



Product code	6270	Page 1 of 12
Product name	GAMIT 36 CS	June 2019
Safety data sheet according to EU Reg. 1907/2006 as amended		Supersedes September 2018

SAFETY DATA SHEET

Gamit 36 CS

Revision: Sections containing a revision or new information are marked with a ♣.

♣ SECTION 1: IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

- 1.1. **Product identifier** **Gamit 36 CS**
- 1.2. **Relevant identified uses of the substance or mixture and uses advised against** Can be used as herbicide only.
- 1.3. **Details of the supplier of the safety data sheet** **FMC Agricultural Solutions A/S**
Thyborønvej 78
DK-7673 Harboøre
Denmark
SDS.Ronland@fmc.com
- 1.4. **Emergency telephone number**
- Medical emergencies:
- | | |
|--|---|
| Austria: +43 1 406 43 43 | Luxembourg: +352 8002 5500 |
| Belgium: +32 70 245 245 | Netherlands: +31 30 274 88 88 |
| Bulgaria: +359 2 9154 409 | Norway: +47 22 591300 |
| Cyprus: 1401 | Poland: +48 22 619 66 54
+48 22 619 08 97 |
| Czech Republic: +420 224 919 293
+420 224 915 402 | Portugal: 808 250 143 (in Portugal only)
+351 21 330 3284 |
| Denmark: +45 82 12 12 12 | Romania: +40 21318 3606 |
| England and Wales: 111 | Scotland: +8454 24 24 24 |
| Estonia: +372 7943500 | Slovakia: +421 2 54 77 4 166 |
| France: +33 (0) 1 45 42 59 59 | Slovenia: +386 41 650 500 |
| Finland: +358 9 471 977 | South Africa: +27 83 123 3911 (Bateleur Emergency Response Co.) |
| Greece: 30 210 77 93 777 | Spain: +34 91 562 04 20 |
| Hungary: +36 80 20 11 99 | Sweden: +46 08-331231
112 |
| Ireland (Republic): +353 1 837 9964 | Switzerland: 145 |
| Italy: +39 02 6610 1029 | Turkey: 114 |
| Latvia: +371 670 42 473
112 | U.S.A. & Canada: +1 800 / 331 3148 |
| Lithuania: +370 523 62052
+370 687 53378 | All other countries: +1 651 / 632 6793 (Collect) |

For fire, leak, spill or other accident emergencies:

U.S.A.: +1 800 / 424 9300 (CHEMTREC)
All other countries: +1 703 / 527 3887 (CHEMTREC - Collect)

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SECTION 2: HAZARDS IDENTIFICATION

- 2.1. **Classification of the substance or mixture** None
- WHO classification Class U (Unlikely to present acute hazard in normal use)
- Health hazards No serious hazards to health are expected.
- Environmental hazards The product is toxic to aquatic organisms.
- 2.2. **Label elements**
According to EU Reg. 1272/2008 as amended
- Product identifier Gamit 36 CS
- Hazard pictograms None
- Signal word None
- Hazard statements None
- H413 May cause long lasting harmful effects to aquatic life.
- Precautionary statements None
- Supplementary hazard statements
- EUH210 Safety data sheet available on request.
- EUH401 To avoid risks to human health and the environment, comply with the instructions of use.
- 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
- 3.2. **Mixtures** See section 16 for full text of hazard statements.
- Gamit 36 CS is a suspension in water of porous microcapsules containing the active ingredient clomazone.
- Active ingredient*
- Clomazone** Content: 32% w/w
- CAS name 3-Isoxazolidinone, 2-[(2-chlorophenyl)methyl]-4,4-dimethyl-
- CAS no. 81777-89-1
- IUPAC name(s) 2-(2-Chlorobenzyl)-4,4-dimethyl-1,2-oxazolidin-3-one
 2-(2-Chlorobenzyl)-4,4-dimethylisoxazolidin-3-one
- ISO-name Clomazone
- EC no. (EINECS no.) None
- EU index no. None
- Molecular weight 239.7
- Classification of the ingredient Acute oral toxicity: Category 4 (H302)
 Acute inhalation toxicity: Category 4 (H332)
 Hazards to the aquatic environment, acute: Category 1 (H400)
 chronic: Category 1 (H410)

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<u>Reportable ingredients</u>	Content (% w/w)	CAS no.	EC no. (EINECS no.)	Classification * = harmonised classification
Sodium nitrate	5	7631-99-4	231-554-3	Ox. Sol. 3 (H272) * Acute Tox. 3 (H301) * Eye Irrit. 2 (H319) Aquatic Acute 1 (H400) *
Lignosulfonic acid, sodium salt, sulfomethylated	1	68512-34-5	None	Eye Irrit. 2 (H319)

SECTION 4: FIRST AID MEASURES

4.1. Description of first aid measures

Inhalation	If experiencing any discomfort, immediately remove from exposure. Light cases: Keep person under surveillance. Get medical attention immediately if symptoms develop. Serious cases: Get medical attention immediately or call for an ambulance.
Skin contact	Immediately remove contaminated clothing and footwear. Flush skin with water. Wash with water and soap. Get medical attention if any symptom develops.
Eye contact	Immediately rinse eyes with much water or eyewash solution, occasionally opening eyelids, until no evidence of chemical remains. Remove contact lenses after a few minutes and rinse again. Get medical attention if irritation develops.
Ingestion	Let the exposed person rinse mouth and drink several glasses of water or milk, but not induce vomiting. If vomiting does occur, let him/her rinse mouth and drink fluids again. Get medical attention immediately.

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

When fed to animals, the active ingredient in this product caused decreased activity, tearing eyes, bleeding from the nose and incoordination

4.3. Indication of any immediate medical attention and special treatment needed

Immediate medical attention is required in case of ingestion.
It may be helpful to show this safety data sheet to physician.

Notes to physician

A specific antidote for exposure to this material is not known. Gastric lavage and/or the administration of activated charcoal can be considered. After decontamination, treatment should be directed at the control of symptoms and the clinical condition.

SECTION 5: FIRE-FIGHTING MEASURES

- 5.1. **Extinguishing media** Dry chemical or carbon dioxide for small fires, water spray or foam for large fires. Avoid heavy hose streams.

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- 5.2. **Special hazards arising from the substance or mixture** The essential breakdown products are volatile, malodorous, toxic, irritant and inflammable compounds such as hydrogen chloride, nitrogen oxides, carbon monoxide, carbon dioxide and various chlorinated organic compounds.
- 5.3. **Advice for firefighters** Use water spray to keep fire-exposed containers cool. Approach fire from upwind to avoid hazardous vapours and toxic decomposition products. Fight fire from protected location or maximum possible distance. Dike area to prevent water runoff. Firemen should wear self-contained breathing apparatus and protective clothing.

SECTION 6: ACCIDENTAL RELEASE MEASURES

- 6.1. **Personal precautions, protective equipment and emergency procedures** It is recommended to have a predetermined plan for the handling of spills. Empty, closable vessels for the collection of spills should be available.
- In case of large spill (involving 10 tonnes of the product or more):
1. use personal protection equipment; see section 8
 2. call emergency telephone no.; see section 1
 3. alert authorities.
- 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.
- 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 materials for containment and cleaning up** It is recommended to consider possibilities to prevent damaging effects of spills, such as bunding or capping. See GHS (Annex 4, Section 6).
- If appropriate, surface water drains should be covered. Minor spills on the floor or other impervious surface should be absorbed onto an absorptive material such as universal binder, Fuller's earth or other absorbent clays. Collect the contaminated absorbent in suitable containers. Clean area with detergent and much water. Absorb wash liquid with absorbent and transfer to suitable containers. The used containers should be properly closed and labelled.
- Large spills which soak into the ground should be dug up and transferred to suitable containers.
- Spills in water should be contained as much as possible by isolation of

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the contaminated water. The contaminated water must be collected and removed for treatment or disposal.

- 6.4. **Reference to other sections** See subsection 8.2. for personal protection.
 See section 13 for disposal.

SECTION 7: HANDLING AND STORAGE

- 7.1. **Precautions for safe 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. The material should be handled 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.

Remove contaminated clothing immediately. Wash thoroughly after handling. Before removing gloves, wash them with water and soap. After work, take off all work clothes and footwear. Take a shower, using water and soap. Wear only clean clothes when leaving job. Wash protective clothing and protective equipment with water and soap after each use.

Do not discharge to the environment. Do not contaminate water when disposing of equipment wash waters. Collect all waste material and remains from cleaning equipment, etc., and dispose of as hazardous waste. See section 13 for disposal.

- 7.2. **Conditions for safe storage, including any incompatibilities** The product is stable under normal conditions of warehouse storage. Protect from frost and extreme heat.

Store in closed, labelled containers. The storage room should be constructed of incombustible material, closed, dry, ventilated and with impermeable floor, without access of unauthorised persons or children. A warning sign reading "POISON" is recommended. The room should only be used for storage of chemicals. Food, drink, feed and seed should not be present. A hand wash station should be available.

- 7.3. **Specific end use(s)** The product is a registered pesticide which may only be used for the applications it is registered for, in accordance with a label approved by the regulatory authorities.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

- 8.1. **Control parameters**
 Personal exposure limits To our knowledge, not established for clomazone. However, personal

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exposure limits defined by local regulations may exist and must be observed.

Clomazone

DNEL Not established
 EFSA has established an AOEL of 0.133 mg/kg bw/day
 PNEC, aquatic environment 0.22 mg/l

8.2. **Exposure controls** When used in a closed system, personal protection equipment will not be required. The following is meant for other situations, when the use of a closed system is not possible, or when it is necessary to open the system. Consider the need to render equipment or piping systems non-hazardous before opening.

The precautions mentioned below are primarily meant for handling of the undiluted product and for preparing the spray solution, but can be recommended for spraying as well.

In cases of incidental high exposure, maximal personal protection may be necessary, such as respirator, face mask, chemical resistant coveralls.



Respiratory protection

The product does not automatically present an airborne exposure concern when handled carefully, but in the event of an accidental discharge of the material which produces a heavy vapour or mist, workers must put on officially approved respiratory protection equipment with a universal filter type including particle filter.



Protective gloves

Wear chemical resistant gloves, such as barrier laminate, butyl rubber or nitrile rubber. The breakthrough times of these materials for the product are unknown, but it is expected that they will give adequate protection.



Eye protection

Wear safety glasses. It is recommended to have an eye wash fountain immediately available in the workplace when there is a potential for eye contact.



Other skin 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 excessive or prolonged exposure, coveralls of barrier laminate may be required.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

9.1. **Information on physical and chemical properties**

Appearance Light beige liquid
 Odour Slight, of aromatic hydrocarbons

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Odour threshold	Not determined
pH	1% dispersion in water: 8.87
Melting point/freezing point	Not determined
Initial boiling point and boiling range	Not determined
Flash point	> 79°C
Evaporation rate	Not determined
Flammability (solid/gas)	Not applicable (liquid)
Upper/lower flammability or explosive limits	Not determined
Vapour pressure	Clomazone : 1.92 x 10 ⁻² Pa at 25°C
Vapour density	Not determined
Relative density	1.171 at 20°C
Solubility(ies)	Organic solvents tend to extract the active ingredient from the capsules. Clomazone is soluble in acetone, acetonitrile, chloroform, cyclohexanone, dichloromethane, methanol, toluene, heptane, dimethylformamide. Solubility of clomazone in water: 1100 mg/l
Partition coefficient n-octanol/water	Clomazone : log K _{ow} = 2.5
Autoignition temperature	392°C
Decomposition temperature	Not determined
Viscosity	115 - 746 mPa.s at 20°C
Explosive properties	Not explosive
Oxidising properties	Not oxidising

9.2. Other information

Miscibility The product is dispersible in water.

SECTION 10: STABILITY AND REACTIVITY

- 10.1. **Reactivity** To our knowledge, the product has no special reactivities.
- 10.2. **Chemical stability** The product is stable during normal handling and storage at ambient temperatures.
- 10.3. **Possibility of hazardous reactions** None known.
- 10.4. **Conditions to avoid** Heating of the product will evolve harmful and irritant vapours.
- 10.5. **Incompatible materials** None known.
- 10.6. **Hazardous decomposition products** See subsection 5.2.

SECTION 11: TOXICOLOGICAL INFORMATION

11.1. **Information on toxicological effects** * = Based on available data, the classification criteria are not met.

Product

Acute toxicity The product is not considered as harmful by single exposures. * The acute toxicity is measured as:

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Route(s) of entry	- ingestion	LD ₅₀ , oral, rat: > 5000 mg/kg (method OECD 401)
	- skin	LD ₅₀ , dermal, rat: > 5000 mg/kg (method OECD 402)
	- inhalation	LC ₅₀ , inhalation, rat: > 5.21 mg/l/4 h (method OECD 403)
Skin corrosion/irritation		Not irritating to skin (method OECD 404). *
Serious eye damage/irritation		Not irritating to eyes (method OECD 405). *
Respiratory or skin sensitisation ...		Not sensitising (method OECD 429). *
Germ cell mutagenicity		The product contains no ingredients known to be mutagenic. *
Carcinogenicity		The product contains no ingredients known to be carcinogenic. *
Reproductive toxicity		The product contains no ingredients found to have adverse effects on reproduction. *
STOT – single exposure		To our knowledge, no specific effects have been observed after single exposure. *
STOT – repeated exposure		The following has been measured on the active ingredient clomazone: Target organ: liver LOAEL: 4000 ppm (400 mg/kg bw/day) in a 90-day rat study (method OECD 408). At this dose level, increased liver weight and increased cholesterol were seen. *
Aspiration hazard		The product does not present an aspiration hazard. *
Symptoms and effects, acute and delayed		When fed to animals, the active ingredient in this product caused decreased activity, tearing eyes, bleeding from the nose and incoordination.

Clomazone

This formulation contains **microencapsulated clomazone**. The toxicity of encapsulated clomazone is lower than that of clomazone itself. It approaches the toxicity of clomazone only in cases where grinding actions break up the capsules, thus freeing the active ingredient.

Toxicokinetics, metabolism and distribution		Clomazone is rapidly absorbed and excreted. It is widely distributed in the body and almost completely metabolised. There is no evidence of accumulation.
Acute toxicity		Clomazone is harmful by ingestion. The acute toxicity is measured as:
Route(s) of entry	- ingestion	LD ₅₀ , oral, rat (female): 768 mg/kg (method OECD 425)
	- skin	LD ₅₀ , dermal, rat: > 2000 mg/kg (method OECD 402) *
	- inhalation	LC ₅₀ , inhalation, rat: > 5.02 mg/l/4 h (method OECD 403) *
Skin corrosion/irritation		Slightly irritating to skin (method OECD 404). *
Serious eye damage/irritation		Slightly irritating to eyes (method OECD 405). *

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Respiratory or skin sensitisation ... Not a skin sensitizer (method OECD 429). *

Sodium nitrate

Toxicokinetics, metabolism and distribution

Sodium in ionic form is a normal body constituent and regulated between narrow ranges. These ranges will not be exceeded, except locally in unusual situations such as accidents. Nitrate ion is expected to be absorbed and widely distributed in the body.

Acute toxicity The substance is not considered as harmful. * The acute toxicity is measured as:

Route(s) of entry - ingestion LD₅₀, oral, rat: 3430 mg/kg (method OECD 401)
 - skin LD₅₀, dermal, rat: > 5000 mg/kg
 (measured on a similar substance, method OECD 402)
 - inhalation LC₅₀, inhalation, rat: not available

Skin corrosion/irritation Not irritating to skin (measured on a similar product; method OECD 404). *

Serious eye damage/irritation Irritating to eyes (method OECD 405).

Respiratory or skin sensitisation ... Did not cause sensitisation (method OECD 429). *

Lignosulfonic acid, sodium salt, sulfomethylated

Acute toxicity The substance is not considered as harmful by single exposure. *

Route(s) of entry - ingestion LD₅₀, oral, rat: not available
 - skin LD₅₀, dermal, rat: not available
 - inhalation LC₅₀, inhalation, rat: not available

Serious eye damage/irritation Causes serious eye irritation.

SECTION 12: ECOLOGICAL INFORMATION

12.1. **Toxicity** The product is a herbicide and must therefore be expected to be harmful to all plants. It is considered as non-toxic to algae, daphnids, fish, soil micro- and macroorganisms, birds and insects.

The ecotoxicity measured on the product is:

- Fish	Rainbow trout (<i>Oncorhynchus mykiss</i>)	96-h LC ₅₀ : 593 mg/l
- Invertebrates	Daphnids (<i>Daphnia magna</i>)	48-h EC ₅₀ : 491 mg/l
- Algae	Green algae (<i>Pseudokirneriella subcapitata</i>)	72-h E _r C ₅₀ : 366 mg/l
- Plants	Duckweed (<i>Lemna gibba</i>)	7-day E _r C ₅₀ : 3547 mg/l

12.2. **Persistence and degradability** **Clomazone** is moderately persistent in the environment. Primary degradation half-lives vary with circumstances, from a few

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weeks to a few months in aerobic soil and water. Degradation occurs microbiologically.

The product contains minor amounts of not readily biodegradable components, which may not be degradable in waste water treatment plants.

12.3. **Bioaccumulative potential**

See section 9 for octanol-water partition coefficient.

Clomazone has a low potential to bioaccumulate. The measured bioaccumulation factor of clomazone is 27 - 40. It is rapidly excreted.

12.4. **Mobility in soil**

Under normal conditions **clomazone** is of moderate mobility in soil.

12.5. **Results of PBT and vPvB assessment**

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

12.6. **Other adverse effects**

Other relevant hazardous effects in the environment are not known.

SECTION 13: DISPOSAL CONSIDERATIONS
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13.1. **Waste treatment methods**

Remaining quantities of the material and empty but unclean packaging should be regarded as hazardous waste.

Disposal of waste and packagings must always be in accordance with all applicable local regulations.

Disposal of product

According to the Waste Framework Directive (2008/98/EC), possibilities for reuse or reprocessing should first be considered. If this is not feasible, the material can be disposed of by removal to a licensed chemical destruction plant or by controlled incineration with flue gas scrubbing.

Do not contaminate water, foodstuffs, feed or seed by storage or disposal. Do not discharge to sewer systems.

Disposal of 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.

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SECTION 14: TRANSPORT INFORMATION

ADR/RID/IMDG/IATA/ICAO classification

- 14.1. **UN number** Not classified as hazardous material for transport
- 14.2. **UN proper shipping name** Not applicable
- 14.3. **Transport hazard class(es)** Not applicable
- 14.4. **Packing group** Not applicable
- 14.5. **Environmental hazards** May be hazardous in the environment
- 14.6. **Special precautions for user** Avoid any unnecessary contact with the product. Misuse can result in damage to health. Do not discharge to the environment.
- 14.7. **Transport in bulk according to Annex II of MARPOL 73/78 and the IBC code** The product is not transported in bulk by ship.

SECTION 15: REGULATORY INFORMATION

- 15.1. **Safety, health and environmental regulations/legislation specific for the substance or mixture** To our knowledge, no specific regulations apply.
- 15.2. **Chemical safety assessment** A chemical safety assessment is not required to be included for this product.

♣ SECTION 16: OTHER INFORMATION

- Relevant changes in the safety data sheet Minor corrections only.
- List of abbreviations
 - AOEL Acceptable Operator Exposure Level
 - CAS Chemical Abstracts Service
 - CS Capsule Suspension
 - Dir. Directive
 - DNEL Derived No Effect Level
 - EC European Community
 - EC₅₀ 50% Effect Concentration
 - E_rC₅₀ 50% Effect Concentration based on growth
 - EFSA European Food Safety Authority
 - EINECS European INventory of Existing Commercial Chemical Substances
 - GHS Globally Harmonized classification and labelling System of chemicals, Fifth revised edition 2013
 - IBC International Bulk Chemical code
 - ISO International Organisation for Standardization
 - IUPAC International Union of Pure and Applied Chemistry
 - LC₅₀ 50% Lethal Concentration

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- LD₅₀ 50% Lethal Dose
- LOAEL Lowest Observed Adverse Effect Level
- MARPOL Set of rules from the International Maritime Organisation (IMO) for prevention of sea pollution
- OECD Organisation for Economic Cooperation and Development
- PBT Persistent, Bioaccumulative, Toxic
- PNEC Predicted No Effect Concentration
- Reg. Regulation
- STOT Specific Target Organ Toxicity
- vPvB very Persistent, very Bioaccumulative
- WHO World Health Organisation

References Data measured on the product are unpublished company data. Data on ingredients are available from published literature and can be found several places.

Method for classification Test data

- Used hazard statements
- H272 May intensify fire; oxidiser.
 - H301 Toxic if swallowed.
 - H302 Harmful if swallowed.
 - H319 Causes serious eye irritation.
 - H332 Harmful if inhaled.
 - H400 Very toxic to aquatic life.
 - H410 Very toxic to aquatic life with long lasting effects.
 - EUH210 Safety data sheet available on request.
 - EUH401 To avoid risks to human health and the environment, comply with the instructions of use.

Advice on training 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.

The information provided in this safety data sheet is believed to be accurate and reliable, but uses of the product vary and situations unforeseen by FMC Corporation may exist. The user has to check the validity of the information under local circumstances.

Prepared by: FMC Agricultural Solutions A/S / GHB