

SAFETY DATA SHEET

Section 1: IDENTIFICATION OF THE SUBSTANCE / MIXTURE AND SUPPLIER

Product Name:	ELATUS PLUS
Design Code:	A15457H
Recommended Use:	For the control of a wide range of diseases in Wheat
Company Details:	Syngenta Crop Protection Limited
Address:	Tower II, Level 7, 110 Symonds Street Private Bag 92618, Symonds Street AUCKLAND NEW ZEALAND
Telephone number:	(weekdays) 09 - 306 1500
Emergency Telephone number:	(24 Hours) 0800 734 607
National Poisons & Hazchem Information Centre :	0800 POISON (0800 764 766)
Date of Preparation:	4 May 2017

Section 2: HAZARDS IDENTIFICATION

Hazard classification:	6.1D, 8.3A, 6.5B, 6.9B, 9.1A, 9.2C, 9.3C
Priority Identifier:	DANGER KEEP OUT OF REACH OF CHILDREN
Secondary Identifiers:	6.1D May be harmful if swallowed or inhaled. 8.3A This product is corrosive and may cause eye damage. 6.5B May cause sensitisation from prolonged skin contact. Avoid skin contact. 6.9B May cause organ damage from repeated oral exposure at high doses. May cause respiratory irritation. 9.1A Very toxic to aquatic organisms. 9.2C Harmful to the soil environment. 9.3C Harmful to terrestrial vertebrates.

Section 3: COMPOSITION / INFORMATION ON INGREDIENTS

<i>Mixture:</i>		
Chemical Identity of ingredients:		
Ingredient	CAS no.	Content (% w/w)
Benzovindiflupyr	1072957-71-1	>=10-<20
Mixture of octanoic acid-, decanoic acid-, N,N-dimethylamide	1118-92-9 / 14433-76-2	>=20-<30
Solvent naphtha (petroleum), highly arom.	64742-94-5	>=20-<25
Poly(oxy-1,2-ethanediyl), alpha-(9Z)-9-octadecenyl-omega-hydroxy-	9004-98-2	>=20-<30
Poly(oxy-1,2-ethanediyl), -[2,4,6-tris(1-phenylethyl)phenyl]- - hydroxy-	99734-09-5	>=1-<2.5
other ingredients determined not to be hazardous	-	to 100%

Section 4: FIRST AID MEASURES

Necessary First Aid measures:	<p>For advice contact the National Poisons Centre on 0800 POISON (0800 764 766) or a doctor immediately. Begin artificial respiration if the victim is not breathing. Use mouth to nose rather than mouth to mouth. Obtain medical attention.</p> <p>Swallowed: If swallowed see medical advice immediately and show this container or label. DO NOT induce vomiting as this product contains petroleum distillates and/or aromatic solvents. Rinse mouth.</p> <p>Eye: If concentrate or spray solution enters the eyes rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Remove contact lenses if present and easy to do. Continue rinsing. Immediately call the National Poisons Centre 0800 POISON (0800 764 766)</p> <p>Skin: If skin contact occurs remove contaminated clothing and flush skin and hair with running water. DO NOT scrub the skin. If skin irritation persists call a doctor. Wash contaminated clothing before re-use.</p> <p>Inhaled: If inhaled move the victim to fresh air immediately.</p>
Poisoning symptoms:	<p>No case of human poisoning due to this product is on record. Aspiration may cause pulmonary oedema and pneumonitis.</p>
Workplace facilities:	<p>No specific facilities required. Standard emergency equipment must be available.</p>
Hygiene Practices:	<p>Avoid contact with skin and eyes and inhalation of concentrate or spray mist.</p> <p>When mixing, applying or handling, wear full protective clothing such as impervious gloves, respirator, waterproof hat, coat and trousers (worn outside rubber boots). Suitable eye protection should be worn. If clothing becomes contaminated with product, remove clothing immediately.</p> <p>DO NOT eat, drink or smoke while using.</p> <p>Wash hands and exposed skin thoroughly with soap and water before meals and after work. Wash protective clothing daily after work and before reuse.</p>
Notes for Medical Personnel:	<p>No specific antidote is available. If poisoning is suspected apply symptomatic therapy.</p> <p>DO NOT INDUCE VOMITING: contains petroleum distillates and / or aromatic solvents.</p>

Section 5: FIRE-FIGHTING MEASURES

Type of Hazard:	This product is combustible.
Fire Hazard Properties:	As the product contains combustible organic components, fire will produce dense black smoke containing hazardous products of combustion. Exposure to decomposition products may be a hazard to health.
Regulatory Requirements: Extinguishing Media and methods:	Not applicable Extinguishing media – small fires Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide. Extinguishing media – large fires Alcohol-resistant foam or water spray. DO NOT use a solid water stream as it may scatter and spread fire.
Recommended Protective Clothing and advice for fire-fighters:	When fighting a major fire wear full protective clothing and self contained breathing apparatus. DO NOT allow run-off from fire fighting to enter drains or water courses. Cool closed containers exposed to fire with water spray.

Section 6: ACCIDENTAL RELEASE MEASURES

Personal Precautions:	Emergency Procedures: Ensure suitable personal protection during removal of spillages. This means wearing eye protection, chemically resistant gloves, boots and overalls.
Environmental Precautions:	Washings must be prevented from entering surface water drains or waterways.
Procedure for spill:	<ol style="list-style-type: none">(1) Keep all bystanders away.(2) Wear goggles, half face-piece respirator with combined dust and vapour cartridge, full length clothing and PVC gloves.(3) Reposition any leaking containers so as to minimise further leakage.(4) Dam and absorb spill with an absorbent material (e.g. sand or soil).(5) Shovel the absorbed spill into drums.(6) Decontaminate the spill area with detergent and water and rinse with the smallest volume of water practicable.
Procedure for Disposal:	Disposal of the absorbed material will depend upon the extent of the spill. Contaminated material must be disposed of in accordance with all local authority requirements. It is suggested: <ul style="list-style-type: none">• For quantities up to 50 litres of product bury in a secure approved landfill site.• For quantities greater than 50 litres seek advice from the manufacturer (use emergency contact number below) before attempting disposal. Contain in a secure location until disposal method is established.

Section 7: HANDLING AND STORAGE

Precautions for safe handling:	<p style="text-align: center;">Handling:</p> <p>No special technical protective measures against fire required. Avoid contact with skin and eyes. When using do not eat, drink or smoke.</p>
Regulatory Requirements:	This product must be under the control of an approved handler during use.
Handling practices:	Avoid contact with skin and eyes and inhalation of concentrate or spray mist. When using, do not eat, drink or smoke. Wash face and hands before eating, drinking or smoking.
Approved Handlers:	This product must be under the control of an Approved Handler.
Conditions for Safe Storage:	<p style="text-align: center;">Storage:</p> <p>Keep out of reach of children. Keep in original containers and tightly closed. Keep away from food, drink and animal feeding stuffs. Store in a cool, dry, well ventilated place and protect from sunlight.</p>
Store Site Requirements:	Stores containing quantities of 100 litres or more require signage and secondary containment.
Packaging:	Store in original container, tightly closed, away from foodstuffs.

Section 8: EXPOSURE CONTROL / PERSONAL PROTECTION

ALWAYS READ AND FOLLOW THE LABEL INSTRUCTIONS AND WARNINGS

Workplace Exposure Guidelines:																	
Application in the workplace:	<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 30%;">Components</th> <th style="width: 20%;">Exposure limit(s)</th> <th style="width: 20%;">Type of exposure limit</th> <th style="width: 30%;">Source</th> </tr> </thead> <tbody> <tr> <td>Benzovindiflupyr</td> <td>1 mg/m³</td> <td>TWA</td> <td>Syngenta</td> </tr> <tr> <td>Solvent naphtha (petroleum), highly arom</td> <td>8 ppm, 50 mg/m³</td> <td>TWA</td> <td>Supplier</td> </tr> <tr> <td>Cellulose, ethyl ether</td> <td>10 mg/m³</td> <td>TWA</td> <td>Supplier</td> </tr> </tbody> </table>	Components	Exposure limit(s)	Type of exposure limit	Source	Benzovindiflupyr	1 mg/m ³	TWA	Syngenta	Solvent naphtha (petroleum), highly arom	8 ppm, 50 mg/m ³	TWA	Supplier	Cellulose, ethyl ether	10 mg/m ³	TWA	Supplier
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Exposure standards outside the workplace:	Not required																
Engineering controls:	<p>Containment and/or segregation is the most reliable technical protection measure if exposure cannot be eliminated. The extent of these protection measures depends on the actual risks in use. Maintain air concentrations below occupational exposure standards. Where necessary, seek additional occupational hygiene advice.</p> <p>Follow precaution statements on the label and the use and safety directions in Code of Practice for the Management of Agrichemical NZS8409.</p>																
Personal Protection:	Use only protective equipment bearing the mark of the Standards Association with Australia/New Zealand. I																

Protective measures:	<p>The use of technical measures should always have priority over the use of personal protective equipment.</p> <p>When selecting personal protective equipment, seek appropriate professional advice.</p> <p>Personal protective equipment should be certified to appropriate standards (see Personal Protection above).</p>
Respiratory protection:	<p>A particulate filter respirator may be necessary until effective technical measures are installed.</p> <p>Protection provided by air-purifying respirators is limited.</p> <p>Use a self-contained breathing apparatus in cases of emergency spills, where exposure levels are unknown, or under any circumstances where air-purifying respirators may not provide adequate protection.</p>
Hand protection:	<p>Suitable material: Nitrile rubber</p> <p>Breakthrough time: >480 min</p> <p>Glove thickness: 0.5 mm</p> <p>Chemical resistant gloves should be used.</p> <p>Gloves should be certified to an appropriate standard.</p> <p>Gloves should have a minimum breakthrough time that is appropriate for the duration of the exposure.</p> <p>The breakthrough time of gloves varies according to the thickness, material and manufacturer.</p> <p>Gloves should be discarded and replaced if there is any indication of degradation or chemical breakthrough.</p>
Eye protection:	<p>If eye contact is possible, use tight fitting chemical safety goggles and a face shield.</p>
Skin and Body protection:	<p>Assess the exposure and select chemical resistant clothing based on the potential for contact and the permeation / penetration characteristics of the clothing material.</p> <p>Wash with soap and water after removing protective clothing.</p> <p>Decontaminate clothing before re-use, use disposable equipment (suits, aprons, sleeves, boots etc).</p> <p>Wear as appropriate: impervious protective suit.</p>
General Hygiene:	<p>Change work clothes daily. May irritate the skin. May cause eye damage. Avoid contact with eyes and skin. Do not inhale spray mist.</p> <p>If product gets on skin immediately wash area with soap and water.</p> <p>After use and before eating, drinking or smoking, wash hands, arms and face thoroughly with soap and water.</p>

Section 9: PHYSICAL AND CHEMICAL PROPERTIES

Appearance:	Clear to slightly turbid liquid
Colour:	Amber to light brown
Odour:	No data available
pH value	4-8 at 1% w/v
Flashpoint:	101°C at 101.9 kPa Pensky-Martens c.c.
Density:	0.978 g/cm ³ at 25°C
Viscosity, dynamic:	24.6 mPa.s at 40°C 70.7 mPa/s at 20°C
Viscosity, kinematic:	>=22.0 mm ² /s at 40°C
Oxidising properties:	Not oxidising
Explosive properties:	Not explosive
Surface tension:	31.3 mN/m at 20°C

Section 10: STABILITY AND REACTIVITY

Stability of the Substance:	This product is stable when used in normal conditions.
Conditions to Avoid:	No decomposition if used as directed.
Materials to Avoid:	No substances are known which lead to the formation of hazardous substances or thermal reactions.
Hazardous decomposition products	Combustion or thermal decomposition will evolve toxic and irritant vapours.
Hazardous polymerisation	Does not occur
Specific Data	Not applicable

Section 11: TOXICOLOGICAL INFORMATION

HSNO Classifications:

- 6.1D May be harmful if swallowed or inhaled.
 6.1E May be harmful if absorbed through the skin.
 8.3A This product is corrosive and may cause eye damage.
 6.5B May cause sensitisation from prolonged skin contact.
 6.9B May cause organ damage from repeated oral exposure at high doses. May cause respiratory irritation.

Acute Effects (Undiluted product)

Swallowed:	LD ₅₀	1086 mg/kg (female rat)
Dermal absorption:	LD ₅₀	>2000 mg/kg (rat)
Inhaled:	LC ₅₀ (4 h)	>2.54 mg/L (rat)
Irritation		
Eye:	SEVERE IRRITANT / Corrosive (rabbit)	
Skin:	Non-irritating (rabbit)	
Sensitization	skin sensitiser (guinea pigs)	

Chronic / Long Term Effects (Benzovindiflupyr)

Germ cell mutagenicity:	Animal testing did not show any mutagenic effects
Carcinogenicity:	Studies in rodents have shown no treatment-related tumour findings of relevance to human health.
Reproductive toxicity:	Did not show reproductive toxicity effects in animal experiments.
STOT – single exposure:	The substance or mixture is not classified as specific target organ toxicant, single exposure.
STOT – repeated exposure:	No adverse effect has been observed in chronic toxicity tests.
Aspiration toxicity: Solvent naphtha (petroleum), highly arom.	The substance or mixture is known to cause human aspiration toxicity hazards or has to be regarded as if it causes human aspiration toxicity hazard.

Section 12: ENVIRONMENTAL INFORMATION

HSNO Classifications:

- 9.1A Very toxic to aquatic organisms.
 9.2C Harmful to the soil environment.
 9.3C Harmful to terrestrial vertebrates.

Environmental Risk and Safety Phrases:	Avoid contamination of any water supply with chemical or empty container
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The information presented below is for the active ingredient, benzovindiflupyr. A thorough review of environmental information is not possible in this document.

Ecotoxicity Effects	
Acute toxicity to Fish:	LC ₅₀ (96 h) = 0.068 mg/L (Oncorhynchus mykiss (Rainbow trout))
Toxicity to aquatic Invertebrates:	LC ₅₀ (48h) = 0.27 mg/L (Daphnia magna (water flea))
Toxicity to aquatic plants:	E _r C ₅₀ (96 h)= 3.3 mg/L (Pseudokirchneriella subcapitata (green algae))
Toxicity to Birds:	LD ₅₀ (8 d) = >2000 mg/kg bw (Quail)
Toxicity to soil dwelling organisms:	LC ₅₀ (14 days) = >695 mg/kg (earthworms)
Toxicity to Bees:	LD ₅₀ (48 h, oral) = >383 µg/bee LD ₅₀ (48 h, contact) = >358 µg/bee

Environmental Fate	
Persistence and degradability:	
<u>Biodegradability:</u> Mixture of octanoic acid-decanoic acid-N,N-dimethylamide Benzovindiflupyr	Readily biodegradable Not readily biodegradable
<u>Stability in water:</u> Mixture of octanoic acid-decanoic acid-N,N-dimethylamide	Not persistent in water.
<u>Stability in soil:</u> Mixture of octanoic acid-decanoic acid-N,N-dimethylamide	No persistent in soil.
Bioaccumulative potential	
Benzovindiflupyr	Does not bioaccumulate
Mobility in Soil	
Benzovindiflupyr	Slightly mobile in soils
Results of PBT and vPvB assessment	
Benzovindiflupyr	This substance is not considered to be persistent, bioaccumulating and toxic (PBT) This substance is not considered to be very persistent and very bioaccumulating (vPvB).

Section 13: DISPOSAL CONSIDERATIONS

Product Disposal:	Do not contaminate ponds, waterways or ditches with chemical or used container. Do not dispose of waste into sewer. Dispose of this product only by using according to the label, or at an approved landfill or other approved facility.
Container Disposal:	Ensure the container is empty. Triple rinse empty container and add rinsate to the spray tank. Recycle empty container through Agrecovery (0800 247 326, www.agrecovery.co.nz). Otherwise crush and bury in a suitable landfill. DO NOT reuse this container for any other purpose.

Section 14: TRANSPORT INFORMATION

Rail / Road (RID/ADR)	UN-No:	3082
	Class:	9
	Packaging Group:	III
	Proper shipping name:	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (benzovindiflupyr)
Sea (IMDG-Code)	UN-No:	3082
	Class:	9
	Packaging Group:	III
	Proper shipping name:	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (benzovindiflupyr)
	MARINE POLLUTANT:	Yes
Air (ICAO/IATA)	UN-No:	3082
	Class:	9
	Packaging Group:	III
	Proper shipping name:	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (benzovindiflupyr)

Section 15: REGULATORY INFORMATION

HSNO Approval Number:	HSR101179
HSNO Controls (inc. Tracking and Record Keeping):	See http://www.epa.govt.nz/search-databases/Pages/controls-search.aspx for controls and additional SDS requirements.
ACVM Registration:	P9276
ACVM Controls:	See www.foodsafety.govt.nz/industry/acvm for registration conditions.

Section 16: OTHER INFORMATION

Note: This product is a registered agricultural chemical and must therefore be used in accordance with the container label directions. A comprehensive package of toxicological and environmental data for the active ingredients of this product has been submitted to the Government health and environment authorities and has been evaluated by expert toxicologists and environmental scientists.

CONTACT POINT: Business Manager - Crop Protection: (09) 306 1503
24 HOURS EMERGENCY CONTACT: 0800 734 607

This Material Safety Data Sheet summarises our best knowledge of the health and safety hazard information of the product and how to safely handle and use the product in the workplace. Each user should read this MSDS and consider the information in the context of how the product will be handled and used in the workplace including in conjunction with other products.

If clarification or further information is needed to ensure that an appropriate risk assessment can be made, the user should contact this company.

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DISCLAIMER

This product complies with the specifications in its statutory registration. Implied terms and warranties are excluded. Syngenta's liability for breach of the express or any non-excludable implied warranty is limited to product replacement or purchase price refund. The purchaser must determine suitability for intended purpose and take all proper precautions in the handling, storage and use of the product including those on the label and/or safety data sheet failing which Syngenta shall have no liability.