

SAFETY DATA SHEET

PROVALIA LQM

This safety data sheet complies with the requirements of:
Regulation (EC) No. 453/2010 and Regulation (EC) No. 1272/2008



SDS #: 130000146675-IE-A

Revision date: 2019-03-05

Format: EU

Version 2

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

Product Code(s) 130000146675-IE-A

Product Name PROVALIA LQM

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

Recommended Use: Herbicide

Restrictions on Use: Use as recommended by the label.

1.3. Details of the supplier of the safety data sheet

Supplier CHEMINOVA A/S, a subsidiary of FMC Corporation
Thyborønvej 78
DK-7673 Harbøre
Denmark
+45 9690 9690
SDS.Ronland@fmc.com

For further information, please contact: _____

Contact point (+45) 97 83 53 53 (24 h; for emergencies only)

1.4. Emergency telephone number

Emergency telephone Medical emergencies:

Austria: +43 1 406 43 43
Belgium: +32 70 245 245
Bulgaria: +359 2 9154 409
Cyprus: 1401
Czech Republic: +420 224 919 293, +420 224 915 402
Denmark: +45 82 12 12 12
France: +33 (0) 1 45 42 59 59
Finland: +358 9 471 977
Greece: 30 210 77 93 777
Hungary: +36 80 20 11 99
Ireland (Republic): 01 837 9964
Italy: +39 02 6610 1029
Lithuania: +370 523 62052, +370 687 53378
Luxembourg: +352 8002 5500
Netherlands: +31 30 274 88 88
Norway: +47 22 591300
Poland: +48 22 619 66 54, +48 22 619 08 97
Portugal: 808 250 143 (in Portugal only), +351 21 330 3284
Romania: +40 21318 3606
Slovakia: +421 2 54 77 4 166
Slovenia: +386 41 650 500

Spain: +34 91 562 04 20
 Sweden: +46 08-331231112
 Switzerland: 145
 United Kingdom:
 England and Wales: 111
 Scotland: 08454 24 24 24
 U.S.A. & Canada: +1 800 / 331-3148
 All other countries: +1 651 / 632-6793 (Collect)
 CHEMTREC help centre
 Dialling from the UK and NI: 0870 820 0418,
 Dialling from Ireland: 01 901 4670

Section 2: HAZARDS IDENTIFICATION

2.1. Classification of the substance or mixture *Regulation (EC) No 1272/2008*

Skin sensitization	Category 1B
Chronic aquatic toxicity	Category 1

2.2. Label elements

Hazard pictograms



Signal Word
 WARNING

Hazard Statements

H317 - May cause an allergic skin reaction

H410 - Very toxic to aquatic life with long lasting effects

EUH401 - To avoid risks to human health and the environment, comply with the instructions for use.

Precautionary Statements

P261 - Avoid breathing fume/gas/mist/vapours/spray

P272 - Contaminated work clothing should not be allowed out of the workplace

P280 - Wear protective gloves/protective clothing/eye protection/face protection

P302 + P352 - IF ON SKIN: Wash with plenty of soap and water

P321 - Specific treatment (see first aid instructions on label)

P333 + P313 - If skin irritation or rash occurs: Get medical advice/attention

P362 + P364 - Take off contaminated clothing and wash before reuse

P501: Dispose of contents/container as hazardous waste.

2.3. Other hazards

None of the ingredients in the product meets the criteria for being PBT or vPvB.

Section 3: COMPOSITION/INFORMATION ON INGREDIENTS

3.1 Substances

The product is a mixture, not a substance.

Chemical name	EC-No	CAS-No	Weight %	Classification according to Regulation (EC) No. 1272/2008 [CLP]	REACH registration number
Thifensulfuron-methyl	-	79277-27-3	3	Aquatic Acute 1 (H400) Aquatic Chronic 1 (H410)	No data available

Metsulfuron-methyl	-	74223-64-6	0.5	Aquatic Acute 1 (H400) Aquatic Chronic 1 (H410) M = 1000	No data available
Fluroxypyr-meptyl	-	81406-37-3	20	Aquatic Acute 1 (H400) Aquatic Chronic 1 (H410)	No data available

Additional Information

For the full text of the H- and EUH- phrases mentioned in this Section, see Section 16

Section 4: FIRST AID MEASURES**4.1. Description of first aid measures**

Eye Contact	Hold eyes open and rinse slowly and gently with water for 15 to 20 minutes. Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye. If eye irritation persists, consult a specialist.
Skin Contact	Take off contaminated clothing. Wash off immediately with soap and plenty of water. In the case of skin irritation or allergic reactions see a physician. Wash contaminated clothing before reuse.
Inhalation	Move to fresh air. Artificial respiration and/or oxygen may be necessary. Consult a physician if necessary.
Ingestion	Do not induce vomiting without medical advice. If victim is conscious: Rinse mouth with water.

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

Most important symptoms and effects, both acute and delayed	To the best of our knowledge, adverse effects in humans have not been reported.
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4.3. Indication of any immediate medical attention and special treatment needed

Indication of immediate medical attention and special treatment needed, if necessary	There is no specific antidote against this substance. Gastric lavage and/or administration of activated charcoal can be considered. After decontamination, treatment is supportive and symptomatic as for a general chemical.
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Section 5: FIRE FIGHTING MEASURES**5.1. Extinguishing media****Suitable Extinguishing Media**

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

Unsuitable extinguishing media

High volume water jet.

5.2. Special hazards arising from the substance or mixture

Thermal decomposition can lead to release of irritating gases and vapors.

Hazardous Combustion Products

Carbon oxides (COx). Nitrogen oxides (NOx).

5.3. Advice for firefighters

Prevent fire extinguishing water from contaminating surface water or the groundwater system. Collect contaminated fire extinguishing water separately. This must not be discharged into drains. Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations. Cool containers / tanks with water spray.

Section 6: ACCIDENTAL RELEASE MEASURES**6.1. Personal precautions, protective equipment and emergency procedures****Personal Precautions**

It is recommended to have a predetermined plan for the handling of spills. Empty, closable vessels for the collection of spills should

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be available.

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In case of large spill (involving 10 tonnes of the product or more):

Observe all safety precautions when cleaning up spills. Use personal protection equipment. Depending on the magnitude of the spill this may mean wearing respirator, face mask or eye protection, chemical resistant clothing, gloves and rubber boots. Stop the source of the spill immediately if safe to do so. Keep unprotected persons away from the spill area.

For further clean-up instructions, call FMC Emergency Hotline number listed in Section 1 "Product and Company Identification" above.

For emergency responders

Use personal protection recommended in Section 8.

6.2. Environmental precautions

Contain the spill to prevent any further contamination of surface, soil or water. Wash waters must be prevented from entering surface water drains. Uncontrolled discharge into water courses must be alerted to the appropriate regulatory body.

6.3. Methods and material for containment and cleaning up**Methods for Containment**

It is recommended to consider possibilities to prevent damaging effects of spills, such as bunding or capping. Use non-sparking tools and equipment. If appropriate, surface water drains should be covered. Minor spills on the floor or other impervious surface should immediately be swept up or preferably vacuumed up using equipment with high efficiency final filter. Transfer to suitable containers. Clean area with detergent and much water. Absorb wash liquid onto inert absorbent such as universal binder, Fuller's earth, bentonite or other absorbent clay and collect in suitable containers. The used containers should be properly closed and labelled.

Methods for cleaning up

If appropriate, surface water drains should be covered. Minor spills on the floor or other impervious surface should be swept up or preferably vacuumed up using equipment with high efficiency final filter. Transfer to suitable containers. Clean area with damp cloth and/or strong industrial detergent with much water. Absorb wash liquid onto a suitable absorbent such as universal binder, attapulgite, bentonite or other absorbent clays and transfer contaminated absorbent to suitable containers. The used containers should be properly closed and labelled.
spills which soak into the ground should be dug up and transferred to suitable containers. in water should be contained as much as possible by isolation of the contaminated water. The contaminated water must be collected and removed for treatment or disposal.

6.4. Reference to other sections

See Section 8 "Exposure Controls/Personal Protection" for specific details. See section 13 for disposal information.

Section 7: HANDLING AND STORAGE

7.1. Precautions for safe handling**Handling**

In an industrial environment it is recommended to avoid all personal contact with the product, if possible by using closed systems with remote system control. Otherwise it is recommended to handle the material by mechanical means as much as possible. Adequate ventilation or local exhaust ventilation is required. The exhaust gases should be filtered or treated otherwise. For personal protection in this situation, see section 8.

For its use as a pesticide, first look for precautions and personal protection measures on the officially approved label on the packaging or for other official guidance or policy in force. If these are lacking, see section 8. Avoid contact with skin, eyes and clothing. Remove and wash contaminated clothing before re-use.

Hygiene measures

Handle in accordance with good industrial hygiene and safety practice.

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

Store in original container. Keep in properly labeled containers. Keep containers tightly closed in a cool, well-ventilated place. Keep

out of the reach of children. Keep away from food, drink and animal feedingstuffs. Protect from moisture.

7.3. Specific end use(s)

Risk Management Methods (RMM)

The information required is contained in this Safety Data Sheet.

Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1. Control parameters

Derived No Effect Level (DNEL) No information available.

Predicted No Effect Concentration (PNEC) No information available.

8.2. Exposure controls

Engineering measures Apply technical measures to comply with the occupational exposure limits (if listed above). When working in confined spaces (tanks, containers, etc.), make sure there is an adequate source of air for breathing and wear the recommended equipment. Ventilate all transport vehicles prior to discharge.

Personal protective equipment

Eye/Face Protection For dust, splash, mist or spray exposure, wear chemical protective goggles. Maintain eye wash fountain and quick-drench facilities in work area.

Hand Protection Wear chemical protective gloves made of materials such as nitrile or neoprene.

Skin and Body Protection Wear appropriate chemical resistant clothing to prevent skin contact depending on the extent of exposure. During most normal work situations where exposure to the material cannot be avoided for a limited time span, waterproof pants and apron of chemical resistant material or coveralls of polyethylene (PE) will be sufficient. Coveralls of PE must be discarded after use if contaminated. In cases of appreciable or prolonged exposure, coveralls of barrier laminate may be required.

Respiratory Protection The product does not automatically present an airborne exposure concern during normal handling. In the event of an accidental discharge of the material which produces a heavy vapour or mist, workers should put on officially approved respiratory protection equipment with a universal filter type including particle filter.

Environmental exposure controls Do not release to the environment.

Section 9: PHYSICAL AND CHEMICAL PROPERTIES

9.1. Information on basic physical and chemical properties

Physical State	Liquid
Appearance	Suspension
Odor	No information available
Color	White, Light yellow
Odor threshold	No information available
pH	No information available
Melting point/freezing point	No information available
Boiling Point/Range	No information available
Flash point	> 93.3 °C
Evaporation Rate	No information available
Flammability (solid, gas)	
Flammability Limit in Air	
Upper flammability limit:	No information available
Lower flammability limit:	No information available
Vapor pressure	No information available

Vapor density	No information available
Specific gravity	No information available
Water solubility	Dispersible in water.
Solubility in other solvents	No information available
Partition coefficient	No information available
Autoignition temperature	No information available
Decomposition temperature	No information available
No information available.	
Viscosity, kinematic	No information available
Viscosity, dynamic	No information available
Explosive properties	Not explosive. Method: Regulation (EC) No. 440/2008, Annex, A.14
Oxidizing properties	No information available

9.2. Other information

Softening point	No information available
Molecular weight	No information available
VOC content (%)	No information available
Relative density	No information available
Bulk density	No information available
K _{st}	No information available

Section 10: STABILITY AND REACTIVITY**10.1. Reactivity**

None under normal use conditions.

10.2. Chemical stability

The product is stable during normal handling and storage at ambient temperatures.

Explosion data

Sensitivity to Mechanical Impact None known.

Sensitivity to Static Discharge None known.

10.3. Possibility of hazardous reactions**Hazardous polymerization**

Hazardous polymerization does not occur.

Hazardous reactions

None under normal processing.

10.4. Conditions to avoid

To avoid thermal decomposition, do not overheat. Protect from freezing.

10.5. Incompatible materials

No materials to be especially mentioned.

10.6. Hazardous decomposition products

None known.

Section 11: TOXICOLOGICAL INFORMATION**11.1. Information on toxicological effects****Acute toxicity****Product Information**

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LD50 Oral > 5000 mg/kg (rat) (Method OECD 425)
 LD50 Dermal > 5000 mg/kg (rat) (Method: OECD 402)
 LC50 Inhalation > 5.1 mg/L (rat) 4 hr (Method: OECD 403)

Chemical name	LD50 Oral	LD50 Dermal	LC50 Inhalation
Metsulfuron-methyl	>5000 mg/kg	>5000 mg/kg	>5.3 mg/L
Fluroxypyr-meptyl	= 3162 mg/kg (Rat) > 5000 mg/kg (Rat)	= 2 g/kg (Rat)	

Skin corrosion/irritation No irritation (rabbit). (Method: OECD 404).
Serious eye damage/eye irritation Non-irritating (rabbit). (Method: OECD 405).
Sensitization Skin sensitizer (mouse) (Method OECD 429)
Mutagenicity Thifensulfuron- methyl: Tests on bacterial or mammalian cell cultures did not show mutagenic effects. Did not show mutagenic effects in animal experiments.

Metsulfuron-methyl: In some laboratory tests, genetic damage was observed in cultures of mammalian cells, but not in others. Not genotoxic in animal studies.

Fluroxypyr-meptyl: In vitro tests did not show mutagenic effects. In vivo tests did not show mutagenic effects.

Carcinogenicity Thifensulfuron- methyl: Did not show carcinogenic effects in animal experiments.

Metsulfuron-methyl: Animal testing did not show any carcinogenic effects.

Fluroxypyr-meptyl: Not classifiable as a human carcinogen. Based on data obtained from similar substances.

Reproductive toxicity Thifensulfuron-methyl: Animal tests did not show any effects on fertility or developmental toxicity.

Metsulfuron Methyl: Animal tests did not show effects on fertility or developmental toxicity.

Fluroxypyr-meptyl: No toxicity to reproduction in animal studies.

STOT - single exposure No specific effects after single exposure have been observed.

STOT - repeated exposure No toxicologically significant effects were found.

Thifensulfuron methyl:

Oral - feed Rat
 Increase in blood urea nitrogen, altered hematology

Metsulfuron methyl:

Oral Rat
 Exposure time: 90 d
 Reduced body weight gain, Liver effects

Dermal Rabbit
 Exposure time: 21 d
 NOAEL: 125 mg/kg
 Drying of skin, Cracking of skin, Skin irritation

Aspiration hazard The product does not present an aspiration pneumonia hazard.

Section 12: ECOLOGICAL INFORMATION

12.1.Toxicity**Ecotoxicity**

The ecotoxicity of the product is measured as:

Toxicity to fish

LC50 / 96 h / Oncorhynchus mykiss (rainbow trout): > 17.5 mg/l

Method: OECD Test Guideline 203

Toxicity to aquatic plants

ErC50 / 72 h / Pseudokirchneriella subcapitata (green algae): 1.9 mg/l

Method: OECD Test Guideline 201

ErC50 / 7 Days / Lemna gibba (duckweed): 0.0369 mg/l

Method: OECD Test Guideline 201

Toxicity to aquatic invertebrates

EC50 / 48 h / Daphnia magna (Water flea): 7.8 mg/l

Method: OECD Test Guideline 202

Thifensulfuron-methyl(79277-27-3)				
Active Ingredient(s)	Duration	Species	Value	Units
Thifensulfuron- methyl	96 h LC50	Oncorhynchus mykiss (rainbow trout)	>100	mg/L
	14-day EC50	Duckweed (Lemna minor)	0.0013	mg/L
	48 h LC50	Daphnia magna	470	mg/L
	28-day NOEC	Mysid shrimp	7.93	mg/L
	96 h LC50	Onchorhyncus mykiss	>100	mg/L
	21 d NOEC	Onchorhyncus mykiss	> 250	mg/L
	21 d NOEC	Daphnia magna	> 340	mg/L

Metsulfuron-methyl(74223-64-6)				
Active Ingredient(s)	Duration	Species	Value	Units
(Metsulfuron-methyl)	48 h LC50	Daphnia magna	>120	mg/L
	96 h LC50	Oncorhynchus mykiss (rainbow trout)	>150	ppm
	14-day EC50	Duckweed (Lemna minor)	0.00036	mg/L
	LD50 Dietary	Bobwhite quail	>5620	mg/kg
	LD50 Dietary	Mallard duck	>2510	mg/kg
	LD50	Bee	>25	µg/bee
	72 h EC50	Cyanobacteria (Aanabaena flos-aquae)	0.066	mg/L
	96 h LC50	Lepomis macrochirus (Bluegill sunfish)	>150	ppm
	21 d NOEC	Onchorhyncus mykiss	68	mg/L
	21 d NOEC	Daphnia magna	100	mg/L

Fluroxypyr-meptyl(81406-37-3)				
Active Ingredient(s)	Duration	Species	Value	Units
	LC50 dietary	Bobwhite quail	>2000	mg/kg
	LD50 Oral	Bee	> 100	µg/bee

	LD50 contact	Bee	> 100	µg/bee
	NOEC	Onchorhyncus mykiss	0.32	mg/L

12.2. Persistence and degradability

Not readily biodegradable. (based on active ingredient).

12.3. Bioaccumulative potential

Does not bioaccumulate. (based on active ingredient).

12.4. Mobility in soil**Mobility in soil**

No information available.

Mobility

The product is not expected to be mobile in the soil.

12.5. Results of PBT and vPvB assessment

None of the ingredients in the product meets the criteria for being PBT or vPvB.

12.6. Other adverse effects

No other adverse effects relevant to the environment are known.

Section 13: DISPOSAL CONSIDERATIONS

13.1. Waste treatment methods**Waste from residues / unused products**

Remaining quantities of the material and empty but unclean packaging should be regarded as hazardous waste. Dispose of as hazardous waste in compliance with local and national regulations. Do not contaminate water, foodstuffs, feed or seed by storage or disposal. Do not discharge to sewer systems.

Contaminated Packaging

It is recommended to consider possible ways of disposal in the following order:

1. Reuse or recycling should first be considered. Reuse is prohibited except by the authorisation holder. If offered for recycling, containers must be emptied and triply rinsed (or equivalent). Do not discharge rinsing water to sewer systems.
2. Controlled incineration with flue gas scrubbing is possible for combustible packaging materials.
3. Delivery of the packaging to a licensed service for disposal of hazardous waste.
4. Disposal in a landfill or burning in open air should only occur as a last resort. For disposal in a landfill containers should be emptied completely, rinsed and punctured to make them unusable for other purposes. If burned, stay out of smoke.

Section 14: TRANSPORT INFORMATION

IMDG/IMO**14.1 UN/ID no**

3082

14.2 Proper Shipping Name

Environmentally hazardous substance, liquid, n.o.s. (Fluroxypyr meptyl, Thifensulfuron-methyl, Metsulfuron methyl)

14.3 Hazard class	9
14.4 Packing Group	III
14.5 Marine Pollutant	Yes
Environmental Hazard	Yes
14.6 Special Provisions	Do not release to the environment
14.7 Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code	Not applicable

RID

14.1 UN/ID no	3082
14.2 Proper Shipping Name	Environmentally hazardous substance, liquid, n.o.s. (Fluroxypyr meptyl, Thifensulfuron-methyl, Metsulfuron methyl)
14.3 Hazard class	9
14.4 Packing Group	III
14.5 Environmental Hazard	Yes
14.6 Special Provisions	Do not release to the environment

ADR/RID

14.1 UN/ID no	3082
14.2 Proper Shipping Name	Environmentally hazardous substance, liquid, n.o.s. (Fluroxypyr meptyl, Thifensulfuron-methyl, Metsulfuron methyl)
14.3 Hazard class	9
14.4 Packing Group	III
14.5 Environmental Hazard	Yes
14.6 Special Provisions	Do not release to the environment
Tunnel restriction code	E

ICAO/IATA

14.1 UN/ID no	3082
14.2 Proper Shipping Name	Environmentally hazardous substance, liquid, n.o.s. (Fluroxypyr meptyl, Thifensulfuron-methyl, Metsulfuron methyl)
14.3 Hazard class	9
14.4 Packing Group	III
14.5 Environmental Hazard	Yes
14.6 Special Provisions	Do not release to the environment

Section 15: REGULATORY INFORMATION

15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture**European Union****Authorizations and/or restrictions on use:**

This product does not contain substances subject to authorization (Regulation (EC) No. 1907/2006 (REACH), Annex XIV)
This product does not contain substances subject to restriction (Regulation (EC) No. 1907/2006 (REACH), Annex XVII)

Persistent Organic Pollutants

Not Applicable

Dangerous substance category per Seveso Directive (2012/18/EU)

DANGEROUS FOR THE ENVIRONMENT

Ozone-depleting substances (ODS) regulation (EC) 1005/2009

Not Applicable

International Inventories

Chemical name	TSCA (United States)	DSL (Canada)	EINECS/ELINCS (Europe)	ENCS (Japan)	China (IECSC)	KECL (Korea)	PICCS (Philippines)	AICS (Australia)
Metsulfuron-methyl 74223-64-6					X			
Fluroxypyr-meptyl 81406-37-3			X					

15.2. Chemical safety assessment

A chemical safety assessment is not required to be included for this product.

Section 16: OTHER INFORMATION**Key or legend to abbreviations and acronyms used in the safety data sheet****Full text of H-Statements referred to under sections 2 and 3**

H317 - May cause an allergic skin reaction

H410 - Very toxic to aquatic life with long lasting effects

EUH401 - To avoid risks to human health and the environment, comply with the instructions for use

Legend

ADR:	European Agreement concerning the International Carriage of Dangerous Goods by Road
CAS:	CAS (Chemical Abstracts Service)
Ceiling:	Maximum limit value:
DNEL:	Derived No Effect Level (DNEL)
EINECS:	EINECS (European Inventory of Existing Chemical Substances)
GHS:	Globally Harmonized System (GHS)
IATA:	International Air Transport Association (IATA)
ICAO:	International Civil Aviation Organization
IMDG:	International Maritime Dangerous Goods (IMDG)
LC50:	LC50 (lethal concentration)
LD50:	LD50 (lethal dose)
PBT:	Persistent, Bioaccumulative, and Toxic (PBT) Chemicals
RID:	Regulations Concerning the International Transport of Dangerous Goods by Rail
STEL:	Short term exposure limit
SVHC:	SVHC: Substances of Very High Concern for Authorization:
TWA:	time weighted average
vPvB:	very Persistent and very Bioaccumulative

Classification procedure

Test data

Revision date: 2019-03-05

Reason for revision: Initial Release.

Training Advice This material should only be used by persons who are made aware of its hazardous properties and have been instructed in the required safety precautions.

Disclaimer

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End of Safety Data Sheet