Safety Data Sheet
DYVEL DSP HERBICIDE

1. Identification

Product identifier used on the label

DYVEL DSP HERBICIDE

Recommended use of the chemical and restriction on use
Recommended use*: herbicide

* The “Recommended use” identified for this product is provided solely to comply with a Federal requirement and is not part of the seller's published specification. The terms of this Safety Data Sheet (SDS) do not create or infer any warranty, express or implied, including by incorporation into or reference in the seller's sales agreement.

Details of the supplier of the safety data sheet

Company:

Emergency telephone number

Other means of identification
PCP # 27856

2. Hazards Identification

According to Controlled Products Regulations (CPR) (SOR/88-66)

Emergency overview

WARNING:
POISON.
Contains the allergen soy.
KEEP OUT OF REACH OF CHILDREN.
Causes eye irritation.
Prolonged or repeated contact may result in dermatitis.
Avoid contact with the skin, eyes and clothing.
Avoid inhalation of dusts/mists/vapours.

3. Composition / Information on Ingredients

According to Hazardous Products Regulations (HPR) (SOR/2015-17)

CAS Number	Weight %	Chemical name
93-65-2	>= 0.3 - < 1.0%	mecoprop
124-40-3	>= 1.0 - < 3.0%	dimethylamine
1918-00-9	>= 7.0 - < 10.0%	Sodium Dicamba
2008-39-1	>= 25.0 - < 50.0%	2,4-D DMA salt
9036-19-5	>= 0.3 - < 1.0%	Isooctylphenol ethoxylate
16484-77-8	>= 5.0 - < 10.0%	mecoprop-P

4. First-Aid Measures

Description of first aid measures

General advice:
Remove contaminated clothing.

If inhaled:
Keep patient calm, remove to fresh air, seek medical attention. Immediately administer a corticosteroid from a controlled/metered dose inhaler.

If on skin:
Immediately wash thoroughly with plenty of water, apply sterile dressings, consult a skin specialist.

If in eyes:
Immediately wash affected eyes for at least 15 minutes under running water with eyelids held open, consult an eye specialist.

If swallowed:
Immediately rinse mouth and then drink 200-300 ml of water, seek medical attention.

Most important symptoms and effects, both acute and delayed

Indication of any immediate medical attention and special treatment needed

Note to physician
Treatment: Treat according to symptoms (decontamination, vital functions), no known specific antidote.

5. Fire-Fighting Measures

Extinguishing media

Suitable extinguishing media:
water spray, carbon dioxide, foam, dry powder

Special hazards arising from the substance or mixture
Hazards during fire-fighting:
No particular hazards known.

Advice for fire-fighters
Protective equipment for fire-fighting:
Firefighters should be equipped with self-contained breathing apparatus and turn-out gear.

Further information:
Collect contaminated extinguishing water separately, do not allow to reach sewage or effluent systems. Dispose of fire debris and contaminated extinguishing water in accordance with official regulations. In case of fire and/or explosion do not breathe fumes. Keep containers cool by spraying with water if exposed to fire.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures
Do not breathe vapour/spray. Use personal protective clothing. Avoid contact with the skin, eyes and clothing.

Environmental precautions
Do not discharge into drains/surface waters/groundwater. Do not discharge into the subsoil/soil.

Methods and material for containment and cleaning up
For small amounts: Pick up with suitable absorbent material.
For large amounts: Dike spillage. Pump off product.
Dispose of absorbed material in accordance with regulations.

7. Handling and Storage

Precautions for safe handling
Avoid contact with skin and eyes.

Protection against fire and explosion:
No special precautions necessary. The substance/product is non-combustible. Product is not explosive.

Conditions for safe storage, including any incompatibilities
Segregate from foods and animal feeds.

Further information on storage conditions: Keep in a cool, well-ventilated place. Keep container dry.
Keep away from food, drink and animal feeding stuffs.
Keep away from heat. Protect from direct sunlight.

8. Exposure Controls/Personal Protection

Users of a pesticidal product should refer to the product label for personal protective equipment requirements.

No occupational exposure limits known.

Advice on system design:
Local exhaust ventilation required.

Personal protective equipment

Respiratory protection:
Breathing protection if gases/vapours are formed.

Hand protection:
Wear chemical resistant protective gloves.

Eye protection:
Tightly fitting safety goggles (chemical goggles).

Body protection:
Protective coverall and/or impermeable apron and boots as necessary.

9. Physical and Chemical Properties

Form:	liquid	
Odour:	fish-like	
Odour threshold:	Not determined due to potential health hazard by inhalation.	
Colour:	product specific	
pH value:	The product has not been tested.	
Freezing point:	< 0 °C The statements are based on the properties of the individual components.	
Boiling point:	approx. 100 °C The statements are based on the properties of the individual components.	
Flash point:	No flash point - Measurement made up to the boiling point.	
Flammability:	not highly flammable	
Lower explosion limit:	As a result of our experience with this product and our knowledge of its composition we do not expect any hazard as long as the product is used appropriately and in accordance with the intended use.	
Upper explosion limit:	As a result of our experience with this product and our knowledge of its composition we do not expect any hazard as long as the product is used appropriately and in accordance with the intended use.	
Vapour pressure:	approx. 23 hPa (20 °C) Information applies to the solvent.	
Density:	approx. 1.16 g/cm3 (20 °C)	
Vapour density:	not applicable	
Partitioning coefficient n-octanol/water (log Pow):	The statements are based on the properties of the individual components.	
Information on: 2,4-D-DMA		
Partitioning coefficient n-octanol/water (log Pow):	-0.83 (25 °C) The values mentioned are those of the active ingredient.	
Information on: dicamba		
Partitioning coefficient n-octanol/water (log Pow):	-0.55 (25 °C)	(OECD Guideline 107)

	-1.8 (25 °C)	(OECD Guideline 107)
	-1.9 (25 °C)	(OECD Guideline 107)

Information on: mecoprop-P (ISO); (R)-2-(4-chloro-o-tolyloxy)propionic acid

Partitioning coefficient n-octanol/water (log Pow):	-0.23 (25 °C)	(OECD Guideline 117)
	0.02 (25 °C)	(OECD Guideline 107)

Self-ignition temperature:	not self-igniting
Thermal decomposition:	No decomposition if stored and handled as prescribed/indicated.
Viscosity, dynamic:	not determined
Solubility in water:	soluble
Evaporation rate:	not applicable

10. Stability and Reactivity

Reactivity
No hazardous reactions if stored and handled as prescribed/indicated.

Oxidizing properties:
not fire-propagating

Chemical stability
The product is stable if stored and handled as prescribed/indicated.

Possibility of hazardous reactions
The product is chemically stable.

Conditions to avoid
No conditions known that should be avoided.

Incompatible materials
No substances known that should be avoided.

Hazardous decomposition products

Decomposition products:
Hazardous decomposition products: carbon monoxide, carbon dioxide, nitrogen oxides, amines, chlorides

Thermal decomposition:
No decomposition if stored and handled as prescribed/indicated.

11. Toxicological information

Primary routes of exposure

Routes of entry for solids and liquids are ingestion and inhalation, but may include eye or skin contact. Routes of entry for gases include inhalation and eye contact. Skin contact may be a route of entry for liquefied gases.

Acute Toxicity/Effects

Acute toxicity
Assessment of acute toxicity: The product has not been tested. The statement has been derived from the properties of the individual components.

Oral

Information on: 2,4-D-DMA
Type of value: LD50
Species: rat
Value: 863 mg/kg

Information on: dicamba
Type of value: LD50
Species: rat (male/female)
Value: 1,581 mg/kg

Information on: Aryloxyalkanoic acid
Type of value: LD50
Species: rat (male/female)
Value: 431 - 1,050 mg/kg

Inhalation

Information on: 2,4-D-DMA
Type of value: LC50
Species: rat
Value: > 3.5 mg/l

Information on: Dicamba
Type of value: LC50
Species: rat (male)
Value: 4.46 mg/l
Exposure time: 4 h

Information on: mecoprop-P (ISO); (R)-2-(4-chloro-o-tolyloxy)propionic acid
Type of value: LC50
Species: rat
Value: > 4.68 mg/l

Dermal

Information on: 2,4-D-DMA
Type of value: LD50
Species: rabbit
Value: > 2,000 mg/kg

Information on: Dicamba
Type of value: LD50
Species: rat
Value: > 2,000 mg/kg

Information on: mecoprop-P (ISO); (R)-2-(4-chloro-o-tolyloxy)propionic acid
Type of value: LD50
Species: rat
Value: > 2,000 mg/kg

Assessment other acute effects
Assessment of STOT single:
Based on the available information there is no specific target organ toxicity to be expected after a single exposure.

The product has not been tested. The statement has been derived from the properties of the individual components.

Irritation / corrosion
Assessment of irritating effects: Irritating to eyes.

Skin

Information on: 2,4-D-DMA
Species: rabbit
Result: Slightly irritating.

Information on: dicamba
Species: rabbit
Result: non-irritant
Method: OECD Guideline 404

Information on: Aryloxyalkanoic acid
Species: rabbit
Result: non-irritant

Eye

Information on: 2,4-D-DMA
Species: rabbit
Result: Severely irritating.

Species: rabbit
Result: Irritant.

Information on: dicamba
Species: rabbit
Result: Risk of serious damage to eyes.

Information on: Aryloxyalkanoic acid
Species: rabbit
Result: Severely irritating.

Sensitization

Information on: 2,4-D-DMA
Species: guinea pig
Result: Skin sensitizing effects were not observed in animal studies.

Species: guinea pig
Result: Non-sensitizing.

Information on: dicamba
Guinea pig maximization test

Species: guinea pig
Result: Non-sensitizing.
Method: OECD Guideline 406

Information on: Aryloxyalkanoic acid
Buehler test
Species: guinea pig
Result: Skin sensitizing effects were not observed in animal studies.

Chronic Toxicity/Effects

Repeated dose toxicity
Assessment of repeated dose toxicity: The product has not been tested. The statement has been derived from the properties of the individual components. No substance-specific organtoxicity was observed after repeated administration to animals.

Genetic toxicity
Assessment of mutagenicity: The product has not been tested. The statement has been derived from the properties of the individual components. Mutagenicity tests revealed no genotoxic potential.

Information on: 2,4-D-DMA
Assessment of mutagenicity: Most of the results from the available studies show no evidence of a mutagenic effect.

Information on: dicamba
Assessment of mutagenicity: No mutagenic effect was found in various tests with microorganisms and mammalian cell culture. The substance was not mutagenic in a test with mammals.

Information on: Aryloxyalkanoic acid
Assessment of mutagenicity: The substance was not mutagenic in bacteria.

Carcinogenicity
Assessment of carcinogenicity: The product has not been tested. The statement has been derived from the properties of the individual components. The results of various animal studies gave no indication of a carcinogenic effect.

Information on: 2,4-D-DMA
Assessment of carcinogenicity: The substance is not considered to pose a carcinogenic risk at low human exposure levels.

Information on: dicamba
Assessment of carcinogenicity: In long-term studies in rats and mice in which the substance was given by feed, a carcinogenic effect was not observed.

Information on: Aryloxyalkanoic acid
Assessment of carcinogenicity: No reliable data was available concerning carcinogenic activity.

Reproductive toxicity
Assessment of reproduction toxicity: The product has not been tested. The statement has been derived from the properties of the individual components. The results of animal studies gave no indication of a fertility impairing effect.

Information on: 2,4-D-DMA

Assessment of reproduction toxicity: The results of animal studies gave no indication of a fertility impairing effect.

Information on: dicamba
Assessment of reproduction toxicity: The results of animal studies gave no indication of a fertility impairing effect.

Information on: Aryloxyalkanoic acid

Teratogenicity
Assessment of teratogenicity: The product has not been tested. The statement has been derived from the properties of the individual components. Animal studies gave no indication of a developmental toxic effect at doses that were not toxic to the parental animals.

Information on: 2,4-D-DMA
Assessment of teratogenicity: The data available for an assessment of the effect of the substance on developmental toxicity are not sufficient for a proper evaluation.

Information on: dicamba
Assessment of teratogenicity: No indications of a developmental toxic / teratogenic effect were seen in animal studies.

Information on: Aryloxyalkanoic acid

Other Information
Misuse can be harmful to health.

Symptoms of Exposure

12. Ecological Information

Toxicity

Toxicity to fish

Information on: 2,4-D-DMA
LC50 (96 h) 100 mg/l, Pimephales promelas

Information on: dicamba
LC50 (96 h) > 100 mg/l, Oncorhynchus mykiss

Information on: mecoprop-P (ISO); (R)-2-(4-chloro-o-tolyloxy)propionic acid
LC50 (96 h) > 100 mg/l, Lepomis macrochirus

Aquatic invertebrates

Information on: 2,4-D-DMA
EC50 (48 h) 134.2 mg/l, Daphnia magna

Information on: dicamba
EC50 (48 h) 110.7 mg/l, Daphnia magna

Information on: mecoprop-P (ISO); (R)-2-(4-chloro-o-tolyloxy)propionic acid
EC50 (48 h) > 91 mg/l, Daphnia magna

Aquatic plants

Information on: 2,4-D-DMA
EC50 (14 d) 0.011 mg/l, aquatic plant
No observed effect concentration (14 d) 0.0047 mg/l, aquatic plant

Information on: dicamba
No observed effect concentration (72 h) 0.011 mg/l, Skeletonema costatum

Information on: mecoprop-P (ISO); (R)-2-(4-chloro-o-tolyloxy)propionic acid
EC50 1.3 mg/l (growth rate), Lemna gibba
EC10 0.23 mg/l (growth rate), Lemna gibba

Chronic toxicity to fish

Information on: 2,4-D-DMA
No observed effect concentration (32 d) > 63.8 mg/l, Pimephales promelas

Information on: dicamba

Information on: mecoprop-P (ISO); (R)-2-(4-chloro-o-tolyloxy)propionic acid
No observed effect concentration (28 d) > 100 mg/l, Oncorhynchus mykiss
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Chronic toxicity to aquatic invertebrates

Information on: 2,4-D-DMA
No observed effect concentration (21 d) > 79 mg/l, Daphnia magna

Information on: dicamba

Information on: mecoprop-P (ISO); (R)-2-(4-chloro-o-tolyloxy)propionic acid
No observed effect concentration (21 d) > 100 mg/l, Daphnia magna
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Persistence and degradability

Assessment biodegradation and elimination (H2O)
The product has not been tested. The statement has been derived from the properties of the individual components.

Assessment biodegradation and elimination (H2O)

Information on: 2,4-D-DMA

Readily biodegradable (according to OECD criteria).

Information on: dicamba

Not readily biodegradable (by OECD criteria).

Information on: mecoprop-P (ISO); (R)-2-(4-chloro-o-tolyloxy)propionic acid

Not readily biodegradable (by OECD criteria).

Bioaccumulative potential

Assessment bioaccumulation potential
The product has not been tested. The statement has been derived from the properties of the individual components.

Assessment bioaccumulation potential

Information on: 2,4-D-DMA

Information on: dicamba

Because of the n-octanol/water distribution coefficient (log Pow) accumulation in organisms is not to be expected.

Information on: Aryloxyalkanoic acid

Because of the n-octanol/water distribution coefficient (log Pow) accumulation in organisms is not to be expected.

Mobility in soil

Assessment transport between environmental compartments
The product has not been tested. The statement has been derived from the properties of the individual components.

Information on: 2,4-D-DMA

Following exposure to soil, the product trickles away and can - dependant on degradation - be transported to deeper soil areas with larger water loads.

Information on: dicamba

The substance will not evaporate into the atmosphere from the water surface.
Following exposure to soil, the product trickles away and can - dependant on degradation - be transported to deeper soil areas with larger water loads.

Information on: mecoprop-P (ISO); (R)-2-(4-chloro-o-tolyloxy)propionic acid

Following exposure to soil, the product trickles away and can - dependant on degradation - be transported to deeper soil areas with larger water loads.

Additional information

Other ecotoxicological advice:
Do not discharge product into the environment without control.

13. Disposal considerations

Waste disposal of substance:
Dispose of in a licensed facility. Observe all local regulations.

Container disposal:
Do not reuse empty containers. Refer to manufacturer/supplier for information on recovery/recycling.

14. Transport Information

Land transport
TDG

Not classified as a dangerous good under transport regulations

Sea transport
IMDG

Hazard class:	9
Packing group:	III
ID number:	UN 3082
Hazard label:	9, EHSM
Marine pollutant:	YES
Proper shipping name:	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (contains DIMETHYLAMMONIUM 2,4-DICHLOROPHENOXYACETATE, MECOPROP-P)

Air transport
IATA/ICAO

Hazard class:	9
Packing group:	III
ID number:	UN 3082
Hazard label:	9, EHSM
Proper shipping name:	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (contains DIMETHYLAMMONIUM 2,4-DICHLOROPHENOXYACETATE, MECOPROP-P)

15. Regulatory Information

Federal Regulations

Registration status:

Crop Protection	DSL, CA	released / exempt
Chemical	DSL, CA	blocked / not listed

According to Controlled Products Regulations (CPR) (SOR/88-66)

WHMIS does not apply to this product.

16. Other Information

SDS Prepared by:
NA Product Regulations
SDS Prepared on: 2016/06/02

We support worldwide Responsible Care® initiatives. We value the health and safety of our employees, customers, suppliers and neighbors, and the protection of the environment. Our commitment to Responsible Care is integral to conducting our business and operating our facilities in a safe and environmentally responsible fashion, supporting our customers and suppliers in ensuring the safe and environmentally sound handling of our products, and minimizing the impact of our operations on society and the environment during production, storage, transport, use and disposal of our products.

END OF DATA SHEET