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Version: 9.6
Effective date: 25/06/2021
Previous Date: 21/02/2020

SAFETY DATA SHEET

CORTROL OS5601 (BoilGard OS 205)

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

1.1. Product identifier

Trade name or designation of the mixture CORTROL OS5601 (BoilGard OS 205)

Version number 9.6

Revision date 25/06/2021

Supersedes date 21/02/2020

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

Identified uses Organic oxygen scavenger

Uses advised against None known.

1.3. Details of the supplier of the safety data sheet

JV Process and Water Chemicals LLC

Address: Street V. Kadirov 10, Chirchik city,
Tashkent Region, Republic of Uzbekistan, 111727

Tel: +99871 209 10 40

Email address: info@pwch.uz

www.pwch.uz

1.4. Emergency telephone number

Multilingual emergency number (24/7)

Street V. Kadirov 10, Chirchik city,
Tashkent Region,
Republic of Uzbekistan, 111727

Tel: +99871 209 10 40

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

The mixture has been assessed and/or tested for its physical, health and environmental hazards and the following classification applies.

Classification according to Regulation (EC) No 1272/2008 as amended

Health hazards

Skin sensitisation

Category 1

H317 - May cause an allergic skin reaction.

Hazard summary May cause an allergic skin reaction.

2.2. Label elements

Label according to Regulation (EC) No. 1272/2008 as amended

Contains: Carbohydrazide



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Hazard pictograms



Signal word Warning

Hazard statements

H317 May cause an allergic skin reaction.

Precautionary statements

Prevention

P280 Wear protective gloves.
P261 Avoid breathing dust/fume/gas/mist/vapours/spray.

Response

P302 + P352 IF ON SKIN: Wash with plenty of water.
P333 + P313 If skin irritation or rash occurs: Get medical advice/attention.

Storage Not available.

Disposal Not available.

Supplemental label information None.

2.3. Other hazards Not a PBT or vPvB substance or mixture.

SECTION 3: Composition/information on ingredients

Mixtures

Chemical description Solution of hydrazine derivative

Chemical name	%	CAS-No. / EC No.	REACH Registration No.	Index No.	Notes
Carbohydrazide	5 - < 10	497-18-7 207-837-2	01-2119965166-31	-	

Classification: Skin Sens. 1B;H317

List of abbreviations and symbols that may be used above

- #: This substance has been assigned Union workplace exposure limit(s).
- M: M-factor
- PBT: persistent, bioaccumulative and toxic substance.
- vPvB: very persistent and very bioaccumulative substance.
- All concentrations are in percent by weight unless ingredient is a gas. Gas concentrations are in percent by volume.

The full text for all H-statements is displayed in section 16.

SECTION 4: First aid measures

General information Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves. Wash contaminated clothing before reuse.

4.1. Description of first aid measures

- Inhalation** Move to fresh air. Call a physician if symptoms develop or persist.
- Skin contact** Remove contaminated clothing immediately and wash skin with soap and water. In case of eczema or other skin disorders: Seek medical attention and take along these instructions.
- Eye contact** Rinse with water. Get medical attention if irritation develops and persists.
- Ingestion** Rinse mouth. Get medical attention if symptoms occur.

4.2. Most important symptoms and effects, both acute and delayed May cause an allergic skin reaction. Dermatitis. Rash.

4.3. Indication of any immediate medical attention and special treatment needed Provide general supportive measures and treat symptomatically. Keep victim under observation. Symptoms may be delayed.



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SECTION 5: Firefighting measures

General fire hazards	No unusual fire or explosion hazards noted.
5.1. Extinguishing media	
Suitable extinguishing media	Water fog. Carbon dioxide (CO ₂). Foam. Dry chemical powder.
Unsuitable extinguishing media	Do not use water jet as an extinguisher, as this will spread the fire.
5.2. Special hazards arising from the substance or mixture	During fire, gases hazardous to health may be formed.
5.3. Advice for firefighters	
Special protective equipment for firefighters	Self-contained breathing apparatus and full protective clothing must be worn in case of fire.
Special fire fighting procedures	Move containers from fire area if you can do so without risk. Prevent spillage and fire-fighting water from entering in public sewers or the immediate environment.
Specific methods	Use standard firefighting procedures and consider the hazards of other involved materials.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures	
For non-emergency personnel	Keep unnecessary personnel away. Keep people away from and upwind of spill/leak. Wear appropriate protective equipment and clothing during clean-up. Avoid breathing mist/vapor. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Ensure adequate ventilation. Local authorities should be advised if significant spillages cannot be contained. For personal protection, see section 8 of the SDS.
For emergency responders	Keep unnecessary personnel away. Use personal protection recommended in Section 8 of the SDS.
6.2. Environmental precautions	Avoid discharge into drains, water courses or onto the ground.
6.3. Methods and material for containment and cleaning up	Large Spills: Stop the flow of material, if this is without risk. Dike the spilled material, where this is possible. Absorb in vermiculite, dry sand or earth and place into containers. Following product recovery, flush area with water. Small Spills: Wipe up with absorbent material (e.g. cloth, fleece). Clean surface thoroughly to remove residual contamination. Never return spills to original containers for re-use. For waste disposal, see section 13 of the SDS.
6.4. Reference to other sections	For personal protection, see section 8 of the SDS. For waste disposal, see section 13 of the SDS.

SECTION 7: Handling and storage

7.1. Precautions for safe handling	Avoid contact with eyes, skin, and clothing. Provide adequate ventilation. Contact with oxidisers, peroxide and metal oxide may result in a violent reaction. Avoid contact with high pH products and any metal (such as Al, Cu, LCS), except for stainless steel. This accelerates decomposition to hydrazine. Wear appropriate personal protective equipment. Observe good industrial hygiene practices.
7.2. Conditions for safe storage, including any incompatibilities	Keep containers tightly closed in a cool, well-ventilated place. Keep away from heat and flame. Protect from sunlight. Maximum storage temperature 35 °C. Store away from incompatible materials (see Section 10 of the SDS).
7.3. Specific end use(s)	Only for industrial users
Shelf life	360 Days

SECTION 8: Exposure controls/personal protection

8.1. Control parameters	
Occupational exposure limits	No exposure limits noted for ingredient(s).
Biological limit values	No biological exposure limits noted for the ingredient(s).
Recommended monitoring procedures	Follow standard monitoring procedures.



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Derived no effect levels (DNELs)

Workers

Components	Value	Assessment factor	Notes
Carbohydrazide (CAS 497-18-7)			
Long-term, Systemic, Dermal	0,75 mg/kg	100	
Long-term, Systemic, Inhalation	2,64 mg/m ³	25	

Predicted no effect concentrations (PNECs)

Components	Value	Assessment factor	Notes
Carbohydrazide (CAS 497-18-7)			
Freshwater	1,5 µg/l	1000	
Intermittent releases	0,015 mg/l	100	
Marine water	0,15 µg/l	10000	
STP	2,5 mg/l	10	

8.2. Exposure controls

Appropriate engineering controls Good general ventilation should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level.

Individual protection measures, such as personal protective equipment

General information Personal protection equipment should be chosen according to the CEN standards and in discussion with the supplier of the personal protective equipment.

Eye/face protection Wear safety glasses with side shields (or goggles).
CEN : EN 166

Skin protection

- Hand protection Neoprene gloves (Protection against unintentional short-term contact)
Nitrile gloves (Protection against unintentional short-term contact)
Coating thickness: 0.4 mm
Penetration time: > 480 min
CEN : EN 374-1/2/3/4; EN 420

- Other Wear appropriate chemical resistant clothing.
CEN : EN ISO 13688; EN ISO 6529; EN 14605

Respiratory protection In case of insufficient ventilation, use face mask with breathing filter, type: P2
CEN : EN 140; EN 143; EN 149

Thermal hazards Wear appropriate thermal protective clothing, when necessary.

Hygiene measures Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants. Contaminated work clothing should not be allowed out of the workplace.

Environmental exposure controls Environmental manager must be informed of all major releases.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Appearance

Colour Colourless

Physical state Liquid

Odour Odourless.

Odour threshold Not available.

pH (concentrated product) 7,4 Neat

pH in aqueous solution Not available.

Melting point/freezing point -2 °C

Initial boiling point and boiling range 99 °C

Flash point Not applicable.

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Evaporation rate	Slower than Ether
Flammability (solid, gas)	Not applicable.
Upper/lower flammability or explosive limits	
Flammability limit - lower (%)	Not available.
Flammability limit - upper (%)	Not available.
Vapour pressure	18 mmHg
Vapour pressure temp.	21 °C
Vapour density	< 1
Relative density	1,01
Relative density temperature	21 °C
Solubility	
Solubility (water)	100 %
Partition coefficient (n-octanol/water)	Not available.
Auto-ignition temperature	Not applicable.
Decomposition temperature	Not available.
Viscosity	3 mPa.s
Viscosity temperature	21 °C
Explosive properties	Not explosive.
Oxidising properties	Not oxidising.
9.2. Other information	
Pour point	1 °C
Shelf life	360 Days
VOC	0 % Calculated

SECTION 10: Stability and reactivity

10.1. Reactivity	The product is stable and non-reactive under normal conditions of use, storage and transport.
10.2. Chemical stability	Material is stable under normal conditions.
10.3. Possibility of hazardous reactions	Hazardous polymerisation does not occur.
10.4. Conditions to avoid	Keep away from heat, hot surfaces, sparks, open flames and other ignition sources.
10.5. Incompatible materials	Strong oxidising agents.
10.6. Hazardous decomposition products	Carbon oxides. Nitrogen oxides (NOx).

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Product	Test Results
CORTROL OS5601 (BoilGard OS 205) (Mixture)	Acute Dermal LD50 Rabbit: > 5000 mg/kg (Calculated according to GHS additivity formula) Acute Oral LD50 Rat: > 5000 mg/kg (Calculated according to GHS additivity formula)
Components	Test Results
Carbohydrazide (497-18-7)	Acute Dermal LD50 Rabbit: > 2000 mg/kg Acute Oral LD50 Rat: > 5000 mg/kg

Acute toxicity

Skin corrosion/irritation Based on available data, the classification criteria are not met.



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Serious eye damage/irritation	Direct contact with eyes may cause temporary irritation.
Respiratory or skin sensitisation	May cause an allergic skin reaction.
Specific target organ toxicity - repeated exposure	Based on available data, the classification criteria are not met.
Specific target organ toxicity - single exposure	Based on available data, the classification criteria are not met.
Carcinogenicity	Based on available data, the classification criteria are not met.
Germ cell mutagenicity	Based on available data, the classification criteria are not met.
Reproductive toxicity	Based on available data, the classification criteria are not met.
General information	Occupational exposure to the substance or mixture may cause adverse effects.

Information on likely routes of exposure

Ingestion	May cause irritation of the gastrointestinal tract.
Inhalation	Prolonged or excessive inhalation may cause respiratory tract irritation.
Skin contact	May cause an allergic skin reaction. May be irritating to the skin.
Eye contact	Direct contact with eyes may cause temporary irritation.
Symptoms	May cause an allergic skin reaction. Dermatitis. Rash.
Aspiration hazard	Based on available data, the classification criteria are not met.
Mixture versus substance information	No information available.
Other information	Not available.

SECTION 12: Ecological information

12.1. Toxicity Based on available data, the classification criteria are not met for hazardous to the aquatic environment.

Product	Species	Test Results		
CORTROL OS5601 (BoilGard OS 205) (CAS Mixture)				
Aquatic				
Crustacea	10% Mortality	Ceriodaphnia	126 mg/l, Static Renewal Bioassay, 48 hour	
	LC50	Ceriodaphnia	222 mg/l, Static Renewal Bioassay, 48 hour	
		Daphnia magna	1120 mg/l, Static Renewal Bioassay, 48 hour	
		Mysid Shrimp	1400 mg/l, Static Renewal Bioassay, 48 hour	
	NOEL	Daphnia magna	250 mg/l, Static Renewal Bioassay, 48 hour	
		Mysid Shrimp	500 mg/l, Static Renewal Bioassay, 48 hour	
	Fish	5% Mortality	Fathead minnow	126 mg/l, Static Renewal Bioassay, 96 hour
		LC50	Fathead minnow	348 mg/l, Static Renewal Bioassay, 96 hour
Rainbow trout			2100 mg/l, Static Acute Bioassay, 96 hour	
Sheepshead minnow			3200 mg/l, Static Renewal Bioassay, 96 hour	
NOEL		Rainbow trout	900 mg/l, Static Acute Bioassay, 96 hour	



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Product	Species	Test Results
	Sheepshead minnow	1000 mg/l, Static Renewal Bioassay, 96 hour

12.2. Persistence and degradability

- COD (mgO2/g) 130 (calculated data)
- TOC (mg C/g) 7 (calculated data)

12.3. Bioaccumulative potential No data available.

Partition coefficient n-octanol/water (log Kow) Not available.

Bioconcentration factor (BCF) Not available.

12.4. Mobility in soil No data available.

12.5. Results of PBT and vPvB assessment Not a PBT or vPvB substance or mixture.

12.6. Other adverse effects Nutrients: P = 0 mg/g ; N = 31.11 mg/g

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Residual waste Dispose of in accordance with local regulations. Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe manner (see: Disposal instructions).

Contaminated packaging Since emptied containers may retain product residue, follow label warnings even after container is emptied. Empty containers should be taken to an approved waste handling site for recycling or disposal. According to Hazardous Waste Regulations.

European List of Wastes (LoW) code recommendation : 15 01 10
 15 Waste packaging; absorbents, wiping cloths, filter materials and protective clothing not otherwise specified.
 15 01 Packaging (including separately collected municipal packaging waste).
 15 01 10 Packaging containing residues of or contaminated by dangerous substances.
 Depending on the origin and state of the waste, other codes may be applicable too.

Disposal methods/information Collect and reclaim or dispose in sealed containers at licensed waste disposal site. Dispose of contents/container in accordance with local/regional/national/international regulations. According to Hazardous Waste Regulations.

European List of Wastes (LoW) code recommendation : 16 03 05
 16 Wastes not otherwise specified in the list.
 16 03 Off-specification batches and unused products.
 16 03 05 Organic wastes containing dangerous substances.
 Depending on the origin and state of the waste, other codes may be applicable too.

Special precautions Dispose in accordance with all applicable regulations.

SECTION 14: Transport information

ADR
 Not regulated as dangerous goods.

RID
 Not regulated as dangerous goods.

ADN
 Not regulated as dangerous goods.

IATA
 Not regulated as dangerous goods.

IMDG
 Not regulated as dangerous goods.

SECTION 15: Regulatory information

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



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EU regulations

Regulation (EC) No. 1005/2009 on substances that deplete the ozone layer, Annex I and II, as amended

Not listed.

Regulation (EC) No. 850/2004 On persistent organic pollutants, Annex I as amended

Not listed.

Regulation (EU) No. 649/2012 concerning the export and import of dangerous chemicals, Annex I, Part 1 as amended

Not listed.

Regulation (EU) No. 649/2012 concerning the export and import of dangerous chemicals, Annex I, Part 2 as amended

Not listed.

Regulation (EU) No. 649/2012 concerning the export and import of dangerous chemicals, Annex I, Part 3 as amended

Not listed.

Regulation (EU) No. 649/2012 concerning the export and import of dangerous chemicals, Annex V as amended

Not listed.

Regulation (EC) No. 166/2006 Annex II Pollutant Release and Transfer Registry, as amended

Not listed.

Regulation (EC) No. 1907/2006, REACH Article 59(10) Candidate List as currently published by ECHA

Not listed.

Authorisations

Regulation (EC) No. 1907/2006, REACH Annex XIV Substances subject to authorization, as amended

Not listed.

Restrictions on use

Regulation (EC) No. 1907/2006, REACH Annex XVII Substances subject to restriction on marketing and use as amended

Not listed.

Directive 2004/37/EC: on the protection of workers from the risks related to exposure to carcinogens and mutagens at work, as amended.

Not listed.

Other EU regulations

Directive 2012/18/EU on major accident hazards involving dangerous substances, as amended

Not listed.

Other regulations

The product is classified and labelled in accordance with Regulation (EC) 1272/2008 (CLP Regulation) as amended. This Safety Data Sheet complies with the requirements of Regulation (EC) No 1907/2006, as amended.

National regulations

Not available.

15.2. Chemical safety assessment

No Chemical Safety Assessment has been carried out.

NSF Registered and/or meets USDA (according to 1998 guidelines):

Registration No. – 141472
Category Code(s):
G5 Cooling and retort water treatment products
G7 Boiler, steam line treatment products – nonfood contact

Inventory status

Country(s) or region	Inventory name	On inventory (yes/no)*
Europe	European Inventory of Existing Commercial Chemical Substances (EINECS)	Yes
Europe	European List of Notified Chemical Substances (ELINCS)	No

*A "Yes" indicates that all components of this product comply with the inventory requirements administered by the governing country(s)
A "No" indicates that one or more components of the product are not listed or exempt from listing on the inventory administered by the governing country(s).

SECTION 16: Other information

List of abbreviations

COD: Chemical Oxygen Demand
EC-No: European Commission Number
IATA: International Air Transport Association
CAS: Chemical Abstract Service.



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CLP: Classification, Labeling and Packaging REGULATION (EC) No 1272/2008 on classification, labeling and packaging of substances and mixtures.

CEN: European Committee for Standardization (Comité Européen de Normalisation).

TWA: Time Weighted Average.

STEL: Short-term Exposure Limit.

LD50: Lethal Dose 50%.

LC50: Lethal Concentration 50%.

EC50: Effective Concentration 50%.

NOEL: No observed effect level.

BOD: Biochemical oxygen demand.

TOC: Total Organic Carbon.

ADR: European agreement concerning the international carriage of dangerous goods by road (Accord européen relatif transport des marchandises dangereuses par route).

ADN: European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways (Accord européen relatif au transport international des marchandises dangereuses par voies de navigation intérieures).

IMDG Code: International Maritime Dangerous Goods Code.

RID: Regulations concerning the international carriage of dangerous goods by rail (Règlement International concernant le transport de marchandises dangereuses par chemin de fer).

Safety data sheets of raw materials.

The classification for health and environmental hazards is derived by a combination of calculation methods and test data, if available.

References

Information on evaluation method leading to the classification of mixture

Full text of any H-statements not written out in full under Sections 2 to 15

H317 May cause an allergic skin reaction.

Revision information

This document has undergone significant changes and should be reviewed in its entirety.

Training information

Provide training on safe handling while considering the type of application and exposure scenarios. Follow training instructions when handling this material.

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.

Based on EC Directive / Regulations

(EC) No 1907/2006 (REACH)

(EU) 2015/830

(EC) No 1272/2008

(EU) No 1357/2014

Further information

Correction in Section: 2,3,4,5,6,7,8,9,10,11,12,13