

Safety Data Sheet

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Version: 9

Section 1: IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

1.1. Product identifier

Product Name **Micromax Premium**
 Product Code **89030225EA**
 Pure substance/mixture **Mixture.**

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

Recommended Use Fertilizer (PC12). Restricted to professional users.
 Uses Advised Against Consumer use [SU 21].

1.3. Details of the supplier of the safety data sheet

Everris International B.V. Nijverheidsweg 1-5; 6422 PD Heerlen (NL); Tel: +31 (0)45-5609100; Fax: +31 (0)45-5609190.

For further information, please contact: INFO-MSDS@EVERRIS.COM.

1.4. Emergency telephone number: IN CASE OF AN EMERGENCY CALL: +44 1235 239 670 (24h).

Section 2: HAZARDS IDENTIFICATION

2.1. Classification of the substance or mixture

Mixture

Regulation (EC) No 1272/2008 (CLP)

Acute toxicity - Oral	Category 4 - (H302)
Skin Corrosion or Irritation	Category 2 - (H315)
Eye Irritation	Category 2 - (H319)
Acute aquatic toxicity	Category 1 - (H400)
Chronic aquatic toxicity	Category 1 - (H410)

2.2. Label elements



Signal Word: Warning

Hazard Statements:

H315 - Causes skin irritation
 H302 - Harmful if swallowed
 H319 - Causes serious eye irritation
 H410 - Very toxic to aquatic life with long lasting effects

Contains Copper sulphate anhydrous; $CuSO_4$, Zinc sulphate mono hydrate; $ZnSO_4 \cdot 1H_2O$

Precautionary Statements:

P280 - Wear protective gloves/protective clothing/eye protection/face protection
 P337 + P313 - If eye irritation persists: Get medical advice/attention
 P391 - Collect spillage
 P264 - Wash face, hands and any exposed skin thoroughly after handling
 P301 + P312 - IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell
 P330 - Rinse mouth
 P501 - Dispose of container in accordance with local regulation

P302 + P352 - IF ON SKIN: Wash with plenty of soap and water

P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing

Section 3: COMPOSITION/INFORMATION ON INGREDIENTS

3.1 Substances

Chemical Name	EC-No.	CAS No	Weight %	Classification according Regulation (EC) 1272/2008 [CLP]	REACH registration number
Iron sulphate; FeSO ₄ +1H ₂ O	231-753-5	7720-78-7	40 - 65%	Skin Irrit. 2 (H315) Eye Irrit. 2 (H319) Acute Tox. 4 (H302)	01-2119513203-57
Manganese sulphate; MnSO ₄ +1H ₂ O	232-08-99	7785-87-7	5 - 10%	STOT RE 2 (H373) Eye Dam. 1 (H318) Aquatic Chronic 2 (H411)	01-2119456624-35
Copper sulphate anhydrous; CuSO ₄	231-847-6	7758-98-7	1 - 5%	Eye Dam. 1 (H318) Acute Tox. 4 (H302) Aquatic Acute 1 (H400) Aquatic Chronic 1 (H410)	01-2119520566-40
Zinc sulphate mono hydrate; ZnSO ₄ +1H ₂ O	231-793-3	7446-19-7	1 - 5%	Acute Tox. 4 (H302) Eye Dam. 1 (H318) Aquatic Acute 1 (H400) Aquatic Chronic 1 (H410)	01-2119474684-27
Borax; Na ₂ B ₄ O ₇ +10H ₂ O	215-540-4	1303-96-4	1 - 5%	Eye Irrit. 2 (H319) Repr. 1B (H360FD)	01-2119490790-32

Component	SVHC candidates
Borax; Na ₂ B ₄ O ₇ +10H ₂ O 1303-96-4 (1 - 5%)	Present

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

Section 4: FIRST AID MEASURES

4.1. Description of first aid measures

General Advice:

First aid measures should be executed by trained personnel only.

Inhalation

In the case of inhalation of aerosol/mist consult a physician if necessary. Possible symptoms are coughing and/or dyspnoea. If symptoms persist, call a physician.

Skin Contact:

Rinse with plenty of water. If a person feels unwell or symptoms of skin irritation appear, consult a physician.

Eye Contact:

Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician. Keep eye wide open while rinsing. Continue rinsing eyes during transport to hospital.

Ingestion:

Clean mouth with water and drink afterwards plenty of water. Do not induce vomiting without medical advice. Possible symptoms are nausea and/or vomiting. If a person vomits when lying on his back, place him in the recovery position. Never give anything by mouth to an unconscious person. Call a physician or Poison Control Centre immediately.

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

None under normal processing

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

Artificial respiration and/or oxygen may be necessary.

Section 5: FIRE FIGHTING MEASURES

5.1. Extinguishing media

Suitable Extinguishing Media:

Coordinate fire extinguishing measures to fire in surrounding area. Use dry chemical, CO₂, water spray or "alcohol" foam.

Unsuitable Extinguishing Media:

High volume water jet.

5.2. Special hazards arising from the substance or mixture

Thermal decomposition can lead to release of irritating and toxic gases and vapors.

5.3. Advice for firefighters

Use extinguishing agent suitable for type of surrounding fire. In the event of fire and/or explosion do not breathe fumes. Firefighters should wear self-contained breathing apparatus and full firefighting turnout gear.

Section 6: ACCIDENTAL RELEASE MEASURES

6.1. Personal precautions, protective equipment and emergency procedures

Personal Precautions: Avoid dust formation. Ensure adequate ventilation. Sweep-up to prevent slipping hazard. Do not get in eyes.

For Emergency Responders: Use personal protection recommended in Section 8.

6.2. Environmental precautions

Prevent product from entering drains. Do not contaminate surface water.

6.3. Methods and material for containment and cleaning up

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

Methods for Cleanup: Shovel or sweep up. Do not create a powder cloud by using a brush or compressed air.

6.4. Reference to other sections

§ 8, 12, 13.

Section 7: HANDLING AND STORAGE

7.1. Precautions for safe handling

General hygiene considerations:

Handle in accordance with good industrial hygiene and safety practice. Use personal protection recommended in Section 8. When using, do not eat, drink or smoke.

7.2. Conditions for safe storage, including any incompatibilities

Technical measures/storage conditions:

Keep containers dry and tightly closed to avoid moisture absorption and contamination. Keep away from food, drink and animal feeding stuffs. For quality reasons: Keep out of reach of direct sunlight, store under dry conditions, partly used packaging should be closed well. Keep at temperatures between 0 °C and 40 °C.

Packaging Materials:
LGK (Germany)

Store in original container. Store in a closed container.
13

7.3. Specific end use(s)

Specific use(s)
Exposure scenario

Fertilizer; www.everris.com; Read and follow label instructions
Mixture. Not required.

Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1. Control parameters

Iron sulphate; FeSO₄·1H₂O

Belgium - 8 Hr TWA	1 mg/m ³
Denmark	TWA: 1 mg/m ³
Finland	TWA: 1 mg/m ³
Ireland	TWA: 1 mg/m ³ STEL: 2 mg/m ³
Norway	TWA: 1 mg/m ³ STEL: 2 mg/m ³
Portugal	TWA: 1 mg/m ³
Spain - Valores Limite Ambientales - VLE	TWA: 1 mg/m ³
Switzerland	TWA: 1 mg/m ³
UK EH40 WEL (8h)	LTEL (8 hr TWA) 1 mg/m ³ STEL (15 min) 2mg/m ³
<i>Manganese sulphate: MnSO₄+1H₂O</i>	
Austria	STEL 2 mg/m ³ TWA: 0.5 mg/m ³
Australia	0.2 mg/m ³
Belgium - 8 Hr TWA	0.2 mg/m ³
Denmark	TWA: 0.2 mg/m ³
Finland	TWA: 0.02 mg/m ³ TWA: 0.2 mg/m ³
Ireland	TWA: 0.2 mg/m ³ STEL: 0.6 mg/m ³
Japan	0.2 mg/m ³ OEL Mn
NL MAC - TWA:	STEL: 0.05 mg/m ³ TWA: 0.2 mg/m ³
Norway	TWA: 0.1 mg/m ³ STEL: 0.1 ppm
Poland	TWA: 0.05 mg/m ³
Portugal	TWA: 0.2 mg/m ³
Spain - Valores Limite Ambientales - VLE	TWA: 0.2 mg/m ³ TWA: 0.05 mg/m ³
Switzerland	TWA: 0.5 mg/m ³
UK EH40 WEL (8h)	5 mg/m ³
<i>Copper sulphate anhydrous: CuSO₄</i>	
Austria	STEL 4 mg/m ³ TWA: 1 mg/m ³
Australia	N.A.
Finland	TWA: 0.02 mg/m ³
Poland	TWA: 0.2 mg/m ³
Russia TWA	0.5 mg/m ³ TWA 1258
Switzerland	STEL: 0.2 mg/m ³ TWA: 0.1 mg/m ³
<i>Borax: Na₂B₄O₇+10H₂O</i>	
Australia	5 mg/m ³ TWA
Belgium - 8 Hr TWA	2 mg/m ³ TWA borate
Bulgaria - OEL- TWAs	5.0 mg/m ³ TWA (as B, listed under Boron and its inorganic compounds)
Denmark	TWA: 2 mg/m ³ Skin
Estonia - OEL - STELs	5 mg/m ³ STEL
FR - OEL - 8h VMEs	TWA: 5 mg/m ³
Iceland - OEL - 8 Hour	2 mg/m ³ TWA
Ireland	TWA: 5 mg/m ³ STEL: 15 mg/m ³
Korea - ISHA - OEL - TWAs	5 mg/m ³ TWA (Serial No. 246)
Malaysia	5 mg/m ³ TWA
Norway	TWA: 5 mg/m ³ STEL: 10 mg/m ³
Poland	STEL: 2 mg/m ³ TWA: 0.5 mg/m ³
Portugal	STEL: 6 mg/m ³ TWA: 2 mg/m ³
Spain - Valores Limite Ambientales - VLE	STEL: 6 mg/m ³ TWA: 2 mg/m ³
Singapore - OEL:PELs	5 mg/m ³ PEL
Switzerland	STEL: 0.8 mg/m ³ TWA: 0.8 mg/m ³
UK EH40 WEL (8h)	5 mg/m ³ TWA

Derived No Effect Level (DNEL)

Component	Oral	Dermal	Inhalation
Manganese sulphate; MnSO ₄ +1H ₂ O 7785-87-7 (5 - 10%)	37.6 mg/m ³	0.004 mg/kg bw/day	0.2 mg/m ³
Zinc sulphate mono hydrate; ZnSO ₄ +1H ₂ O 7446-19-7 (1 - 5%)		8.3 mg/kg bw/day	1 mg/m ³

Predicted No Effect Concentration (PNEC)

No data available

Component	Fresh Water	Freshwater sediment	Sea Water	Sea sediment	Soil	Impact on Sewage Treatment
Manganese sulphate; MnSO ₄ +1H ₂ O 7785-87-7 (5 - 10%)	0.013 mg/l	0.011 mg/kg	0 mg/l	0.001 mg/kg	25.1 mg/kg	25.1 mg/kg
Copper sulphate anhydrous; CuSO ₄ 7758-98-7 (1 - 5%)	7.8 µg/l	87 mg/kg	5.2 µg/l	676 mg/kg	65 mg/kg	230 µg/l
Zinc sulphate mono hydrate; ZnSO ₄ +1H ₂ O 7446-19-7 (1 - 5%)	20.6 µg/l		6.1 µg/l	56.5 mg/kg	35.6 mg/kg	100 µg/l

8.2. Exposure controls**Personal protective equipment****Eye/Face Protection**

Wear eye/face protection

Hand protection

Nitrile rubber (0.26 mm). Break through time. > 8 h.

Respiratory Protection

Suitable mask with particle filter p3 (bs en 143)

Skin and body protection:

Wear suitable protective clothing

Hygiene Measures:

When using, do not eat, drink or smoke.

Section 9: PHYSICAL AND CHEMICAL PROPERTIES**9.1. Information on basic physical and chemical properties**

Physical State:	Solid
Appearance:	Powder(s)
Color:	Off-white.
Odor:	None
Bulk density:	+/- 1000 kg/m ³
Melting Point/Freezing Point:	No data available
Boiling Point/Range:	Solid. Not applicable.
Flash Point:	Solid. Not applicable.
Evaporation Rate:	Solid. Not applicable.
Flammability (solid, gas):	Not flammable
Vapor Pressure:	Solid. Not applicable.
Vapour density	Solid. Not applicable.
Relative density	No data available
Water Solubility:	No data available
Solubility(ies)	No data available
Partition Coefficient:	Solid. Not applicable.
Autoignition Temperature:	No data available
Decomposition temperature:	No data available
Explosive Properties:	Doesn't present explosion hazard.

9.2. Other information

VOC Content (%):	Solid. Not applicable.
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Section 10: STABILITY AND REACTIVITY

10.1. Reactivity

Not reactive.

10.2. Chemical stability

Stable under normal conditions.

10.3. Possibility of hazardous reactions

None under normal processing. Thermal decomposition can lead to release of irritating and toxic gases and vapors.

10.4. Conditions to avoid

Avoid dust formation. Burning produces obnoxious and toxic fumes. Keep away from open flames, hot surfaces and sources of ignition.

10.5. Incompatible materials

Keep away from catalysts like derivatives of hexavalent chromium and metal halides. Keep away from flammable products (fuels) like charcoal, wood, flour, soot etc.

10.6. Hazardous decomposition products

None under normal processing. Thermal decomposition can lead to release of irritating and toxic gases and vapors.

Section 11: TOXICOLOGICAL INFORMATION

11.1. Information on toxicological effects**Product Information**

If this product is a mixture, the classification is not based on toxicology studies for this product, but is based solely on toxicology studies for ingredients found within this product. More detailed substance and/or ingredient information may be provided in the other sections of this SDS

Unknown Acute Toxicity: 0% of the mixture consists of ingredient(s) of unknown toxicity.

Information on the Likely Routes of Exposure (inhalation, ingestion, skin and eye contact):

Inhalation Inhalation of dust in high concentration may cause irritation of respiratory system.

Eye contact May cause slight irritation.

Skin Contact May cause irritation.

Ingestion May cause gastrointestinal discomfort if consumed in large amounts.

Information on Toxicological Effects

None known

Acute Toxicity

The following values are calculated based on chapter 3.1 of the GHS document:

ATEmix (oral): 824.00 mg/kg

ATEmix (dermal): 25,253.00 mg/kg

Chemical Name	LD50 Oral	LD50 Dermal	LC50 Inhalation
Iron sulphate; FeSO ₄ +1H ₂ O	= 500 mg/kg (Rat)	= 155 mg/kg (Rat)	
Manganese sulphate; MnSO ₄ +1H ₂ O	= 2125 mg/kg (Rat)		> 4.98 mg/L (Rat) 4h
Copper sulphate anhydrous; CuSO ₄	= 300 mg/kg (Rat)	= 1000 mg/kg (Rabbit)	
Borax; Na ₂ B ₄ O ₇ +10H ₂ O	= 2660 mg/kg (Rat) = 3493 mg/kg (Rat)	> 10000 mg/kg (Rabbit)	> 2 mg/m ³ (Rat) 4 h

Delayed and Immediate Effects as well as Chronic Effects from Short and Long-Term Exposure:

If this product is a mixture, the classification is not based on toxicology studies for this product, but is based solely on toxicology studies for ingredients found within this product. More detailed substance and/or ingredient information may be provided in the other sections of this SDS

Serious eye damage/eye irritation Classification based on individual ingredients of the mixture.

Respiratory or skin sensitization	Classification based on individual ingredients of the mixture.
Germ Cell Mutagenicity	Classification based on individual ingredients of the mixture.
Carcinogenicity	Classification based on individual ingredients of the mixture.
Reproductive Toxicity	Classification based on individual ingredients of the mixture.
STOT - Single Exposure	Classification based on individual ingredients of the mixture.
STOT - Repeated Exposure	Classification based on individual ingredients of the mixture.
Aspiration Hazard	Classification based on individual ingredients of the mixture.

Section 12: ECOLOGICAL INFORMATION

12.1. Toxicity

Ecotoxicity

Unknown Aquatic Toxicity

Should not be released into the environment
0% of the mixture consists of components(s) of unknown hazards to the aquatic environment.

Chemical Name	Algae/aquatic plants	Fish	Toxicity to Microorganisms	Crustacea
Iron sulphate; FeSO ₄ +1H ₂ O	-	925: 96 h Poecilia reticulata mg/L LC50 static 0.56: 96 h Cyprinus carpio mg/L LC50 semi-static	-	152: 48 h Daphnia magna mg/L EC50 6.15 - 9.26: 48 h Daphnia magna mg/L EC50 Static
Copper sulphate anhydrous; CuSO ₄	-	0.1: 96 h Oncorhynchus mykiss mg/L LC50	-	0.024: 48 h Daphnia magna mg/L EC50

12.2. Persistence and degradability

Persistence and Degradability:

No persistent or cumulative effects were observed.

12.3. Bioaccumulative potential

Bioaccumulation:

Does not bioaccumulate.

12.4. Mobility in soil

No data available.

12.5. PBT and vPvB assessment

No data available.

12.6. Other adverse effects

No data available.

Section 13: DISPOSAL CONSIDERATIONS

13.1. Waste treatment methods

Disposal of Wastes:

Disposal should be in accordance with applicable regional, national and local laws and regulations.

Contaminated Packaging:

Do not reuse container.

Other Information

Use up product completely. Packaging material is industrial waste.

Section 14: TRANSPORT INFORMATION

IMO / IMDG

14.1

UN-No:

3077

14.2

Proper shipping name:

Environmentally Hazardous Substance Solid N.O.S.(MnSO₄,

14.3 CuSO4)
 Hazard Class: 9
 14.4
 Packing group: III
 Limited Quantity 5 kg
 14.5

Chemical Name	IMDG - Marine Pollutants
Copper sulphate anhydrous; CuSO ₄ 7758-98-7 (1 - 5%)	IMDG regulated marine pollutant (Listed in the index, listed under Copper sulphate, anhydrous, hydrates and solution)

Marine Pollutant: This material meets the definition of a marine pollutant
 Environmental Hazard Yes

14.6
 EmS: F-A / S-F
 Special Provisions 274, 335, 966, 967

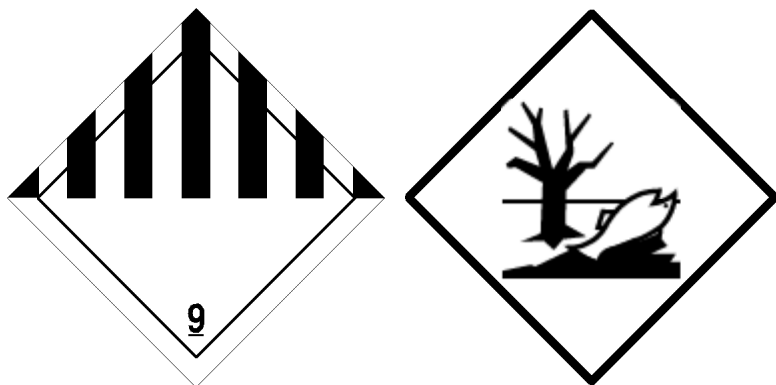
14.7
 Bulk transport according Annex II of MARPOL and IBC Code No data available

ADR/RID

14.1
 UN-No: 3077
 14.2
 Proper shipping name: Environmentally Hazardous Substance Solid N.O.S.(MnSO₄, CuSO₄)
 14.3
 Hazard Class: 9
 14.4
 Packing group: III
 14.5
 Environmental Hazard Yes
 14.6
 Special Provisions 274
 Tunnel restriction code E
 Limited Quantity 5 kg
 Environmental Hazard Yes
 Environmental Hazard Yes

IATA

14.1
 UN-No: 3077
 14.2
 Proper shipping name: Environmentally Hazardous Substance Solid N.O.S.(MnSO₄, CuSO₄)
 14.3
 Hazard Class: 9
 14.4
 Packing group: III
 14.5
 Environmental Hazard Yes
 14.6
 Special Provisions A97, A158



Section 15: REGULATORY INFORMATION

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

Belgium

Denmark

Denmark

No data available

France

ICPE

Classified installation: article 4510

Germany

LGK (Germany)

13

Water Endangering Class (WGK):

2 (Everris classification)

Gefahrstoffverordnung (Germany) TRGS 511

Not regulated

Component	German WGK Section
Iron sulphate; FeSO ₄ +1H ₂ O 7720-78-7 (40 - 65%)	1
Manganese sulphate; MnSO ₄ +1H ₂ O 7785-87-7 (5 - 10%)	2
Copper sulphate anhydrous; CuSO ₄ 7758-98-7 (1 - 5%)	2
Zinc sulphate mono hydrate; ZnSO ₄ +1H ₂ O 7446-19-7 (1 - 5%)	3
Borax; Na ₂ B ₄ O ₇ +10H ₂ O 1303-96-4 (1 - 5%)	1

Component	EU - Explosives Precursors Marketing and Use (98/2013) - Substances Subject to Suspicious Transactions Reporting	EU - REACH (1907/2006) - Annex XVII - Restrictions on Certain Dangerous Substances
Borax; Na ₂ B ₄ O ₇ +10H ₂ O 1303-96-4 (1 - 5%)		Use restricted. See item 30.

Component	EU - REACH (1907/2006) - Article 59(1) - Candidate List of Substances for Eventual Inclusion in Annex XIV
Borax; Na ₂ B ₄ O ₇ +10H ₂ O 1303-96-4 (1 - 5%)	Reason for inclusion Toxic for reproduction, Article 57c (603-411-9)

15.2 Chemical safety assessment

Substance(s) usage is covered according to Reach regulation 1907/2006

Take note of Dir. 98/24/EC on the protection of the health and safety of workers from risks related to chemical agents at work

Chemical Name	Restricted substance per REACH Annex XVII	Substance subject to authorization per REACH Annex XIV
Borax; Na ₂ B ₄ O ₇ +10H ₂ O	Use restricted. See item 30.	

Section 16: OTHER INFORMATION

Full text of H-Statements referred to under sections 2 and 3

- H360FD - May damage fertility. May damage the unborn child
- H302 - Harmful if swallowed
- H318 - Causes serious eye damage
- H400 - Very toxic to aquatic life
- H410 - Very toxic to aquatic life with long lasting effects
- H315 - Causes skin irritation
- H319 - Causes serious eye irritation
- H373 - May cause damage to the kidneys/ liver/ eyes/ brain/ digestive system/ central nervous system through prolonged or repeated exposure if swallowed
- H411 - Toxic to aquatic life with long lasting effects

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

RID: Regulations Concerning the International Transport of Dangerous Goods by Rail

ICAO: International Civil Aviation Organization

ADR: European Agreement concerning the International Carriage of Dangerous Goods by Road

IMDG: International Maritime Code for Dangerous Goods

IATA: International Air Transport Association

GHS: Globally Harmonized System of Classification and Labeling of Chemicals

EINECS: European Inventory of Existing Commercial Chemical Substances

CAS: Chemical Abstracts Service (division of the American Chemical Society)

PNEC: Predicted No Effect Concentration

DNEL: Derived No-Effect Level

REACH: Registration, Evaluation, Authorization of Chemicals

CLP: EU-GHS; Classification, Labelling and Packaging

OEL: Occupational Exposure Limit

TWA: Time Weighted Average

ATE: Acute Toxicity Estimate

EUH phrase: CLP (EU) specific hazard statement

LD50: Lethal dose, 50%.

LC50: Lethal concentration, 50%.

SVHC: Substance of Very High Concern.

Classification procedure

- Calculation method
- Expert judgment and weight of evidence determination

Key literature references and sources for data

According to EC Regulation 1907/2006 (Reach), Regulation EU No. 2015/830. Regulation (EC) No 1272/2008 (CLP).

Prepared by

Regulatory Affairs Department (INFO-MSDS@EVERRIS.COM)

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Restrictions on use

Restricted to professional users

Reason for revision

*** Indicates changes since the last revision. This version replaces all previous versions

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