



SAFETY DATA SHEET

Glyphosate/Diflufenican 290 SC

Revision Date 21-May-2015

Version 1

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H-0430-RAII / 17284 / AG-DG1-290 SC

Product identifier

Glyphosate/Diflufenican 290 SC

Pure substance/mixture

Mixture

Relevant identified uses of the substance or mixture and uses advised against

Recommended Use	Herbicide
Uses advised against	No information available

Details of the supplier of the safety data sheet

Supplier Address	ADAMA Agan Ltd P.O.B. 262 ASHDOD Israel
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For further information, please contact

Email address	SDS@ADAMA.COM
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Emergency Telephone

Emergency Telephone	+972-03-6106666 Subscription no. 36789 (ADAMA Makhteshim Ltd.)
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Section 2: HAZARD IDENTIFICATION

Classification of the substance or mixture

Acute aquatic toxicity	Category 1 - (H400)
Chronic aquatic toxicity	Category 1 - (H410)

Label Elements

Hazard pictograms



Signal word	Warning
Hazard Statements	H410 - Very toxic to aquatic life with long lasting effects
Precautionary Statements	P102 - Keep out of reach of children P501 - Dispose of contents/ container to an approved waste disposal plant

Other Hazards

No information available

Section 3: COMPOSITION/INFORMATION ON INGREDIENTS

Mixture

Chemical Name	Weight-%	CAS No
Glyphosate, isopropylamine salt	45-50	38641-94-0
Diflufenican	2-5	83164-33-4
Isopropylamine	< 2	75-31-0
orthophosphoric acid	< 2	7664-38-2
Ethoxylated alcohols phosphate ether	1-3	68130-47-2
Ethoxylated butanol, phosphate ester	1-3	50769-39-6
reaction mass of: 5-chloro-2-methyl-4-isothiazolin-3-one and 2-methyl-4-isothiazolin-3-one	< 0.1	55965-84-9

Section 4: FIRST AID MEASURES

First aid measures

General advice	In case of accident or unwellness, seek medical advice immediately (show directions for use or safety data sheet if possible). First aider: Pay attention to self-protection!.
Inhalation	Remove to fresh air. If breathing is irregular or stopped, administer artificial respiration. Call a physician.
Skin Contact	Wash off immediately with soap and plenty of water while removing all contaminated clothes and shoes. Consult a physician if necessary.
Eye contact	Immediately flush with plenty of water. After initial flushing, remove any contact lenses and continue flushing for at least 15 minutes. Keep eye wide open while rinsing. If symptoms persist, call a physician.
Ingestion	Rinse mouth. Drink plenty of water. If symptoms persist, call a physician.
Self-protection of the first aider	Use personal protective equipment as required.

Most important symptoms and effects, both acute and delayed

Symptoms None known

Indication of any immediate medical attention and special treatment needed

Note to physicians Treat symptomatically.

Section 5: FIRE-FIGHTING MEASURES

Extinguishing media

Suitable Extinguishing Media

Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

Unsuitable Extinguishing Media

No information available.

Special hazards arising from the substance or mixture

No specific hazard known.

Advice for firefighters

In the event of fire, wear self-contained breathing apparatus
In the event of fire and/or explosion do not breathe fumes.

Section 6: ACCIDENTAL RELEASE MEASURES**Personal precautions, protective equipment and emergency procedures****Personal precautions**

Use personal protective equipment as required.

For emergency responders

Use personal protection recommended in Section 8.

Environmental precautions

Prevent further leakage or spillage if safe to do so. Do not allow into any sewer, on the ground or into any body of water. Prevent product from entering drains. Local authorities should be advised if significant spillages cannot be contained.

Methods and material for containment and cleaning up**Methods for cleaning up**

Take up mechanically, placing in appropriate containers for disposal.

Reference to other sections**Other Information**

See also section 8,13

Section 7: HANDLING AND STORAGE**Precautions for safe handling****Advice on safe handling**

Use personal protective equipment as required. Avoid contact with skin, eyes or clothing. Wash contaminated clothing before reuse. Do not breathe dust/fume/gas/mist/vapors/spray. Do not eat, drink or smoke when using this product. Use only with adequate ventilation.

General Hygiene Considerations

When using do not eat, drink or smoke. Regular cleaning of equipment, work area and clothing is recommended. Avoid contact with skin, eyes or clothing. Wash hands thoroughly after handling. Keep away from food, drink and animal feeding stuffs. Wash contaminated clothing before reuse.

Conditions for safe storage, including any incompatibilities**Storage Conditions**

Keep container tightly closed in a dry and well-ventilated place. Keep out of the reach of children.

Specific end use(s)

Risk Management Methods (RMM)

The information required is contained in this Material Safety Data Sheet.

Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION**National occupational exposure limits**

Chemical Name	European Union	United Kingdom	France	Spain	Germany
Isopropylamine 75-31-0			TWA: 5 ppm TWA: 12 mg/m ³	STEL: 10 ppm STEL: 24 mg/m ³ TWA: 5 ppm TWA: 12 mg/m ³	TWA: 5 ppm TWA: 12 mg/m ³ Ceiling / Peak: 10 ppm Ceiling / Peak: 24 mg/m ³
orthophosphoric acid 7664-38-2	TWA 1 mg/m ³ STEL 2 mg/m ³	STEL: 2 mg/m ³ TWA: 1 mg/m ³	TWA: 0.2 ppm TWA: 1 mg/m ³ STEL: 0.5 ppm STEL: 2 mg/m ³	STEL: 2 mg/m ³ TWA: 1 mg/m ³	TWA: 2 mg/m ³ Ceiling / Peak: 4 mg/m ³
Chemical Name	Italy	Portugal	Netherlands	Finland	Denmark
Isopropylamine 75-31-0		STEL: 10 ppm TWA: 5 ppm		STEL: 5 ppm STEL: 12 mg/m ³	TWA: 5 ppm TWA: 12 mg/m ³
orthophosphoric acid 7664-38-2	TWA: 1 mg/m ³ STEL: 2 mg/m ³	STEL: 3 mg/m ³ TWA: 1 mg/m ³	STEL: 2 mg/m ³ TWA: 1 mg/m ³	TWA: 1 mg/m ³ STEL: 2 mg/m ³	TWA: 1 mg/m ³
Chemical Name	Austria	Switzerland	Poland	Norway	Ireland
Isopropylamine 75-31-0	STEL 20 ppm STEL 48 mg/m ³ TWA: 5 ppm TWA: 12 mg/m ³	STEL: 10 ppm STEL: 24 mg/m ³ TWA: 5 ppm TWA: 12 mg/m ³	STEL: 24 mg/m ³ TWA: 12 mg/m ³	TWA: 5 ppm TWA: 12 mg/m ³ STEL: 10 ppm STEL: 18 mg/m ³	TWA: 5 ppm TWA: 12 mg/m ³ STEL: 10 ppm STEL: 24 mg/m ³
orthophosphoric acid 7664-38-2	STEL 2 mg/m ³ TWA: 1 mg/m ³	STEL: 2 mg/m ³ TWA: 1 mg/m ³	STEL: 2 mg/m ³ TWA: 1 mg/m ³	TWA: 1 mg/m ³ STEL: 3 mg/m ³	TWA: 1 mg/m ³ STEL: 2 mg/m ³

Derived No Effect Level (DNEL) No information available**Predicted No Effect Concentration (PNEC)** No information available.**Exposure controls****Engineering Controls**

Ensure adequate ventilation, especially in confined areas.

Personal protective equipment**Eye/face protection**

Tight sealing safety goggles.

Body Protection

Gloves made of plastic or rubber, Suitable protective clothing.

General Hygiene Considerations

When using do not eat, drink or smoke. Regular cleaning of equipment, work area and clothing is recommended. Avoid contact with skin, eyes or clothing. Wash hands thoroughly after handling. Keep away from food, drink and animal feeding stuffs. Wash contaminated clothing before reuse.

Environmental exposure controls

Do not allow into any sewer, on the ground or into any body of water. Local authorities should be advised if significant spillages cannot be contained. Prevent product from entering drains.

Section 9: PHYSICAL AND CHEMICAL PROPERTIES**Physical and Chemical Properties**

Property	Values	Method	Remarks
Appearance Physical state	: Liquid		

Color	:	grey		
Odor	:	characteristic		
Odor threshold	:	No data available		
pH	:	4.2 - 5.2	CIPAC MT 75.3	solution (1 %)
Melting point/freezing point °C	:	----		Not Applicable
Boiling point/boiling range °C	:	No data available		
Flash point °C	:	> 100		
Evaporation rate	:	Not Applicable		
Flammability (solid, gas)	:	Not applicable for liquids		
Upper/lower flammability or explosive limits	:	No data available		
Vapor pressure kPa	:	----		Not Applicable
Vapor density	:	No data available		
Relative density	:	1.1 - 1.2	EEC A.3	20 °C
Solubility(ies) mg/l	:	----		Not Applicable
Partition Coefficient (n-octanol/water) Log Pow	:			See Section 12 for more information
Autoignition temperature °C	:	> 600	EEC A.15	
Decomposition temperature °C	:	No data available		
Kinematic viscosity mm²/s 40 °C	:	80	OECD 114	
Explosive properties	:	Not an explosive	EEC A.14	
Oxidizing properties	:	Not oxidizing	EEC A.21	
Other Information				
Bulk density g/ml	:	----		Not Applicable
Surface tension mN/m	:	> 36.5	EEC A.5	solution (1 %)

Section 10: STABILITY AND REACTIVITY

Reactivity

Not available.

Chemical stability

Stable under normal conditions.

Possibility of Hazardous Reactions

None under normal processing.

Conditions to avoid

Heat, flames and sparks.

Incompatible Materials

No information available

Hazardous Decomposition Products

None under normal use conditions.

Section 11: TOXICOLOGY INFORMATION

Information on toxicological effects

Acute toxicity

<u>Values</u>	<u>Species</u>	<u>Method</u>	<u>Remarks</u>
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Oral LD50 mg/kg	: > 2000	Rat	OECD 423
Dermal LD50 mg/kg	: > 2000	Rat	OECD 402
Inhalation LC50 mg/l/4h	: > 5.2	Rat	OECD 403
Skin corrosion/irritation	: Non-irritating to the skin	Rabbit	OECD 404
Serious eye damage/eye irritation	: Not irritating to eyes	Rabbit	OECD 405
Respiratory/skin sensitization	: Not a skin sensitizer	Guinea pig	OECD 406

Chronic toxicity

Germ cell mutagenicity

Chemical Name

Glyphosate, isopropylamine salt	: Not classified
Diflufenican	: Not classified

Carcinogenicity

Chemical Name

Glyphosate, isopropylamine salt	: Not Carcinogenic
Diflufenican	: Not Carcinogenic

Reproductive toxicity

Chemical Name

Glyphosate, isopropylamine salt	: Not toxic for the reproductive system
Diflufenican	: Not toxic for the reproductive system

STOT - single exposure

Chemical Name

Glyphosate, isopropylamine salt	: No data available
Diflufenican	: No data available

STOT - repeated exposure

Chemical Name

Glyphosate, isopropylamine salt	: No data available
Diflufenican	: No data available

Aspiration hazard

Chemical Name

Glyphosate, isopropylamine salt	: No data available
Diflufenican	: No data available

Section 12: ECOLOGICAL INFORMATION

Toxicity

Aquatic toxicity

Acute toxicity	Values	Species	Method	Remarks
Fish 96-hour LC50 mg/l	:			No data available
Crustacea 48-hour EC50 mg/l	:			No data available
Algae 72-hour EC50 mg/l	: 0.027	D. Subspicatus	OECD 201	
Other plants EC50 mg/l	:			No data available

Terrestrial Toxicity

Birds Oral LD50 mg/kg

Chemical Name

Glyphosate, isopropylamine salt	: > 2000	
Diflufenican	: > 2150	Bobwhite quail

Bees Oral LD50 µg/bee

Chemical Name

Glyphosate, isopropylamine salt	: 100	
Diflufenican	: > 100	Apis mellifera

Persistence and degradability

Abiotic Degradation	Values	Method	Remarks
Water DT50 days			
Chemical Name			
Glyphosate, isopropylamine salt	: 1 - 4	BBA IV: 5-1	approx
Diflufenican	: 1 - 5		
Soil DT50 days			
Chemical Name			
Glyphosate, isopropylamine salt	: 4 - 180	EPA / SETAC	20 °C
Diflufenican	: 128		
Biodegradation			
Chemical Name			
Glyphosate, isopropylamine salt	: Not readily biodegradable		
Diflufenican	: No information available		

Bioaccumulative potential

Partition Coefficient (n-octanol/water) Log Pow	Values	Method	Remarks
Chemical Name			
Glyphosate, isopropylamine salt	: -3.2	OECD 117	pH 5-9, 25 °C
Diflufenican	: 4.2		20 °C

Bioconcentration factor (BCF)

Chemical Name			
Glyphosate, isopropylamine salt	: < 1	OECD 305	
Diflufenican	: 1276 - 1596		

Mobility in soil

Adsorption/Desorption	Values	Method	Remarks
Chemical Name			
Glyphosate, isopropylamine salt	: 24000		Koc
Diflufenican	: 3417		Koc

Results of PBT and vPvB assessment

The components in this formulation do not meet the criteria for classification as PBT or vPvB

Other adverse effects

No information available.

Section 13: DISPOSAL CONSIDERATIONS**Waste treatment methods**

Waste from residues/unused products	Disposal should be in accordance with applicable regional, national and local laws and regulations.
Contaminated packaging	Improper disposal or reuse of this container may be dangerous and illegal.
Other Information	Waste codes should be assigned by the user based on the application for which the product was used.

Section 14: TRANSPORTATION INFORMATION

IMDG/IMO

UN/ID No 3082
Proper shipping name ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Glyphosate Isopropylamine salt,)
Hazard Class 9
Packing Group III
Marine pollutant Yes
Special precautions for user

RID/ADR

UN/ID No 3082
Proper shipping name ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Glyphosate Isopropylamine salt,)
Hazard Class 9
Packing Group III
Environmental hazard Yes
Special precautions for user

ICAO/IATA

UN/ID No 3082
Proper shipping name ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Glyphosate Isopropylamine salt,)
Hazard Class 9
Packing Group III
Environmental hazard Yes
Special precautions for user
Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code Not Applicable



Section 15: REGULATORY INFORMATION

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

Section 16: OTHER INFORMATION

Revision Note *** - Change from previous version.

Disclaimer

The information provided in this Material Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

End of Safety Data Sheet