

SAFETY DATA SHEET

This safety data sheet was created pursuant to the requirements of: Regulation (EC) No. 1907/2006 and Regulation (EC) No. 1272/2008

Issuing Date 14-Nov-2024 Revision date 14-Nov-2024 Revision Number 12

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

1.1. Product identifier

Safety data sheet number PD-MSDS-4

Product Name Oragene (OG-500, OG-600, OG-510, OG-610, OG-575, OG-675, OG-XXX.XXX), Oragene

Dx (OGD-500, OGD-600, OGD-510, OGD-610, OGD-575, OGD-675, OGD-XXX.XXX), Oragene DISCOVER (OGR-500, OGR-600, OGR-575, OGR-675, OGR-XXX.XXX) and

OR000-03

Pure substance/mixture Mixture

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

Recommended use For nucleic acid stabilization

Uses advised against No information available

1.3. Details of the supplier of the safety data sheet

Manufacturer

DNA Genotek Inc., 500 Palladium Dr., Suite 3000, Ottawa, ON, Canada, K2V 1C2

For further information, please contact

E-mail address support@dnagenotek.com

1.4. Emergency telephone number

Emergency Telephone 1-866-813-6354 Mon-Fri 9:00am-5:00am ET

Emergency Telephone - §45 - (EC)1272/2008

Europe 112

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification according to

Regulation (EC) No. 1272/2008 [CLP]

Flammable liquids Category 3 - (H226)

2.2. Label elements



Warning

Hazard statements

H226 - Flammable liquid and vapor

Precautionary Statements - EU (§28, 1272/2008)

P210 - Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking

P233 - Keep container tightly closed

P363 - Wash contaminated clothing before reuse

P370 + P378 - In case of fire: Use dry chemical, CO2, water spray or alcohol-resistant foam to extinguish

P403 + P235 - Store in a well-ventilated place. Keep cool

P501 - Dispose of contents/ container to an approved waste disposal plant

2.3. Other hazards

Harmful to aquatic life.

SECTION 3: Composition/information on ingredients

3.1 Substances

Not applicable

3.2 Mixtures

Chemical name	Weight-%	REACH registration number		Classification according to Regulation (EC) No. 1272/2008 [CLP]	Specific concentration limit (SCL)	M-Factor	M-Factor (long-term)
Ethanol 64-17-5	10-30	No data available	200-578-6 (603-002-00 -5)	Flam. Liq. 2 (H225)	-	-	-
Sodium Acetate Trihydrate 6131-90-4	3-7	No data available	-	No data available	-	-	-

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

Acute Toxicity Estimate

If LD50/LC50 data is not available or does not correspond to the classification category, then the appropriate conversion value from CLP Annex I, Table 3.1.2, is used to calculate the acute toxicity estimate (ATEmix) for classifying a mixture based on its components

Chemical name	Oral LD50 mg/kg	Dermal LD50	Inhalation LC50 - 4	Inhalation LC50 - 4	Inhalation LC50 - 4
		mg/kg	hour - dust/mist - mg/L	hour - vapor - mg/L	hour - gas - ppm
Ethanol 64-17-5	7060	No data available	116.9 133.8	No data available	No data available
Sodium Acetate Trihydrate 6131-90-4	3530	10000	7.5	No data available	No data available

This product does not contain candidate substances of very high concern at a concentration >=0.1% (Regulation (EC) No. 1907/2006 (REACH), Article 59)

SECTION 4: First aid measures

4.1. Description of first aid measures

Inhalation Remove to fresh air.

Eye contact Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Keep

eye wide open while rinsing. Do not rub affected area.

Skin contactWash off immediately with soap and plenty of water while removing all contaminated clothes

and shoes.

Ingestion Rinse mouth.

Self-protection of the first aider Remove all sources of ignition. Ensure that medical personnel are aware of the material(s)

involved, take precautions to protect themselves and prevent spread of contamination. Use

personal protective equipment as required. See section 8 for more information.

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

Symptoms No information available.

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

Note to physiciansTreat symptomatically.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable Extinguishing Media Dry chemical. Carbon dioxide (CO2). Water spray. Alcohol resistant foam.

Large Fire CAUTION: Use of water spray when fighting fire may be inefficient.

Unsuitable extinguishing mediaDo not scatter spilled material with high pressure water streams.

5.2. Special hazards arising from the substance or mixture

Specific hazards arising from the

chemical

Risk of ignition. Keep product and empty container away from heat and sources of ignition. In the event of fire, cool tanks with water spray. Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations.

5.3. Advice for firefighters

Special protective equipment and precautions for fire-fighters

Firefighters should wear self-contained breathing apparatus and full firefighting turnout gear.

Use personal protection equipment.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Personal precautions Evacuate personnel to safe areas. Use personal protective equipment as required. See

section 8 for more information. Avoid contact with skin, eyes or clothing. Ensure adequate ventilation. Keep people away from and upwind of spill/leak. ELIMINATE all ignition sources

(no smoking, flares, sparks or flames in immediate area). Pay attention to flashback. Take precautionary measures against static discharges. All equipment used when handling the product must be grounded. Do not touch or walk through spilled material.

Other information Ventilate the area.

6.2. Environmental precautions

Environmental precautions Refer to protective measures listed in Sections 7 and 8. Prevent further leakage or spillage if

safe to do so. Prevent product from entering drains.

6.3. Methods and material for containment and cleaning up

Methods for containment Stop leak if you can do it without risk. Do not touch or walk through spilled material. A vapor

suppressing foam may be used to reduce vapors. Dike far ahead of spill to collect runoff water. Keep out of drains, sewers, ditches and waterways. Absorb with earth, sand or other

non-combustible material and transfer to containers for later disposal.

Methods for cleaning up Take precautionary measures against static discharges. Dam up. Soak up with inert

absorbent material. Pick up and transfer to properly labeled containers.

Prevention of secondary hazards Clean contaminated objects and areas thoroughly observing environmental regulations.

6.4. Reference to other sections

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

Advice on safe handling Use personal protection equipment. Avoid contact with skin and eyes. Avoid breathing

vapors or mists. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Use grounding and bonding connection when transferring this material to prevent static discharge, fire or explosion. Use with local exhaust ventilation. Use spark-proof tools and explosion-proof equipment. Keep in an area equipped with sprinklers.

Use according to package label instructions.

General hygiene considerations Do not eat, drink or smoke when using this product. Contaminated work clothing should not

be allowed out of the workplace. Regular cleaning of equipment, work area and clothing is recommended. Wash hands before breaks and immediately after handling the product.

7.2. Conditions for safe storage, including any incompatibilities

Storage Conditions Keep containers tightly closed in a dry, cool and well-ventilated place. Keep away from heat,

sparks, flame and other sources of ignition (i.e., pilot lights, electric motors and static electricity). Keep in properly labeled containers. Do not store near combustible materials. Keep in an area equipped with sprinklers. Store in accordance with the particular national

regulations. Store in accordance with local regulations.

7.3. Specific end use(s)

Risk Management Methods (RMM) The information required is contained in this Safety Data Sheet.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Exposure Limits

Chemical name	European Union	Austria	Belgium	Bulgaria	Croatia
Ethanol	-	TWA: 1000 ppm	TWA: 1000 ppm	TWA: 1000 mg/m ³	TWA: 1000 ppm
64-17-5		TWA: 1900 mg/m ³	TWA: 1907 mg/m ³		TWA: 1900 mg/m ³
		STEL 2000 ppm			
		STEL 3800 mg/m ³			
Chemical name	Cyprus	Czech Republic	Denmark	Estonia	Finland
Ethanol	-	TWA: 1000 mg/m ³	TWA: 1000 ppm	TWA: 500 ppm	TWA: 1000 ppm
64-17-5		Ceiling: 3000 mg/m ³	TWA: 1900 mg/m ³	TWA: 1000 mg/m ³	TWA: 1900 mg/m ³
			STEL: 2000 ppm	STEL: 1000 ppm	STEL: 1300 ppm
			STEL: 3800 mg/m ³	STEL: 1900 mg/m ³	STEL: 2500 mg/m ³
Chemical name	France	Germany TRGS	Germany DFG	Greece	Hungary
Ethanol	TWA: 1000 ppm	TWA: 200 ppm	TWA: 200 ppm	TWA: 1000 ppm	TWA: 1000 ppm
64-17-5	TWA: 1900 mg/m ³	TWA: 380 mg/m ³	TWA: 380 mg/m ³	TWA: 1900 mg/m ³	TWA: 1900 mg/m ³
	STEL: 5000 ppm		Peak: 800 ppm		STEL: 2000 ppm
	STEL: 9500 mg/m ³		Peak: 1520 mg/m ³		STEL: 3800 mg/m ³
Chemical name	Ireland	Italy MDLPS	Italy AIDII	Latvia	Lithuania
Ethanol	STEL: 1000 ppm	-	STEL: 1000 ppm	TWA: 1000 mg/m ³	TWA: 500 ppm
64-17-5			STEL: 1884 mg/m ³		TWA: 1000 mg/m ³
					STEL: 1000 ppm
					STEL: 1900 mg/m ³
Chemical name	Luxembourg	Malta	Netherlands	Norway	Poland
Ethanol	-	-	TWA: 137 ppm	TWA: 500 ppm	TWA: 1900 mg/m ³
64-17-5			TWA: 260 mg/m ³	TWA: 950 mg/m ³	
			STEL: 1000 ppm	STEL: 625 ppm	
				STEL: 1187.5 mg/m ³	
			Sk*		
Chemical name	Portugal	Romania	Slovakia	Slovenia	Spain
Ethanol	STEL: 1000 ppm	TWA: 1000 ppm	TWA: 500 ppm	TWA: 960 mg/m ³	STEL: 1000 ppm
64-17-5		TWA: 1900 mg/m ³	TWA: 960 mg/m ³	TWA: 500 ppm	STEL: 1910 mg/m ³
		STEL: 5000 ppm	Ceiling: 1920 mg/m ³	STEL: 1000 ppm	
		STEL: 9500 mg/m ³		STEL: 1920 mg/m ³	
Chemical name		weden	Switzerland		ted Kingdom
Ethanol		: 500 ppm	TWA: 500 ppm		A: 1000 ppm
64-17-5		1000 mg/m ³	TWA: 960 mg/m		A: 1920 mg/m ³
		KGV: 1000 ppm	STEL: 1000 ppr		EL: 3000 ppm
	Vägledande	KGV: 1900 mg/m ³	STEL: 1920 mg/l	m ³ STE	L: 5760 mg/m ³

Biological occupational exposure limits

This product, as supplied, does not contain any hazardous materials with biological limits established by the region specific regulatory bodies.

Derived No Effect Level (DNEL) Predicted No Effect Concentration No information available. (PNEC)

No information available.

8.2. Exposure controls

Personal protective equipment

Eye/face protection Tight sealing safety goggles.

Hand protection Wear suitable gloves. Impervious gloves.

Skin and body protection Wear suitable protective clothing. Long sleeved clothing. Chemical resistant apron.

Antistatic boots.

Respiratory protectionNo protective equipment is needed under normal use conditions. If exposure limits are

exceeded or irritation is experienced, ventilation and evacuation may be required.

General hygiene considerations Do not eat, drink or smoke when using this product. Contaminated work clothing should not

be allowed out of the workplace. Regular cleaning of equipment, work area and clothing is recommended. Wash hands before breaks and immediately after handling the product.

Environmental exposure controls No information available.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state Liquid Appearance aqueous solution

Color colorless

Odor No information available.
Odor threshold No information available

<u>Property</u> <u>Values</u> <u>Remarks • Method</u>

Melting point / freezing point No data available None known Initial boiling point and boiling rangeNo data available None known Flammability No data available None known Flammability Limit in Air None known

Upper flammability or explosive No data available

limits

Lower flammability or explosive No data available

limits

Flash point= 26 °CNone knownAutoignition temperature248 °CNone knownDecomposition temperatureNone knownpH9.6 - 9.8None known

pH (as aqueous solution) No data available No information available

Kinematic viscosity No data available None known Dynamic viscosity No data available None known Water solubility No data available None known Solubility(ies) No data available None known **Partition coefficient** No data available None known Vapor pressure No data available None known Relative density No data available None known

Bulk density
Liquid Density

No data available
No data available

Relative vapor density No data available None known

Particle characteristics **Particle Size**

No information available **Particle Size Distribution** No information available

9.2. Other information

9.2.1. Information with regard to physical hazard classes Not applicable

9.2.2. Other safety characteristics No information available

SECTION 10: Stability and reactivity

10.1. Reactivity

Reactivity No information available.

10.2. Chemical stability

Stable under normal conditions. Stability

Explosion data

Sensitivity to mechanical impact None. Sensitivity to static discharge

10.3. Possibility of hazardous reactions

Possibility of hazardous reactions None under normal processing.

10.4. Conditions to avoid

Conditions to avoid Heat, flames and sparks.

10.5. Incompatible materials

Incompatible materials None known based on information supplied.

10.6. Hazardous decomposition products

Hazardous decomposition products None known based on information supplied.

SECTION 11: Toxicological information

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

Information on likely routes of exposure

Product Information

Inhalation Specific test data for the substance or mixture is not available.

Eye contact Specific test data for the substance or mixture is not available.

Skin contact Specific test data for the substance or mixture is not available.

Ingestion Specific test data for the substance or mixture is not available.

Symptoms related to the physical, chemical and toxicological characteristics

Symptoms No information available.

Acute toxicity

Numerical measures of toxicity

No information available

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

 ATEmix (oral)
 18,031.70 mg/kg

 ATEmix (dermal)
 13,430.90 mg/kg

 ATEmix (inhalation-gas)
 99,999.00 ppm

 ATEmix (inhalation-dust/mist)
 41.80 mg/l

 ATEmix (inhalation-vapor)
 99,999.00 mg/l

Component Information

Chemical name	Oral LD50	Dermal LD50	Inhalation LC50
Ethanol	= 7060 mg/kg (Rat)	-	= 116.9 mg/L (Rat) 4 h
			= 133.8 mg/L (Rat) 4 h
Sodium Acetate Trihydrate	= 3530 mg/kg (Rat)	> 10 g/kg (Rabbit)	> 30 g/m³ (Rat) 1 h

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Skin corrosion/irritationNo information available.

Serious eye damage/eye irritation No information available.

Respiratory or skin sensitization No information available.

Germ cell mutagenicity No information available.

Carcinogenicity No information available.

Reproductive toxicity No information available.

STOT - single exposure No information available.

STOT - repeated exposure No information available.

Aspiration hazard No information available.

11.2. Information on other hazards

11.2.1. Endocrine disrupting properties

Endocrine disrupting properties No information available.

11.2.2. Other information

Other adverse effects No information available.

SECTION 12: Ecological information

12.1. Toxicity

Ecotoxicity Harmful to aquatic life.

Unknown aquatic toxicityContains -0.07 % of components with unknown hazards to the aquatic environment.

Chemical name	Algae/aquatic plants	Fish	Toxicity to	Crustacea
			microorganisms	
Ethanol	-	LC50: 12.0 - 16.0mL/L	-	LC50: 9268 - 14221mg/L
		(96h, Oncorhynchus		(48h, Daphnia magna)
		mykiss)		EC50: =2mg/L (48h,
		LC50: >100mg/L (96h,		Daphnia magna)
		Pimephales promelas)		
		LC50: 13400 - 15100mg/L		
		(96h, Pimephales		
		promelas)		
Sodium Acetate	-	LC50: >100mg/L (96h,	-	EC50: >1000mg/L (48h,
Trihydrate		Danio rerio)		Daphnia magna)

12.2. Persistence and degradability

Persistence and degradability No information available.

12.3. Bioaccumulative potential

Bioaccumulation

Component Information

Chemical name	Partition coefficient
Ethanol	-0.35

12.4. Mobility in soil

Mobility in soil No information available.

12.5. Results of PBT and vPvB assessment

PBT and vPvB assessment

Chemical name	PBT and vPvB assessment
Ethanol	The substance is not PBT / vPvB PBT assessment does
	not apply

12.6. Endocrine disrupting properties

Endocrine disrupting properties No information available.

12.7. Other adverse effects

No information available.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Waste from residues/unused products

Should not be released into the environment. Dispose of in accordance with local regulations. Dispose of waste in accordance with environmental legislation.

Contaminated packaging

Empty containers pose a potential fire and explosion hazard. Do not cut, puncture or weld containers.

SECTION 14: Transport information

Note: UN Dangerous Goods List Special Provision 144

<u>IATA</u>

14.1 UN number or ID number
 14.2 UN proper shipping name
 14.3 Transport hazard class(es)
 14.4 Packing group
 14.5 Environmental hazards
 Not regulated Not regulated Not applicable

14.6 Special precautions for user

Special Provisions 144

IMDG

14.1 UN number or ID number
 14.2 UN proper shipping name
 14.3 Transport hazard class(es)
 14.4 Packing group
 14.5 Environmental hazards
 Not regulated Not regulated Not applicable

14.6 Special precautions for user

Special Provisions 144

14.7 Maritime transport in bulk according to IMO instruments

No information available

RID

14.1 UN number or ID number
14.2 UN proper shipping name
14.3 Transport hazard class(es)
14.4 Packing group
14.5 Environmental hazards
Not regulated
Not regulated
Not regulated
Not applicable

14.6 Special precautions for user

Special Provisions 144

ADR

14.1 UN number or ID number
14.2 UN proper shipping name
14.3 Transport hazard class(es)
14.4 Packing group
14.5 Environmental hazards

Not regulated

Not regulated
Not regulated
Not regulated
Not applicable

14.6 Special precautions for user

Special Provisions 144

SECTION 15: Regulatory information

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

National regulations

France

Occupational Illnesses (R-463-3, France)

Chemical name	French RG number	Title
Ethanol	RG 84	-
64-17-5		

Netherlands

Chemical name	Netherlands - List of	Netherlands - List of	Netherlands - List of
	Carcinogens	Mutagens	Reproductive Toxins
Ethanol	Present	-	Fertility Category 1A Development Category 1A Can be harmful via breastfeeding

European Union

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

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

Dangerous substance category per Seveso Directive (2012/18/EU)

P5a - FLAMMABLE LIQUIDS P5b - FLAMMABLE LIQUIDS

P5c - FLAMMABLE LIQUIDS

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

Not applicable

Biocidal Products Regulation (EU) No 528/2012 (BPR)

Chemical name	Biocidal Products Regulation (EU) No 528/2012 (BPR)
Ethanol - 64-17-5	Product-type 1: Human hygiene Product-type 2:
	Disinfectants and algaecides not intended for direct
	application to humans or animals Product-type 4: Food and
	feed area
Sodium Acetate Trihydrate - 6131-90-4	Simplified procedure - Category 1

International Inventories

Contact supplier for inventory compliance status **TSCA** Contact supplier for inventory compliance status DSL/NDSL Contact supplier for inventory compliance status **EINECS/ELINCS** Contact supplier for inventory compliance status **ENCS IECSC** Contact supplier for inventory compliance status **KECL** Contact supplier for inventory compliance status **PICCS** Contact supplier for inventory compliance status AIIC Contact supplier for inventory compliance status

Legend:

TSCA - United States Toxic Substances Control Act Section 8(b) Inventory

DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances List

EINECS/ELINCS - European Inventory of Existing Chemical Substances/European List of Notified Chemical Substances

ENCS - Japan Existing and New Chemical Substances

IECSC - China Inventory of Existing Chemical Substances

KECL - Korean Existing and Evaluated Chemical Substances

PICCS - Philippines Inventory of Chemicals and Chemical Substances

AIIC - Australian Inventory of Industrial Chemicals

15.2. Chemical safety assessment

Chemical Safety Report No information available

SECTION 16: Other information

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

Leaend

SVHC: Substances of Very High Concern for Authorization:

Legend Section 8: Exposure controls/personal protection

TWA TWA (time-weighted average) STEL STEL (Short Term Exposure Limit)

Ceiling Maximum limit value Sk* Skin designation

Classification procedure			
Classification according to Regulation (EC) No. 1272/2008 [CLP]	Method Used		
Acute oral toxicity	Calculation method		
Acute dermal toxicity	Calculation method		
Acute inhalation toxicity - gas	Calculation method		
Acute inhalation toxicity - vapor	Calculation method		
Acute inhalation toxicity - dust/mist	Calculation method		
Skin corrosion/irritation	Calculation method		
Serious eye damage/eye irritation	Calculation method		

Respiratory sensitization	Calculation method
Skin sensitization	Calculation method
Mutagenicity	Calculation method
Carcinogenicity	Calculation method
Reproductive toxicity	Calculation method
STOT - single exposure	Calculation method
STOT - repeated exposure	Calculation method
Chronic aquatic toxicity	Calculation method
Acute aquatic toxicity	Calculation method
	Calculation method
Ozone	Calculation method

Key literature references and sources for data used to compile the SDS

Agency for Toxic Substances and Disease Registry (ATSDR)

U.S. Environmental Protection Agency ChemView Database

European Food Safety Authority (EFSA)

EPA (Environmental Protection Agency)

Acute Exposure Guideline Level(s) (AEGL(s))

U.S. Environmental Protection Agency Federal Insecticide, Fungicide, and Rodenticide Act

U.S. Environmental Protection Agency High Production Volume Chemicals

Food Research Journal

Hazardous Substance Database

International Uniform Chemical Information Database (IUCLID)

National Institute of Technology and Evaluation (NITE)

Australia National Industrial Chemicals Notification and Assessment Scheme (NICNAS)

NIOSH (National Institute for Occupational Safety and Health)

National Library of Medicine's ChemID Plus (NLM CIP)

National Library of Medicine's PubMed database (NLM PUBMED)

National Toxicology Program (NTP)

New Zealand's Chemical Classification and Information Database (CCID)

Organization for Economic Co-operation and Development Environment, Health, and Safety Publications

Organization for Economic Co-operation and Development High Production Volume Chemicals Program

Organization for Economic Co-operation and Development Screening Information Data Set

World Health Organization

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Safety Data Sheet according to Regulation (EC) No. 1907/2006 (REACH)

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.

End of Safety Data Sheet