1. IDENTIFICATION OF SUBSTANCE/PREPARATION AND THE COMPANY/UNDERTAKING

Product Code: PN350

Product Name	**PACAYA**
MAPP Number:	16797
Use of the Substance/Preparation	Herbicide
Company identification	ProKlass Products Limited 20-22 Wenlock Road London N1 7GU Email: office@proklass-products.com
Poisoning Situations	**Call** ProKlass Products Limited **+44 (0) 1480 810137**
Additional information available from	For advice on medical emergencies, fires, spillages or chemical hazards ONLY: **+44 (0) 1480 810137**

2. HAZARDs IDENTIFICATION

2.1 Classification of the substance or mixture:

Classification according to Regulation EC No 1272/2008
Classified as dangerous according to the criteria of Regulation (EC) No 1272/2008

Class	Category	Hazard statements
Aquatic Acute	Category 1	H400: Very toxic to aquatic life.
Aquatic Chronic	Category 1	H410: Very toxic to aquatic life with long lasting effects.

Classification according to Directive 67/548/EEC-1999/45/EC
Classified as dangerous in accordance with the criteria of Directives 67/548/EEC and 1999/45/EC
N; R50-53 - Very toxic to aquatic organisms. May cause long-term adverse effects in the aquatic environment.

2.2 Label elements:

Labelling according to Regulation EC No 1272/2008 (CLP)

Signal word Warning

H-statements
H410: Very toxic to aquatic life with long lasting effects.

P-statements
P273: Avoid release to the environment.
P391: Collect spillage.
P501: Dispose of contents/container to manufacturer/competent authority.

Supplemental information
EUH210: Safety sata sheet available on request.
EUH 401: To avoid risks to human health and the environment, comply with the instructions for use.

2.3 Other hazards:

No other hazards known

3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Structure of Product: (For full text of R phrases, refer to Section 16.)
Not applicable

Name (REACH Registration No)	CAS No EC No	Conc. (C)	Classification according to DSD/DPD	Classification according to CLP	Note	Remark
Flazasulfuron (-)	104040-78-0	26.6 %	N; R50-53	Aquatic Acute 1; H400 Aquatic Chronic 1; H410	(1)	Constituent
Methylnapthalenesulfonic acid/formaldehyde, copolymer, sodium salt (-)	81065-51-2	4.9%<= C<5.6%	Xi; R41	Eye Dam. 1; H318	(1)	Constituent
Sodium diisopropylnaphthalenesulphonate (-)	1322-93-6 215-343-3	C < 5 %	Xn; R20/22 Xi; R36/37	Acute Tox. 4; H332 Acute Tox. 4; H302 Eye Irrit. 2; H319 STOT SE 3; H335	(1)	Constituent

4. FIRST AID MEASURES

4.1 Description of first aid measures:

General:
If you feel unwell, seek medical advice.

Inhalation:
Remove the victim into fresh air. Respiratory problems: consult a doctor/medical service.

Skin contact:
Rinse with water. Soap may be used. Take victim to a doctor if irritation persists.

Eye contact:
Rinse with water. Take victim to an ophthalmologist if irritation persists.

Ingestion:
Rinse mouth with water. Do not induce vomiting. Consult a doctor/medical service if you feel unwell.

4.2 Most important symptoms and effects, both acute and delayed:

4.2.1 Acute symptoms
After inhalation
Unlikely to cause harmful effects.

After skin contact
Not irritating.

After eye contact
Not irritating.

After ingestion
Unlikely to cause harmful effects.

4.2.2 Delayed symptoms

No effects known.

4.3 Indication of any immediate medical attention and special treatment needed

If applicable and available it will be listed below.

5. FIRE-FIGHTING MEASURES

5.1 Suitable extinguishing media:

Suitable extinguishing media:
Polyvalent foam. ABC powder. Carbon dioxide. MAJOR FIRE: Water spray.

Unsuitable extinguishing media:
Solid water jet ineffective as extinguishing medium.

5.2 Special hazards arising from the substance or mixture:

On heating/burning: release of toxic and corrosive gases/vapours e.g.: nitrous vapours, hydrofluoric acid, sulphur oxides, carbon monoxide - carbon dioxide.

5.3 Advice for firefighters:

Instructions:
Dilute toxic gases with water spray. Take account of environmentally hazardous firefighting water. Use water moderately and if possible collect or contain it.

Special protective equipment for fire-fighters:
Gloves. Protective clothing. Dust cloud production: compressed air/oxygen apparatus. Heat/fire exposure: compressed air/oxygen apparatus.

6. ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures:

Prevent dust cloud formation. No naked flames.

Protective equipment for non-emergency personnel
See heading 8.2

Protective equipment for emergency responders
Gloves. Protective clothing. Dust cloud production: compressed air/oxygen apparatus.

Suitable protective clothing
See heading 8.2

6.2 Environmental precautions:

Contain released product, pump into suitable containers. Plug the leak, cut off the supply. Dam up the solid spill. Knock down/dilute dust cloud with water spray. Prevent soil and water pollution. Prevent spreading in sewers.

6.3 Methods and material for containment and cleaning up:

Stop dust cloud by covering with sand/earth. Scoop solid spill into closing containers. Carefully collect the spill/leftovers. Clean contaminated surfaces with an excess of water. Wash clothing and equipment after handling.

6.4 Reference to other sections:

See heading 13.

7. HANDLING AND STORAGE

The information in this section is a general description. If applicable and available, exposure scenarios are attached in annex. Always use the relevant exposure scenarios that correspond to your identified use.

7.1 Precautions for safe handling:
Avoid raising dust. Keep away from naked flames/heat. Observe normal hygiene standards. Keep container tightly closed. Do not discharge the waste into the drain.

7.2 Conditions for safe storage, including any incompatibilities:

Safe storage requirements:
Keep only in the original container. Meet the legal requirements.

Keep away from:
Heat sources.

Suitable packaging material:
No data available

Non suitable packaging material:
No data available

7.3 Specific end use(s):

If applicable and available, exposure scenarios are attached in annex. See information supplied by the manufacturer. The product will only be used as herbicide.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 Control parameters:

Occupational exposure
a) Occupational exposure limit values
If limit values are applicable and available these will be listed below.
b) National biological limit values
If limit values are applicable and available these will be listed below.

Sampling methods
If applicable and available it will be listed below.

DNEL/PNEC values
If applicable and available it will be listed below.

Control banding
If applicable and available it will be listed below.

8.2 Exposure controls:

The information in this section is a general description. If applicable and available, exposure scenarios are attached in annex. Always use the relevant exposure scenarios that correspond to your identified use.

Appropriate engineering controls
Avoid raising dust. Keep away from naked flames/heat. Carry operations in the open/under local exhaust/ventilation or with respiratory protection.

Individual protection measures, such as personal protective equipment
Observe normal hygiene standards. Keep container tightly closed. Do not eat, drink or smoke during work.

a) Respiratory protection: dust production
Dust mask with filter type P1.

b) Hand protection: gloves.
Materials for protective clothing (good resistance): Rubber, PVC, plastics.

c) Eye protection: safety glasses. In case of dust production: protective goggles.

d) Skin protection: Protective clothing.

Environmental exposure controls:
See headings 6.2, 6.3 and 13

9. PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties:

Physical form: Grains
Odour: Cinnamon odour
Odour threshold: No data available
Colour: Brown
Particle size: 97.2% > 710 µm
Explosion limits: No data available
Flammability: Non-flammable
Log Kow: Not applicable (mixture)
Dynamic viscosity: No data available
Kinematic viscosity: No data available
Melting point: No data available
Boiling point: No data available
Flash point: No data available
Evaporation rate: ether ; No data available
Vapour pressure: No data available
Relative vapour density: No data available
Solubility: No data available
Relative density: 0.84; Bulk density
Decomposition temperature: No data available
Auto-ignition temperature: No data available
Explosive properties: No chemical group associated with explosive properties
Oxidising properties: No chemical group associated with oxidising properties
pH: 5.1 ; 1 %

9.2 Other information:
Absolute density: 840 kg/m³

10. STABILITY AND REACTIVITY

10.1 Reactivity:
Substance has acid reaction.

10.2 Chemical stability:
Stable under normal conditions.

10.3 Possibility of hazardous reactions:
No data available.

10.4 Conditions to avoid:
Avoid raising dust. Keep away from naked flames/heat.

10.5 Incompatible materials:
No data available.

10.6 Hazardous decomposition products:
On heating/burning: release of toxic and corrosive gases/vapours e.g.: nitrous vapours, hydrofluoric acid, sulphur oxides, carbon monoxide - carbon dioxide**.**

11. TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects:

Test results

Acute toxicity
Pacaya

Route of exposure	Parameter	Method	Value	Exposure time	Species	Value determination	Remark
Oral	LD50		4800 mg/kg		Rat	Experimental value	
Dermal	LD50		> 2000 mg/kg		Rat	Experimental value	
Inhalation	LC50		> 6.17 mg/l	4 h	Rat	Experimental value	

Flazasulfuron

Route of exposure	Parameter	Method	Value	Exposure time	Species	Value determination	Remark
Oral	LD50		> 5000 mg/kg		Rat (male/female)	Experimental value	
Dermal	LD50		> 2000 mg/kg		Rat	Experimental value	
Inhalation	LC50		> 5.99 mg/l	4 h	Rat	Experimental value	

Judgement of the mixture is based on test data on the mixture as a whole.

Conclusion
Not classified for acute toxicity.

Corrosion/irritation
Pacaya

Route of exposure	Result	Method	Exposure time	Time point	Species	Value determination
Eye	Not irritating					Literature study
Skin	Not irritating					Literature study

Judgement of the mixture is based on test data on the mixture as a whole.

Conclusion
Not classified as irritating to the skin
Not classified as irritating to the eyes

Respiratory or skin sensitisation

Pacaya

Route of exposure	Result	Method	Exposure time	Observation time point	Species	Value determination
Skin	Not sensitizing					Literature study

Flazasulfuron

Route of exposure	Result	Method	Exposure time	Observation time point	Species	Value determination
Skin	Not sensitizing					Literature study

Judgement of the mixture is based on test data on the mixture as a whole

Conclusion
Not classified as sensitizing for skin.

Specific target organ toxicity
Pacaya
No (test) data on the mixture available.
Judgement is based on the relevant ingredients.

Conclusion
Not classfied for subchronic toxicity.

Mutagenicity (in vitro)
Pacaya
No (test) data on the mixture available.

Mutagenicity (in vivo)
Pacaya
No (test) data on the mixture available.
Judgement is based on the relevant ingredients.

Conclusion
Not classified for mutagenic or genotoxic toxicity.

Carcinogenicity
Pacaya
No (test) data on the mixture available.
Judgement is based on the relevant ingredients.

Conclusion
Not classified for carcinogenicity.

Reproductive toxicity
Pacaya
No (test) data on the mixture available.
Judgement is based on the relevant ingredients.

Conclusion
Not classified for reprotoxic or developmental toxicity.

Toxicity other effects

Pacaya
No (test) data on the mixture available.

Chronic effects from short and long-term exposure

Pacaya
No effects known.

12. ECOLOGICAL INFORMATION

12.1 Toxicity:

Pacaya

	Parameter	Method	Value	Duration	Species	Test design	Fresh/salt water	Value determination
Acute toxicity fishes	LC50		> 100 mg/l	96 h	*Oncorhynchus mykiss*			Experimental value
	LC50		> 400 mg/l	96 h	*Lepomis macrochirus*			Experimental value
Acute toxicity invertebrates	EC50		> 100 mg/l	48 h	*Daphnia magna*			Experimental value
Toxicity algae and other aquatic plants	EC50		0.025 mg/l	72 h	*Selenastrum capricornutum*			Experimental value

Flazasulfuron

	Parameter	Method	Value	Duration	Species	Test design	Fresh/salt water	Value determination
Acute toxicity fishes	LC50		22 mg/l	96 h	*Oncorhynchus mykiss*	Flow-through system		Experimental value
	LC50		>98 mg/l	96 h	*Lepomis macrochirus*	Flow-through system		Experimental value
Acute toxicity invertebrates	EC50		>106 mg/l	48 h	*Daphnia magna*			Experimental value
Toxicity algae and other aquatic plants	EC50		0.045 mg/l	72 h	*Selenastrum capricornutum*			Experimental value
	NOEC		0.02 µg/l	7 day(s)	*Lemna gibba*			Experimental value
Toxicity aquatic micro-organisms		OECD 209	100 mg/l		Activated sludge			Experimental value

Classification of the mixture is based on test data on the mixture as a whole

Conclusion
Slightly harmful to fishes
Slightly harmful to crustacea
Very toxic to algae
Very toxic to aquatic life with long lasting effects.

12.2 Persistence and degradability:

Flazasulfuron
Half-life soil (t1/2 soil)

Method	Value	Primary degradation/mineralisation	Value determination
	12.8 - 15.9 day(s)		

Conclusion
Contains non readily biodegradable component(s)

12.3 Bioaccumulative potential

Pacaya
Log Kow

Method	Remark	Value	Temperature	Value determination
	Not applicable (mixture)			

Flazasulfuron
Log Kow

Method	Remark	Value	Temperature	Value determination
		< 1.5		

Methylnaphthalenesulfonic acid/formaldehyde, copolymer, sodium salt
Log Kow

Method	Remark	Value	Temperature	Value determination
	No data available			

Conclusion
No straightforward conclusion can be drawn based upon the available numerical values

12.4 Mobility in soil:

Flazasulfuron
(log) Koc

Parameter	Method	Value	Value determination
Koc		46.16	Experimental value

Conclusion
No straightforward conclusion can be drawn based upon the available numerical values

12.5 Results of PBT and vPvB assessment:
Does not contain component(s) that meet(s) the criteria of PBT and/or vPvB as listed in Annex XIII of Regulation (EC) No. 1907/2006.

12.6 Other adverse effects:
Pacaya
Fluorinated greenhouse gases (Regulation (EU) No 517/2014)
None of the known components is included in the list of fluorinated greenhouse gases (Regulation (EU) No 517/2014)

Ozone-depleting potential (ODP)
Not classified as dangerous for the ozone layer (Regulation (EC) No 1005/2009)

13. DISPOSAL INFORMATION

The information in this section is a general description. If applicable and available, exposure scenarios are attached in annex. Always use the relevant exposure scenarios that correspond to your identified use.

13.1 Waste treatment methods:

13.1.1 Provisions relating to waste
Hazardous waste according to Directive 2008/98/EC, as amended by Regulation (EU) No 1357/2014.
Waste material code (Directive 2008/98/EC, Decision 2000/0532/EC).
02 01 08* (wastes from agriculture, horticulture, aquaculture, forestry, hunting and fishing: agrochemical waste containing hazardous substances).

13.1.2 Disposal methods
Remove to an authorized incinerator equipped with an afterburner and a flue gas scrubber with energy recovery. Remove waste in accordance with local and/or national regulations. Hazardous waste shall not be mixed together with other waste. Different types of hazardous waste shall not be mixed together if this may entail a risk of pollution or create problems for the further management of the waste. Hazardous waste shall be managed responsibly. All entities that store, transport or handle hazardous waste shall take the

necessary measures to prevent risks of pollution or damage to people or animals. Do not discharge into surface water.

13.1.3 Packaging/Container
Waste material code packaging (Directive 2008/98/EC).
15 01 10* (packaging containing residues of or contaminated by dangerous substances).

14. TRANSPORT INFORMATION

Land transport
ADR:

14.1 UN-Number:	3077
14.2 Proper Shipping Name:	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (flazasulfuron)

14.3 Transport hazard class(es):

Hazard identification No:	90
Class	9
Classification code	M7

14.4 Packing group:

Packing group	III
Labels	9

14.5 Environmental hazards:

Environmentally hazardous substance mark	Yes

14.6 Special precautions for user:

Special provisions	274
Special provisions	335
Special provisions	375
Special provisions	601
Limited quantities	Combination packagings: not more than 5 kg per inner packaging for solids. A package shall not weigh more than 30 kg. (gross mass)

Rail (RID)

14.1 UN-Number:	3077
14.2 Proper Shipping Name:	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (flazasulfuron)

14.3 Transport hazard class(es):

Hazard identification No:	90
Class	9
Classification code	M7

14.4 Packing group:

Packing group	III
Labels	9

14.5 Environmental hazards:

Environmentally hazardous substance mark	Yes

14.6 Special precautions for user:

Special provisions	274
Special provisions	335
Special provisions	375

Special provisions	601
Limited quantities	Combination packagings: not more than 5 kg per inner packaging for solids. A package shall not weigh more than 30 kg. (gross mass)

Inland Waterways (ADN)

14.1 UN-Number:	3077
14.2 Proper Shipping Name:	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (flazasulfuron)

14.3 Transport hazard class(es):

Class	9
Classification code	M7

14.4 Packing group:

Packing group	III
Labels	9

14.5 Environmental hazards:

Environmentally hazardous substance mark	Yes

14.6 Special precautions for user:

Special provisions	274
Special provisions	335
Special provisions	375
Special provisions	601
Limited quantities	Combination packagings: not more than 5 kg per inner packaging for solids. A package shall not weigh more than 30 kg. (gross mass)

Sea (IMDG)

14.1 UN-Number:	3077
14.2 Proper Shipping Name:	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (flazasulfuron)

14.3 Transport hazard class(es):

Hazard identification No:	90

14.4 Packing group:

Packing group	III
Labels	9

14.5 Environmental hazards:

Marine pollutant	P
Environmentally hazardous substance mark	Yes

14.6 Special precautions for user:

Special provisions	274
Special provisions	335
Special provisions	966
Special provisions	967
Special provisions	969
Limited quantities	Combination packagings: not more than 5 kg per inner packaging for solids. A package shall not weigh more than 30 kg. (gross mass)

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

Annex II of MARPOL 73/78	Not applicable.

Air (ICAO-TI/IATA-DGR)

14.1 UN-Number:	3077
14.2 Proper Shipping Name:	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (flazasulfuron)

14.3 Transport hazard class(es):

Class	9

14.4 Packing group:

Packing group	III
Labels	9

14.5 Environmental hazards:

Environmentally hazardous substance mark	Yes

14.6 Special precautions for user:

Special provisions	A97
Special provisions	A158
Special provisions	A179
Special provisions	A197
Passenger and cargo transport: limited quantities: maximum net quantity per packaging	30 kg G

15. REGULATORY INFORMATION

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

European legislation:
Volatile organic compounds (VOC): 0%
European drinking water standards (Directive 98/83/EC)

Flazasulfuron

Parameter	Parametric value	Note	Reference
Pesticides	0,1 µg/l		Listed in Annex I, Part B, of Directive 98/83/EC on the quality of water intended for human consumption.
Pesticides – total	0,5 µg/l		Listed in Annex I, Part B, of Directive 98/83/EC on the quality of water intended for human consumption.

National legislation Belgium
Pacaya
No data available.

National legislation The Netherlands

Waterbezwaarlijkheid	4
Waste identification (the Netherlands)	LWCA (the Netherlands): KGA category 03

National legislation Germany
Pacaya

Lagerklasse (TRGS510)	13: Nicht brennbare Feststoffe
WGK	Classification water polluting based on the components in compliance with Verwaltungsvorschrift wassergefährdender Stoffe (VwVwS) of 27 July 2005 (Anhang 4)

National legislation United Kingdom
Pacaya
No data available.

Other relevant data
Pacaya
No data available.

15.2 Chemical safety assessment

No chemical safety assessment has been conducted.

16. OTHER INFORMATION

Full text of any H-statements referred to under headings 2 and 3:

H302 Harmful if swallowed.
H318 Causes serious eye damage.
H319 Causes serious eye irritation.
H332 Harmful if inhaled.
H335 May cause respiratory irritation.
H400 Very toxic to aquatic life.
H410 Very toxic to aquatic life with long lasting effects.

PBT-substances = persistent, bioaccumulative and toxic substances
CLP (EU-GHS) Classification, labelling and packaging (Globally Harmonised System in Europe)