Section 1: Identification of the substance/mixture and of the company/undertaking

1.1 Product identifier

Trade name: **M50**

Chemical Name: not applicable, the product is a mixture

EC Number: Not applicable

Registration number: mixture - not subject to registration under REACH regulation

UFI code: K0C0-R06P-8005-G7JV

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

Identified uses:

Plant protection product acting as a herbicide in the form of a concentrate for making an aqueous solution, used to control dicotyledonous weeds in grassy areas.

Uses advised against: any other than listed above

1.3 Details of the supplier of the safety data sheet

Supplier: **QEMETICA Agricultural Solutions Poland S.A.**

Address: ul. Chemików 1, 37-310 Nowa Sarzyna, Poland

Telephone: + 48 (17) 2407 416 between 7.00 - 15.00

e-mail address of the person responsible for this Material Safety Data Sheet: sds@qemetica.com

Permit Holder: **DHM Agrochemicals Ltd.**
Address: Castle Lodge Kilgobbin Road Dublin 18, Irlandia
Telephone/Fax: + 00 353 1 2952 377
+ 00 353 1 2959 399
Email: info@dhm.ie

1.4 Emergency telephone number

112 (emergency)

01 809 2166 (Emergency telephone number in Ireland)

Section 2: Hazards identification

2.1 Classification of the substance or mixture

Classification according to Regulation No.1272/1272/EEC (as amended)

Acute Tox. 4 **H302** – Harmful if swallowed.
Eye Dam. 1 **H318** - Causes serious eye damage.

2.2 Label elements

Hazard pictograms and warning phrase

DANGER

(Signs - black symbol on a white background with a red border.)

Product identification

M50

This product contains:
MCPA 4-chloro-o-tolyloxyacetic acid as dimethylamine salt
(fenoxyacid group compound)
(index number: 607-052-00-9)
Hazard Statements:

H302 Harmful if swallowed.
H318 Causes serious eye damage.
EUH401 To avoid risks to human health and the environment, comply with the instructions for use.

Precautionary Statements:

P264 Wash hands thoroughly after handling.
P270 Do not eat, drink or smoke when using this product.
P280 Wear protective gloves / protective clothing / eye protection / face protection.
P301+P312 IF SWALLOWED: Contact POISON CENTRE or doctor/physician if feel unwell.
P330 Rinse mouth
P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P501 Dispose of contents/container to a licensed hazardous waste disposal contractor or collection site except for triple rinsed empty containers which can be disposed of as non-hazardous waste.

Other hazards

The mixture constituents do not meet the PBT or vPvB criteria according to Annex XIII of the REACH Regulation.

The ingredients of the mixture do not have endocrine disrupting properties according to the criteria laid down in Commission Regulation (EU) 2018/605.

Section 3: Composition / information on ingredients

3.1 Substances

Not applicable.

3.2 Mixtures

Substance[1]:	Content [%]	Classification according to Regulation No. 1272/2008 (as amended)[2]
Dimethylamine salt MCPA Dimethylamine salt of 4-chloro-o-tolyloxyacetic acid Index number: 607-052-00-9 CAS Number: 2039-46-5 EC Number: 218-014-2 Registration No.: not applicable (Art. 15 of the REACH regulation)	approx. 54 %	**Acute Tox. 4** H332 **Acute Tox. 4** H312 **Acute Tox. 4** H302 **Aquatic Acute 1** H400 **Aquatic Chronic 1** H410

1) - Classification of the substance given in accordance with Tables 3.1 of Regulation No. 1272/2008 (as amended) - see Section 15.1 of this MSDS.

2) - Full text of abbreviations, symbols and H statements - see Section 16 of this MSDS.

Section 4: First aid measures

4.1 Description of first aid measures

Contact with skin: immediately remove the contaminated clothing and shoes. Thoroughly wash the exposed parts of the skin with soapy water. If signs of irritation / sensitisation occur, consult a doctor.

Contact with eyes: immediately rinse contaminated eyes thoroughly with water for 10-15 minutes with eyelids open. Protect the non-irritated eye, remove contact lenses if present and can be easily removed. Keep rinsing. Avoid strong jets of water - risk of corneal damage. After rinsing, apply a sterile dressing. Consult an ophthalmologist immediately.

Ingestion: call for medical assistance immediately and show the container or label. Do not induce vomiting. Thoroughly wash the mouth with water and drink plenty of water afterwards. Never give anything to drink to an unconscious person.

Inhalation: move the affected person to fresh air, provide warmth and rest. If any worrying symptoms develop seek medical attention.

4.2 Most important symptoms and effects, both acute and delayed

Contact with skin: sensitive individuals may experience redness, dry skin, itching, rash or other skin lesions.

Contact with eyes: possible redness, lacrimation, burning sensation and pain

Swallowing: possible irritation of the digestive tract, abdominal pain and nausea

4.3 Indication of any immediate medical attention and special treatment needed

Decision on suitable further treatment is made by the doctor after assessing the condition of the affected person. In severe intoxication give anti-liver damage drugs - control heart and circulatory system function. Antidote - none. Apply symptomatic treatment.

Section 5: Firefighting measures

5.1 Extinguishing media

Suitable extinguishing media: water spray, foam, carbon dioxide and dry powder. Adapt the extinguishing media to materials stored in the immediate vicinity.

Unsuitable extinguishing media: compact water jets.

5.2 Special hazards arising from the substance or mixture

Combustion reaction produces dangerous vapours and gases containing carbon monoxide and hydrogen chloride. Avoid inhaling of combustion product as they can pose a threat to health.

5.3 Advice for firefighters

General protection measures in case of fire. Do not stay in the area at risk of fire without proper clothing. Recommended personal protective equipment for the rescue services: full protective gear, self-contained breathing apparatus. Post-extinguishing waters should be handles as described in Section 6.2.

Section 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

For non-emergency personnel: restrict access of unauthorised persons to the affected area until all cleaning operations have been completed. Use personal protective equipment. Avoid contact with skin and eyes. Provide adequate ventilation.

For emergency responders: ensure that all activities were performed by trained personnel only. Wear protective clothing and personal protective equipment resistant to chemicals.

6.2 Environmental precautions

In case of release of large quantities of the mixture, take necessary steps to prevent spreading in the environment - prevent from entering drains, water courses, rivers, groundwater and soil. Notify the relevant emergency services. Warn others of the hazard. Similar precautions should be also applied for the post-extinguishing water (Section 5).

6.3 Methods and material for containment and cleaning up

For large spills, embank the accumulating mixture and pump into suitable sealed and labelled containers and submit for recycling or disposal in accordance with the provisions of the Waste Act. In order to remove the remains and small amounts of spilled mixture use binding agent kits, if available, or diatomite or sand. Binding agent containing a mixture must be collected to suitable, sealed and labelled waste containers and submitted for recycling or disposal in accordance with the regulations in force in Ireland.

6.4 References to other sections

Product waste handling - see Section 13 of this MSDS.
Personal protective equipment - see Section 8 of this MSDS.

Section 7: Handling and storage

7.1 Precautions for safe handling

Observe relevant occupational health and safety rules. Avoid eye and skin contamination. Avoid inhalation of spray. Remove contaminated clothing and protective equipment before entering eating areas. Before break and after work wash hands with soapy water. Keep the containers with mixture sealed. Ensure good ventilation in the work rooms.

7.2 Conditions for safe storage including any incompatibilities

Store in original, sealed containers, in dry and ventilated storage rooms at temperatures from 0 to 30^0C. Keep away from food, feed, animal feed, dishes for food, in places inaccessible to unauthorized persons, especially children.
Follow the regulations, rules and recommendations for the storage of plant protection products. Take all necessary measures to prevent damage to the packaging or transfer systems that may result in accidental release of a mixture to drains, water bodies, rivers and soil.

Material suitable for packaging: HDPE, LDPE
Shelf-life of the mixture: 3 years.

7.3 Special end use(s)

The mixture is a plant protection product with herbicidal activity. **When applying the product on plants, follow the guidelines given in the label-instructions for use provided with the product.**

In the production process of the mixture, follow the guidelines given in the Material Safety Data Sheet and instructions relevant for the process.

Section 8: Exposure controls/personal protection

8.1 Control parameters

The maximum permissible concentration values of substances in the working environment in accordance with the national provisions implemented under Commission Directive No 2000/39/EC of 8 June 2000 are:

Dimethylamine salt MCPA

MAC	Not established
STEL	Not established

8.2. Exposure controls

Follow general occupational health and safety rules. Use personal protective measures listed in Section 8.2.2. Do not eat, drink or smoke when using the substance. Wash hands thoroughly with soapy water before breaks and after work.

8.2.1. Appropriate engineering controls

Procedures shall be in place to monitor concentrations of hazardous constituents in the air and procedures to control the cleanliness of the air in the workplace, where available and reasonable for the particular site, in accordance with relevant reference methods - Irish standards.

8.2.2. Individual protection measures, such as personal protective equipment

The personal protective equipment used should meet the national requirements of Regulation (EU) 425/2016.

The employer is obliged to provide protective equipment appropriate to the activities performed and to maintain and clean it.

a) Eye/face protection

Use protective glasses (goggles) or face protection.

b) Skin protection

Hand protection

Use appropriate chemical-resistant protective gloves with a minimum thickness of 0. 4 mm tested according to EN 374 - butyl or neoprene.

Other

Wear protective clothing and footwear suitable for the type of the performed activities. Soiled clothing should be regularly washed.

c) Respiratory protection

In well ventilated working areas personal respiratory protection is not required. In other cases, use half-respirators or respirators with filters that absorb vapours of organic compounds.

d) Thermal hazards

Type of protective equipment: not applicable; the material is not a thermal hazard.

8.2.3 Environmental exposure controls

To reduce the impact on the environment and human health, follow the recommendations in this safety data sheet and the product label. When handling the product, use efficient ventilation systems equipped with devices preventing the emission of organic compound vapours into the air. Do not contaminate water with the product or its packaging. Prevent product or packaging from entering drains, water courses, rivers, groundwater or soil. It is prohibited to recover or dispose of the product, the packaging and packaging waste from the product outside of installations or facilities designated for that purpose, which meet the requirements set out in the regulations in force in Ireland.

Section 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

a)	physical state:	clear liquid
b)	colour:	brown
c)	odour:	weak, characteristic for amines
d)	melting point/freezing point:	approx. -10°C
e)	boiling point or initial boiling point and boiling range:	> 100°C
f)	flammability:	not applicable
g)	lower and upper explosion limit:	not applicable
h)	flash point:	> 100°C (closed cup PM)
i)	auto-ignition temperature:	does not spontaneously combust
j)	decomposition temperature:	not applicable
k)	pH:	8,0 – 10,0
l)	kinematic viscosity(25°C):	not determined
m)	solubility in water:	forms homogeneous solutions with water
	solubility in organic solvents - valuesfor MCPA:	in xylene - 15.8 g/l in methanol - 621.0 g/l in 1,2-dichloroethane - 30.6 g/l in n-octanol - 205.0 g/l in acetone - 454.6 g/l in ethyl acetate - 258.4 g/l
n)	partition coefficient n-octanol/water:	log P_{ow}=1.9 (at pH 4); 1.09 (at pH 9) at 20 °C - the value for MCPA
o)	vapour pressure (25°C):	4.25 x 10^{-4} Pa (for MCPA)
p)	density and/or relative density (20°C)	approx. 1.13 g/ml
q)	relative vapour density	not determined
r)	particle characteristics:	not applicable

9.2 Other information

9.2.1 Information with regard to physical hazard classes

explosive properties:	none
oxidizing properties:	none

9.2.2 Other safety characteristics

surface tension (25°C): 43,8 mN/m

Section 10: Stability and reactivity

10.1 Reactivity

The mixture is stable under normal conditions of storage and use (Section 7.2).

10.2 Chemical stability

The product is stable when used and stored properly.

10.3 Possibility of hazardous reactions

None when handled in accordance with the intended use and conditions of use and when stored in the recommended conditions

10.4 Conditions to avoid

Avoid temperatures below 0°C and above 30°C.

10.5 Incompatible materials

Avoid contact with acids.

10.6 Hazardous decomposition products

None when used and stored as recommended - may occur in fire (see Section 5.2).

Section 11: Toxicological information

11.1 Information on hazard classes as defined in Regulation (EC) No 1272/2008

Information on the effects of exposure in terms of acute inhalation toxicity, eye or skin corrosion/irritation and sensitization was determined based on the results of toxicological tests of the mixture with a higher content of the active substance.

Acute Toxicity

LD_{50} (orally) rat:	>300 and < 2,000 mg/kg b.w.
LD_{50} (percutaneous) rat:	> 2,000 mg/kg b.w.
LC_{50} (inhalation) rat after 4h from exposure	>7,570 mg/m^3*

Skin corrosion/irritation (rabbit)

No irritation

Serious eye damage/irritation (rabbit)

Causes serious eye damage.

Respiratory or skin sensitisation

The mixture has no sensitising effect

Germ cell mutagenicity*

Not applicable - the substance does not meet the criteria for classification.

Carcinogenicity*

Not applicable - the substance does not meet the criteria for classification.

Reproductive toxicity*

The substance has no adverse effects on reproductive function or fertility.

STOT-single exposure*

Not applicable - the substance does not meet the criteria for classification.

STOT-repeated exposure*

Not applicable - the substance does not meet the criteria for classification.

Aspiration hazard

Not applicable - the substance does not meet the criteria for classification.

* classification based on the properties of the components in the mixture

11.2 Information on other hazards

11.2.1 Endocrine disrupting properties

The ingredients of the mixture do not show endocrine disrupting properties.

11.2.2 Other information

Not applicable.

Section 12: Ecological information

12.1 Toxicity

Aquatic toxicity*

Acute toxicity to carp (Ciprinus carpio):	LC_{50} (after 96h) = 471 mg/l
Acute toxicity to rainbow trout (Salmo Gairdneri):	LC_{50} (after 96h) > 100 mg/l
Acute toxicity to daphnia (Daphnia magna):	EC_{50} (after 48h) = 442 mg/l
Acute toxicity to algae (Chlorella pyrenoidosa):	IC_{50} (after 72h) = 644 mg/l
Acute toxicity to algae (Pseudokirchneriella subcapitata):	E_rC_{50} (after 72 h) > 320 mg/l
	E_yC_{50} (after 72 h) > 68.54 mg/l
	NOEC(after 72 h) = 10 mg/l
Acute toxicity for algae (Anabena flos-aquae):	E_rC_{50} (after 72 h) > 90.76 mg/l
	E_yC_{50} (after 72 h) > 65.81 mg/l

Toxicity to honeybees

Acute oral toxicity: LD_{50} (24 and 48 h after exposure) is 67.82 and 57.07 µg product/bee respectively
Acute contact toxicity: LD_{50} (24,48 and 72 h after exposure) > 200 µg product/bee

Toxicity to lemna gibba (Lemna gibba L.)*

E_rC_{50} after 7 days: > 100 mg/l
E_yC_{50} after 7 days: 12.63 mg/l
NOEC/ 7 days (number of segments) = 1 mg/l

Toxicity to earthworms and effects on reproduction of earthworms

LC_{50} after 7 and 14 days is > 1000 mg/kg dry mass of substrate

* - results of tests performed with the product of similar composition

12.2 Persistence and degradability

MCPA

Biodegradability in water:	100% degradable after 16 days (OECD 302 B method)
Persistence in aquatic sediments	
DT_{50} (water + sediment system)	21.9 ÷ 25.1 days; (OECD 308 method)
Persistance in soil DT_{50}:	3.7 ÷ 7.1 days; (OECD 307 method)

12.3 Bioaccumulative potential

Bioconcentration in fish:

Active ingredient - MCPA present in the mixture is not bioaccumulative.
Bioconcentration factor for MCPA: BCF = 0.4
octanol/water coefficient – see Section 9.1.

12.4 Mobility in soil

MCPA is mobile in soil.
Equilibrium organic carbon adsorption coefficient (for MCPA): K_{oc} = 86.67 cm^3/g (for dusty soil)

12.5 Results of PBT and vPvB assessment

Substance in the mixture does not meet the PBT or vPvB criteria according to Annex XIII of the REACH Regulation.

12.6 Endocrine disrupting properties

The components of the mixture do not exhibit endocrine disrupting properties for the environment.

12.7 Other adverse effects

The product does not affect global warming and ozone depletion.

Section 13: Disposal considerations

13.1 Waste treatment methods

The holder of mixture and packaging waste is obliged to handle the waste in a manner consistent with the waste management principles set out in the legislation in force in Ireland.

The resulting waste mixture and packaging waste must be stored, transported and recovered, including recycled or disposed of in accordance with Irish regulations.

Rinse the empty mixture containers three times with water and pour the rinsing liquid into the spray liquid tank and treat it as an applied liquid.

It is prohibited to use empty plant protection agent packaging for other purposes. Dispose of unused plant protection product and contaminated packaging to an entity authorised to collect hazardous waste.

Waste classification must be followed, using the appropriate codes and names in accordance with the applicable waste catalogue.
Disposal of waste into soil and ground, sewers, rivers, bodies of water is prohibited.

Legal basis:
DIRECTIVE 94/62/EC OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 20 December 1994 on packaging and packaging waste.
DIRECTIVE 2008/98/EC OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 19 November 2008 non waste.

Section 14: Transport information

14.1 UN number or ID number

Not applicable. The mixture is not a hazardous material within the meaning of RID/ADR/IMDG regulations.

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

Not applicable.

14.6 Special precautions for user

Use personal protective equipment in accordance with section 8 when handling the load.

14.7 Maritime transport in bulk according to IMO instruments

Not applicable.

Section 15: Regulatory information

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

- REGULATION (EC) No 1107/2009 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 21 October 2009 concerning the placing of plant protection products on the market and repealing Council Directives 79/117/EEC and 91/414/EEC (Official Journal of the EU L 309/1 of 24 November 2009 as amended),
- REGULATION (EC) No 1907/2006 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 18 December 2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH), establishing a European Chemicals Agency, amending Directive 1999/45/EC

and repealing Council Regulation (EEC) No 793/93 and Commission Regulation (EC) No 1488/94 as well as Council Directive 76/769/EEC and Commission Directives 91/155/EEC, 93/67/EEC, 93/105/EC and 2000/21/EC (Official Journal of the EU L 396/1 of 30 December 2006 as corrected and amended),

- REGULATION (EC) No 1272/2008 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 16 December 2008 on classification, labelling and packaging of substances and mixtures, amending and repealing Directives 67/548/EEC and 1999/45/EC, and amending Regulation (EC) No 1907/2006 (Official Journal of the EU L 353/1 of 31 December 2008 as amended),
- REGULATION (EC) No 1005/2009 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 16 September 2009 on substances that deplete the ozone layer (Official Journal of the EU L 286/1 of 31 October 2009 as amended),
- COMMISSION REGULATION (EU) 2018/605 of 19 April 2018 amending Annex II to Regulation (EC) No 1107/2009 by setting out scientific criteria for the determination of endocrine disrupting properties,
- DIRECTIVE 2008/68/EC OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 24 September 2008 on the inland transport of dangerous goods

15.2 Chemical safety assessment

Assessed as crop protection product.

Section 16: Other information

Explanation of the remaining abbreviations and acronyms

Acute Tox. 4	- Acute toxicity, category 4.
Eye dam. 1	- Serious eye damage, category 1.
Aquatic Acute 1	- Acute aquatic hazard, category 1.
Aquatic Chronic 1	- Chronic aquatic hazard, category 1.

H302 – Harmful if swallowed.
H312 – Harmful in contact with skin.
H332 – Harmful if inhaled,
H318 – Causes serious eye damage.
H400 – Very toxic to aquatic life.
H410 – Very toxic to aquatic life with long lasting effects.

Training:

Prior to working with the product, the user shall read this Material Safety Data Sheet, occupational health and safety regulations relevant to handling of chemicals, and in particular receive appropriate job training in accordance with Irish regulations.

Sources of information:

- In-house studies: physicochemical, toxicological, ecotoxicological and impact on the environment for the product and active ingredient (MCPA),
- Web page: http://sitem.herts.ac.uk/aeru/footprint/pl/Reports/427.htm(data on this website have been collected as part of the EU-funded FOOTPRINT project).

Information assessment:

Assessment of the information identified in accordance with Chapter 1 of Title II of the CLP Regulation has been performed by applying the classification criteria for each hazard class, taking into account further differentiation as specified in Annex I of the CLP Regulation and **taking into account the results of the in-house studies carried out for the plant protection product**. When assessing the available information for the purposes of classification, the form/physical state of the mixture was considered, as in the form in which the mixture is marketed and may be used in accordance with reasonable expectation.

Additional Information:

Further information can be obtained from the manufacturer - contact as in subsection 1. 3.
This Safety Data Sheet has been prepared in accordance with Commission Regulation (EU) 2020/878 of 18 June 2020 amending Annex II to Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH).

The information provided in this charter corresponds to the current state of our knowledge and experience; are given in good faith to describe the mixture in terms of safety requirements. They cannot be interpreted as a guarantee of its properties or the quality specification of the measure. It is the responsibility of the recipient and user to provide a safe workplace and to comply with all applicable laws.

Commas in numeric data define decimals.

Changes made in relation to KCh/H/417 issue 2 of 14.06.2023- Issue 1.