SAFETY DATA SHEETS

This SDS packet was issued with item:

072046969

N/A



MS557000 COEZYME MATERIAL SAFETY DATA SHEET

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SECTION 1 - SOURCE/IDENTITY/USE INFORMATION

MANUFACTURER

GC AMERICA INC. 3737 West 127th St. Alsip, Illinois, 60803 Telephone: 708-597-0900

Hours: Mon.- Fri. 8:00 am. - 5:00 pm. C.S.T.

Transportation Emergency Telephone No. 800-424-9300

COMMON NAME: COEZYME CHEMICAL NAME: N.A.

PRODUCT USE: Detergent/Cleaner Solution

The following information is provided with regard to the toxicity and hazards of the pure components present.

SECTION 2 - HAZARDOUS INGREDIENTS/IDENTITY INFORMATION

COMPONENT	C.A.S.	EXPOSURE LIMITS	LD50/LC50	%
Proteinase	9073-77-2	PEL=0.06ug/m ³	N.E.	Proprietary
(Alkaline Bacillus)		(OSHA)		
		$TLV=0.06ug/m^3$		
		(ACGIH)		
Proteinase (Subtilisin)	9014-01-1	PEL=0.06ug/m ³	LD50=3700mg/kg	Proprietary
		(OSHA)	LC50=N.E.	
		$TLV=0.06um/m^3$		
		(ACGIH)		
Propylene Glycol	57-55-6	TWA=10mg/m ³	LD50-20.0-33.7g/kg	Proprietary
		Dow (mist)	(oral rat)	
			LC50=N.E.	

SECTION 3 - PHYSICAL/CHEMICAL PROPERTIES

BOILING POINT: 100°C to 105°C SPECIFIC GRAVITY: (H20-1): $1.05 \text{ (}20^{\circ}\text{C)}$

VAPOR PRESSURE (mm Hg): N.E. MELTING POINT: N/A - Aqueous Solution

APPEARANCE AND ODOR: Bluish green viscous solution with mint odor

SECTION 4 - FIRE AND EXPLOSION DATA

Not flammable; aqueous solution $\mbox{\bf EXTINGUISHING MEDIA:}\ N.A.$

SPECIAL FIRE FIGHTING PROCEDURES: N.A. UNUSUAL FIRE AND EXPLOSION HAZARDS: N.A. HAZARDOUS COMBUSTION PRODUCTS: N.A.

SECTION 5 - REACTIVITY DATA

STABILITY: Stable Unstable Unstable Unstable Will Not Occur Will Occur

CONDITIONS TO AVOID: Avoid removal of water.

INCOMPATIBILITY (Materials To Avoid): Avoid strong oxidizing agents (bleach)

HAZARDOUS DECOMPOSITION OR BY-PRODUCTS: Nitrous Oxide and Ammonical vapors.



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SECTION 6 - HEALTH HAZARD DATA and FIRST AID INFORMATION

	YES	NO	NE	NA	NTP	IARC	OSHA	OTHER
MUTAGENIC AFFECTS		X						
TERATOGENIC AFFECTS		X						
REPRODUCTIVE TOXIN		X						
CARCINOGENICITY		X						
SENSITIZER	X							

ROUTES OF ENTRY: Inhalation Skin Ingestion

HEALTH HAZARD (Acute And Chronic): Repeated exposure via inhalation can result in sensitization and allergic reaction in hypersensitive individuals.

SIGNS AND SYMPTOMS OF OVEREXPOSURE:

SKIN: Skin absorption not known to occur. May cause minor irritation following prolonged direct contact.

EYES: Material can cause eye irritation upon direct contact.

INGESTION: Ingestion of this material is not known to result in significant adverse health effects. Can cause irritation to mouth and throat.

INHALATION: Can cause allergic type response in susceptible individuals upon repeated or prolonged exposure.

CONDITIONS GENERALLY AGGRAVATED BY EXPOSURE: N.E.

EMERGENCY FIRST AID PROCEDURES:

SKIN: Wash with soap and water.

EYES: Flush with low-pressure water for 15 minutes. Seek medical attention if adverse symptoms develop.

INGESTION: Rinse mouth and throat thoroughly with tap water. Seek medical attention if adverse symptoms develop.

INHALATION: Remove to fresh air. Seek medical attention if allergic response exhibited.

SECTION 7 - PRECAUTIONS FOR SAFE HANDLING AND USE

IN CASE OF RELEASE OR SPILL: Absorb spill with inert material and transfer to suitable container for disposal. Avoid high pressure wash down which may create aerosol.

WASTE DISPOSAL METHOD: In accordance with local, state and federal regulations.

STORAGE, **HANDLING**, **AND SPECIAL PRECAUTIONS**: Keep in cool place. Maintain good housekeeping. Keep out of reach of children. Long exposure of product to heat and/or humidity may reduce product's activity. For liquid enzymes, it is also necessary to avoid spraying or high pressure washing.

SECTION 8 - CONTROL MEASURES

RESPIRATORY PROTECTION: None required under normal conditions

VENTILATION: Local Exhaust: Adequate Mechanical: N.A. Special: N.A. Other: N.A.

PROTECTIVE GLOVES: Yes

EYE PROTECTION: Safety glasses if splashing likely OTHER PROTECTIVE CLOTHING OR EQUIPMENT: N.A.

WORK/HYGIENIC PRACTICE: Avoid splashing

SECTION 9- PREPARATION INFORMATION

This data is supplied to comply with OSHA Hazard Communication Standard 29 CFR 1910,1200 and W.H.M.I.S. CPR

DATE: 09 January 2006

REVIEWED: 21 February 2012

N.A. = NOT APPLICABLE N.E. = NOT ESTABLISHED

The information herein is given in good faith but no warranty expressed or implied is made.

NFPA

FIRE - 0 TOXICITY - 1 REACTIVITY - 0 SPECIAL -



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Version US-EN-Rev 1

Reviewed on 02/27/2015

1 Identification

· Product identifier

Trade name: COEZYME

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

Dental material

The product is intended for professional use.

To avoid risks for humans and environment obtain instructions.

- · Application of the substance / the mixture Auxiliary for dental technology
- Details of the supplier of the safety data sheet
- · Manufacturer/Supplier:

GC America Inc. 3737 W. 127th Street Alsip, IL 60803 USA

sds@gcamerica.com

- · Information department: Regulatory Affairs
- · Emergency telephone number:

During normal opening times (Mon.-Fri. 8:00 AM-5:00 PM CST): +1 (708) 597-0900 Transportation (CHEMTREC®) Emergency Telephone No. +1 (800) 424-9300

2 Hazard(s) identification

· Classification of the substance or mixture

Resp. Sens. 1 H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.

Acute Tox. 4 H302 Harmful if swallowed.

Eye Irrit. 2A H319 Causes serious eye irritation.

Skin Sens. 1 H317 May cause an allergic skin reaction.

STOT SE 3 H335 May cause respiratory irritation.

· Additional information:

The information provided is in regards to the toxicity and hazard rating(s) of the individual component(s) in the formulation. The associated risk(s) depends on the route(s) of exposure. The hazard rating system is based entirely on the existence of the risk(s) and does not take into account the likelihood of reduced risk(s) through proper usage and handling.

- · Label elements
- · GHS label elements

The product is classified and labeled according to the Globally Harmonized System (GHS).

· Hazard pictograms





GHS07 GHS08

- · Signal word Danger
- Hazard-determining components of labeling: subtilisin

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· Hazard statements

Harmful if swallowed.

Causes serious eye irritation.

May cause allergy or asthma symptoms or breathing difficulties if inhaled.

May cause an allergic skin reaction.

May cause respiratory irritation.

Precautionary statements

Contaminated work clothing must not be allowed out of the workplace.

[In case of inadequate ventilation] wear respiratory protection.

Avoid breathing dust/fume/gas/mist/vapors/spray

If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

Store locked up.

Dispose of contents/container in accordance with local/regional/national/international regulations.

- · Classification system:
- NFPA ratings (scale 0 4)



Health = 2 Fire = 0Reactivity = 0

· HMIS-ratings (scale 0 - 4)



Health = 2 Fire = 0

- · Other hazards
- · Results of PBT and vPvB assessment
- · **PBT:** Not applicable. · **vPvB**: Not applicable.

3 Composition/information on ingredients

- · Chemical characterization: Mixtures
- **Description:** Mixture of the substances listed below with nonhazardous additions.

Dangerous components:

	•	
57-55-6	propylene glycol	25-50%
9014-01-1	subtilisin	1-5%

· Additional information:

If a substance is marked with **, then substance is a trade secret. This is allowed under OSHA's Hazard Communication Standard (HCS) as a trade secret and under GHS as Confidential Business Information (CBI).

4 First-aid measures

- Description of first aid measures
- · General information:

Immediately remove any clothing soiled by the product.

If symptoms persist consult doctor.

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· After inhalation:

Supply fresh air; consult doctor in case of complaints.

In case of unconsciousness place patient stably in side position for transportation.

Do not use mouth to mouth or mouth to nose resuscitation.

· After skin contact:

Immediately wash with water and soap and rinse thoroughly.

Seek medical treatment.

· After eye contact:

Protect unharmed eye.

Rinse opened eye for several minutes under running water. Then consult a doctor.

After swallowing:

Do not induce vomiting; immediately call for medical help.

Rinse out mouth and then drink plenty of water.

- · Information for doctor:
- · Most important symptoms and effects, both acute and delayed Allergic reactions
- Indication of any immediate medical attention and special treatment needed

No further relevant information available.

5 Fire-fighting measures

- Extinguishing media
- · Suitable extinguishing agents:

CO2, extinguishing powder or water spray. Fight larger fires with water spray or alcohol resistant foam. Use fire fighting measures that suit the environment.

- · For safety reasons unsuitable extinguishing agents: Water with full jet
- · Special hazards arising from the substance or mixture

Formation of toxic gases is possible during heating or in case of fire.

- · Advice for firefighters
- · Protective equipment: Wear self-contained respiratory protective device.
- · Additional information

Dispose of fire debris and contaminated fire fighting water in accordance with official regulations.

6 Accidental release measures

Personal precautions, protective equipment and emergency procedures

Remove persons from danger area.

Avoid contact with the eves and skin.

Wear protective clothing.

Environmental precautions:

Do not allow product to reach sewage system or any water course.

Do not allow to penetrate the ground/soil.

Methods and material for containment and cleaning up:

Ensure adequate ventilation.

Absorb liquid components with liquid-binding material.

Dispose of the collected material according to regulations.

· Reference to other sections

See Section 7 for information on safe handling.

See Section 8 for information on personal protection equipment.

See Section 13 for disposal information.

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7 Handling and storage

- · Handling:
- · Precautions for safe handling

Observe instructions for use.

Ensure good ventilation/exhaustion at the workplace.

Do not inhale dust / smoke / mist.

Prevent formation of aerosols.

Avoid contact with the eyes and skin.

- · Information about protection against explosions and fires: No special measures required.
- Storage:
- Requirements to be met by storerooms and receptacles:

Store only in unopened original receptacles.

- **Information about storage in one common storage facility:** Store away from foodstuffs.
- Further information about storage conditions: Observe instructions for use / storage.
- · Specific end use(s) No further relevant information available.

8 Exposure controls/personal protection

- · Additional information about design of technical systems: No further data; see item 7.
- · Control parameters

 Components wi 	th limit values	that require mor	nitoring at t	the workplace:
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57-55-6 propylene glycol

WEEL Long-term value: 10 mg/m³

9014-01-1 subtilisin

short-term value: 0.00006* mg/m³ *60-min
Ceiling limit value: 0.00006 mg/m³
as 100% crystalline active pure enzyme

- Additional information: The lists that were valid during the creation were used as basis.
- · Exposure controls
- Personal protective equipment:
- General protective and hygienic measures:

The usual precautionary measures for handling chemicals should be followed.

Avoid contact with the eyes and skin.

Wash hands before breaks and at the end of work.

Keep away from foodstuffs, beverages and feed.

Immediately remove all soiled and contaminated clothing.

- · Breathing equipment: Suitable respiratory protective device recommended.
- Protection of hands: Protective gloves
- · Material of gloves

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.

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· Penetration time of glove material

The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

· Eye protection: Safety glasses

9 Physical and chemical prope	erties
Information on basic physical and	chemical properties
General Information	
· Appearance: Form:	Liquid
Color:	Blue
· Odor:	Pleasant
· Odor threshold:	Not determined.
· pH-value at 20 °C (68 °F):	8.5
· Change in condition	
Melting point/Melting range:	Undetermined.
Boiling point/Boiling range:	100 °C (212 °F)
· Flash point:	Not applicable.
· Flammability (solid, gaseous):	Not applicable.
· Ignition temperature:	Undetermined.
· Decomposition temperature:	Not determined.
· Auto igniting:	Product is not selfigniting.
· Danger of explosion:	Product does not present an explosion hazard.
· Explosion limits:	
Lower:	2.6 Vol %
Upper:	12.6 Vol %
· Vapor pressure:	Not determined.
Density at 20 °C (68 °F):	1.07 g/cm³ (8.929 lbs/gal)
Relative density	Not determined.
· Vapour density · Evaporation rate	Not determined. Not determined.
<u> </u>	Not determined.
· Solubility in / Miscibility with Water:	Fully miscible.
Partition coefficient (n-octanol/wat	·
· Viscosity:	,
Dynamic:	Not determined.
Kinematic:	Not determined.
Solvent content:	
Organic solvents:	30.0 %
VOC content:	30.0 %
Solids content:	69.0 %
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· Other information

No further relevant information available.

10 Stability and reactivity

- · **Reactivity** No further relevant information available.
- · Chemical stability Stable at ambient temperature.
- Thermal decomposition / conditions to be avoided:

No decomposition if used according to specifications.

- · Possibility of hazardous reactions No dangerous reactions known.
- · Conditions to avoid No further relevant information available.
- · Incompatible materials: No further relevant information available.
- · Hazardous decomposition products: No dangerous decomposition products known.

11 Toxicological information

- · Information on toxicological effects
- · Acute toxicity:
- · LD/LC50 values that are relevant for classification:

9014-01-1 subtilisin

Oral LD50 2000 mg/kg (rat (f+m))

- Primary irritant effect:
- · on the skin: No irritant effect.
- on the eye: Irritating effect.
- · Sensitization:

Sensitization possible through inhalation.

Sensitization possible through skin contact.

· Additional toxicological information:

The product shows the following dangers according to internally approved calculation methods for preparations:

Irritant

· Carcinogenic categories

· IARC (International Agency for Research on Cancer)

None of the ingredients is listed.

· NTP (National Toxicology Program)

None of the ingredients is listed.

· OSHA-Ca (Occupational Safety & Health Administration)

None of the ingredients is listed.

· Carcinogenic categories' legend:

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IARC Group 1: The agent is carcinogenic to humans.

IARC Group 2A: The agent is probably carcinogenic to humans. IARC Group 2B: The agent is possibly carcinogenic to humans.

IARC Group 3: The agent is not classifiable as to its carcinogenicity to humans.

IARC Group 4: The agent is probably not carcinogenic to humans.

NTP K: Known to be human carcinogen.

NTP R: Reasonably anticipated to be human carcinogen.

12 Ecological information

- · Toxicity
- · Aquatic toxicity: No further relevant information available.
- Persistence and degradability No further relevant information available.
- Behavior in environmental systems:
- · Bioaccumulative potential No further relevant information available.
- · Mobility in soil No further relevant information available.
- · Additional ecological information:
- General notes:

Water hazard class 1 (Self-assessment): slightly hazardous for water

Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.

- · Results of PBT and vPvB assessment
- · **PBT:** Not applicable.
- vPvB: Not applicable.
- Other adverse effects No further relevant information available.

13 Disposal considerations

- · Waste treatment methods
- · Recommendation:

Must not be disposed of together with household garbage. Do not allow product to reach sewage system.

- Uncleaned packagings:
- · **Recommendation**: Disposal must be made according to official regulations.
- Recommended cleansing agent: Water, if necessary with cleansing agents.

· UN-Number		
DOT, ADR, ADN, IMDG, IATA	Void	
UN proper shipping name		
DOT, ADR, ADN, IMDG, IATA	Void	
Transport hazard class(es)		
DOT, ADR, ADN, IMDG, IATA		
Class	Void	

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· Packing group · DOT, ADR, IMDG, IATA	Void	
Environmental hazards:		
· Marine pollutant:	No	
Special precautions for user	Not applicable.	
Transport in bulk according to Annex	II of	
MARPOL73/78 and the IBC Code	Not applicable.	
UN "Model Regulation":	-	

15 Regulatory information

- · Safety, health and environmental regulations/legislation specific for the substance or mixture · SARA (Superfund Amendments and Reauthorization Act)
- · Section 355 (extremely hazardous substances):

None of the ingredient is listed.

· Section 313 (Specific toxic chemical listings):

None of the ingredients is listed.

TSCA (Toxic Substances Control Act):

propylene glycol

subtilisin

- Carcinogenic categories
- · EPA (Environmental Protection Agency)

None of the ingredients is listed.

TLV (Threshold Limit Value established by ACGIH)

None of the ingredients is listed.

· NIOSH-Ca (National Institute for Occupational Safety and Health)

None of the ingredients is listed.

· GHS label elements

The product is classified and labeled according to the Globally Harmonized System (GHS).

· Hazard pictograms





GHS07 GHS08

- · Signal word Danger
- · Hazard-determining components of labeling:

subtilisin

· Hazard statements

Harmful if swallowed.

Causes serious eye irritation.

May cause allergy or asthma symptoms or breathing difficulties if inhaled.

May cause an allergic skin reaction.

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May cause respiratory irritation.

· Precautionary statements

Contaminated work clothing must not be allowed out of the workplace.

[In case of inadequate ventilation] wear respiratory protection.

Avoid breathing dust/fume/gas/mist/vapors/spray

If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

Store locked up.

Dispose of contents/container in accordance with local/regional/national/international regulations.

· Chemical safety assessment: A Chemical Safety Assessment has not been carried out.

16 Other information

Department issuing SDS: Regulatory Affairs

· Contact:

Regulatory Affairs

Telephone No. +1 (708) 597-0900

sds@gcamerica.com

· Date of preparation / last revision 03/09/2015 / -

· Abbreviations and acronyms:

GHS: Globally Harmonized System of Classification and Labelling of Chemicals

HCS: Hazard Communication Standard (USA)

MSDS: Material Safety Data Sheet

SDS: Safety Data Sheet

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

ECHA: European Chemicals Agency

OSHA: Occupational Safety and Health Administration (USA)

ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)

IMDG: International Maritime Code for Dangerous Goods

DOT: US Department of Transportation

IATA: International Air Transport Association

ACGIH: American Conference of Governmental Industrial Hygienists

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

NFPA: National Fire Protection Association (USA)

HMIS: Hazardous Materials Identification System (USA) VOC: Volatile Organic Compounds (USA, EU)

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

PBT: Persistent, Bioaccumulative and Toxic

vPvB: very Persistent and very Bioaccumulative

Acute Tox. 4: Acute toxicity, Hazard Category 4

Eye Irrit. 2A: Serious eye damage/eye irritation, Hazard Category 2A

Resp. Sens. 1: Sensitisation - Respirat., Hazard Category 1

Skin Sens. 1: Sensitisation - Skin, Hazard Category 1

STOT SE 3: Specific target organ toxicity - Single exposure, Hazard Category 3

Sources

- Manufacturers' MSDSs/SDSs
- OSHA (https://www.osha.gov/dts/chemicalsampling/toc/chmcas.html)
- TOXNET (http://toxnet.nlm.nih.gov/)
- ECHA (http://echa.europa.eu/)
- EnviChem (www.echemportal.org)

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* Data compared to the previous version altered. This version replaces all previous versions.

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