



SAFETY DATA SHEET

Flurochloridone 250 EC

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Version 1

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H-0302-16536-RAII 16536 AG-F8-250 EC

Section 1: IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

Product identifier

Flurochloridone 250 EC

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

For further information, please contact

Email address SDS@ADAMA.COM

Emergency Telephone

Emergency Telephone +972-03-6106666 Subscription no. 36789 (ADAMA Makhteshim Ltd.)

Section 2: HAZARDS IDENTIFICATION

Classification of the substance or mixture

Aspiration toxicity	Category 1 - (H304)
Serious eye damage/eye irritation	Category 2 - (H319)
Skin sensitization	Category 1 - (H317)
Reproductive toxicity	Category 2 - (H361d)
Specific target organ toxicity (single exposure)	Category 3 - (H335)
Acute aquatic toxicity	Category 1 - (H400)
Chronic aquatic toxicity	Category 1 - (H410)
Flammable liquids	Category 3 - (H226)

Label Elements

Hazard pictograms

**Signal word**

Danger

Hazard Statements

H304 - May be fatal if swallowed and enters airways
 H317 - May cause an allergic skin reaction
 H319 - Causes serious eye irritation
 H335 - May cause respiratory irritation
 H361d - Suspected of damaging the unborn child
 H410 - Very toxic to aquatic life with long lasting effects
 H226 - Flammable liquid and vapor

Precautionary Statements

P102 - Keep out of reach of children
 P201 - Obtain special instructions before use
 P210 - Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
 P243 - Take precautionary measures against static discharge
 P261 - Avoid breathing dust/fume/gas/mist/vapors/spray
 P280 - Wear protective gloves/protective clothing/eye protection/face protection
 P302 + P352 - IF ON SKIN: Wash with plenty of soap and water
 P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing
 P331 - Do NOT induce vomiting
 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
Flurochloridone	22-27	61213-25-0
2-Ethylhexan-1-ol	1-2	104-76-7
calcium dodecylbenzenesulphonate	1-2	26264-06-2
Hydrocarbons, C9, aromatics	26-30	N/A
Cyclohexanone	37-41	108-94-1

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	Do NOT induce vomiting. Rinse mouth. Drink plenty of water. Immediate medical attention is required.
Self-protection of the first aider	Use personal protective equipment as required.
<u>Most important symptoms and effects, both acute and delayed</u>	
Symptoms	None known
<u>Indication of any immediate medical attention and special treatment needed</u>	
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 and/or explosion do not breathe fumes.
In the event of fire, wear self-contained breathing apparatus

Section 6: ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

Personal precautions

Remove all sources of ignition. Evacuate personnel to safe areas. Use only with adequate ventilation. Use personal protective equipment as required. Keep people away from and upwind of spill/leak.

For emergency responders

Use personal protection recommended in Section 8.

Environmental precautions

Prevent further leakage or spillage if safe to do so. Prevent product from entering drains. Do not flush into surface water or sanitary sewer system.

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 only with adequate ventilation. Keep away from heat, sparks, flame and other sources of ignition (i.e., pilot lights, electric motors and static electricity). Use with local exhaust ventilation. Use personal protective equipment as required. Do not breathe dust/fume/gas/mist/vapors/spray.

General Hygiene Considerations

When using do not eat, drink or smoke. Regular cleaning of equipment, work area and clothing is recommended. Wash contaminated clothing before reuse.

Conditions for safe storage, including any incompatibilities

Storage Conditions

Keep tightly closed in a dry and cool place. Keep in properly labeled containers. Keep containers tightly closed in a cool, well-ventilated place.

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
2-Ethylhexan-1-ol 104-76-7					TWA: 10 ppm TWA: 54 mg/m ³ Ceiling / Peak: 10 ppm Ceiling / Peak: 54 mg/m ³ TWA: 20 ppm TWA: 110 mg/m ³
Cyclohexanone 108-94-1	S* TWA 10 ppm TWA 40.8 mg/m ³ STEL 20 ppm STEL 81.6 mg/m ³	STEL: 20 ppm STEL: 82 mg/m ³ TWA: 10 ppm TWA: 41 mg/m ³ Skin	TWA: 10 ppm TWA: 40.8 mg/m ³ STEL: 20 ppm STEL: 81.6 mg/m ³	S* STEL: 20 ppm STEL: 82 mg/m ³ TWA: 10 ppm TWA: 41 mg/m ³	Skin TWA: 20 ppm TWA: 80 mg/m ³
Chemical Name	Italy	Portugal	Netherlands	Finland	Denmark
Cyclohexanone 108-94-1	TWA: 10 ppm TWA: 40.8 mg/m ³ STEL: 20 ppm STEL: 81.6 mg/m ³ Skin	STEL: 50 ppm TWA: 20 ppm	Skin STEL: 50 mg/m ³	TWA: 10 ppm TWA: 41 mg/m ³ STEL: 20 ppm STEL: 82 mg/m ³ Skin	TWA: 10 ppm TWA: 40 mg/m ³ Skin
Chemical Name	Austria	Switzerland	Poland	Norway	Ireland
2-Ethylhexan-1-ol 104-76-7	Skin STEL 100 ppm STEL 540 mg/m ³ TWA: 50 ppm TWA: 270 mg/m ³	STEL: 20 ppm STEL: 110 mg/m ³ TWA: 20 ppm TWA: 110 mg/m ³	STEL: 320 mg/m ³ TWA: 160 mg/m ³		
Cyclohexanone 108-94-1	Skin STEL 20 ppm STEL 80 mg/m ³ TWA: 5 ppm TWA: 20 mg/m ³	Skin STEL: 50 ppm STEL: 200 mg/m ³ TWA: 25 ppm TWA: 100 mg/m ³	NDSch: 80 mg/m ³ TWA: 40 mg/m ³ Skin	TWA: 20 ppm TWA: 80 mg/m ³ Skin STEL: 30 ppm STEL: 120 mg/m ³	TWA: 10 ppm TWA: 40.8 mg/m ³ STEL: 20 ppm STEL: 81.6 mg/m ³ Skin

Exposure controls

Engineering Controls

Ensure adequate ventilation, especially in confined areas.

Personal protective equipment

Eye/face protection	Tight sealing safety goggles.
Hand Protection	Gloves made of plastic or rubber.
Body Protection	Antistatic footwear, Wear fire/flamm resistant/retardant clothing, Gloves made of plastic or rubber, Suitable protective clothing, Apron.

General Hygiene Considerations When using do not eat, drink or smoke. Regular cleaning of equipment, work area and clothing is recommended. Wash contaminated clothing before reuse.

Environmental exposure controls Do not allow into any sewer, on the ground or into any body of water.

Section 9: PHYSICAL AND CHEMICAL PROPERTIES

Physical and Chemical Properties

<u>Property</u>	<u>Property</u>	<u>Values</u>	<u>Method</u>	<u>Remarks</u>
Appearance				
	Physical state	: Liquid		
	Color	: clear, amber		
	Odor	: Aromatic		
	Odor threshold	: No data available		
	pH	: 4.4 - 5.4	CIPAC MT 75.3	solution (1 %)
	Melting point/freezing point °C	: No data available		
	Boiling point/boiling range °C	: No data available		
	Flash point °C	: 43	CIPAC MT 12	
	Evaporation rate	: Not Applicable		
	Flammability (solid, gas)	: Not Applicable		
	Upper/lower flammability or explosive limits	: No data available		
	Vapor pressure kPa	: No data available		
	Vapor density	: No data available		
	Relative density	: 0.97 - 1.07	CIPAC MT 3.3	20 °C
	Solubility(ies) mg/l	: No data available		
	Partition Coefficient (n-octanol/water) Log Pow	:		See Section 12 for more information
	Autoignition temperature °C	: 428	EEC A.15	
	Decomposition temperature °C	: No data available		
	Kinematic viscosity mm ² /s 40 °C	: 3.033		
	Explosive properties	: Not an explosive		
	Oxidizing properties	: No		
Other Information				
	Bulk density g/ml	:		Not Applicable
	Surface tension mN/m	: 30.0		1%, 25 °C

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>
Oral LD50 mg/kg	: > 2000	Rat	OECD 423	
Dermal LD50 mg/kg	: > 2000	Rat	OECD 402	
Inhalation LC50 mg/l/4h	: > 5.1	Rat	OECD 403	
Skin corrosion/irritation	: Non-irritating to the skin	Rabbit	OECD 404	
Serious eye damage/eye irritation	: Irritating to eyes	Rabbit	OECD 405	
Respiratory/skin sensitization	: Skin sensitizer	Guinea pig	OECD 406	Flurochloridone

Chronic toxicity

Germ cell mutagenicity

Chemical Name
Flurochloridone : Not classified

Carcinogenicity

Chemical Name
Flurochloridone : Not Carcinogenic

Reproductive toxicity

Chemical Name
Flurochloridone : H361d - Suspected of damaging the unborn child

STOT - single exposure

Chemical Name
Flurochloridone : No data available

STOT - repeated exposure

Chemical Name
Flurochloridone : No data available

Aspiration hazard

Chemical Name
Flurochloridone : No data available

Section 12: ECOLOGICAL INFORMATION

Toxicity

Aquatic toxicity

	<u>Values</u>	<u>Species</u>	<u>Method</u>	<u>Remarks</u>
Acute toxicity Fish 96-hour LC50 mg/l	: 3.0	Rainbow trout	OECD 203	
Crustacea 48-hour EC50 mg/l	: 3.5	Daphnia magna	OECD 202	
Algae 72-hour EC50 mg/l	: 0.019	P. subcapitata	OECD 201	
Other plants EC50 mg/l	: < 1.00	Lemna		

Terrestrial Toxicity**Birds Oral LD50 mg/kg****Chemical Name**

Flurochloridone : > 2150 Bobwhite quail

Bees Oral LD50 µg/bee**Chemical Name**

Flurochloridone : 100

Persistence and degradability**Abiotic Degradation****Water DT50 days****Chemical Name**

Flurochloridone : 14.3

Soil DT50 days**Chemical Name**

Flurochloridone : 53

Biodegradation**Chemical Name**

Flurochloridone : Not readily biodegradable

Bioaccumulative potential**Partition Coefficient****(n-octanol/water) Partition Coefficient (n-octanol/water) Log Pow****Chemical Name**

Flurochloridone : 3.36 pH 7, 20 ° C

Bioconcentration factor (BCF)**Chemical Name**

Flurochloridone : 220

Mobility in soil**Adsorption/Desorption****Chemical Name**

Flurochloridone : 490 - 1100 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 * 1993
Proper shipping name FLAMMABLE LIQUID, N.O.S. (Cyclohexanone, Hydrocarbons, C9, aromatics)
Hazard Class 3
Packing Group III
Marine pollutant Yes
Special precautions for user

RID/ADR

UN/ID No * 1993
Proper shipping name FLAMMABLE LIQUID, N.O.S. (Cyclohexanone, Hydrocarbons, C9, aromatics)
Hazard Class 3
Packing Group III
Environmental hazard Yes
Special precautions for user

ICAO/IATA

UN/ID No * 1993
Proper shipping name FLAMMABLE LIQUID, N.O.S. (Cyclohexanone, Hydrocarbons, C9, aromatics)
Hazard Class 3
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



* Note: UN3077 & UN3082 – These products may be transported as non-dangerous goods under the special provisions of IMDG Code 2.10.2.7; ADR SP375 and ICAO/IATA A197 when packed in single or inner packaging of up to 5L for liquids or 5 kg or less for solids.

Section 15: REGULATORY INFORMATION

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

Section 16: OTHER INFORMATION

Revision Note Changes made to the last version are labeled with this sign ***.

List of Acronyms

ADR - European Agreement concerning the International Carriage of Dangerous Goods by Road
 ADN - European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways
 CAS Number - Chemical Abstracts Service number
 EC Number - EINECS and ELINCS Number

EINECS - European Inventory of Existing Commercial Substances
ELINCS - European List of notified Chemical Substances
IATA - International Air Transport Association
ICAO-TI - Technical Instructions for the Safe Transport of Dangerous Goods by Air
IMDG - International Maritime Dangerous Goods
LC50 - Lethal Concentration to 50 % of a test population
LD50 - Lethal Dose to 50% of a test population (Median Lethal Dose)
OECD - Organization for Economic Co-operation and Development
PBT - Persistent, Bioaccumulative and Toxic substance
RID - Regulations concerning the International Carriage of Dangerous Goods by Rail
STOT - Specific Target Organ Toxicity
vPvB - Very Persistent and Very Bioaccumulative

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