



# MES PLUS 20-20-20+TE

## EC FERTILIZER - NPK FERTILIZER BLENDED

### Material Safety Data Sheet

Prepared in accordance with the Regulation on Safety Data Sheets on Harmful Substances and Mixtures published in the Official Gazette dated 13 December 2014 and numbered 29204.

Prepared On : 15.04.2024  
Revision No/Date : - / -

MSDS No : GBF - 33

## SECTION 1. IDENTIFICATION

### 1.1. Description of the Substance

**Substance Name** : MES PLUS 20-20-20+TE  
**Chemical Identification** : Mixture

### 1.2. Information About the Product

**Area of Usage/Application** : EC Fertilizer - NP Fertilizer Blended  
**Restrictions for Usage** : No data available

### 1.3. Manufacturer Company Information

**Company Name** : WONDER WORM Organik Gübre ve Tar. Ürün. San. Tic. Ltd. Şti.  
**Address** : Nişantaşı Mah. Kalemkar Sok. Rahime Hatun Sitesi No: 12/B  
Selçuklu – KONYA / TÜRKİYE  
**Tel** : + 90 553 259 47 63  
**Website** : [www.wonderworm.com.tr](http://www.wonderworm.com.tr)  
**E-mail** : [info@wonderworm.com.tr](mailto:info@wonderworm.com.tr)

### 1.4. Emergency Phone Numbers

**Emergency** : 112  
**UZEM National Toxic Information Center** : 114

## SECTION 2. HAZARDS IDENTIFICATION

### 2.1. Classification of Substances and Mixtures

- Classified according to the "Regulation on Classification, Labeling and Packaging of Substances and Mixtures" published in the (Repeated) Official Gazette dated 11 December 2013 and numbered 28848.
- H319 Serious Eye Damage/Eye Irritation, Category 2
- H314 Skin corrosion, Sub-category 1A

### 2.2. Label Elements

**Hazard Sign** :



GHS07

**Warning Word** : CAUTION  
**Hazard Class** : H319 Causes serious eye irritation.  
H314 Causes severe skin burns and eye damage



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#### Precaution Class :

- P233 Keep container tightly closed
- P280 Wear protective gloves/protective clothing/eye protection/face protection
- P370+P378 In case of fire: Use Dry chemical, alcohol foam, multipurpose AFFF, carbon dioxide to extinguish.
- P305+P351+P338 In case of eye contact: Rinse carefully with water for a few minutes. Remove contact lenses, if present and easy to do. Keep rinsing
- P337+P313 If eye irritation is persistent: Get medical advice/attention.
- P403+P235 Stores in a well-ventilated area, keep cold.
- P501 Content/container; Dispose of at a hazardous or special waste collection point in accordance with local/regional/national/international regulations.

#### 2.3. Other Hazards:

To our knowledge, this product does not present any particular risk, provided it is handled in accordance with good occupational hygiene and safety practice.

## SECTION 3. INFORMATION ON COMPOSITION/INGREDIENTS

#### 3.1. Substances

Not applicable.

#### 3.2. Mixtures

Name	Identity of Substance/Mixture	%	Classification (SEA)
Total Nitrogen (N)	(CAS-No.) - (EC-No.) -	20	no classification
Neutral Ammonium Citrate	CAS-No.) 3458-72-8 (EC-No.) 222-394-5	6,3	Eye Irrit. 2, H319 Skin Irrit. 2, H315 STOT SE 3, H335
Nitrate Nitrogen	CAS-No.) 6484-52-2 (EC-No.) 229-347-8	8	Oxide. Solid 3, H272 Skin Irrit. 2, H315 Eye Irrit. 2, H319 STOT SE 3, H335
Urea Nitrogen	CAS-No.) 57-13-6 (EC-No.) 200-315-5	5,7	not classified
Neutral Ammonium Citrate and Water Soluble Phosphorus Pentaoxide (P2O5)	(CAS-No.) 1314-56-3 (EC-No.) -	20	H314 Skin Corr. 1A H318 Eye Dam. 1
Water Soluble Potassium Oxide	(Cas No): 7447-40-7 EC No: 231-211-8	20	Not classification
Boric Acid	(CAS-No.) 10043-35-3 (EC-No.) 233-139-2	0,02	Repr. 1B 1B- H360FD
Water Soluble Copper	(CAS-No.) 231-159-6 (EC-No.) 7440-50-8	0,02	Aquatic Chronic 2 H411
Water Soluble Iron Iron(II) Sulphate hepta hydrate	(CAS-No.) 7782-63-0 (EC-No.) -	0,03	Eye Irrit. 2 (H319) Acute Tox. 4 (H302)Skin Irrit. 2 (H315)
Suda Çözünür Mangan manganese sulfate	(CAS-No.) 10034-96-5 (EC-No.) 232-089-9	0,04	Acute Tox. 4 ; H302 Acute Tok 4. ; H332



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Suda Çözünür Çinko Zinc Oxide	(CAS-No.) 1314-13-2 (EC-No.) 215-222-5	0,04	Aquatic Acute 1- H400 (M=1) Aquatic Chronic 1- H410 (M=1)
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\* Expansion of H expressions is given in Chapter 16.

## SECTION 4. FIRST AID MEASURES

### 4.1. Description of First Aid Measures

#### General First Aid Measures

: If in doubt or if symptoms persist, seek medical attention. Never give anything by mouth to an unconscious person.

#### Inhalation

: Remove from exposure, taking care not to inhale vapours. Keep warm. Seek medical attention if symptoms occur

#### Skin Contact

: Rinse your skin with water/shower. Immediately remove/take off all contaminated clothing. If skin irritation occurs: Get medical advice/attention.

#### Eye Contact

: Immediately flush eyes with plenty of water for at least 15 minutes keeping eye open. If possible, remove contact lenses. Get medical help.

#### Ingestion

: Do not try to induce vomiting. Seek medical attention if symptoms occur or if large amounts are swallowed. Accidental ingestion at a level high enough to be hazardous to health is unlikely

### 4.2. Significant Symptoms and Effects, Quick and Delayed

#### After Inhalation

: EXPOSURE TO HIGH CONCENTRATIONS: Irritation of respiratory tract. Irritation of the nasal mucous membranes.

#### After Skin Contact

: Mild irritation

#### After Eye Contact

: Redness of the eye tissue. lacrimation Irritation of eye tissue.

#### After Ingestion

: Nausea, respiratory tract irritation.

### 4.3. Indication of Need for Medical Attention and Special Treatment

Treat symptomatically

## SECTION 5. FIREFIGHTING MEASURES

The product is not flammable

### 5.1. Fire Extinguishers

#### Suitable extinguishing agents

: Water spray. Dry powder. Foam. Carbon dioxide

#### Unsuitable extinguishing agents

: None known.



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#### 5.2. Special Hazards Caused by the Substance and Mixture

**Fire Hazard** : The product is not flammable

**Explosion Hazard** : Not detected.

**Hazardous decomposition products in case of fire** : Toxic fumes may be released.  
Carbon dioxide.

#### 5.3. Advice for Fire Fighting Squad/Personnel

**Firefighting measures** : Use water spray or mist to cool exposed containers. Do not dispose of water used for firefighting purposes into the environment.

**Protection in event of fire** : Do not attempt to intervene without appropriate protective equipment. Independent breathing apparatus. Complete protective clothing

## SECTION 6. ACCIDENTAL RELEASE MEASURES

#### 6.1. Personal Precautions, Protective Equipment and Emergency Procedures

##### For non-emergency personnel

**Protective Equipment** : Wear recommended personal protective equipment

**Emergency Plans** : Ventilate the spill area. Provide adequate ventilation.

##### For emergency responders

**Protective Equipment** : Do not attempt to intervene without appropriate protective equipment. For more information, see section 8: "Exposure controls/personal protection"

#### 6.2 Environmental Measures

Avoid release to the environment

#### 6.3 Methods and Materials for Containment and Cleaning

**Cleaning** : Contain liquid spill with absorbent material. Collect in closed containers for disposal. Notify authorities if product enters sewers or city waters

**Other Information** : Dispose of material or solid residues at an authorized facility

#### 6.4 References to Other Sections

See Section 13 for further information.

## SECTION 7. HANDLING AND STORAGE

In order to ensure the protection of health, safety and environment, the employer is obliged to comply with the provisions of the "Regulation on Health and Safety Precautions in Working with Chemicals", published



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in the Official Gazette dated 26.12.2003 and numbered 25328, regarding the measures to be taken in the workplaces and workplaces where hazardous chemicals are used. Care should be taken to plan and take organizational measures.

#### 7.1. Measures for Safe Handling

- Measures for Safe Handling** : Ensure good ventilation of the work station. Wear personal protective equipment.
- Hygiene Measures** : Do not eat, drink or smoke while using this product. Always wash your hands after handling the product

#### 7.2. Conditions for Safe Storage, Including Incompatibilities

- Technical Measures** : Ground/connect container and receiving equipment
- Storage Conditions** : Keep container tightly closed and dry. Store in a cool, well-ventilated place away from incompatible materials. Store away from direct sunlight.
- Substances to be Avoided** : No data available
- Suitable Packaging Material** : Stainless steel, plastic, synthetic.
- Unsuitable Packaging Material** : No data available

#### 7.3. Specific End Uses

No supplementary information.

## SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

#### 8.1. Exposure Controls

- Appropriate Engineering Controls** : Ensure good ventilation of the work station.
- Hand Protection** : Protective gloves
- Eye Protection** : Safety glasses
- Skin and Body Protection** : Wear suitable protective clothing
- Respiratory protection** : In case of insufficient ventilation, wear suitable respiratory equipment
- Environmental Exposure Controls** : Avoid release to the environment.

#### 8.2 Exposure Controls



- Appropriate Engineering Controls** : Provide good ventilation in the work area. In case of any potential exposure, emergency eyewash fountains and safety showers should be available in the area.



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**Hand Protection** : Protective gloves. Standard EN 374 - Chemical protective gloves.  
The selection of suitable gloves depends not only on the type of material but also on other quality attributes that vary for each manufacturer.

**Eye Protection** : Edge protection safety glasses. Standard EN 166 - Personal eye protection

**Skin and Body Protection** : Use suitable protective equipment.

**Respiratory Protection** : In case of insufficient ventilation wear suitable respiratory equipment. Recommended filter type: A. Standard EN 14387 - Respiratory protective devices - Gas filters combined filters - EN 136

**Environmental Exposure Controls** : Avoid release to the environment

## SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

### 9.1. Information on Basic Physical and Chemical Properties

- Physical State	: Liquid
- Appearance	: Clear
- Color	: Brown
- Odor	: Characteristic
- Odor Threshold	: No data available
- pH	: 4,3
- Relative evaporation rate (butyl acetate=1)	: No data available
- Melting Point	: Not applicable
- Boiling Point	: No data available
- Flash Point	: No data available
- Auto-ignition Temperature	: No data available
- Decomposition Temperature	: No data available
- Flammability	: Not applicable
- Vapor Pressure	: No data available
- Vapor Density	: No data available
- Evaporation Rate	: No data available
- Relative Vapor Density	: No data available
- Density	: 1,29 g/cm <sup>3</sup> (20 °C)
- Solubility	: Miscible with water in any proportion
- Log Kow	: No data available
- Viscosity, Kinematic	: No data available
- Viscosity, Dynamic	: No data available
- Explosive Properties	: No data available
- Oxidizing Properties	: No data available
- Explosive Borders	: No data available

### 9.2. Other Information

No additional information available



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## SECTION 10. STABILITY AND REACTIVITY

### 10.1. Reactions

The product is non-reactive under normal conditions of use, storage and transport.

### 10.2. Chemical Stability

Stable under normal conditions.

### 10.3. Possibility of Harmful Reaction

No dangerous reactions known under normal conditions of use.

### 10.4. Conditions to Avoid

None under recommended storage and handling conditions (see section 7).

### 10.5. Substances to Avoid

No additional information available.

### 10.6. Harmful Decomposition Products

Under normal conditions of storage and use, hazardous decomposition products should not be produced

## SECTION 11. TOXICOLOGICAL INFORMATION

### 11.1. Information on Toxic Effects

Skin corrosion/irritation	: Not classified (Based on available data, classification criteria are not met)
Serious eye corrosion/irritation	: Not classified (Based on available data, classification criteria are not met)
Respiratory or skin sensitization	: Not classified (Based on available data, classification criteria are not met)
Germ cell mutagenicity	: Not classified (Based on available data, classification criteria are not met)
Carcinogenicity	: Not classified (Based on available data, classification criteria are not met)
Reproductive toxicity	: Not classified (Based on available data, classification criteria are not met)
STOT-single exposure	: Not classified (Based on available data, classification criteria are not met)
STOT-repeated exposure	: Not classified (Based on available data, classification criteria are not met)
Aspiration Damage	: Not classified (Based on available data, classification criteria are not met)

## SECTION 12. ECOLOGICAL INFORMATION

### 12.1. Toxicity

Ecologic-General	: The product is not considered to be harmful to aquatic organisms or to cause long-term adverse effects for the environment.
Acute Aquatic Toxicity	: Not classified
Chronic Aquatic Toxicity	: Not classified

### 12.2. Persistence and Degradability

No supplementary information



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**12.3. Bioaccumulation Potential**

No supplementary information

**12.4. Mobility in Soil**

No supplementary information

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

No supplementary information

**12.6. Other Negative Effects**

No supplementary information

**SECTION 13. DISPOSAL INFORMATION**

**13.1. Waste Treatment Methods**

**Regional regulations (waste)** : Dispose safely in accordance with national waste legislation  
**Waste treatment methods** : Dispose of via controlled incineration or landfill in licensed waste storage facilities.

**European Waste Catalog code (CED)** : Not classified

**Safe Disposal:**

Leave the product in its original containers. Do not mix with other waste.

Dispose of the product according to official regulations.

**Uncleaned Packaging:**

**Proposal** : Packaging can be cleaned with water.

**SECTION 14. TRANSPORT INFORMATION**

In accordance with ADR / RID / IMDG / IATA / ADN instructions

ADR	IMDG	IATA	ADN	RID
<b>14.1. UN Number</b>				
Not regulated for transport				
<b>14.2. Proper UN shipping name</b>				
Not applicable	Not applicable	Not applicable	Not applicable	Not applicable
<b>14.3. Transport hazard class(es)</b>				
Not applicable	Not applicable	Not applicable	Not applicable	Not applicable
<b>14.4. Packing Group</b>				
Not applicable	Not applicable	Not applicable	Not applicable	Not applicable
<b>14.5. Environmental Hazards</b>				





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Harmful to the environment : No	Harmful to the environment : No Marine pollutant : No	Harmful to the environment : No	Harmful to the environment : No	Harmful to the environment : No
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**14.6. Special precautions for the user**

- **Overland transport**  
No data available
- **Transport by sea**  
No data available
- **Air transport**  
No data available
- **Inland waterway transport**  
No data available
- **Rail transport**  
No data available

**14.7. Transport in bulk according to Annex II of MARPOL 73/78 and the IBC code**

Not applicable

**SECTION 15. REGULATORY INFORMATION**

**National Regulations**

- Prepared in accordance with the Regulation on Safety Data Sheets for Hazardous Substances and Mixtures (Date of 13 December 2014, Official Gazette No. 29204).
- Regulation on the Classification, Labeling and Packaging of Matter and Mixtures [R.G.11 / 12 / 2013-28848]
- Regulation on the Transport of Dangerous Goods by Road (R.G. 24/10 / 2013-28801)
- T.C. Ministry of Environment and Forestry, Regulation on Classification, Packing and Labeling of Hazardous Materials and Preparations, dated 26 December 2008, numbered 27092.
- Regulation on Restrictions on the Production, Market Supply and Use of Certain Hazardous Materials, Preparations and Products.
- Regulation on Health and Safety Precautions in Chemical Ingredients.
- Regulation on the Use of Personal Protective Equipment in Workplaces.
- Occupational Health and Safety Regulation.

**SECTION 16. OTHER INFORMATION**

**Abbreviations and Acronyms**

ADN	European Agreement on the International Carriage of Dangerous Goods by Inland Waterways
ADR	European Agreement on the International Carriage of Dangerous Goods by Road
GBF	Safety Data Sheet
EC50	Average effective concentration
IATA	International Air Transport Association
IMDG	International Maritime Dangerous Goods
LC50	Average lethal concentration



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LD50	Average lethal dose
PBT	Persistent Bioaccumulative Toxic
RID	Legislation on International Transport of Dangerous Goods by Rail
SEA	Classification Labeling Packaging Regulation; 11.12.2013 - 28848 (Repeated)
vPvB	Very Persistent and Very Bioaccumulative

Full text on H expressions

#### Prohibition / Restriction:

No prohibition or restriction has been imposed on the sale, use, areas of use and quantities of the product within the scope of this safety data sheet, in order to protect the environment and human health.

The information contained in this safety data sheet has been compiled based on the manufacturer's experience.

The product-related information in this Safety Data Sheet has been compiled from what is known about the ingredients. The data here are based on current knowledge and experience. This Safety Data Sheet examines the product in terms of safety requirements and does not make any warranty regarding the features of the product.

The data here is valid only when the product is used in the appropriate application(s). The product is not sold as suitable for other applications; use in such a situation may lead to risks not mentioned in this list. Do not use for other application(s) without obtaining information from the manufacturer.

It has been prepared/approved by expert personnel who have been prepared within the framework of the "Regulation on Safety Data Sheets Regarding Harmful Substances and Mixtures" (OG. 13.12.2014 dated and 29204) and certified as stipulated by the regulation.

The information given in this document is based on the best available information. This information is valid only for the specified substance/preparation and may not be valid if this substance/preparation is mixed with other substances/preparations or used in any other process.

The information given in this document does not constitute a guarantee/guarantee for the features of the product and does not constitute a legally binding agreement/contractual legal relationship. This document supplements the technical documentation, but cannot replace them. The information given is based on our knowledge of this product available at the time of publication.

#### MSDS Prepared by:

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