



## Safety Data Sheet HARVESTSHIELD

Safety Data Sheet version 1.4 dated 11/6/2021

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### SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier

Trade name:

HARVESTSHIELD

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

Recommended use:

Liquid fertiliser for agricultural use.

1.3. Details of the distributor of the safety data sheet

Company:

Meristem Crop Performance  
489 Village Park Dr.,  
Powell, OH 43065

Competent person responsible for the safety data sheet: 833-637-4783

1.4. Emergency telephone number:

National Poison Control  
800-822-1222

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### SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

EC regulation criteria 1272/2008 (CLP)

The product is not classified as dangerous according to Regulation EC 1272/2008 (CLP).

Adverse physicochemical, human health and environmental effects:

No other hazards

2.2. Label elements

The product is not classified as dangerous according to Regulation EC 1272/2008 (CLP).

Hazard pictograms:

None

Hazard statements:

None

Precautionary statements:

None

Special Provisions:

None

Special provisions according to Annex XVII of REACH and subsequent amendments:

None

2.3. Other hazards

No PBT, vPvB or endocrine disruptor substances present in concentration  $\geq 0.1\%$

Other Hazards:

No other hazards

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### SECTION 3: Composition/information on ingredients



## Safety Data Sheet HARVESTSHIELD

### 3.1. Substances

N.A.

### 3.2. Mixtures

Hazardous components within the meaning of the CLP regulation and related classification:

None.

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## SECTION 4: First aid measures

### 4.1. Description of first aid measures

In case of skin contact:

Wash with plenty of water and soap.

After contact with skin, wash immediately with soap and plenty of water for at least 10-15 min.

In case of eyes contact:

After contact with the eyes, rinse with water with the eyelids open for at least 10-15 min., then consult an ophthalmologist immediately.

In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.

In case of Ingestion:

Do not induce vomiting.

Seek immediate medical attention.

Do not give anything that is not expressly authorized by your doctor.

In case of Inhalation:

Remove casualty to fresh air and keep warm and at rest.

First aid self-protection:

Adopt adequate precautions for the rescuer in accordance with the contents of the first aid kit (Ministerial Decree No. 388/2003)

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

There are no known episodes of damage to health attributable to the product.

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

Treatment:

No specific treatments related to the product are known. Contact specialized medical personnel.

For information on the substances contained, see sections 3 and 11.

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## SECTION 5: Firefighting measures

### 5.1. Extinguishing media

Suitable extinguishing media:

Carbon dioxide, foam, powder and water.

Extinguishing media which must not be used for safety reasons:

None in particular.

### 5.2. Special hazards arising from the substance or mixture

Do not inhale explosion and combustion gases.

Burning produces heavy smoke.

### 5.3. Advice for firefighters

Cool the containers with jets of water.

Always wear full fire protection equipment.

Collect the extinguishing water which must not be fed into the sewers.

Dispose of the contaminated water used for extinguishing and the residue of the fire according to current regulations.

EQUIPMENT:

Normal clothing for firefighting, such as an open circuit compressed air breathing apparatus (EN 137), flame retardant suit (EN 469), flame retardant gloves (EN 659) and fire brigade boots (HO A29 or A30).

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## SECTION 6: Accidental release measures

- 6.1. Personal precautions, protective equipment and emergency procedures  
Wear personal protection equipment.  
Remove persons to safety.  
See protective measures under point 7 and 8.
- 6.2. Environmental precautions  
Do not allow to enter into soil/subsoil. Do not allow to enter into surface water or drains.  
Retain contaminated washing water and dispose it.  
In case of gas escape or of entry into waterways, soil or drains, inform the responsible authorities.  
Suitable material for taking up: absorbing material, organic, sand
- 6.3. Methods and material for containment and cleaning up  
For containment:  
Collect the product for re-use, if possible, or for disposal.  
For recovery or disposal, vacuum or clean and place in appropriate labeled containers.  
For cleaning up:  
Provide sufficient ventilation of the place affected by the leak. Disposal of contaminated material must be carried out in accordance with the provisions of section 13.  
Clear spills immediately
- 6.4. Reference to other sections  
Any information regarding personal protection and disposal is given in sections 8 and 13.
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### SECTION 7: Handling and storage

- 7.1. Precautions for safe handling  
Handle the product after consulting all the other sections of this safety data sheet.  
Avoid the dispersion of the product in the environment outside the indicated uses.  
Avoid contact with skin and eyes, inhalation of vapors and mists.  
See also section 8 for recommended protective equipment.  
Advice on general occupational hygiene:  
Do not eat, drink or smoke when using this product.  
Wash hands after use  
Contaminated clothing should be changed before entering eating areas.
- 7.2. Conditions for safe storage, including any incompatibilities  
Keep the product in clearly labeled containers.  
Store with care and attention, avoiding precarious storage.  
Keep the containers closed in a well-ventilated place.  
Store the containers in a dry place away from sunlight or other atmospheric agents.  
Keep away from food, drink and feed.  
Incompatible materials:  
See section 10 below.  
Instructions as regards storage premises:  
Cool and adequately ventilated.
- 7.3. Specific end use(s)  
Refer to section 1.2
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### SECTION 8: Exposure controls/personal protection

- 8.1. Control parameters  
No occupational exposure limit available  
DNEL Exposure Limit Values  
N.A.  
PNEC Exposure Limit Values  
N.A.
- 8.2. Exposure controls  
Eye protection:  
Safety glasses.  
(see standard EN 166)



## Safety Data Sheet HARVESTSHIELD

### Protection for skin:

- Disposable suit.  
(see standard EN 13034)
- Safety shoes.  
(see standard UNI EN ISO 20345)

### Protection for hands:

- Suitable gloves type:  
One-time gloves.
- Suitable material:  
NBR (nitrile rubber).  
(see standard EN 374)
- Wash hands before eating, drinking or smoking.

### Respiratory protection:

- Avoid inhaling the product.
- Provide adequate ventilation. Good local ventilation and a good general air exchange system must be ensured.

### Thermal Hazards:

None

### Environmental exposure controls:

- Use according to good working practices, avoiding to disperse the product in the environment.
- Do not discharge the product into the sewers.

### Appropriate engineering controls:

- Ensure adequate ventilation, especially in confined areas.

## SECTION 9: Physical and chemical properties

### 9.1. Information on basic physical and chemical properties

Properties	Value	Method:	Notes
Physical state:	Liquid	--	--
Colour:	brown	--	The product may undergo color changes that are not relevant for classification and product quality.
Odour:	Not Relevant	--	Not relevant for product classification purposes.
Melting point/freezing point:	Not Relevant	--	Freezing point lower than the temperature range of use of the product.
Boiling point or initial boiling point and boiling range:	Not Relevant	--	Boiling point higher than the temperature range of use of the product.
Flammability:	Non-flammable	--	--
Lower and upper explosion limit:	N.A.	--	Not flammable.
Flash point:	N.A.	--	NOT FLAMMABLE: water-based mixture consisting of inorganic components (Annex VII REACH) and / or non-flammable organic components.
Auto-ignition temperature:	N.A.	--	Not flammable.
Decomposition temperature:	Not Relevant	--	Decomposition temperature higher than the temperature range of use of the product.
pH (20°C):	5.0	--	--

Kinematic viscosity:	Not Relevant	--	Not relevant for product classification purposes
Solubility in water:	Soluble	--	--
Solubility in oil:	Not Relevant	--	Not relevant for classification and use of the product.
Partition coefficient n-octanol/water (log value):	Not Relevant	--	--
Vapour pressure:	Not Relevant	--	Not relevant for product classification purposes.
Density and/or relative density:	1.21 Kg/L	--	--
Relative vapour density:	Not Relevant	--	Not relevant for product classification purposes.

Particle characteristics:

Particle size:	N.A.	--	--
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9.2. Other information

Properties	Value	Method:	Notes
Miscibility:	Mixable with water	--	--
Conductivity (25°C):	2.8 mS/cm (sol.1% w/w)	--	--

## SECTION 10: Stability and reactivity

10.1. Reactivity

Stable under normal conditions

Substances Information:

N.A.

10.2. Chemical stability

Stable under normal conditions

Substances Information:

N.A.

10.3. Possibility of hazardous reactions

None

Substances Information:

N.A.

10.4. Conditions to avoid

Stable under normal conditions.

Substances Information:

N.A.

10.5. Incompatible materials

None in particular.

Substances Information:

N.A.

10.6. Hazardous decomposition products

According to the data in our possession, no one in particular to report.

Substances Information:

N.A.

## SECTION 11: Toxicological information

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

Toxicological information of the product:

KRISS

a) acute toxicity

- Not classified  
Based on available data, the classification criteria are not met
  - b) skin corrosion/irritation  
Not classified  
Based on available data, the classification criteria are not met
  - c) serious eye damage/irritation  
Not classified  
Based on available data, the classification criteria are not met
  - d) respiratory or skin sensitisation  
Not classified  
Based on available data, the classification criteria are not met
  - e) germ cell mutagenicity  
Not classified  
Based on available data, the classification criteria are not met
  - f) carcinogenicity  
Not classified  
Based on available data, the classification criteria are not met
  - g) reproductive toxicity  
Not classified  
Based on available data, the classification criteria are not met
  - h) STOT-single exposure  
Not classified  
Based on available data, the classification criteria are not met
  - i) STOT-repeated exposure  
Not classified  
Based on available data, the classification criteria are not met
  - j) aspiration hazard  
Not classified  
Based on available data, the classification criteria are not met
- Toxicological information of the main substances found in the product:  
N.A.
- 11.2. Information on other hazards  
Endocrine disrupting properties:  
No endocrine disruptor substances present in concentration  $\geq 0.1\%$

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## **SECTION 12: Ecological information**

- 12.1. Toxicity  
Adopt good working practices, so that the product is not released into the environment.  
KRISS  
Not classified for environmental hazards  
Based on available data, the classification criteria are not met
- 12.2. Persistence and degradability  
None  
N.A.
- 12.3. Bioaccumulative potential  
N.A.
- 12.4. Mobility in soil  
N.A.
- 12.5. Results of PBT and vPvB assessment  
vPvB Substances: None - PBT Substances: None
- 12.6. Endocrine disrupting properties  
No endocrine disruptor substances present in concentration  $\geq 0.1\%$
- 12.7. Other adverse effects  
None

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**SECTION 13: Disposal considerations**

13.1. Waste treatment methods

Do not dispose of the unused product and the container in the environment.

The dangerousness of the waste that partially contains this product must be evaluated according to the laws in force.

Disposal must be entrusted to an authorized waste management company, in compliance with national and possibly local regulations.

**CONTAMINATED PACKAGING:**

Contaminated packaging must be sent for recovery or disposal in compliance with national waste management regulations.

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**SECTION 14: Transport information**

14.1. UN number or ID number

Not classified as dangerous in the meaning of transport regulations.

14.2. UN proper shipping name

N.A.

14.3. Transport hazard class(es)

N.A.

14.4. Packing group

N.A.

14.5. Environmental hazards

Marine pollutant: No

N.A.

14.6. Special precautions for user

N.A.

14.7. Maritime transport in bulk according to IMO instruments

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**SECTION 15: Regulatory information**

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

Dir. 98/24/EC (Risks related to chemical agents at work)

Dir. 2000/39/EC (Occupational exposure limit values)

Regulation (EC) n. 1907/2006 (REACH)

Regulation (EC) n. 1272/2008 (CLP)

Regulation (EC) n. 790/2009 (ATP 1 CLP) and (EU) n. 758/2013

Regulation (EU) n. 2020/878

Regulation (EU) n. 286/2011 (ATP 2 CLP)

Regulation (EU) n. 618/2012 (ATP 3 CLP)

Regulation (EU) n. 487/2013 (ATP 4 CLP)

Regulation (EU) n. 944/2013 (ATP 5 CLP)

Regulation (EU) n. 605/2014 (ATP 6 CLP)

International Regulations of the transport of dangerous goods (ADR, RID, IMDG, ICAO/IATA).

Regulation (EU) n. 2015/1221 (ATP 7 CLP)

Regulation (EU) n. 2016/918 (ATP 8 CLP)

Regulation (EU) n. 2016/1179 (ATP 9 CLP)

Regulation (EU) n. 2017/776 (ATP 10 CLP)

Regulation (EU) n. 2018/669 (ATP 11 CLP)

Regulation (EU) n. 2018/1480 (ATP 13 CLP)

Regulation (EU) n. 2019/521 (ATP 12 CLP)

Restrictions related to the product or the substances contained according to Annex XVII Regulation (EC) 1907/2006 (REACH) and subsequent modifications:

Restrictions related to the product:

No restriction.

Restrictions related to the substances contained:

No restriction.



## Safety Data Sheet HARVESTSHIELD

Where applicable, refer to the following regulatory provisions :

- Directive 2012/18/EU (Seveso III)
- Regulation (EC) nr 648/2004 (detergents).
- Dir. 2004/42/EC (VOC directive)
- Regulation (EU) 2019/1148

Provisions related to directive EU 2012/18 (Seveso III):

- Seveso III category according to Annex 1, part 1
- None

Provisions relating to Regulation (EU) 2019/1148:

'This product is regulated by Regulation (EU) 2019/1148: all suspicious transactions, and significant disappearances and thefts should be reported to the relevant national contact point. Please see [https://ec.europa.eu/home-affairs/sites/homeaffairs/files/what-we-do/policies/crisis-and-terrorism/explosives/explosives-precursors/docs/list\\_of\\_competent\\_authorities\\_and\\_national\\_contact\\_points\\_en.pdf](https://ec.europa.eu/home-affairs/sites/homeaffairs/files/what-we-do/policies/crisis-and-terrorism/explosives/explosives-precursors/docs/list_of_competent_authorities_and_national_contact_points_en.pdf)

15.2. Chemical safety assessment

No Chemical Safety Assessment has been carried out for the mixture.

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### SECTION 16: Other information

This document was prepared by a competent person who has received appropriate training.

Main bibliographic sources:

- ECDIN - Environmental Chemicals Data and Information Network - Joint Research Centre, Commission of the European Communities
- SAX's DANGEROUS PROPERTIES OF INDUSTRIAL MATERIALS - Eight Edition - Van Nostrand Reinold

The information contained herein is based on our state of knowledge at the above-specified date. It refers solely to the product indicated and constitutes no guarantee of particular quality.

It is the duty of the user to ensure that this information is appropriate and complete with respect to the specific use intended.

This MSDS cancels and replaces any preceding release.

ADR:	European Agreement concerning the International Carriage of Dangerous Goods by Road.
ATE:	Acute Toxicity Estimate
ATEmix:	Acute toxicity Estimate (Mixtures)
CAS:	Chemical Abstracts Service (division of the American Chemical Society).
CLP:	Classification, Labeling, Packaging.
DNEL:	Derived No Effect Level.
EINECS:	European Inventory of Existing Commercial Chemical Substances.
GefStoffVO:	Ordinance on Hazardous Substances, Germany.
GHS:	Globally Harmonized System of Classification and Labeling of Chemicals.
IATA:	International Air Transport Association.
IATA-DGR:	Dangerous Goods Regulation by the "International Air Transport Association" (IATA).
ICAO:	International Civil Aviation Organization.
ICAO-TI:	Technical Instructions by the "International Civil Aviation Organization" (ICAO).
IMDG:	International Maritime Code for Dangerous Goods.
INCI:	International Nomenclature of Cosmetic Ingredients.
KSt:	Explosion coefficient.





## Safety Data Sheet HARVESTSHIELD

LC50:	Lethal concentration, for 50 percent of test population.
LD50:	Lethal dose, for 50 percent of test population.
PNEC:	Predicted No Effect Concentration.
RID:	Regulation Concerning the International Transport of Dangerous Goods by Rail.
STEL:	Short Term Exposure limit.
STOT:	Specific Target Organ Toxicity.
TLV:	Threshold Limiting Value.
TWA:	Time-weighted average
WGK:	German Water Hazard Class.