

Product code	6245-NPF	Page 1 of 12
Product name	RIVET 24 EC	G 1
		September 2018
Safety data shee	t according to EU Reg. 1907/2006 as amended	Supersedes September 2017

SAFETY DATA SHEET Rivet 24 EC

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

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

Rivet 24 EC 1.1. Product identifier

Contains hydrocarbons, C10-C13, aromatics,

< 1% naphthalene

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

CHEMINOVA A/S, a subsidiary of FMC Corporation Thyborønvej 78

DK-7673 Harboøre

Denmark

SDS.Ronland@fmc.com

1.4. Emergency telephone number

Medical emergencies:

Norway: +47 22 591300 Austria: +43 1 406 43 43 Poland: +48 22 619 66 54 Belgium: +32 70 245 245 +48 22 619 08 97 Bulgaria: +359 2 9154 409

Cyprus: 1401

Portugal: 808 250 143 (in Portugal only) +351 21 330 3284 Czech Republic: +420 224 919 293

Romania: +40 21318 3606

+420 224 915 402 Scotland: +8454 24 24 24 Denmark: +45 82 12 12 12 England and Wales: 111 Slovakia: +421 2 54 77 4 166 France: +33 (0) 1 45 42 59 59 Slovenia: +386 41 650 500

South Africa: +27 83 123 3911 (Bateleur Emergency Response Co.) Finland: +358 9 471 977

Spain: +34 91 562 04 20 Greece: 30 210 77 93 777 Sweden: +46 08-331231 Hungary: +36 80 20 11 99

112 Ireland (Republic): +353 1 837 9964 Switzerland: 145 Italy: +39 02 6610 1029 Turkey: 114 Lithuania: +370 523 62052

> U.S.A. & Canada: +1 800 / 331 3148 (ProPharma) +370 687 53378

All other countries: +1 651 / 632 6793 (ProPharma - Collect) Luxembourg: +352 8002 5500

Netherlands: +31 30 274 88 88

For fire, leak, spill or other accident emergencies:

U.S.A.: +1 800 / 424 9300 (CHEMTREC)

All other countries: +1 703 / 741 5970 (CHEMTREC - Collect)

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SECTION 2: HAZARDS IDENTIFICATION

2.1. Classification of the substance or mixture

Aspiration toxicity: Category 1 (H304)

Hazards to the aquatic environment, acute: Category 1 (H400)

chronic: Category 1 (H410)

Health hazards The product may cause aspiration pneumonia.

all green plants.

2.2. Label elements

According to EU Reg. 1272/2008 as amended

Product identifier Rivet 24 EC

Contains hydrocarbons, C10-C13, aromatics, < 1% naphthalene

Hazard pictograms (GHS08, GHS09)





Signal word Danger

Hazard statements

Supplementary hazard statements

instructions of use.

Precautionary statements

P273 Avoid release to the environment.

P301+P310 IF SWALLOWED: Immediately call a POISON CENTER or

doctor/physician.

P331 Do NOT induce vomiting.

P391 Collect spillage. P405 Store locked up.

P501 Dispose of contents/container as hazardous waste.

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.

Active ingredient

Carfentrazone-ethyl Content: < 25% w/w

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CAS name CAS no. IUPAC name(s) ISO name/EU name EC no. (EINECS no.) EU index no. Molecular weight Classification of the ingredient	Benzenepropanoic acid, α,2-dichloro-5-[4-(difluoromethyl)-4,5-dihydro-3-methyl-5-oxo-1H-1,2,4-triazole-1-yl]-4-fluoro, ethyl ester 128639-02-1 Ethyl 2-chloro-3-(2-chloro-5-(4-difluoromethyl)-3-methyl-5-oxo-4,5-dihydro-1H-1,2,4-triazol-1-yl)-4-fluorophenyl)propanoate Carfentrazone-ethyl None 607-309-00-5 412.2 Hazards to the aquatic environment, acute: Category 1 (H400) chronic: Category 1 (H410)			
Reportable ingredients	Content (% w/w)	CAS no.	EC no.	Classification
Hydrocarbons, C10-C13, aromatics, < 1% naphthalene Reg. no. 01-2119451097-39	< 70		922-153-0	Asp. Tox. 1 (H304) Aquatic Chronic 2 (H411)
Calcium dodecylbenzenesulphonate	1.5	26264-06-2	EINECS no.: 247-557-8	Skin Irrit. 2 (H315) Eye Dam. 1 (H318) Aquatic Chronic 2 (H411)

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 irritation 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	Irritation, headache, dizziness.
4.3.		Immediate medical attention is required in case of ingestion.
	medical attention and special treatment needed	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.

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The product contains petroleum distillates which may pose an aspiration pneumonia hazard.

SECTION 5: FIRE-FIGHTING MEASURES

5.2. Special hazards arising from the substance or mixture

The essential breakdown products are volatile, malodorous, toxic, irritant and inflammable compounds such as carbon monoxide, carbon dioxide, nitrogen oxides, hydrogen fluoride, hydrogen chloride, sulphur dioxide and various fluorinated and 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. It is advisable for firemen to avoid direct contact with the product such as splashing.

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. Remove sources of ignition.

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, hydrated lime, Fuller's earth or other absorbent clays. Collect the contaminated absorbent in

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suitable containers. Clean area with much water and detergent. Absorb wash liquid onto 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 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

Inhalation of vapours of the product can cause lowered consciousness, which increases the risks of operating machinery and driving.

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.

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.

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♣ SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1. **Control parameters** To our knowledge, personal exposure limits have not been established

for the active ingredient in this product.

However, other exposure limits defined by local regulations may exist

and must be observed.

Carfentrazone-ethyl

DNEL Not established

EFSA has established an AOEL of 0.6 mg/kg bw/day

PNEC, aquatic environment 1.1 μg/l

Aromatic hydrocarbons

DNEL, dermal 12.5 mg/kg bw/day

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

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,

nitrile rubber or viton. The breakthrough times of these materials for the product are unknown, but it is expected that they will give adequate protection. It is recommended to limit the work to be done

manually.



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

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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

chemical propertiesAppearanceDark brown liquid, translucentOdourChemical smellOdour thresholdNot determined

Melting point/freezing point Not determined

Initial boiling point and boiling range **Aromatic hydrocarbons**: 200 - 310°C

Aromatic hydrocarbons : < 0.01

Flammability (solid/gas) Not applicable (liquid)

Upper/lower flammability or

9.1. Information on physical and

Aromatic hydrocarbons : $< 0.1 \text{ kPa at } 25^{\circ}\text{C}$

Vapour density (Air = 1)

Aromatic hydrocarbons :> 1

Relative density 1.0793 at 20°C

Solubility (ies) Solubility of **carfentrazone-ethyl** at 20°C in

 $\begin{array}{lll} \text{ethanol} & > 2000 \text{ g/l} \\ \text{hexane} & 30 \text{ g/l} \\ \text{water} & 12 \text{ mg/l} \end{array}$

Partition coefficient n-octanol/water Carfentrazone-ethyl : $\log K_{ow} = 3.36$ at 20° C

Aromatic hydrocarbons : some of the main components have log

 $K_{ow} = 4.0 - 4.4$ at 25°C by model calculation

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.

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.

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10.6. **Hazardous decomposition products** See subsection 5.2.

SECTION 11: TOXICOLOGICAL INFORMATION

SECT	TION 11: TOXICOLOGICAL INFOR	RMATION
11.1.	Information on toxicological effects	* = Based on available data, the classification criteria are not met.
	Product Acute toxicity	The product is practically non-toxic. * However, it should always be treated with the usual care of handling chemicals.
	The acute toxicity of the product is me	asured as:
	Route(s) of entry - ingestion	LD ₅₀ , oral, rat: 4077 mg/kg
	- skin	LD_{50} , dermal, rat: $> 4000 \text{ mg/kg}$
	- inhalation	LC_{50} , inhalation, rat: $> 6.31 \text{ mg/l/4 h}$
	Skin corrosion/irritation	The product may be slightly irritating to skin. *
	Serious eye damage/irritation	The product may be slightly irritating to eyes. *
	Respiratory or skin sensitisation	The product is not sensitising. *
	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 known to have adverse effects on reproduction. *
	STOT – single exposure	To our knowledge, specific effects after single exposure have not been reported. *
	STOT – repeated exposure	The following was measured on the active ingredient carfentrazone- ethyl:
		NOAEL: 50 ppm (3 mg/kg bw/day) in a 2-year rat study.
	Aspiration hazard	The product presents an aspiration hazard.
	Symptoms and effects, acute and delayed	Slight irritation may occur. On inhalation or ingestion: headache, dizziness.
	<u>Carfentrazone-ethyl</u> Toxicokinetics, metabolism and distribution	Carfentrazone-ethyl is rapidly absorbed and widely distributed in the body after oral intake. It is extensively metabolised and rapidly excreted, almost completely within 7 days. There is no evidence of accumulation.
	Acute toxicity	The substance is not considered as harmful. * The acute toxicity of the substance is measured as:
	Route(s) of entry - ingestion	LD ₅₀ , oral, rat: > 5000 mg/kg
	- skin	LD_{50} , dermal, rat: $> 4000 \text{ mg/kg}$

 LC_{50} , inhalation, rat: > 5.09 mg/l/4 h

- inhalation

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Skin corrosion/irritation Not irritating to skin. *

Serious eye damage/irritation Not irritating to eyes. *

Respiratory or skin sensitisation ... Not sensitising. *

Hydrocarbons, C10-C13, aromatics, < 1% naphthalene

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

measured on a similar product is:

Route(s) of entry - ingestion LD_{50} , oral, rat: > 5000 mg/kg (method OECD 401)

- skin LD_{50} , dermal, rat: > 2000 mg/kg (method OECD 402)

- inhalation LC_{50} , inhalation, rat: > 4.7 mg/l (method OECD 403)

404).

Serious eye damage/irritation May cause mild, short-lasting discomfort to eyes (measured on similar

products; method OECD 405). *

Respiratory or skin sensitisation ... Not expected to cause respiratory or skin sensitisation (measured on

similar products; method OECD 406). *

Calcium dodecylbenzenesulphonate

and inhalation. * The acute toxicity is measured as:

Route(s) of entry - ingestion LD₅₀, oral, rat: 4000 mg/kg

skin LD₅₀, dermal, rat: not available
 inhalation LC₅₀, inhalation, rat: not available

Skin corrosion/irritation Irritating to skin.

Serious eye damage/irritation Irritating to eyes with the potential to cause permanent eye damage.

SECTION 12: ECOLOGICAL INFORMATION

green plants. It is harmful to fish and aquatic invertebrates. It is considered as less harmful to birds, insects and soil micro- and

macroorganisms.

The following has been measured on the product:

- Algae 72-h E_rC₅₀: 0.135 mg/l

12.2. **Persistence and degradability** **Carfentrazone-ethyl** is not readily biodegradable. Primary

degradation in the environment is rapid, usually less than one day, but

degradation products are degraded much slower.

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Aromatic hydrocarbons are readily biodegradable as measured according to OECD guidelines. However, they are not always rapidly degraded in the environment, but are expected to be degraded at a moderate rate, depending on circumstances.

The product contains small amounts of other ingredients which are not readily biodegradable and may not be degradable in a waste water treatment plant.

12.3. Bioaccumulative potential

See section 9 for octanol-water partition coefficient.

Carfentrazone-ethyl is not expected to bioaccumulate either. A Bioaccumulation Factor (BCF) of 176 was measured for whole fish.

Aromatic hydrocarbons have a potential to bioaccumulate if continuous exposure is maintained. Most components can be metabolised by many organisms. Bioaccumulation factors (BCFs) of some of the main components are 1200 - 3200 by model calculation.

12.4. **Mobility in soil**

Carfentrazone-ethyl and its soil metabolites have a potential for being mobile, but were not detected in a field leaching study.

Aromatic hydrocarbons are not mobile in the environment, but are volatile and will evaporate to the air if released onto water or on the surface of soil. They float and can migrate to sediment.

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

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.

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- 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

ADR/RID/IMDG/IATA/ICAO classification

14.2. UN proper shipping name Environmentally hazardous substance, liquid, n.o.s. (carfentrazone-

ethyl and alkyl(C3-C6)benzenes)

14.3. Transport hazard class(es) 9

14.4. Packing group III

14.5. Environmental hazards Marine pollutant

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

SECTION 15: REGULATORY INFORMATION

15.1. Safety, health and environmental regulations/legislation specific for

the substance or mixture Seveso category (Dir. 2012/18/EU): dangerous for the environment.

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

Dir. Directive

DNEL Derived No Effect Level EC Emulsifiable Concentrate, or

European Community 50% Effect Concentration

EC₅₀ 50% Effect Concentration E_rC₅₀ 50% Effect Concentration based on growth

EFSA European Food Safety Authority

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	EINECS	Substances
	GHS	Globally Harmonized classification and labelling System of chemicals, Fifth revised edition 2013
	IBC	International Bulk Chemical code
	ISO IUPAC	International Organisation for Standardization International Union of Pure and Applied Chemistry
	LC ₅₀	50% Lethal Concentration
	LD_{50}	50% Lethal Dose
	MARPOL	Set of rules from the International Maritime Organisation
		(IMO) for prevention of sea pollution
	NOAEL	No Observed Adverse Effect Level
	n.o.s. OECD	Not otherwise specified Organisation for Economic Cooperation and Development
	PBT	Persistent, Bioaccumulative, Toxic
	PNEC	Predicted No Effect Concentration
	Reg.	Registration, or
	стот	Regulation
	STOT vPvB	Specific Target Organ Toxicity very Persistent, very Bioaccumulative
	WHO	World Health Organisation
References	Data measured on this 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	H304 H315	May be fatal if swallowed and enters airways. Causes skin irritation.
	H318	Causes serious eye damage.
	H400	Very toxic to aquatic life.
	H410	Very toxic to aquatic life with long lasting effects.
	H411 EUH066	Toxic to aquatic life with long lasting effects. Repeated exposure may cause skin dryness and cracking.
	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 Corporation / Cheminova A/S / GHB