

Safety data sheet

according to 1907/2006/EC, Article 31

Trade name: **Et-VC™**

Version: 6

Revision: 2019.12.27

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

1.1 Product identifier

Trade name	Et-VC™
CAS number	86404-04-8

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

Recommended Use	SU3 Industrial uses: Uses of substances as such or in preparations at industrial sites SU21 Consumer uses: Private households/general public/consumers SU22 Professional uses
Uses advised against	Not determined
Product category	Not determined
Process category	Not determined

1.3 Details of the supplier of the safety data sheet

Manufacturer/Supplier
CORUM INC.
6FL., No.360, Ruei Guang Rd.,
Neihu Dist, Taipei 11492, Taiwan
Further information obtainable from
marketing.support@corum.com.tw

1.4 Emergency telephone number

Company phone number	CORUM Tel. 886-2-8751-6060 Fax. 886-2-8751-6363
-----------------------------	--

SECTION 2: HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture

Classification according to Regulation (EC) No 1272/2008



GHS07 Eye Irrit. 2	H319 Causes serious eye irritation.
-----------------------	-------------------------------------

2.2 Label elements

Label according to Regulation (EC) No 1272/2008

The substance is classified and labelled according to the CLP regulation.

Hazard pictograms



GHS07 Signal word

Safety data sheet

according to 1907/2006/EC, Article 31

Trade name: **Et-VC™**

Version: 6

Revision: 2019.12.27

Warning

Hazard statements

H319 Causes serious eye irritation.

Precautionary statements

P280 Wear protective gloves/protective clothing/eye protection/face protection.

P264 Wash thoroughly after handling.

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

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

P337+P313 If eye irritation persists: Get medical advice/attention.

2.3 Other hazards**Results of PBT and vPvB assessment**

Not applicable

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS**3.1 Chemical characterization:** Substances**3.2 Composition/information on ingredients**

Chemical Name	CAS No.	EC No.
3-O- Ethyl Ascorbic Acid	86404-04-8	617-849-3

SECTION 4: FIRST AID MEASURES**4.1 Description of first aid measures****General information**

Remove contaminated clothing. Seek medical treatment.

After inhalation

Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Seek medical treatment.

After skin contactImmediately wash with soap and rinse thoroughly.
Cover the irritated skin with an emollient.
If skin irritation continues, consult a doctor.**After eye contact**Check and remove any contact lenses.
Immediately flush eyes with copious amounts of water for at least 15 minutes.
Cold water must be used. Seek medical treatment.**After swallowing**Do not induce vomiting; call for medical help immediately.
Do not give anything by mouth to an unconscious person.
Loosen tight clothing such as a collar, tie, belt or waistband.
If symptoms persist, consult a doctor.

4.2 Most important symptoms and effects, both acute and delayed

Symptoms No further relevant information available

4.3 Indication of any immediate medical attention and special treatment needed

Note to physicians No further relevant information available

SECTION 5: FIRE-FIGHTING MEASURES**5.1 Extinguishing media****Suitable extinguishing media**

Extinguishing powder

Do not use water.

Fight larger fires with water spray or alcohol resistant foam.

Unsuitable extinguishing media

Water with full jet

5.2 Special hazards arising from the substance or mixture

In case of fire, the following can be released: Carbon monoxide (CO) and Carbon dioxide (CO₂)

5.3 Advice for firefighters

Wear protective clothing and glasses.

Wear self-contained breathing apparatus with facepiece.

SECTION 6: ACCIDENTAL RELEASE MEASURES**6.1 Personal precautions, protective equipment and emergency procedures**

Avoid formation of dust.

Use respiratory protective device against the effects of fumes/dust/aerosol.

Wear respirator, chemical safety goggles, rubber boots and heavy rubber gloves.

Make sure only trained personnel are allowed to carry out the cleaning work.

6.2 Environmental precautions

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

In case of seepage into the ground inform responsible authorities.

6.3 Methods and material for containment and cleaning up

Pick up mechanically using appropriate tools.

Dispose of the material collected according to regulations.

Use warm water to clean the affected area carefully.

6.4 Reference to other sections

No dangerous substances are released.

See Section 7 for information on safe handling.

See Section 8 for information on personal protection equipment.

See Section 13 for disposal information.

Safety data sheet

according to 1907/2006/EC, Article 31

Trade name: **Et-VC™**

Version: 6

Revision: 2019.12.27

SECTION 7: HANDLING AND STORAGE

7.1 Precaution for safe handling

Advice on safe handling

Keep receptacles tightly sealed.
 Keep away from heat and direct sunlight.
 Ensure good ventilation/exhaustion at the workplace.
 Prevent formation of dust.

7.2 Conditions for safe storage, including any incompatibilities

Storage conditions

Store in a cool location.
 Store only in the original receptacle.
 Store only in unopened original receptacles.
 It is best to use the entire content of the pack after opening.

Incompatible materials

None known based on information supplied

Storage class (VbF)

No

7.3 Specific end use(s)

No further relevant information available

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 Control parameters

Exposure limits

The product does not contain relevant quantities of materials with critical values that have to be monitored at the workplace.

DNEL

Not determined

PNEC

Not determined

Additional information

The valid lists during this review were used as a basis.

8.2 Exposure controls

Personal protective equipment

Respiration protection

Not necessary if room is well-ventilated

Hands protection

Protective gloves



The glove material has to be impermeable and resistant to the product/the substance/the preparation.
 For prolonged or repeated contact use protective gloves.
 Chemical resistant gloves (EN374)

Safety data sheet

according to 1907/2006/EC, Article 31

Trade name: **Et-VC™**

Version: 6

Revision: 2019.12.27

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.

For the permanent contact gloves made of the following materials are suitable:

Natural rubber, NR
 PVC gloves
 Neoprene gloves
 Nitrile rubber, NBR
 Fluorocarbon rubber (Viton)
 PVA gloves
 Butyl rubber, BR

Eye protection

Tightly sealed goggles

General protective measure

Avoid contact with the eyes and skin.

General hygiene measure

The usual precautionary measures are to be adhered to when handling chemicals.

Environmental exposure controls

No further relevant information available

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES
9.1 Information on basic physical and chemical properties

Physical State	Powder
Appearance	Crystalline powder
Color	White
Odor	Characteristic
Odor threshold	Not determined
Property	
pH value (1 g/l) at 20 °C	3.5-5.0
Melting point/Melting range	112-116 °C (OECD 102 capillary method)
Boiling point/Boiling range	214 °C (OECD 103, Siwoloboff)
Flash point	>93°C
Flammability (solid, gaseous)	Not flammable solid (burning time 200 mm>240s) None
Ignition temperature	>400°C
Decomposition temperature	Not determined
Self-igniting	Product is not self-igniting.
Danger of explosion	Product does not present an explosion hazard.
Explosion limit	
Lower	Not determined
Upper	Not determined
Oxidizing properties	Not determined
Explosive properties	Not determined
Vapor pressure at 25 °C	3.1*10 ⁻⁷ Pa (Grain method, EPISUITE)
Vapor density at 20 °C	Not determined
Relative density	1.41 g/cm ³ (OECD 109, pycnometer)

Safety data sheet

according to 1907/2006/EC, Article 31

Trade name: **Et-VC™**

Version: 6

Revision: 2019.12.27

Evaporation rate	Not determined
Solubility (water 20 °C)	778 g/l (Flask method)
Partition coefficient (n-octanol/water at 25 °C)	-0.71 log POW (Flask shake method)
Kinematic viscosity	Not applicable
Dynamic viscosity	Not determined

9.2 Other information

Surface tension	69.6 mN/m at 20 °C, 1 g/l
Dissociation constant	Not determined
Granulometry	The mean value size of >50% of the particles is 95.91 µm.
Specific gravity (20 °C)	Not determined

SECTION 10: STABILITY AND REACTIVITY**10.1 Reactivity**

No further relevant information available

10.2 Chemical stability

The product is stable under ordinary condition.

Thermal decomposition/conditions to be avoided

No decomposition if used according to specifications

10.3 Possibility of hazardous reactions

No dangerous reactions known

10.4 Conditions to avoid

Heat, fire, moisture and incompatible substances

10.5 Incompatible material

No further relevant information available

10.6 Hazardous decomposition products

No dangerous decomposition products known

SECTION 11: TOXICOLOGICAL INFORMATION**11.1 Information on toxicological effects****Acute toxicity****LD/LC50 values relevant for classification**

	Effect dose/concentration	Value	Species
Substance 86404-04-8 3-O- Ethyl Ascorbic Acid			
Acute oral toxicity	LD50	5900 mg/kg bw (QSAR calculation, Consensus method)	rat

Primary Irritant effect**Skin corrosion/irritation**In vitro skin irritation, OECD Guideline 439
(Human patch test, dilution at 2%)

Safety data sheet

according to 1907/2006/EC, Article 31

Trade name: **Et-VC™**

Version: 6

Revision: 2019.12.27

Serious eye damage/irritation	Causes serious eye irritation. (in-vitro HETCAM test, dilution at 3%, moderately irritant)
Respiratory tract	Not determined
Respiratory/skin sensitization	Sensitisation determined by read-across and QSAR calculations

Additional toxicological information

Toxicokinetics, metabolism and distribution Not determined

Repeated dose toxicity Not determined

CMR effects (carcinogenicity, mutagenicity and toxicity for reproduction)

Germ Cell mutagenicity Not Genotoxic
Negative results in test OECD 471, Bacterial Reverse Mutation Test (Ames test)

Carcinogenicity Based on available data, the classification criteria are not met.

Reproductive toxicity Based on available data, the classification criteria are not met.

STOT-single exposure Based on available data, the classification criteria are not met.

STOT-repeated exposure Based on available data, the classification criteria are not met.

Aspiration hazard Based on physical form, product is not expected to pose an aspiration hazard.

SECTION 12: ECOLOGICAL INFORMATION**12.1 Toxicity****Aquatic toxicity**

	Effect dose/concentration	Value	Species	Test
Substance 86404-04-8 3-O- Ethyl Ascorbic Acid				
Acute toxicity	EC50 (72hr)	>100 mg/l	Algae	OECD 201, growth rate
Other	EC50 (48 hr)	>100 mg/l	Daphnia	OECD 202 Daphnia sp acute immobilisation test

12.2 Persistence and degradability

Inherently biodegradable
Degrades 35%, 28 days (30% 10-days window) in the manometric respirometry test (OECD 301F)

12.3 Bioaccumulative potential

Due to the distribution coefficient n-octanol/water a worth-mentioning accumulation in organisms is not expected.

12.4 Mobility in soil

Miscible in water, it is expected to be mobile within the environment.
Adsorption to solid soil is not expected.

12.5 Results of PBT and vPvB assessment

Not applicable

12.6 Other adverse effects

No further relevant information available

SECTION 13: DISPOSAL CONSIDERATIONS**13.1 Waste treatment methods****Recommendation**

Smaller quantities can be disposed of with household waste.

13.2 Uncleaning packaging**Recommendation**

Disposal must be made according to official regulations.

SECTION 14: TRANSPORT INFORMATION**14.1 UN-Number**

ADR/RID

Not applicable

ADN

Not applicable

IMDG

Not applicable

IATA

Not applicable

14.2 UN proper shipping name

ADR/RID

Not applicable

ADN

Not applicable

IMDG

Not applicable

IATA

Not applicable

14.3 Transport hazard class(es)

ADR/RID

Not applicable

ADN

Not applicable

IMDG

Not applicable

IATA

Not applicable

14.4 Packing group

ADR/RID

Not applicable

ADN

Not applicable

IMDG

Not applicable

IATA

Not applicable

14.5 Environmental hazard**Marine pollutant**

No

14.6 Special precautions for user**Special precaution for user**

Not applicable

14.7 Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code

Not applicable

14.8 ICAO/IATA – DGR

Not regulated as dangerous good

SECTION 15: REGULATORY INFORMATION**15.1 Safe, health and environmental regulations/legislation specific for the substance or mixture****Inventory - United States - Toxic Substances Control Act (TSCA)**

Substance is not listed.

Canada Domestic Substances List (DSL)

Substance is not listed.

Canada Non-Domestic Substances List (NDSL)

Substance is not listed.

European Inventory of Existing Chemical Substances (EINECS)

Substance is listed.

Japan Existing and New Chemical Substances (ENCS)

Substance is listed.

China Inventory of Existing Chemical Substance (IECSC)

Substance is listed.

Korean Existing and Evaluated Chemical Substances (KECL)

Substance is not listed.

Philippines Inventory of Chemicals and Chemical Substances (PICCS)

Substance is not listed.

Australian Inventory of Chemical Substances

Substance is listed. Assessed in 2015 will be made public in 2020.

National regulations**Other regulations, limitations and prohibitive regulations**

Not determined

Substances of very high concern (SVHC) according to REACH, Article 59(10)

Not determined

15.2 Chemical safety assessment

A chemical safety assessment has not been carried out.

SECTION 16: OTHER INFORMATION

This information is furnished without warranty, express or implied, except that it is accurate to the best knowledge of CORUM Inc. It relates only to the specific material designated herein and does not relate to use in combination with any other material or in any process. CORUM Inc. assumes no legal responsibility for use of or reliance upon this information.

Abbreviations and acronyms

NOAEL: Non Observed Adverse Effect Level
LOAEL: Lowest Observed Adverse Effect Level
NOEC: No Observed Effect Concentration
GHS: Globally Harmonized System of Classification and Labeling Chemicals
EINECS: European Inventory of Existing Commercial Chemical Substances
ELINCS: European List of Notified Chemical Substances
CAS: Chemical Abstract Service (division of the American Chemical Society)
VbF: Ordinance on the storage of combustible liquids, Austria
DNEL: Derived No-Effect Level (REACH)
PNEC: Predicted No-Effect Concentration (REACH)
LC50: Lethal concentration, 50 percent
LD50: Lethal dose, 50 percent
SVHC: Substances of Very High Concern
PBT: Persistent Bioaccumulative and Toxic
vPvB: very Persistent and very Bioaccumulative
STOT: Specific Target Organ Toxicity
ADR: Agreement on Dangerous Goods by Road
RID: Regulations concerning the Intl Transport of Dangerous Goods by Rail
ADN: The European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways
IMDG: International Maritime Dangerous Goods
IATA: International Air Transport Association
Eye Irrit. 2: Serious eye damage/eye irritation, Hazard Category 2

Sources

Own data from manufacture
Chemical safety report according to REACH registration dossier