



# Safety Data Sheet

Preparation Date 20-May-2015

Revision date 23-Sep-2020

Revision Number: 6

## 1. Identification of the Substance/Preparation and of the Company/Undertaking

### Identification of the product

Product Description DUET

### Other means of identification

Product code RC-9  
Registration number(s) 70506-361

### Recommended use of the chemical and restrictions on use

Recommended use Herbicide.  
Uses advised against Non labeled activities

### Details of the Supplier of the Safety Data Sheet

#### Supplier Address

UPL NA Inc.  
630 Freedom Business Center  
Suite 402  
King of Prussia, PA 19406

### Emergency telephone number

Company Phone Number 1-800-438-6071  
Emergency telephone number Chemtec: (800) 424-9300 (24hrs) or (703) 527-3887  
Medical: Rocky Mountain Poison and Drug Safety (866) 673-6671 (24hrs)

## 2. Hazards Identification

### Classification

#### OSHA Regulatory Status

This chemical is considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200)

Acute toxicity - Dermal	Category 4
Acute toxicity - Inhalation (Gases)	Not classified
Acute toxicity - Inhalation (Vapors)	Not classified

### Label elements

#### EMERGENCY OVERVIEW

#### WARNING

#### Hazard Statements

Harmful in contact with skin  
May be harmful if inhaled



**Appearance** Light tan**Physical state** Liquid**Odor** sweet**Precautionary Statements - Prevention**

Wear protective gloves/protective clothing/eye protection/face protection

Do not get in eyes, on skin, or on clothing

Use only outdoors or in a well-ventilated area

IF ON SKIN: Wash with plenty of soap and water

Call a POISON CENTER or doctor if you feel unwell

Wash contaminated clothing before reuse

IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing

Call a POISON CENTER or doctor/physician

**Precautionary Statements - Storage**

Store in a well-ventilated place. Keep container tightly closed

Store locked up

**Precautionary Statements - Disposal**

Dispose of contents/container to an approved waste disposal plant

**Hazards Not Otherwise Classified (HNOC)****OTHER INFORMATION**

- Causes mild skin irritation
- Very toxic to aquatic life with long lasting effects
- Very toxic to aquatic life

**3. Composition/information on Ingredients**

Chemical name	CAS No	Weight-%
Propanil	709-98-8	41.2
Bensulfuron-methyl	83055-99-6	0.32
Ethylene glycol	107-21-1	6
Naphthalene and alkylnaphthalenesulfonic acid, formaldehyde condensed, sodium salt	68425-94-5	2.5

If CAS number is "proprietary", the specific chemical identity and percentage of composition has been withheld as a trade secret.

**4. First aid measures****FIRST AID MEASURES****Eye contact**

Hold eye open and rinse slowly and gently with water for 15 - 20 minutes. Remove contact lenses, if present, after 5 minutes, then continue rinsing eye. Call a poison control center or doctor for treatment advice.

**Skin contact**

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.

**Inhalation**

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.

**Ingestion**

Call a physician or poison control center immediately. Have person sip a glass of water if able to swallow. Do not induce vomiting without medical advice. Never give anything by mouth to an unconscious person.

**Protection of First-aiders**

Use personal protective equipment.

**Most Important Symptoms and Effects, Both Acute and Delayed**

**Most Important Symptoms and Effects** no data available.

**Indication of Any Immediate Medical Attention and Special Treatment Needed**

**Notes to physician** Treat symptomatically.

**5. Fire-fighting measures****Suitable extinguishing media**

Carbon dioxide (CO<sub>2</sub>).  
Use: Dry chemical. Water spray. alcohol-resistant foam.

**Unsuitable extinguishing media** no data available.

**Specific hazards arising from the chemical**

Thermal decomposition can lead to release of irritating gases and vapours.

**Hazardous combustion products** Hydrogen chloride. Chlorine gas.

**Explosion data****Protective equipment and precautions for firefighters**

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

**6. Accidental release measures****Personal precautions, protective equipment and emergency procedures**

**Personal Precautions** Avoid contact with skin and eyes. Remove all sources of ignition. Wear protective gloves/protective clothing and eye/face protection.

**Environmental Precautions**

**Environmental precautions** Consult a regulatory specialist to determine appropriate state or local reporting requirements, for assistance in waste characterization and/or hazardous waste disposal and other requirements listed in pertinent environmental permits.

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

**Methods for Clean-Up** Pick up and transfer to properly labelled containers. Ground and bond containers when transferring material. Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust).

**7. Handling and Storage****Precautions for safe handling**

**Handling** Wear personal protective equipment. Avoid contact with skin and eyes. Remove all sources of ignition. Do not eat, drink or smoke when using this product. Wash thoroughly after handling. Keep out of reach of children.

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

**Storage** Keep containers tightly closed in a cool, well-ventilated place. Keep away from heat. Protect from light. Keep in properly labelled containers.

**incompatible materials** Strong oxidizing agents.

**8. Exposure Controls/Personal Protection**

**Exposure guidelines**

Chemical name	ACGIH TLV	OSHA PEL
Ethylene glycol	STEL: 50 ppm vapor fraction STEL: 10 mg/m <sup>3</sup> inhalable particulate matter, aerosol only TWA: 25 ppm vapor fraction	(vacated) Ceiling: 50 ppm (vacated) Ceiling: 125 mg/m <sup>3</sup>

**Engineering controls** Investigate engineering techniques to reduce exposures. Local mechanical exhaust ventilation is preferred. Consult ACGIH ventilation manual or NFPA Standard 91 for design of exhaust systems.

**Personal protective equipment****Eye/Face Protection**

Use eye protection to avoid eye contact. Where there is potential for eye contact have eye flushing equipment available. If splashes are likely to occur, wear: Goggles.

**Skin protection**

Wear protective gloves/clothing. Chemical resistant footwear plus socks. Long sleeved clothing.

**Respiratory protection**

Select respirator with an organic vapor cartridge with prefilter approved for pesticides (MSHA/NIOSH approval number prefix TC-23C), or a canister approved for pesticides (MSHA/NIOSH approval number prefix TC-14G), or a NIOSH approved respirator with organic vapor cartridge or canister with any N,P,R, or HE filter.

**General hygiene considerations**

Do not eat, drink or smoke when using this product. Remove and wash contaminated clothing before re-use. Wear suitable gloves and eye/face protection. Wash hands before breaks and immediately after handling the product.

## 9. Physical and Chemical Properties

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

<b>Appearance</b>	Light tan	
<b>Physical state</b>	Liquid	
<b>Odor</b>	sweet	
<b>color</b>	No information available	
<b>Property</b>	<u>VALUES</u>	<u>Remarks/ Method</u>
<b>pH</b>	6	Approximately
<b>Melting point/freezing point</b>		None known
<b>Boiling Point/Range</b>		None known
<b>Flash Point</b>	Not Applicable	Seta Closed Cup <1
None known		<b>Flammability (solid, gas)</b>
None known		<b>Vapor pressure</b>
None known		4 X 10-5 mmHg @ 20 C/68 F (based on active ingredient)
None known		<b>Specific gravity</b>
None known		1.164
None known		<b>Solubility in Other Solvents</b>
None known		Dispersible in water
None known		<b>Partition coefficient: n-octanol/water</b>
None known		<b>Autoignition temperature</b>
None known		<b>Decomposition temperature</b>
None known		<b>Viscosity</b>

**9.2 OTHER INFORMATION**

## 10. Stability and Reactivity

**Reactivity**

no data available

**Chemical stability**

Stable under normal conditions. Hazardous polymerisation does not occur.

**Possibility of hazardous reactions**

None under normal processing.

**Hazardous polymerization**

Hazardous polymerisation does not occur.

**Conditions to avoid**

Strong acids. Strong bases. Strong oxidizing agents.

**incompatible materials**

Strong oxidizing agents.

**Hazardous decomposition products**

Thermal decomposition can lead to release of irritating gases and vapours. Hydrogen chloride. Organic acids. chloroanilines.

**11. Toxicological Information****Information on Likely Routes of Exposure****Product information**

Duet  
 Oral LD50 (rat) = >3000 mg/kg  
 Dermal LD50 (rat) = >2000 mg/kg  
 Inhalation LC50 SWDO4hr >2.03 mg/L no deaths

**Inhalation**

May cause irritation of respiratory tract.

**Eye contact**

Moderately irritating to the eyes.

**Skin contact**

Repeated or prolonged skin contact may cause allergic reactions with susceptible persons.

**Ingestion**

HARMFUL IF SWALLOWED.

**Information on Toxicological Effects****Symptoms**

No information available.

**Delayed and immediate effects as well as chronic effects from short and long-term exposure****Sensitization**

No information available.

**Mutagenic effects**

no data available.

**Carcinogenicity**

The information below indicates whether any agency has listed any ingredient as a carcinogen. Bensulfuron methyl - Repeated and long term ingestion exposure with Bensulfuron methyl caused decreased body weight, increased liver weight, pathological changes in the liver and kidneys, anemia, and altered hematology and clinical chemistry. Single inhalation exposure caused decreased body weight with nasal and ocular discharge. In animal testing Bensulfuron methyl has not caused carcinogenicity or reproductive toxicity. Animal data show developmental effects only at exposure levels producing other toxic effects in the adult animal. No-observed-adverse-effect-level (NOAEL) for the development study was 300 mg/kg in rabbits. The NOAEL for maternal and fetal toxicity was 1320 mg/kg. Tests have shown that Bensulfuron methyl did not cause genetic damage in bacterial or mammalian cell cultures, or in animals.

**Reproductive effects**

Not Available.

**STOT - Single Exposure**

no data available.

**STOT - Repeated Exposure**

no data available.

**Chronic toxicity** Avoid repeated exposure.  
**Target organ effects** liver, kidney, Respiratory System, EYES, skin, Central Nervous System (CNS).  
**Aspiration hazard** No information available.

**Numerical Measures of Toxicity - No information available**

The following values are calculated based on chapter 3.1 of the GHS document .

**LD50 Oral** > 3000 mg/kg (rat)  
**LD50 Dermal** > 2000 mg/kg (rat)

## 12. Ecological Information

**ecotoxicity**

for active ingredient - Propanil  
 Bluegill sunfish 96 hr LC50 = 5.4 mg/L  
 Rainbow trout 96 hr LC50 = 2.3 mg/L  
 Quail Oral LD50 = 196 mg/kg  
 Quail 8 day dietary LC50 = 2861 ppm  
 Mallard duck 8 day dietary LC50 = 5627 ppm  
 Daphnia magna 48 hr EC50 = 0.14 mg/L  
 Estuarine and marine organism 48-96 hr EC50 = 0.4 - 5.8 mg/L

**Persistence/Degradability**

no data available.

**Bioaccumulation/ Accumulation**

Bioaccumulative potential.

Chemical name	Log Pow
Propanil 709-98-8	3.07
Ethylene glycol 107-21-1	-1.93

**Other Adverse Effects**

no data available

## 13. Disposal Considerations

**Waste Treatment Methods**

**Waste Disposal Method**

Pesticide wastes are acutely hazardous. Improper disposal of excess pesticide or rinsate is a violation of Federal law. If the wastes cannot be disposed of by use or according to label instructions, contact your State Pesticide or Environmental Control Agency, or the Hazardous Waste representative at the nearest EPA Regional Office for guidance.

**Contaminated packaging**

Refer to product label.

## 14. Transport Information

**DOT**

Inhalation values were not considered as no deaths were observed.  
 When shipped domestically by highway in non-bulk containers this product can be shipped as not regulated.

**TDG**

When shipped in Canada domestic highway non-bulk this product can be shipped as Not regulated as per TDG 1.45.1

**IATA**

<b>UN/ID no</b>	UN3082
<b>Proper shipping name</b>	Environmentally hazardous substances, liquid, n.o.s (Propanil)
<b>Hazard class</b>	9
<b>Packing group</b>	PG III
<b>Description</b>	IMDG - Marine Pollutant

**IMDG**

<b>UN/ID no</b>	UN3082
<b>Proper shipping name</b>	Environmentally hazardous substances, liquid, n.o.s (Propanil)
<b>Hazard class</b>	9
<b>Packing group</b>	PG III
<b>Environmental hazards</b>	IMDG - Marine Pollutant

## 15. Regulatory Information

This chemical is a pesticide product registered by the Environmental Protection Agency and is subject to certain labeling 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:

**signal word** CAUTION

**Ventilation Control** PESTICIDE APPLICATORS & WORKERS THESE WORKERS MUST REFER TO PRODUCT LABELING AND DIRECTIONS FOR USE IN ACCORDANCE WITH EPA WORKER PROTECTION STANDARD 40 CFR PART 170.

**Keep out of Reach of Children. Toxic to fish and aquatic invertebrates. Harmful if swallowed. Harmful if absorbed through the skin. Do not store with food, feed, drugs, or clothing.**

**International Inventories**

<b>USINV</b>	Not present
<b>DSL/NDSL</b>	Not present
<b>EINECS/ ELINCS</b>	Not Present
<b>ENCS</b>	Not Present
<b>China</b>	Not Present
<b>KECL</b>	Not Present
<b>PICCS</b>	Not Present
<b>AICS</b>	Not Present
<b>TSCA</b>	Not Present

**TSCA** - United States Toxic Substances Control Act Section 8(b) Inventory

**DSL/NDSL** - Canadian Domestic Substances List/Non-Domestic Substances List

**EINECS/ELINCS** - European Inventory of Existing Commercial Chemical Substances/EU List of Notified Chemical Substances

**ENCS** - Japan Existing and New Chemical Substances

**IECSC** - China Inventory of Existing Chemical Substances

**KECL** - Korean Existing and Evaluated Chemical Substances

**PICCS** - Philippines Inventory of Chemicals and Chemical Substances

**AICS** - Australian Inventory of Chemical Substances

**Federal Regulations****SARA 313**

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product contains a chemical or chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372:

**CERCLA**

Not applicable

Chemical name	RQ	CERCLA EHS RQs	RQ
Ethylene glycol 107-21-1	5000 lb		RQ 5000 lb final RQ RQ 2270 kg final RQ

**CERCLA**

Component	RQ
Ethylene glycol 107-21-1 ( 6 )	5000 lb

SARA Product RQ 0

**RCRA****Pesticide Information**

Component	FIFRA - Restricted Use	FIFRA - Pesticide Product Other Ingredients	FIFRA - Listing of Pesticide Chemicals	California Pesticides - Restricted Materials
Propanil 709-98-8 ( 41.2 )			X	Present
Bensulfuron-methyl 83055-99-6 ( 0.32 )			X	
Ethylene glycol 107-21-1 ( 6 )			X	
Naphthalene and alkylnaphthalenesulfonic acid, formaldehyde condensed, sodium salt 68425-94-5 ( 2.5 )			X	

**State Regulations**

California Proposition 65 This product contains the following Proposition 65 chemicals:

Component	California Prop. 65
Ethylene glycol 107-21-1 ( 6 )	Developmental

**State Right-to-Know**

Chemical name	Massachusetts	New Jersey	Pennsylvania	Illinois	Rhode Island
Propanil - 709-98-8		X			
Ethylene glycol - 107-21-1	X	X	X	X	

**International regulations****U.S. EPA Label information**

EPA Pesticide registration number 70506-361

**16. Other Information**

**NFPA** HEALTH 2 flammability 1 Instability 0 Physical hazard -

Preparation Date 20-May-2015

Revision date 23-Sep-2020

**Revision Summary**

Update logo Update registration number Update section 2

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End of SDS