



Safety Data Sheet

According to Regulation (EC) No 453/2010 (REACH)

Trade name: Resolva Xtra Concentrate weedkiller

MAPP 19313 PCS 06563

Version:2.0

Revision date: 29.01.2021

Print date: 29.01.2021

Supplemental Information

EUH401 To avoid risks to human health and the environment, comply with the instructions for use.

SP1 Do not contaminate water with the product or its container (Do not clean application equipment near surface water)

2.3 Other Hazards N/A

3. COMPOSITION/INFORMATION ON INGREDIENTS

3.1 Substances

3.2 Description Herbicide containing 37.55 g/l Mecoprop-P and 4.675 g/l Dicamba as a soluble concentrate

Hazardous Ingredients

Ingredient	Identifiers	Concentration %W/W	Warning Symbols	Regulation (EC) No 1272/2008 (CLP)
(R)and (S)-2-(4-Chloro-2-methylphenoxy) propionic acid potassium salt (Mecoprop-P)	EC: 240-539-0 CAS: 16484-77-8	3.45 % W/W		Acute Tox. 4 H302 Eye Dam. 1 H318 Aquatic Chr. 2 H411
3,6-dichloro-2-methoxy benzoic acid (Dicamba)	EC: 217-635-6 CAS: 1918-00-9	0.35% W/W		Acute Tox. 4 H302, H332 Eye Dam. 1 H318 Aquatic Chr. 2 H411
Potassium Hydroxide	EC: 215-181-3 CAS: 1310-58-3	0 - 0.5%		Acute Tox. 4 H302 Skin Corr. 1A H314

Additional information:

Full text of H- and EUH-phrases: see SECTION 16.



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4. FIRST AID MEASURES

4.1 Description of first aid measures

General information: Have the product container, label or Material Safety Data Sheet with you when calling a poison control center or physician, or going for treatment.

Inhalation: Move person to fresh air.
If there is breathing difficulty or coughing, keep patient warm and at rest.
Seek medical advice immediately.

Skin Contact: Take off all contaminated clothing.
Wash all exposed skin area with mild soap and gently flowing water for at least 10 minutes
If skin irritation persists call a physician.
Wash contaminated clothing before re-use.

Eye Contact: Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes.
Remove contact lenses and continue flushing.
Take care not to wash the chemical from one eye into the other
Seek medical attention immediately.

Ingestion: Rinse mouth with water if the person is conscious
Do NOT induce vomiting.
Seek medical advice immediately and show container or label.

4.2 Most important symptoms and effects, both acute and delayed

None known

4.3 Indication of any immediate medical attention and special treatment needed

None known

5. FIRE FIGHTING MEASURES

5.1 Extinguishing Media:

Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide



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5.2 Specific Hazards Arising From the Substance Or Mixture:

As the product contains combustible organic components, fire will produce dense black smoke containing hazardous products of combustion (HCl, Cl₂, CO, CO₂, NO_x).

Exposure to decomposition products may be a hazard to health

5.3 Advice for Fire Fighters:

Wear full protective clothing and self-contained breathing apparatus.

Additional Information:

Standard procedure for chemical fires.

Collect contaminated fire extinguishing water separately

Do not allow run-off from fire fighting to enter drains or water courses.

Use water spray or fog for cooling exposed containers

6. ACCIDENTAL RELEASE MEASURES

6.1 Personal Precautions, Protective Equipment and Emergency Procedures:

Wear personal respiratory and eye protective equipment; refer to protective measures listed in sections 8.

6.2 Environmental Precautions:

Prevent further leakage or spillage if safe to do so.

Do not flush into surface water or sanitary sewer system.

6.3 Methods and Materials For Containment And Cleaning Up:

Contain spillage, and then soak up with non-combustible absorbent material (e.g. sand, silica gel, acid binder, universal binder). Sweep and shovel into suitable containers for disposal according to local / national regulations

Additional information: If the product contaminates rivers and lakes or drains inform respective authorities.

7. HANDLING AND STORAGE

7.1 Precautions for safe handling

Handling:

- Do not eat, drink or smoke when using this product



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- Wash hands and other exposed areas with mild soap and water before eat, drink or smoke and when leaving work
- Handle in accordance with good industrial hygiene and safety procedures
- Do not breathe spray

7.2 Conditions for safe storage, including any incompatibilities

- Store in original container.
- Keep away from naked lights
- Keep containers closed tightly in a dry, cool and well-ventilated place.
- Keep out of reach of children
- Keep away from food, drink and animal feeding stuffs

7.3 Specific End Uses:

Use only as herbicide according to the instruction on the label

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

8.1 Control Parameters

Ingredients with limit values that require monitoring at the workplace:

Ingredient	Work Exposure Limit (WEL)	
	Long-term Exposure Limit (8-hr TWA reference period)	Short-term Exposure Limit (15 minute reference period)
(R)-2-(4-Chloro-2-methylphenoxy)propionic acid potassium salt (Mecoprop-P)	10 mg/m ³	20 mg/m ³
3,6-dichloro-2-methoxy benzoic acid, potassium salt (Dicamba)	10 mg/m ³	
Potassium Hydroxide		2 mg/m ³

8.2 Exposure controls:

The normal precautionary measures for handling chemicals should be observed



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8.2.1 Appropriate engineering controls: None known

8.2.2 Personal protective equipment: Avoid contact with skin, eyes and clothing.

- **Respiratory Protection:** No personal respiratory protective equipment normally required when used with adequate ventilation
- **Hand Protection:** Wear chemical resistant gloves.
- **Eye Protection:** Safety glasses or goggles
- **Skin and Body Protection:** Lightweight protective clothing appropriate to the conditions of use

Hygiene Measures: Remove and wash contaminated clothing and gloves, including the inside, before re-use
Wash hands before breaks and immediately after handling the product.
When using, do not eat, drink or smoke
Shower or bath at the end of working

8.2.3 Environmental exposure controls: none known

9. PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties

Appearance: Clear brown liquid

Physical state: Liquid

Colour: clear brown

Odour: Slight phenolic odour

Odour threshold: none known



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9.2 Other information:

	Value	Concentration	Method	Temperature	Pressure	Remark
pH	9.6-11.0	-	-	20°C	-	-
Melting point/freezing point	-	-	-	-	-	-
Initial boiling point/boiling range	-	-	-	-	-	-
Flash point	-	-	-	-	-	-
-Evaporation rate	-	-	-	-	-	-
Flammability (solid, gas)	-	-	-	-	-	-
Upper/lower flammability or explosive limits	-	-	-	-	-	-
Upper explosive limits	-	-	-	-	-	-
Lower explosive limits	-	-	-	-	-	-
Vapour pressure	-	-	-	-	-	-
Vapour density	-	-	-	-	-	-
Relative density	1.022g/ml	-	-	-	-	-
Solubility(ies)	soluble in water	-	-	-	-	-
Partition coefficient: n-octanol/water	-	-	-	-	-	-
Auto-ignition temperature	-	-	-	-	-	-
Decomposition temperature	-	-	-	-	-	-
Viscosity	-	-	-	-	-	-
Viscosity, dynamic	-	-	-	-	-	-
Viscosity, cinematic	-	-	-	-	-	-
Explosive properties	-	-	-	-	-	-
Oxidising properties	-	-	-	-	-	-

Physical hazards: N/A



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10. STABILITY AND REACTIVITY

10.1 Reactivity: The product is stable under normal conditions of use and storage

10.2 Chemical stability: The product is stable under normal conditions of use and storage

10.3 Possibility of hazardous reactions: None known

10.4 Conditions to Avoid: Avoid direct heat. Protect from frost

10.5 Incompatible materials: Strong acid, strong bases and oxidising agents

10.6 Hazardous decomposition products: The product is stable under normal conditions of use and storage. Combustion or thermal decomposition will evolve toxic or irritant vapours: hydrogen chloride, halogens, nitrogen oxides, carbon monoxide, carbon dioxide

11. TOXICOLOGICAL INFORMATION

Toxicokinetics, metabolism and distribution

11.1 Information on toxicological effects

11.1.1 Substances:

Acute Toxicity: No test data available. Information on ingredients below:

Dicamba ($\geq 97\%$): Median lethal dose Oral, LD50 1581 mg/kg (Rat).
Median lethal dose Dermal, LD50 >2000 mg/kg (Rat)
Median lethal concentration Inhalation, LC50 4.46 mg/l, 4h, (Rat)

Mecoprop-P (600g/l AI): Median lethal dose Oral, LD50 500-2000 mg/kg (Rat).
Harmful if swallowed
Median lethal dose Dermal, LD50 >2000 ml/kg (Rat)
Median lethal concentration Inhalation, LC50 >5.4 mg/l, (Rat)



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Potassium Hydroxide: Median lethal dose Oral, LD50 273 mg/kg (Rat). Strong caustic effect

Corrosion/Irritation: No test data available. Information on ingredients below:

On the skin: Dicamba: Mildly irritating
Potassium hydroxide: Strong caustic effect
Mecoprop-p: There may be irritation and redness at the site of contact

On the eye: Dicamba: Severely irritating
Mecoprop-P: There may be irritation and redness. The eyes may water profusely
Potassium hydroxide: Strong caustic effect

Respiratory or Skin Sensitization: No test data available. Information on ingredients below:

Dicamba: Not sensitizing

CMR effects (carcinogenicity, mutagenicity and toxicity for reproduction):

No test data available. Information on ingredients below:

Dicamba: This product is not known to be mutagenic, carcinogenic or toxic to reproduction and development

STOT- repeated exposure: No test data available. Information on ingredients below:

Dicamba: This product is not known to be toxic in repeat doses

Other information: None known

12. ECOLOGICAL INFORMATION

12.1 Toxicity : Toxic to aquatic organisms. Information on ingredients below:

- **Toxicity To Fish:**
Dicamba: LC₅₀ Oncorhynchus mykiss (Rainbow trout), 135.4 mg/l, 96h
Mecoprop-P: LC₅₀ Rainbow trout, >100 mg/l, 96h
Potassium Hydroxide: LC₅₀ Gambusia affinis, 80mg/l, 96h
- **Toxicity To Aquatic Invertebrates:**
Dicamba: EC₅₀ Daphnia magna (water flea), 110.7 mg/l, 48h
Mecoprop-P: EC₅₀ Daphnia magna (water flea), >91 mg/l, 48h
- **Toxicity To Aquatic Plants:**
Dicamba: EbC₅₀ Anabaena flos-aquae (Bluegreen algae), 43.1 mg/l, 72 h



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Mecoprop-P: ErC₅₀ Pseudokirchneriella subcapitata, 16.2 mg/l, 72 h or 96h
ErC₅₀ Lemna minor, 1.6 mg/l, 72h or 96h

- **Toxicity To Bacteria: Dicamba:** IC₅₀ activated sewage sludge >500mg/l, 3h

12.2 Persistence & Degradability: Dicamba: Not readily biodegradable. No persistent in water: degradation half life 35-46 d. No persistent in soil: degradation half life 1.4-11d

Mecoprop-P: Rapidly biodegradable

Potassium Hydroxide: Not applicable to inorganic substances

12.3 Bio-accumulative Potential: Dicamba: Potential for bioaccumulation is low

Mecoprop-P: Potential for bioaccumulation is low based on log P_{ow}

Potassium Hydroxide: Accumulation in organisms is not expected

12.4 Mobility:

Dicamba: Very high mobility in soil

Mecoprop-P: Fairly mobile but rapidly degraded in aerobic soils

Potassium Hydroxide: Slightly hazardous for water. Do not allow undiluted product or large quantities to reach ground water, water course or sewage system

12.5 Results of PBT and vPvB assessment: Ingredients not identified as PBT nor vPvB substances

12.6 Other adverse effects: None known

13. DISPOSAL CONSIDERATIONS

13.1 Waste treatment methods

Product:

Do not contaminate ponds, waterways or ditches with chemical or used container.
Do not dispose of waste into sewer.

Where possible recycling is preferred to disposal or incineration.

If recycling is not practicable, dispose at licensed waste disposal site capable of accepting pesticides in compliance with applicable regulations.

Contaminated Packaging: Empty remaining contents.

Triple rinse containers. The rinse water should be added to the final spray solution. It must not be put down the drain, sink or toilet



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Completely empty containers can be put in the bin or disposed of in compliance with applicable local regulations

14. TRANSPORT INFORMATION

	Land transport (ADR/RID)	Inland waterway transport (ADN)	Sea transport (IMDG)	Air transport (ICAO-TI / IATA-DGR)
14.1 UN No.	Not dangerous goods	Not dangerous goods	Not dangerous goods	Not dangerous goods
14.2 UN Proper shipping name	Not dangerous goods	Not dangerous goods	Not dangerous goods	Not dangerous goods
14.3 Transport hazard class(es)	Not dangerous goods	Not dangerous goods	Not dangerous goods	Not dangerous goods
Hazard label(s)	Not dangerous goods	Not dangerous goods	Not dangerous goods	Not dangerous goods
14.4 Packing group	Not dangerous goods	Not dangerous goods	Not dangerous goods	Not dangerous goods
14.5 Environmental hazards	Not dangerous goods	Not dangerous goods	Not dangerous goods	Not dangerous goods

14.6 Special precautions for user: None known

14.7 Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Additional information: None known

15. REGULATORY INFORMATION

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture:

Contains: Potassium salt of CMPP-P and Dicamba

15.1.1 EU regulations: Registration Numbers: MAPP 16848 PCS 05323



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15.2 Chemical Safety Assessment:

For this substance a chemical safety assessment is not required.

16. OTHER INFORMATION

16.1 Indication of changes: revised and updated.

16.2 Abbreviations and Acronyms

ADR	International Carriage of Dangerous Goods by Road
CAS No	Chemicals Abstract Service Registry Number
Directive 67/548/EEC	Dangerous Substances Directive (DSD)
EC No	European Community Number for chemicals within EU regulations
IATA-DGR	Dangerous Goods Regulations by the International Air Transport Association
IMDG Code	International Maritime Dangerous Goods Code
PBT	Persistent, Bioaccumulative and Toxic Properties
Regulation (EC) No 1272/2008	Classification, Labelling and Packaging (CLP)
RID	International Transport of Dangerous Goods by Rail
vPvB	Very Persistent and Very Bioaccumulative Properties

16.3 Key literature references and sources for data : Hygeia Ltd

16.4 Classification for mixtures and used evaluation method according to regulation (EC) 1207/2008 [CLP]:

CLP/GHS: Acute Tox 4; Acute Toxicity, Category 4
Aquatic Chr 2; Aquatic Chronic Toxicity, Category 2
Eye Dam 1; Eye Damage, Category 1
Skin Corr 1A; Skin Corrosion, Category 1A

16.5 Full texts of abbreviated H Statements refer to under Section 3:

H302	Harmful if swallowed
H314	Causes severe skin burns and eye damage
H318	Causes serious eye damage
H332	Harmful if inhaled
H411	Toxic to aquatic life with long-lasting effects



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16.6 Recommended uses and restrictions:

Follow the instructions

16.7 Further information

Before using this product, ensure that you read and understand its label

MSDS information:

This Safety Data Sheet is prepared in compliance with Directive 1999/45/EC, 1272/2008 and Annex I of the REACH regulation 453/2010.

This safety data sheet provides health and safety information. This product is to be used in applications with best use practice. Individuals handling this product should be informed under COSHH of the recommended safety precautions and should have access to this information. The product information in this data sheet is to the best of our knowledge correct as at the date of publication. Westland Horticulture Limited does not accept responsibility for damage caused by incorrect use of this information.

Training and related advice:

This document contains important information to ensure the safe storage, handling and use of this product. It is the responsibility of your organisation to ensure that the information contained in this document is communicated to the end user and that all necessary training to enable the product to be used correctly has been given.

For further information please contact Westland Horticulture Ltd, 14 Granville Industrial Estate, Granville Road, Dungannon, County Tyrone, BT70 1NJ.