ISO) (N-[3,4-dichlorophenyl] propanamide)
HAZARD CLASS: 9
PACKING GROUP: III
ENVIRONMENTAL HAZARD: Environmentally Hazardous Substance
NOTE: The Environmentally Hazardous Substance Mark is not required when transported in sizes of 5kg or ≤5L.

SECTION 15. REGULATORY INFORMATION

U.S. Federal regulations **TSCA 8(a) CDR Exempt/Partial exemption:** Not determined
United States inventory (TSCA 8b): All components are listed or exempted.

Clean Air Act Section 112 (b) Hazardous Air Pollutants (HAPs): Not listed

Clean Air Act Section 602 Class I Substances: Not listed

Clean Air Act Section 602 Class II Substances: Not listed

DEA List I Chemicals (Precursor Chemicals): Not listed

DEA List II Chemicals (Essential Chemicals): Not listed

SARA 302/304 Composition/information on ingredients

Name	%	EHS	SARA 302 TPQ		SARA 304 RQ	
			(lbs)	(gallons)	(lbs)	(gallons)
Ethylene oxide	0 - 0.01	Yes.	-	-	-	-

SARA 304 RQ : Not applicable.

SARA 311/312

Classification : Immediate (acute) health hazard

Composition/information on ingredients

Name	%	Fire hazard	Sudden release of pressure	Reactive	Immediate (acute) health hazard	Delayed (chronic) health hazard
Propanil (ISO) (N-[3,4-dichlorophenyl] propanamide)	60 - 100	No.	No.	No.	Yes.	No.
STEPSPERSE DF-500 (Anionic/Lignosulfonate Blend)	5 - 10	No.	No.	No.	Yes.	No.
Kaolin	1 - 5	No.	No.	No.	Yes.	No.

SARA 313

	Product name	CAS number	%
Form R - Reporting requirements	Propanil (ISO) (N-[3,4-dichlorophenyl] propanamide)	709-98-8	60 - 100
Supplier notification	Propanil (ISO) (N-[3,4-dichlorophenyl] propanamide)	709-98-8	60 - 100

SARA 313 notifications must not be detached from the SDS and any copying and redistribution of the SDS shall include copying and redistribution of the notice attached to copies of the SDS subsequently redistributed.

State regulations

Massachusetts

None of the components are listed.

New York

None of the components are listed.

New Jersey

The following components are listed: Propanil (ISO) (N-[3,4-diclorophenyl] propanamide); Kaolin

Pennsylvania

The following components are listed: Kaolin

California Prop. 65

WARNING: This product contains less than 0.1% of a chemical known to the State of California to cause cancer.

WARNING: This product contains less than 1% of a chemical known to the State of California to cause birth defects or other reproductive harm.

Ingredient name	Cancer	Reproductive	No significant risk level	Maximum acceptable dosage level
Titanium dioxide	Yes.	No.	No.	No.
Ethylene oxide	Yes.	Yes.	Yes.	Yes.

SECTION 16. OTHER INFORMATION

This information is provided in good faith but without express or implied warranty. The customer assumes all responsibility for safety and use not in accordance with label instructions.

Revision Date : 01-13-20