



SAFETY DATA SHEET

The Globally Harmonized System of Classification and Labeling of Chemicals (GHS)

Mesoflex 480 SC

Revision date 07-Dec-2022 Version 1.01 Supersedes Date: 05-Dec-2022

Product Code(s)

HRB05073-27

Print Date 07-Dec-2022

ADM.04650.H.2.A 21630

1. Identification

Product identifier

Mesoflex 480 SC

Other means of identification

| | |
|------------------------|-------------------|
| Synonyms | Mesotrione 480 SC |
| Formulation type | SC |
| Registration Number(s) | L9541 |
| Pure substance/mixture | Mixture |

Recommended use of the chemical and restrictions on use

| | |
|----------------------|--------------------------|
| Recommended use | Professional use |
| Uses advised against | No information available |

Detailed information about the manufacturer, supplier, and/or importer

| | |
|----------|--|
| Supplier | ADAMA SOUTH AFRICA (PTY) LTD Ground Floor, Simeka House The Vineyards Office Estate 99 Jip de Jager Drive Bellville 7530 |
|----------|--|

Emergency telephone number

| | |
|---------------------|--|
| Emergency Telephone | +27 82 446 8946 (Griffon Poison Centre) +27 86 155 5777 (Tygerberg Poison Information Centre) +27 86 100 6366 and +27 83 253 6618 (SPILL TECH) |
|---------------------|--|

| | |
|----------------|---------------|
| E-mail address | SDS@ADAMA.COM |
|----------------|---------------|

2. Hazard(s) identification

Classification of the substance or mixture

| | |
|--|---------------------|
| Reproductive toxicity | Category 2 - (H361) |
| Specific target organ toxicity (repeated exposure) | Category 2 - (H373) |
| Acute aquatic toxicity | Category 1 - (H400) |
| Chronic aquatic toxicity | Category 1 - (H410) |

Label elements

Signal word Warning

Hazard pictograms



Hazard statements

H361 - Suspected of damaging fertility or the unborn child
 H373 - May cause damage to organs through prolonged or repeated exposure
 H410 - Very toxic to aquatic life with long lasting effects

Precautionary statements

P101 - If medical advice is needed, have product container or label at hand
 P102 - Keep out of reach of children
 P103 - Read label before use
 P203 - Obtain, read and follow all safety instructions before reuse
 P260 - Do not breathe dust/fume/gas/mist/vapors/spray
 P273 - Avoid release to the environment
 P280 - Wear protective gloves/protective clothing/eye protection/face protection
 P318 - If exposed or concerned get medical advice.
 P319 - Get medical help if you feel unwell
 P391 - Collect spillage
 P405 - Store locked up
 P501 - Dispose of contents/ container to an approved waste disposal plant

Additional information

This product is classified as hazardous according to the criteria in South Africa - GHS classification and labelling of chemicals – SANS10234 and the Regulations for Hazardous Chemical Agents - 2021.

Other hazards

The components in this formulation do not meet the criteria for classification as PBT or vPvB.

3. Composition/information on ingredients

Substance

Not applicable

Mixture

Synonyms

Mesotrione 480 SC

| Chemical name | CAS No | Weight-% | EC No | INTERNATIONAL GHS CLASSIFICATION | M-Factor |
|------------------|-------------|----------|-----------|---|--------------|
| Mesotrione (ISO) | 104206-82-8 | 38-44 | 600-533-4 | Repr. 2 (H361) STOT RE 2 (H373) (eyes, nervous system) Aquatic Acute 1 (H400) Aquatic Chronic 1 (H410) | M=10 M=10 |

Full text of H- and EUH-phrases: see section 16

Additional information

Note: The other ingredients do not cause or contribute towards the correct GHS classification of Mesoflex 480 SC and are therefore, in terms of the South African Regulations for Hazardous Chemical Agents - 2021. Regulation 14(b), not listed in the table above.

4. First-aid measures

Description of necessary first aid measures

| | |
|-----------------------|---|
| General advice | In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible). First aider: Pay attention to self-protection. |
| Inhalation | Remove to fresh air. If breathing is irregular or stopped, administer artificial respiration. Call a physician. |
| Skin contact | Wash off immediately with soap and plenty of water while removing all contaminated clothes and shoes. Consult a physician if necessary. |
| Eye contact | Immediately flush with plenty of water. After initial flushing, remove any contact lenses and continue flushing for at least 15 minutes. Keep eye wide open while rinsing. If symptoms persist, call a physician. |
| Ingestion | Rinse mouth. Drink plenty of water. If symptoms persist, call a physician. |

For emergency responders

Self-protection of the first aider Use personal protective equipment as required.

Most important symptoms/effects, acute and delayed

Symptoms None known.

Indication of immediate medical attention and special treatment needed, if necessary

Note to physicians Treat symptomatically.

5. Fire-fighting measures

Suitable Extinguishing Media

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

Unsuitable extinguishing media Do not scatter spilled material with high pressure water streams.

Specific hazards arising from the chemical

Specific hazards arising from the chemical No information available.

Explosive properties Not an explosive.

Specific/special fire-fighting measures

Specific/special fire-fighting measures No information available.

Special protective equipment and precautions for fire-fighters

Special protective equipment for fire-fighters Firefighters should wear self-contained breathing apparatus and full firefighting turnout gear. Use personal protection equipment.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

Personal precautions Ensure adequate ventilation. Use personal protective equipment as required. Evacuate personnel to safe areas.

Environmental precautions

Environmental precautions See Section 12 for additional Ecological Information.

Methods and material for containment and cleaning up

Methods for containment Prevent further leakage or spillage if safe to do so.

Methods for cleaning up Pick up and transfer to properly labeled containers.

Prevention of secondary hazards Clean contaminated objects and areas thoroughly observing environmental regulations.

Other information Refer to protective measures listed in Sections 7 and 8.

7. Handling and storage

Preventive measures for safe handling

Advice on safe handling Handle in accordance with good industrial hygiene and safety practice. Avoid contact with skin, eyes or clothing. Do not eat, drink or smoke when using this product. Remove contaminated clothing and shoes. Ensure adequate ventilation.

Precautions for safe handling

General hygiene considerations Handle in accordance with good industrial hygiene and safety practice.

Conditions for safe storage, including any incompatibilities

Storage Conditions Store locked up.

8. Exposure controls/personal protection

Control parameters

Exposure guidelines This product, as supplied, does not contain any hazardous materials with occupational exposure limits established by the region specific regulatory bodies

Appropriate engineering controls

Engineering controls Ensure adequate ventilation, especially in confined areas.

Individual protection measures, such as personal protective equipment

Respiratory protection In case of insufficient ventilation, wear suitable respiratory equipment.

Hand protection Suitable chemical resistant gloves (EN 374) also with prolonged, direct contact

(recommendation: protection index 6, corresponding > 480 minutes Permeability time (permeation) according to EN 374): e.g. nitrile rubber (0.4 mm), chloroprene rubber (0.5 mm), butyl rubber (0.7 mm).

| | |
|--|---|
| Eye/face protection | Tight sealing safety goggles. |
| Skin and body protection | Use suitable protective clothing and equipment if required, such as safety goggles certified to EN 166, gloves certified to EN 374, protective boots certified to EN 13832, and/or a water repellent woven coverall with 65% polyester and 35 % cotton. |
| General hygiene considerations | Handle in accordance with good industrial hygiene and safety practice. |
| Environmental exposure controls | Local authorities should be advised if significant spillages cannot be contained. |

9. Physical and chemical properties

Information on basic physical and chemical properties

| <u>Property</u> | <u>Values</u> | <u>Method</u> | <u>Remarks</u> |
|---|---------------------|-------------------|--|
| Appearance | | | |
| Physical state | : liquid | | |
| Color | : Off-white | | |
| Odor | : characteristic | | |
| Odor threshold | : No data available | | |
| pH | : 2.1 | CIPAC MT 75.3 | |
| Melting point / freezing point °C | : No data available | | |
| Boiling point / boiling range °C | : No data available | | |
| Flash point °C | : >100 | CIPAC MT 12 | |
| Evaporation rate | : No data available | | |
| Flammability (solid, gas) | : Not applicable | | |
| Upper/lower flammability or explosive limits | : No data available | | |
| Vapor pressure kPa | : No data available | | |
| Vapor density | : No data available | | |
| Relative density | : No data available | | |
| Solubility(ies) mg/l | : No data available | | |
| Partition coefficient Log Pow | : | | See Section 12 for additional Ecological Information |
| Autoignition temperature °C | : 445 | 92/69/EEC A.15 | |
| Decomposition temperature °C | : No data available | | |
| Kinematic viscosity mm²/s 40 °C | : Not applicable | | |
| Explosive properties | : Not an explosive | 92/69/EEC A.14 | |
| Oxidizing properties | : Not oxidizing | EEC A.14 EEC A.21 | |
| Surface tension | : No data available | | |
| Particle Size | : Not applicable | | |
| Other information | | | |
| Bulk density g/ml | : Not applicable | | |

10. Stability and reactivity

Reactivity

Reactivity No information available.

Chemical stability

Stability Stable under normal conditions.

Explosion data

Sensitivity to mechanical impact None.

Sensitivity to static discharge None.

Possibility of hazardous reactions

Possibility of hazardous reactions None under normal processing.

Conditions to avoid

Conditions to avoid None known based on information supplied.

Incompatible materials

Incompatible materials None known based on information supplied.

Hazardous decomposition products

Hazardous decomposition products None known based on information supplied.

11. Toxicological information

Information on toxicological effects**Acute toxicity**

| | <u>Values</u> | <u>Species</u> | <u>Method</u> | <u>Remarks</u> |
|--|------------------------------|----------------|---------------|----------------|
| Oral LD50 mg/kg | : > 2000 | Rat | OECD 423 | |
| Dermal LD50 mg/kg | : > 2000 | Rat | OECD 402 | |
| Inhalation LC50 LC50 | : > 5.59 | Rat | OECD 403 | |
| Skin corrosion/irritation | : Non-irritating to the skin | Rabbit | OECD 404 | |
| Serious eye damage/eye irritation | : Not irritating to eyes | Rabbit | OECD 405 | |
| Sensitization | : Not a skin sensitizer | Guinea pig | OECD 406 | |

Chronic toxicity**Germ cell mutagenicity****Chemical name**

Mesotrione (ISO) : Not classified

Carcinogenicity**Chemical name**

Mesotrione (ISO) : Not Carcinogenic

Reproductive toxicity**Chemical name**

Mesotrione (ISO) : Suspected of damaging the unborn child

STOT - Single Exposure**Chemical name**

Mesotrione (ISO) : Not available

STOT - Repeated Exposure**Chemical name**

Mesotrione (ISO) : May cause damage to organs through prolonged or repeated exposure Eyes, nervous system

Aspiration hazard**Chemical name**

Mesotrione (ISO) : Not available

12. Ecological information

Ecotoxicity

Aquatic toxicity

| | <u>Values</u> | <u>Species</u> | <u>Method</u> | <u>Remarks</u> |
|-----------------------------|---------------|---------------------|---------------|----------------|
| Acute toxicity | | | | |
| Fish 96-hour LC50 mg/l | : >100 | Oncorhynchus mykiss | OECD 203 | |
| Crustacea 48-hour EC50 mg/l | : > 100 | Daphnia magna | OECD 202 | |
| Algae 72-hour EC50 mg/l | : 20.6 | P. subcapitata | OECD 201 | |
| Other plants EC50 mg/l | : 0.057 | Lemna | OECD 221 | |

| | <u>Values</u> | <u>Species</u> | <u>Method</u> | <u>Remarks</u> |
|---------------------------------|---------------------|----------------|---------------|----------------|
| Chronic aquatic toxicity | | | | |
| Fish NOEC mg/l | : No data available | | | |
| Crustacea NOEC mg/l | : No data available | | | |
| Algae NOEC mg/l | : No data available | | | |
| Other plants NOEC mg/l | : No data available | | | |

Terrestrial Toxicity

| | | | | |
|------------------------------|----------|----------------|----------------|---------|
| Birds Oral LD50 mg/kg | | | | |
| Chemical name | | | | |
| Mesotrione (ISO) | : > 2000 | C. virginianus | EPA-FIFRA 71-1 | 14 days |

Bees Oral LD50 µg/bee

| | | | | |
|----------------------|--------|--|----------|--|
| Chemical name | | | | |
| Mesotrione (ISO) | : > 11 | | EPPO 170 | |

Abiotic Degradation

| | | | | |
|------------------------|-------------|--|-----------------|--|
| Water DT50 days | | | | |
| Chemical name | | | | |
| Mesotrione (ISO) | : 3.9 - 6.5 | | EPA-FIFRA 162-4 | |

Soil DT50 days

| | | | | |
|----------------------|----------|--|-----------------|---------|
| Chemical name | | | | |
| Mesotrione (ISO) | : 6 - 27 | | EPA-FIFRA 163-2 | aerobic |

Biodegradation

| | | | | |
|----------------------|-----------------------------|--|--|--|
| Chemical name | | | | |
| Mesotrione (ISO) | : Not readily biodegradable | | | |

Log Pow

| | <u>Values</u> | <u>Method</u> | <u>Remarks</u> |
|----------------------|---------------|---------------|----------------|
| Chemical name | | | |
| Mesotrione (ISO) | : < -1.0 | EEC A.8 | pH 7, 20 °C |

Bioconcentration factor (BCF)

| | | | | |
|----------------------|---|--|--|----------------|
| Chemical name | | | | |
| Mesotrione (ISO) | : | | | Not applicable |

Adsorption/Desorption

| | <u>Values</u> | <u>Method</u> | <u>Remarks</u> |
|----------------------|---------------|-----------------|----------------|
| Chemical name | | | |
| Mesotrione (ISO) | : 109 | EPA-FIFRA 163-1 | KOC |

13. Disposal considerations

Disposal methods

| | |
|--|---|
| Waste from residues/unused products | Dispose of waste in accordance with environmental legislation. Dispose of in accordance with local regulations. |
| Contaminated packaging | Improper disposal or reuse of this container may be dangerous and illegal. |

14. Transport informationADR

| | |
|---|---|
| 14.1 UN number | UN3082 |
| 14.2 UN proper shipping name | ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Mesotrione (ISO)) |
| 14.3 Transport hazard class(es) | 9 |
| Labels | 9 |
| 14.4 Packing group | III |
| Description | UN3082, ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Mesotrione (ISO)), 9, III, (-) |
| 14.5 Environmental hazard | Yes |
| 14.6 Special Precautions for Users | |
| Special Provisions | 274, 335, 601, 375 |
| Classification code | M6 |
| Tunnel restriction code | (-) |

RID

| | |
|---|--|
| 14.1 UN number | UN3082 |
| 14.2 UN proper shipping name | ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Mesotrione (ISO)) |
| 14.3 Transport hazard class(es) | 9 |
| Labels | 9 |
| 14.4 Packing group | III |
| Description | UN3082, ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Mesotrione (ISO)), 9, III |
| 14.5 Environmental hazard | Yes |
| 14.6 Special Precautions for Users | |
| Special Provisions | 274, 335, 375, 601 |
| Classification code | M6 |

IMDG

| | |
|---|--|
| 14.1 UN number | UN3082 |
| 14.2 UN proper shipping name | ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Mesotrione (ISO)) |
| 14.3 Hazard Class | 9 |
| 14.4 Packing group | III |
| Description | UN3082, ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Mesotrione (ISO)), 9, III, Marine pollutant |
| 14.5 Marine pollutant | P |
| Environmental hazard | Yes |
| 14.6 Special Precautions for Users | |
| Special Provisions | 274, 335, 969 |
| EmS-No | F-A, S-F |
| IMDG Stowage and segregation | Category A |
| 14.7. Transport in bulk according to Annex II of MARPOL and the IBC Code | No information available |

IATA

| | |
|--|--|
| 14.1 UN number | UN3082 |
| 14.2 UN proper shipping name | ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Mesotrione (ISO)) |
| 14.3 Transport hazard class(es) | 9 |
| 14.4 Packing group | III |
| Description | UN3082, ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Mesotrione (ISO)), 9, III |

| | |
|------------------------------------|-----------------|
| 14.5 Environmental hazard | Yes |
| 14.6 Special Precautions for Users | |
| Special Provisions | A97, A158, A197 |
| ERG Code | 9L |



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

15. Regulatory information

Safety, health and environmental regulations specific for the product in question

Registration Requirements: Fertilizer, Farm Feeds, Agricultural Remedies and Stock Remedies Act, 1947 (Act 36 of 1947). Pesticide Handling, Storage and Disposal Safety: SANS10206: 2020. Safety Data Sheet and Occupational Exposure Limit Requirements: Regulations for Hazardous Chemical Agents – 2021 – SA Occupational Health and Safety Act. SANS11014:2010. Control of and handling of poisonous/hazardous and non-poisonous/non-hazardous substances/chemicals in workplaces: Hazardous Substances Act, 1973 (Act No.15 of 1973). Occupational Health and Safety Act No. 85 of 1993.

16. Other information

Full text of H-Statements referred to under section 3

H361 - Suspected of damaging fertility or the unborn child
H373 - May cause damage to organs through prolonged or repeated exposure
H400 - Very toxic to aquatic life
H410 - Very toxic to aquatic life with long lasting effects

| | |
|--------------------------------|--|
| Date of preparation of the SDS | No data available |
| Revision date | 07-Dec-2022 |
| Revision Note | Changes made to the last version are labeled with this sign ***. |

Key or legend to abbreviations and acronyms used in the safety data sheet

| | |
|------|---|
| IMDG | International Maritime Dangerous Goods (IMDG) |
| IATA | International Air Transport Association (IATA) |
| ADR | European Agreement concerning the International Carriage of Dangerous Goods by Road |

Legend Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

| | | | |
|---------|-----------------------------|------|----------------------------------|
| TWA | TWA (time-weighted average) | STEL | STEL (Short Term Exposure Limit) |
| Ceiling | Maximum limit value | * | Skin designation |

Abbreviations and acronyms

ADR - European Agreement concerning the International Carriage of Dangerous Goods by Road
ADN - European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways
CAS Number - Chemical Abstracts Service number
EC Number - EINECS and ELINCS Number
EINECS - European Inventory of Existing Commercial Substances
ELINCS - European List of notified Chemical Substances
IATA - International Air Transport Association

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

The Globally Harmonized System of Classification and Labeling of Chemicals (GHS)**Classification of the mixture**

H361 - Suspected of damaging fertility or the unborn child

H373 - May cause damage to organs through prolonged or repeated exposure

H400 - Very toxic to aquatic life

H410 - Very toxic to aquatic life with long lasting effects

Classification procedure

Classification based on Calculation method

Classification based on Calculation method

Classification based on test data

Classification based on Calculation method

Disclaimer

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text

End of Safety Data Sheet