Date: 9th December 2019
Version: 02
Revision number: 01
Supersedes: SDS dated 03/08/2017

SAFETY DATA SHEET
Doff Advanced Concentrated Weedkiller 90g/l

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

1.1 Product Identifier:

Product name: Doff Advanced Concentrated Weedkiller 90g/l

Product code: F-FH-xxx-DOF

1.2 Relevant uses of the substance or mixture and uses advised against:

Supplied for amateur use as a herbicide

1.3 Details of the supplier of the safety data sheet:

Doff Portland Limited
Aerial Way
Hucknall
Nottingham
NG15 6DW
UK

Telephone number: +44 (0) 115 9834 300
Email: help@doff.co.uk

1.4 Emergency phone number

Emergency telephone number: +44 (0) 115 9834 300 (office hours only)

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2. HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture

CLASSIFICATION according to Regulation EC 1272/2008 Classification, Labelling and Packaging

Aquatic Chronic 3 **H412** **Harmful to aquatic life with long lasting effects.**

2.2 Label Elements

Product Name:	**Doff Advanced Concentrated Weedkiller**	
Pictogram:	[None]	
Signal word:	[None]	
Hazard statements:	H412	Harmful to aquatic life with long lasting effects.
Precautionary statements:	P101	If medical advice is needed, have product container or label at hand.
	P102	Keep out of reach of children.
	P103	Read label before use.
	P273	Avoid release to the environment.
	P501	Dispose of contents/container to local authority regulations.

2.3 Other Hazards
Mixture not classed as PBT or vPvB

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3. COMPOSITION/INFORMATION ON INGREDIENTS
3.2 Mixtures

Name:	CAS/EC No.	Index No./REACh Registration No.	Pictogram(s) according to 1272/2008:	H-phrase(s) according to 1272/2008:	Concentrations [% w/w]
glyphosate (ISO); N-(phosphonomethyl)glycine	1071-83-6/ 213-997-4	607-315-00-8/ -	 GHS05  GHS09	Eye Dam. 1; H318 Aquatic Chronic 2; H411	5 – 10
2-aminopropane	75-31-0/ 200-860-9	612-007-00-1/ -	 GHS02  GHS07	Flam. Liq. 1; H224 Eye Irrit. 2; H319 STOT SE 3; H335 Skin Irrit. 2; H315	≤ 3.0
Quaternary ammonium compound	-	-	 GHS05  GHS09	Skin Corr. 1A; H314 Eye Irrit. 2; H319 Aquatic Acute 1; H400 Aquatic chronic 3; H412	≤ 3.0

The full hazard information for individual components if not displayed in section 2 or 3 are displayed in Section 16.

4.0. FIRST AID MEASURES
4.1 Description of first aid measures
4.1.1 Inhalation
If symptoms arise remove from source of exposure to fresh air; seek medical attention if symptoms persist or develop

4.1.2 Skin & Eye exposure

Skin: Drench immediately with water. Remove any contaminated clothing and launder before re-use. Obtain medical attention if symptoms persist or develop.

Eyes: Immediately rinse with clean water for 15 minutes. Obtain medical attention if symptoms occur or persist.

4.1.3 Ingestion
Do not induce vomiting. Wash out mouth with water and give water to drink. Obtain medical attention if adverse health effects persist or are severe.

4.2 Most important symptoms and effects, both acute and delayed
None reported.

See SECTION 11 for more detailed information on health effects and symptoms.

4.3 Indications of any immediate medical attention and special treatment needed
Notes to physician
No specific treatment. Treat symptomatically.

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5. FIRE-FIGHTING MEASURES
5.1 Extinguishing media
Suitable
Use water spray, fog or foam, carbon dioxide. Use an extinguishing agent suitable for the surrounding fire.
Use water spray to cool containers.

Not suitable
No information available.

5.2 Special hazards arising from the substance or mixture
In a fire or if heated, a pressure increase may occur. Fire water contaminated with this material must be contained and prevented from being discharged to any waterway, sewer or drain.
Hazardous thermal decomposition products
In combustion, may emit toxic fumes.

5.3 Advice for firefighters
Special precautions for fire-fighters
Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training.

Special protective equipment for fire-fighters
Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

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6. ACCIDENTAL RELEASE MEASURES
6.1 Personal precautions, protective equipment and emergency procedures
The following precautions are considered to be good practice when using any chemicals irrespective of their classification unless otherwise specified.

Ensure adequate ventilation
Use personal protective equipment,
- Gloves
- Eye protection
- Suitable respirator if dust is generated during handling

6.2 Environmental Precautions
Do not allow to enter storm drains or water courses. If this product enters a water course or a sewer (including via contaminated soil & vegetation) in large quantities contact local water authority and inform the Environment Agency

6.3 Methods and material for containment and cleaning up
Absorb spillage onto inert material such as sand or Fuller's earth and transfer to a suitably-labelled container. Contact specialist waste disposal contractor.

6.4 Reference to other sections
Note: see SECTION 1 for emergency contact information, SECTION 8 for personal protection and section 13 for waste disposal.

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7. Handling and storage
7.1 Precaution for safe handling
Avoid contact with skin and eyes. Ensure sufficient ventilation of the area. Wash Hands thoroughly after handling Do not eat, drink or smoke when using this product

7.2 Conditions for safe storage, including any incompatibilities
Store in a cool dry atmosphere, in original labelled containers. Refer to manufacturer for maximum safe stacking height.

7.3 Specific end use(s)
Supplied for amateur use as a herbicide

8.Exposure controls/personal protection
8.1 Control Parameters
None set for contents.

8.2 Exposure controls
General
Avoid contact with skin, eyes and clothing.

Hygiene measures:
Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location. Ensure that there is sufficient ventilation of the area.

Eye and face protection
Wear tightly fitting safety goggles and Face shield that meet EN 166 a/o ANSI Z87.1 standards

Skin protection
When handling product wear chemical-resistant gloves.
Suitability and durability of a glove is dependent on usage, e.g. frequency and duration of contact. Always seek advice from glove suppliers. Select gloves approved to EU standard EN407.
Wear impermeable protective clothing, butyl rubber apron and boots.

Inhalation
Provide a good standard of general ventilation. Use outdoors or ensure adequate air changes.

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9. PHYSICAL AND CHEMICAL PROPERTIES
9.1 Information on basic physical and chemical properties
Physical state: liquid
Colour: colourless
Odour: Characteristic odour
Odour threshold: No data
pH: No data
Melting Point: No data
Initial boiling point and boiling range: 106 ^{o}C
Flash point: No data
Evaporation rate: No data
Flammability: No data
Explosion limits
Upper: No data
Lower: No data
Vapour pressure: < 2.1 x 10^{-7} Pa.m^3
Vapour density: No data
Specific gravity: No data
Solubility: soluble in water
Partition coefficient: n-octanol/water No data
Auto-ignition temperature: No data
Decomposition temperature: No data
Viscosity: Not applicable
Explosive properties: No data
Oxidising properties: No data

9.2 Other Information
No other relevant information available.

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10. STABILITY AND REACTIVITY
10.1 Reactivity
Stable under recommended transport or storage conditions.

10.2 Chemical stability
Stable under normal conditions.

10.3 Possibility of hazardous reactions

Hazardous reactions will not occur under normal transport or storage conditions.
Decomposition may occur on exposure to conditions or materials listed below.

10.4 Conditions to avoid
Avoid heat.

10.5 Incompatible materials
Materials to avoid: Strong oxidising agents. Strong acids.

10.6 Hazardous decomposition products
In combustion, may emit toxic fumes.

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11. TOXICOLOGICAL INFORMATION
11.1 Information on toxicological effects
The mixture has not been assessed for toxicological effects, the mixture classification is given in section 2 based on individual component contents. Individual component hazards are given in section 3
Test results based on identical substance.

Acute toxicity:	Not expected to be toxic. Tests: LD50 oral, rat (OECD 423) > 2500 mg/kg bw LD50 dermal, rat (OECD 402) > 4000 mg/kg bw
Skin corrosion/irritation:	Product is not classified as causing skin irritation. Test: Skin irritation, (OECD 404) Non-irritant
Serious eye damage/irritation:	Product is not classified as causing serious eye damage/irritation. Test: Eye irritation, (OECD 405) Non-irritant
Skin sensitisation:	Product is not classified as causing skin sensitisation. Test: Skin sensitisation, guinea pig (OECD 406, Buehler (9 applications) Non-sensitising
Germ cell mutagenicity:	No information specified.
Carcinogenicity:	No information specified
Reproductive toxicity:	No information specified.
STOT-single exposure:	Product is not classified as having Specific Target Organ Toxicity for single exposure
STOT-repeated exposure:	No information specified.
Aspiration hazard:	No information specified.

Toxicity values:

Route	Species	Test	Value	Units
Dermal	Rat	LD50	>2000	mg/Kg bw
Oral	Rat	LD50	>2000	mg/Kg bw

Toxicological information on hazardous ingredients where available:
Glyphosate (ISO):

Acute Oral LD50:	LD50 for rats >2,000 mg/Kg
Acute Dermal LD50:	LD50 for rats >4,000 mg/Kg

Acute inhalation LC50:	LC50 (4h) for rats > 6,25 mg/l air
Eye Irritation:	Corrosive to eyes (rabbit)
Skin irritation:	Non-irritating to skin (rabbits)
Skin sensitisation:	Non-sensitive to skin (guinea pig)
Chronic toxicity:	In 2 year feeding trials, no ill effects were observed in rats receiving 410 mg/Kg daily (average) and in 1 year feeding trials no ill-effects were observed in dogs receiving 500 mg/Kg daily (highest dose treated). Lowest relevant NOAEL (2 year) for rats 31 mg/Kg bw daily (EU)
Mutagenic toxicity:	Not mutagenic, not carcinogenic, not teratogenic, not neurotoxic. No adverse effects on reproduction.

2-aminopropane:

Acute Oral LD50:	LD50 for rats >111 mg/Kg
Acute Dermal LD50:	LD50 for rats >380 mg/Kg
Acute inhalation LC50:	LC50 (4h) for rats > 8.7 mg/l air

Quaternary ammonium compound:

Acute Oral LD50:	2,640 mg/Kg Mouse; OECD 401
Acute Dermal LD50:	620 mg/Kg Rat, male and female; OECD 402
Acute inhalation LC50:	No data available
Skin corrosion/irritation	Corrosive to Skin Rabbit; OECD 404
Serious eye damage/irritation:	Irreversible effects on the eye Rabbit; OECD 405
Sensitisation:	Does not cause skin sensitisation Mouse; OECD 429 Buehler Test – Guinea pig OECD 406 Maximisation Test (GPMT) – Guinea pig
Genotoxicity *in vitro*	Ames test – negative; OECD 471 Chromosome aberration test *in vitro* – negative; OECD 473 Gene mutation assays in mammalian cells (Chinese hamster ovary cells) – negative; OECD 476
Genotoxicity *in vivo*	No data available
Carcinogenicity	No data available
Toxicity to reproduction/fertility	Reproductive/developmental toxicity screening test – rat, male and female Oral No toxicity to reproduction NOAEL parent: 150 mg/Kg NOAEL F1: 150 mg/Kg OECD 422
Developmental toxicity/Teratogenicity	Foetal toxicity is not considered to be significant since it was only observed at doses which caused maternal toxicity Oral; rat, male and female NOEL teratogenicity: 1,000 mg/Kg NOEL maternal: 100 mg/Kg OECD 414

STOT – single exposure	Substance not classified as specific target organ toxicant, single exposure
STOT – repeated exposure	Substance not classified as specific target organ toxicant, repeated exposure Oral 90 days; rat, male and female NOAEL: ≥ 145 mg/Kg OECD 408
Aspiration toxicity	No data available

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12. ECOLOGICAL INFORMATION

12.1 Toxicity

Mixture classified as harmful to aquatic life with long lasting effects.

Ecotoxicity values:

Species	Test	Value	Units
Daphnia	LC50 48hr	>100	mg/l
Rainbow rout	LC50 96hr	>100	mg/l

Ecoxicity of ingredients where available:

Species	Test	Value	Units
Zebrafish (Brachydanio)	LC50 96hr	21	mg/l

12.2 Persistence and degradability

Not biodegradable.

12.3 Bioaccumulative potential

Bioaccumulation potential.

12.4 Mobility in soil

Readily absorbed into soil.

12.5 Results of PBT and vPvB assessment

This mixture does not contain any substances that are assessed to be PBT or vPvB.

12.6 Other adverse effects

Toxic to soil organisms.

13.DISPOSAL CONSIDERATIONS

13.1 Waste Treatment Methods

Methods of disposal:

The generation of waste should be avoided or minimized wherever possible.
Empty containers or liners may retain some product residues.
This material and its container must be disposed of in a safe way.
Dispose of surplus and non-recyclable products via a licensed waste disposal contractor.

Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

Hazardous waste:
The classification of the product may meet the criteria for a hazardous waste

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14. TRANSPORT INFORMATION
14.1 UN number: Not applicable
14.2 UN proper shipping name: Not applicable
14.3 Transport hazard: Not applicable
14.4 Packing group: Not applicable
14.5 Environmental hazards: Product is not classified as harmful to the environment.
14.6 Special precautions for user: No information available
14.7 Transport in bulk according to Annex II of MARPOL 73/78 and the IBC code
Applicable for Maritime bulk transport only. Check with carrier.

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15. REGULATORY INFORMATION
15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture.
This substance is classified and labelled in accordance with regulation 1272/2008 and Regulation (EC) No 1907/2006 of the European Parliament and of the Council of 18 December 2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH), establishing a European Chemicals Agency, amending Directive 1999/45/EC and repealing Council Regulation (EEC) No 793/93 and Commission Regulation (EC) No 1488/94 as well as Council Directive 76/769/EEC and Commission Directives 91/155/EEC, 93/67/EEC, 93/105/EC and 2000/21/EC, including amendments.

15.2 Chemical Safety Assessment (CSA)
CSA not undertaken for this substance

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16. OTHER INFORMATION
Reasons for update:

Document	Updated after review;
Section 2.1	Correction to classification;
Section 2.2	Correction to label elements;

Abbreviations:

Aquatic Acute 1	Aquatic Acute Category 1
Aquatic Chronic 3	Aquatic Chronic Category 3
Eye Dam. 1	Eye Damage Category 1
Eye Irrit. 2	Eye Irritation Category 2
Flam. Liq. 1	Flammable Liquid Category 1
LC/LD50	Lethal Concentration/Dose 50%
NOAEL	No Observed Adverse Effect Level
PBT	Persistent, Bioaccumulative, Toxic
Skin Corr. 1A	Skin Corrosion Category 1A

Skin Irrit. 2	Skin Irritation Category 2
STOT	Specific Target Organ Toxicity
STOT SE 3	Specific Target Organ Toxicity Single Exposure Category 3
vPvB	very Persistent, very Bioaccumulative

Other Hazard Information assigned to individual ingredients, but not carried to final classification:

H224	Extremely flammable liquid and vapour
H314	Causes severe skin burns and eye damage
H315	Causes skin irritation
H318	Causes serious eye damage
H319	Causes serious eye irritation
H335	May cause respiratory irritation
H400	Very toxic to aquatic life
H411	Toxic to aquatic life with long lasting effects

SDS information:

This safety data sheet is compiled using data submitted for raw materials and practical experience. This product is intended for professional users only.

This Safety Data Sheet is prepared in compliance with regulation 1272/2008 and Regulation (EC) No 1907/2006 of the European Parliament and of the Council of 18 December 2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH), establishing a European Chemicals Agency, amending Directive 1999/45/EC and repealing Council Regulation (EEC) No 793/93 and Commission Regulation (EC) No 1488/94 as well as Council Directive 76/769/EEC and Commission Directives 91/155/EEC, 93/67/EEC, 93/105/EC and 2000/21/EC, including amendments.

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