SAFETY DATA SHEET

Impact 12.5 SC

This safety data sheet complies with the requirements of: Regulation (EC) No. 453/2010 and Regulation (EC) No. 1272/2008



SDS #: FO004120-A

Revision date: 2019-05-22

Format: EU Version 1

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

Product Code(s) FO004120-A

Product Name Impact 12.5 SC

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

Recommended Use: Fungicide

Restrictions on Use: Use as recommended by the label.

1.3. Details of the supplier of the safety data sheet

Supplier CHEMINOVA A/S, a subsidiary of FMC Corporation

Thyborønvej 78 DK-7673 Harboøre Denmark

+45 9690 9690

SDS.Ronland@fmc.com

For further information, please contact:

Contact point E-Mail: msdsinfo@fmc.com

Phone: +1 215-299-6000 (General Information)

1.4. Emergency telephone number

Emergency telephone Medical emergencies:

Austria: +43 1 406 43 43 Belgium: +32 70 245 245 Bulgaria: +359 2 9154 409

Cyprus: 1401

Czech Republic: +420 224 919 293, +420 224 915 402

Denmark: +45 82 12 12 12 France: +33 (0) 1 45 42 59 59 Finland: +358 9 471 977 Greece: 30 210 77 93 777 Hungary: +36 80 20 11 99

Ireland (Republic): +352 1 809 2166

Italy: +39 02 6610 1029

Lithuania: +370 523 62052, +370 687 53378

Luxembourg: +352 8002 5500 Netherlands: +31 30 274 88 88 Norway: +47 22 591300

Poland: +48 22 619 66 54, +48 22 619 08 97

Portugal: 808 250 143 (in Portugal only), +351 21 330 3284

Romania: +40 21318 3606 Slovakia: +421 2 54 77 4 166

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Slovenia: +386 41 650 500 Spain: +34 91 562 04 20 Sweden: +46 08-331231112

Switzerland: 145

United Kingdom: 0870 600 6266 (in the UK only)

U.S.A. & Canada: +1 800 / 331-3148

All other countries: +1 651 / 632-6793 (Collect)

Section 2: HAZARDS IDENTIFICATION

2.1. Classification of the substance or mixture Regulation (EC) No 1272/2008

Skin sensitization	Category 1B (H317)
Chronic aquatic toxicity	Category 1 (H410)

2.2. Label elements

Hazard pictograms



Signal Word Warning

Hazard Statements

H317 - May cause an allergic skin reaction

H410 - Very toxic to aquatic life with long lasting effects

EUH208 - May produce an allergic reaction: contains 1,2-benzisothiazol-3 (2H) -one

EUH401 - To avoid risks to human health and the environment, comply with the instructions for use

Precautionary Statements

P261: Avoid breathing vapors.

P270 - Do not eat, drink or smoke when using this product

P280 - Wear protective gloves

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

P102 - Keep out of reach of children

P405 - Store locked up

2.3. Other hazards

None of the ingredients in the product meets the criteria for being PBT or vPvB.

Section 3: COMPOSITION/INFORMATION ON INGREDIENTS

3.1 Substances

The product is a mixture, not a substance.

3.2 Mixture containing the following hazardous ingredients:

Chemical name	EC-No	CAS-No	Weight %	Classification according to Regulation (EC) No. 1272/2008 [CLP]	REACH registration number
Flutriafol	-	76674-21-0	11.8	Acute Tox. 4 (H302)	No data available
				Aquatic Chronic 2 (H411)	
Alcohols, C13-15	=	157627-86-6	5-10	Acute Tox. 4 (H302)	No data available
Branched and Linear,				Eye Dam. 1 (H318)	

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Ethoxylated				Aquatic Acute 1 (H400)	
Propylene glycol	200-338-0	57-55-6	5-10	Not classified	No data available

Additional Information

Contains 1,2-Benzisothiazolin-3-one (CAS number 2634-33-5) at a level below the concentration limit for classification of the mixture as sensitising.

For the full text of the H- and EUH- phrases mentioned in this Section, see Section 16

Section 4: FIRST AID MEASURES

4.1. Description of first aid measures

Eye Contact Hold eyes open and rinse slowly and gently with water for 15 to 20 minutes. Remove

contact lenses, if present, after the first 5 minutes, then continue rinsing eye. Call a poison

control center or doctor for further treatment advice.

Skin Contact Wash off immediately with soap and plenty of water while removing all contaminated

clothes and shoes. In the case of skin irritation or allergic reactions see a physician.

Inhalation Move to fresh air. If breathing is difficult or if discomfort occurs and persists, obtain medical

attention.

IngestionCall a poison control center or doctor immediately for treatment advice. Have person sip a

glass of water if able to swallow. Do not induce vomiting unless told to do so by a poison

control center or doctor. Do not induce vomiting or give anything by mouth to an

unconscious person.

Protection of first-aiders

Use personal protective equipment. See Section 8 for more detail.

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

Most important symptoms and effects, both acute and delayed

Asthma-like and/or skin allergy-like symptoms. When fed to animals at high dosage, similar products caused salivation, depression of activity, muscle spasms, ataxia and increased

body temperature.

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

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

Immediate medical attention is required in cases of ingestion. There is no specific antidote against this substance. Gastric lavage and/or administration of activated charcoal can be considered. After decontamination, treatment is supportive and symptomatic as for a

general chemical.

Section 5: FIRE FIGHTING MEASURES

5.1. Extinguishing media

Suitable Extinguishing Media

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

Small Fire Dry chemical, Carbon dioxide (CO₂).

Large Fire Water spray, Foam.

Unsuitable extinguishing media

Avoid heavy hose streams.

5.2. Special hazards arising from the substance or mixture

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

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Hazardous Combustion Products

Nitrogen oxides (NOx), Hydrogen chloride, Carbon oxides (COx), Sulfur dioxide, and various chlorinated organic compounds.

5.3. Advice for firefighters

Use water spray to cool fire exposed surfaces and protect personnel. As in any fire, wear self-contained breathing apparatus and full protective gear. Isolate fire area. Evaluate upwind.

Section 6: ACCIDENTAL RELEASE MEASURES

6.1. Personal precautions, protective equipment and emergency procedures

Personal Precautions

It is recommended to have a predetermined plan for the handling of spills. Empty, closable vessels for the collection of spills should be available.

In case of large spill (involving 10 tonnes of the product or more):

Observe all safety precautions when cleaning up spills. Use personal protection equipment. Depending on the magnitude of the spill this may mean wearing respirator, face mask or eye protection, chemical resistant clothing, gloves and rubber boots. Stop the source of the spill immediately if safe to do so. Keep unprotected persons away from the spill area.

For further clean-up instructions, call FMC Emergency Hotline number listed in Section 1 "Product and Company Identification" above.

For emergency responders

Use personal protection recommended in Section 8.

6.2. Environmental precautions

Keep out of waterways. Keep people and animals away from and upwind of spill/leak. Keep material out of lakes, streams, ponds, and sewer drains.

6.3. Methods and material for containment and cleaning up

Methods for Containment If appropriate, surface water drains should be covered. Minor spills on the floor or other

impervious surface should immediately be swept up or preferably vacuumed up using equipment with high efficiency final filter. Transfer to suitable containers. Clean area with detergent and much water. Absorb wash liquid onto inert absorbent such as universal binder, Fuller's earth, bentonite or other absorbent clay and collect in suitable containers.

The used containers should be properly closed and labelled.

Methods for cleaning upSweep up and shovel into suitable containers for disposal. Clean and neutralize spill area,

tools and equipment for a minimum contact of one hour with vinegar-alcohol solution, then

by bleach, soap, and water. Dispose of waste as indicated in Section 13.

6.4. Reference to other sections

See section 8 for more information. See section 13 for more information.

Section 7: HANDLING AND STORAGE

7.1. Precautions for safe handling

Handling

Do not contaminate other pesticides, fertilizers, water, food, or feed by storage or disposal.

In an industrial environment, it is recommended to avoid any personal contact with the product, if possible, using remotely controlled systems with remote control. Otherwise, it is recommended to process the material with maximum mechanical means. Adequate ventilation or local exhaust ventilation is required. Exhaust gases must be filtered or treated differently. For personal protection in this situation, see Section 8. Remove contaminated clothing and shoes. Wash thoroughly after handling. Use protective gloves made from chemicals such as nitrile or neoprene. Wash gloves with soap and water before reuse. Check regularly for leaks. Do not dispose into the environment. Do not contaminate water when disposing of the flushing water for equipment. Collect all waste and residues from cleaning equipment, etc. And dispose of them as hazardous waste. See Section 13 for disposal.

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Hygiene measures

Handle in accordance with good industrial hygiene and safety practice.

7.2. Conditions for safe storage, including any incompatibilities

Storage

Keep container tightly closed in a dry and well-ventilated place. Keep away from open flames, hot surfaces and sources of ignition. Keep from freezing. Keep out of reach of children and animals. Keep/store only in original container.

7.3. Specific end use(s)

Specific Use(s)

The product is a registered pesticide which may only be used for the applications it is registered for, in accordance with a label approved by the regulatory authorities.

Risk Management Methods (RMM)

The information required is contained in this Safety Data Sheet.

Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1. Control parameters

According to our knowledge, no personal limits have been set exposure to flutriafol. An internal TLV of 1.5 mg / m 3 (8 hr TWA) for flutriafol is recommended by the manufacturer.

Chemical name	European Union	The United Kingdom	France	Spain	Germany
Propylene glycol	Propylene glycol - 57-55-6		-	-	-
57-55-6					
Chemical name	Austria	Switzerland	Poland	Norway	Ireland
Propylene glycol	-	-	TWA 100 mg/m ³	TWA 25 ppm	TWA 10 mg/m ³
57-55-6	57-55-6		_	TWA 79 mg/m ³	TWA 150 ppm
				STEL 37.5 ppm	TWA 470 mg/m ³
				STEL 118.5 mg/m ³	STEL 1410 mg/m ³
					STEL 30 mg/m ³
					STEL 450 ppm

Derived No Effect Level (DNEL) Flutriafo
--

Propylene glycol

Predicted No Effect Concentration

(PNEC)

Flutriafol

PNEC, aquatic environment 6.2 µg/L

Propylene glycol

8.2. Exposure controls

Engineering measures Apply technical measures to comply with the occupational exposure limits. When working in

confined spaces (tanks, containers, etc.), ensure that there is a supply of air suitable for

breathing and wear the recommended equipment.

Personal protective equipment

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Eye/Face Protection For dust, splash, mist or spray exposure, wear chemical protective goggles. Provide

emergency on-site eyewash.

Hand Protection Wear chemical protective gloves made of materials such as nitrile or neoprene.

Skin and Body Protection Minimize skin contamination by following good industrial hygiene practices. Wear suitable

protective clothing. Protective shoes or boots.

Respiratory Protection The product does not automatically present an airborne exposure concern during normal

handling. In the event of an accidental discharge of the material which produces a heavy vapour or mist, workers should put on officially approved respiratory protection equipment

with a universal filter type including particle filter.

Environmental exposure controls No information available.

Section 9: PHYSICAL AND CHEMICAL PROPERTIES

9.1. Information on basic physical and chemical properties

Physical StateLiquid SuspensionAppearanceOff-white / brown

Odor Characteristic odor between fish-and glue-like

ColorNo information availableOdor thresholdNo information availablepH4.5 - 5 (1% dilution in water)

Melting point/freezing point < 0 °C Boiling Point/Range > 100 °C

Flash point > 100 °C

Evaporation Rate No information available

Flammability (solid, gas) Flammability Limit in Air

Upper flammability limit:No information availableLower flammability limit:No information availableVapor pressureFlutriafol: 7.1 x 10 -9 Pa at 20°C

Vapor densityNo information availableSpecific gravityNo information available

Water solubility Dispersible in water: 130 mg/l at 20°C

Solubility in other solvents No information available

Partition coefficient No information available

Flutriafol: log Kow = 2.29

Autoignition temperature Approx. 450 °C

Decomposition temperatureNo information availableViscosity, kinematicNo information available

Viscosity, dynamic 25-35 mPas at 20°C depending on the shear rate

Explosive properties

Oxidizing properties

Non-oxidizing

9.2. Other information

Softening point
Molecular weight
VOC content (%)
Relative density
No information available
1.03 - 1.05 g/ml at 20°C
Bulk density
No information available
No information available
No information available

Section 10: STABILITY AND REACTIVITY

10.1. Reactivity

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None under normal use conditions

10.2. Chemical stability

Stable under recommended storage conditions.

Explosion data

Sensitivity to Mechanical Impact None. Sensitivity to Static Discharge None.

10.3. Possibility of hazardous reactions

Hazardous polymerization

Hazardous polymerization does not occur.

Hazardous reactions

None known.

10.4. Conditions to avoid

Heat, flames and sparks.

10.5. Incompatible materials

Strong oxidizing agents, Strong acids, Strong bases.

10.6. Hazardous decomposition products

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

Section 11: TOXICOLOGICAL INFORMATION

11.1. Information on toxicological effects

Acute toxicity

Product Information

No acute toxicity information is available for this product.

 LD50 Oral
 > 3000 mg/kg (rat) (Method: OECD 423)

 LD50 Dermal
 > 4000 mg/kg (rat) (Method: OECD 402)

 LC50 Inhalation
 > 2.10 mg/L 4 hr (rat) (Method: OECD 403)

Chemical name	LD50 Oral	LD50 Dermal	LC50 Inhalation
Flutriafol	= 1140 mg/kg (Rat)		
Propylene glycol	20000 mg/kg (Rat)	20800 mg/kg (Rabbit)	

Skin corrosion/irritation

Serious eye damage/eye irritation

Sensitization

Non-irritating (rabbit), (Method: OECD 404). (Based on a similar product). Mildly irritating (rabbit). (Method: OECD 405). (Based on a similar product).

Weakly sensitizing. (Method: OECD 406)

Mutagenicity

The product contains no ingredients known to be mutagenic.

Carcinogenicity This product is not considered to be a carcinogen.

Reproductive toxicity

This product does not contain any known or suspected reproductive hazards.

STOT - single exposureNo specific effects after single exposure have been observed. **STOT - repeated exposure**The following is found for the active ingredient flutriafol: organ: liver

Repeated exposure to flutriafol may cause liver damage. The LOEL for this effect has been

found to be approx. 150 mg flutriafol/kg bw/day in a 90-day feeding study in rats.

Aspiration hazard The product does not present an aspiration pneumonia hazard.

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Section 12: ECOLOGICAL INFORMATION

12.1. Toxicity

Ecotoxicity

The ecotoxicity of the product is measured as:

-Invertebrates

Water flea (Daphnia magna)......21-day NOEC: 0.1 mg/L

Acute ecotoxicity was measured in a similar product as:

- Fish

Iridescent trout (Salmo gairdnerii)......96-h LC50 : 7.9 mg/L

- Invertebrates

Daphnia magna (Daphnia magna)......48-h EC50 : 7.5 mg/L

Algae

Green algae (Pseudokirchneriella subcapitata)......72-h EC50 : 4.3 mg/L Diatoms (Skeletonema costatum)......72-h EC50 : 3.2 mg/L

- Birds

Japanese quail (Coturnix coturnix japonica.....14-day LD50 :> 2000 mg/kg bw

- Bees

Bees (Apis mellifera)......48-h LD50 , oral:> 100 μg/bee

Chemical name	Toxicity to algae	Toxicity to fish	Toxicity to daphnia and other aquatic invertebrates
Flutriafol	Green algae (Selenastrum capricornutum),	Rainbow trout (Salmo gairdneri), 96 h-LC50: 61 mg/l	48 h-EC50: > 78 mg/l
	96-h IC50: 12 mg/l	28-day NOEC: 6.2 mg/l	21-day NOEC: 0.31 mg/l
	(Scenedesmus subspicatus), 72-h		
	IC50: 1.9 mg/l		
Propylene glycol	96 h EC50: = 19000 mg/L	96 h LC50: 41 - 47 mL/L	48 h EC50: > 1000 mg/L (Daphnia
	(Pseudokirchneriella subcapitata)	(Oncorhynchus mykiss) static 96 h	magna) Static 24 h EC50: > 10000
		LC50: = 51400 mg/L (Pimephales	mg/L (Daphnia magna)
		promelas) static 96 h LC50: = 51600	
		mg/L (Oncorhynchus mykiss) static	
		96 h LC50: = 710 mg/L (Pimephales	
		promelas)	

12.2. Persistence and degradability

Flutriafol: Not readily biodegradable.

The product contains minor amounts of not readily biodegradable components, which may not be degradable in waste water treatment plants.

12.3. Bioaccumulative potential

See section 9 for n-octanol/water partition coefficient.

12.4. Mobility in soil

Mobility in soil

No information available.

Mobility

Flutriafol: Moderately mobile. Absorption depends on soil pH and organic matter content.

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12.5. Results of PBT and vPvB assessment

None of the ingredients in the product meets the criteria for being PBT or vPvB.

12.6. Other adverse effects

Chemical name	EU - Endocrine Disrupters	EU - Endocrine Disruptors -	Japan - Endocrine Disruptor
	Candidate List	Evaluated Substances	Information
Flutriafol	Group III Chemical	-	-

Section 13: DISPOSAL CONSIDERATIONS

13.1. Waste treatment methods

Waste from residues / unused products

According to the Waste Framework Directive (2008/98/EC), possibilities for reuse or reprocessing should first be considered. If this is not feasible, the material can be disposed of by removal to a licensed chemical destruction plant or by controlled incineration with flue gas scrubbing.

Do not contaminate water, foodstuffs, feed or seed by storage or disposal. Do not discharge to sewer systems.

Contaminated Packaging

It is recommended to consider possible ways of disposal in the following order:

- 1. Reuse or recycling should first be considered. Reuse is prohibited except by the authorisation holder. If offered for recycling, containers must be emptied and triply rinsed (or equivalent). Do not discharge rinsing water to sewer systems.
- 2. Controlled incineration with flue gas scrubbing is possible for combustible packaging materials.
- 3. Delivery of the packaging to a licensed service for disposal of hazardous waste.
- 4. Disposal in a landfill or burning in open air should only occur as a last resort. For disposal in a landfill containers should be emptied completely, rinsed and punctured to make them unusable for other purposes. If burned, stay out of smoke.

Section 14: TRANSPORT INFORMATION

IMDG/IMO

14.1 UN/ID no

14.2 Proper Shipping Name Environmentally hazardous substance, liquid, n.o.s. (Flutriafol)

14.3 Hazard class 9 14.4 Packing Group Ш 14.5 Marine Pollutant Yes

Marine Pollutant **Environmental Hazard**

14.6 Special Provisions Avoid any unnecessary contact with the product. Misuse can result in damage to health. Do

not release to the environment

F-A, S-F EmS No.

14.7 Transport in bulk according to The product is not transported in bulk by ship.

Annex II of MARPOL 73/78 and the

IBC Code

RID

14.1 UN/ID no

14.2 Proper Shipping Name Environmentally hazardous substance, liquid, n.o.s. (Flutriafol) 9

14.3 Hazard class

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14.4 Packing Group

14.5 Environmental Hazard Marine Pollutant

14.6 Special ProvisionsAvoid any unnecessary contact with the product. Misuse can result in damage to health. Do

not release to the environment

ADR/RID

14.1 UN/ID no UN3082

14.2 Proper Shipping Name Environmentally hazardous substance, liquid, n.o.s. (Flutriafol)

14.3 Hazard class 9
14.4 Packing Group III

14.5 Environmental Hazard Marine Pollutant

14.6 Special ProvisionsAvoid any unnecessary contact with the product. Misuse can result in damage to health. Do

not discharge to the environment. Do not release to the environment

ICAO/IATA

14.1 UN/ID no UN3082

14.2 Proper Shipping Name Environmentally hazardous substance, liquid, n.o.s. (Flutriafol)

14.3 Hazard class 9 **14.4 Packing Group** III

14.5 Environmental Hazard Marine Pollutant

14.6 Special ProvisionsAvoid any unnecessary contact with the product. Misuse can result in damage to health. Do

not release to the environment

Section 15: REGULATORY INFORMATION

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

National regulations Seveso category in Annex I to Dir. 2012/18/EU: dangerous for the environment.

The substance is covered by EU chemical legislation.

Young people under the age of 18 are not allowed to work with the substance.

European Union

Authorizations and/or restrictions on use:

This product does not contain substances subject to authorization (Regulation (EC) No. 1907/2006 (REACH), Annex XIV) This product does not contain substances subject to restriction (Regulation (EC) No. 1907/2006 (REACH), Annex XVII)

Persistent Organic Pollutants

Not Applicable

Ozone-depleting substances (ODS) regulation (EC) 1005/2009

Not Applicable

International Inventories

Chemical name	TSCA (United States)	DSL (Canada)	EINECS/ELINC S (Europe)	ENCS (Japan)	China (IECSC)	KECL (Korea)	PICCS (Philippines)	AICS (Australia)
Alcohols, C13-15 Branched and Linear, Ethoxylated 157627-86-6	Х	Х	Х		Х			
Propylene glycol 57-55-6	Х	Х	Х	Х	Х	X	Х	Х

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15.2. Chemical safety assessment

A chemical safety assessment is not required to be included for this product.

Section 16: OTHER INFORMATION

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

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

H302 - Harmful if swallowed

H315 - Causes skin irritation

H317 - May cause an allergic skin reaction

H318 - Causes serious eye damage

H400 - Very toxic to aquatic life

H411 - Toxic to aquatic life with long lasting effects

EUH208: Contains 1,2-Benzisothiazolin-3-one. May produce an allergic reaction.

EUH401 - To avoid risks to human health and the environment, comply with the instructions for use

Legend

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

CAS: CAS (Chemical Abstracts Service)

Ceiling: Maximum limit value:

DNEL: Derived No Effect Level (DNEL)

EINECS: EINECS (European Inventory of Existing Chemical Substances)

GHS: Globally Harmonized System (GHS)

IATA: International Air Transport Association (IATA)
ICAO: International Civil Aviation Organization

IMDG: International Maritime Dangerous Goods (IMDG)

LC50: LC50 (lethal concentration)

LD50: LD50 (lethal dose)

PBT: Persistent, Bioaccumulative, and Toxic (PBT) Chemicals

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

STEL: Short term exposure limit

SVHC: Substances of Very High Concern for Authorization:

TWA: time weighted average

vPvB: very Persistent and very Bioaccumulative

Classification procedure Sensitisation – skin: test data

Hazards to the aquatic environment: test data

Key literature references and sources for data

Data measured on the product are unpublished company data. Data on ingredients are available from published literature and can be found several places.

Revision date: 2019-05-22

Reason for revision: Format Change.

Training Advice This material should only be used by persons who are made aware of its hazardous

properties and have been instructed in the required safety precautions.

Disclaimer

The information provided in this safety data sheet is believed to be accurate and reliable, but uses of the product vary and situations unforeseen by FMC Corporation may exist. The user has to check the validity of the information under local circumstances.

Prepared By:

FMC Corporation

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End of Safety Data Sheet