

Safety Data Sheet

according to 1907/2006/EC, Article 31, (Commission Regulation (EU) 2020/878)

Trade name: **Et-VC®**

Version: 11

Revision: 2023.11.20

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: Use as a cosmetic ingredient

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 114729, 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
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

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

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P337+P313

If eye irritation persists: Get medical advice/attention.

2.3 Other hazards

Results of PBT and vPvB assessment

PBT:

Based on available data, the ingredients of this mixture do not meet the PBT criteria (not PBT) according to (EC) 1907/2006, Annex XIII.

vPvB:

Based on available data, the ingredients of this mixture do not meet the vPvB criteria (not vPvB) according to (EC) 1907/2006, Annex XIII.

Determination of endocrine-disrupting properties

The product does not contain ingredients with endocrine-disrupting properties for humans.

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

3.1 Substances

Composition/information on ingredients

| Name | Chemical name | Identification | Classification | SCLs, M-Factors | % |
|----------------------------------------|--------------------------------|--------------------------------------------------|-------------------|--------------------|------|
| COMPONENT | | | | | |
| 3-O-Ethyl Ascorbic Acid | L-Ascorbic acid, 3-O-ethyl- | (CAS No.) 86404-04-8 (EC No.) 617-849-3 | Eye Irrit. 2 H319 | - | 100% |

3.2 Mixtures

Not applicable

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 contact | Immediately 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

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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

Protective equipment:

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.

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.

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Ensure good ventilation/exhaustion at the workplace.
Prevent formation of dust.

Information about fire - and explosion protection:

No special measures required.

7.2 Conditions for safe storage, including any incompatibilities

Storage conditions

Protect from light, heat and moisture.
Store in tightly closed container at 25°C. Keep the pack vacuum sealed until use. If material is too hard to break upon bag opening, let it sit for about 10 - 30 minutes. Use the entire contents after opening. If the contents are only partly used, reseal carefully and store in a dry place.

Incompatible materials

None known based on information supplied.

Storage class (VbF)

No

Requirements to be met by storerooms and receptacles

No special measures required.

Information about storage in common storage facility

Not required

Further information about storage conditions

None

7.3 Specific end use(s)

Cosmetic products

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 Control parameters

Ingredients with limit values that require monitoring at the workplace

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

Appropriate engineering controls

Ensure that eyewash and safety showers are in close proximity to work location. Good general ventilation is recommended for handling the product. No further data; see section 7.

Individual protection measures, such as personal protective equipment

General protective and hygienic measures

Avoid contact with the eyes and skin. Wash hands before breaks and at the end of work.

Personal protective equipment

Respiration protection

Not necessary if room is well-ventilated.

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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)

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 (3% aq.sol.) | 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 |

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| | |
|-------------------------------------------------------------|--------------------------------------------------|
| 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) |
| 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. |

Information with regard to physical hazard classes

| | |
|---------------------------------------------------------------------------------|------|
| Explosives | Void |
| Flammable Gases and Chemically Unstable Gases | Void |
| Flammable Aerosols | Void |
| Oxidising Gases | Void |
| Gases Under Pressure | Void |
| Flammable Liquids | Void |
| Flammable Solids | Void |
| Self-reactive Substances and Mixtures | Void |
| Pyrophoric Liquids | Void |
| Pyrophoric Solids | Void |
| Self-heating Substances and Mixtures | Void |
| Substances and Mixtures which in contact with water emit flammable gases | Void |
| Oxidising Liquids | Void |
| Oxidising Solids | Void |
| Organic Peroxides | Void |
| Substances and Mixtures corrosive to Metals | Void |
| Desensitized Explosives | Void |

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

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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

| Name | 3-O-Ethyl Ascorbic Acid CAS:86404-04-8 |
|---------------------------------------------------------------------|--------------------------------------------------------------------------------------------|
| Acute toxicity LD/LC50 values relevant for classification | *Acute oral toxicity, LD50, 5,900 mg/kg bw, rat (QSAR calculation, Consensus method) |
| Skin corrosion/irritation | Non irritant (dilution at 2%) |
| Serious eye damage/irritation | Moderately irritant (dilution at 3%) *H319 Causes serious eye irritation. |
| Respiratory tract | Not determined |
| Respiratory/skin sensitization | Hypoallergenic (Et-VC®) *Sensitisation determined by read-across and QSAR Calculations. |
| Toxicokinetics, metabolism and distribution | Not determined |
| Repeated dose toxicity | Not determined |
| Germ Cell mutagenicity | Not Genotoxic Non mutagenic and non pro-mutagenic |
| 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. |

*from ECHA webpage registration data

11.2 Information on other hazards

| | |
|----------------------------------------|--------------------------|
| Endocrine disrupting properties | Substance is not listed. |
| Phototoxicity | No phototoxic potential. |
| Cytotoxicity | Negligible |

SECTION 12: ECOLOGICAL INFORMATION

| Name | 3-O-Ethyl Ascorbic Acid CAS:86404-04-8 |
|-------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 12.1 Toxicity Aquatic toxicity | *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. |

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| | |
|------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| | *Adsorption to solid soil is not expected. |
| 12.5 Results of PBT and vPvB assessment | PBT: Not applicable vPvB: Not applicable |
| 12.6 Endocrine disrupting properties | The product does not contain substances with endocrine disrupting properties. |
| 12.7 Other adverse effects | Other ecological indications: General indications: Water hazard class 1 (D) (self-classification): little dangerous for water Do not allow concentrated substances, i.e. large quantities, to reach groundwater, watercourses or sewage systems. |

*from ECHA webpage registration data

SECTION 13: DISPOSAL CONSIDERATIONS

13.1 Waste treatment methods

Recommendation
European waste catalogue
HP4

Smaller quantities can be disposed of with household waste.
Not applicable
Irritant - skin irritation and eye damage

13.2 Uncleaning packaging

Recommendation

Disposal must be made according to official regulations.

SECTION 14: TRANSPORT INFORMATION

14.1 UN number or ID number

ADR/RID
ADN
IMDG
IATA

Not applicable
Not applicable
Not applicable
Not applicable

14.2 UN proper shipping name

ADR/RID
ADN
IMDG
IATA

Not applicable
Not applicable
Not applicable
Not applicable

14.3 Transport hazard class(es)

ADR/RID
ADN
IMDG
IATA

Not applicable
Not applicable
Not applicable
Not applicable

14.4 Packing group

ADR/RID
ADN
IMDG
IATA

Not applicable
Not applicable
Not applicable
Not applicable

14.5 Environmental hazard

Marine pollutant

No

14.6 Special precautions for user

Special precaution for user

Not applicable

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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

14.9 Maritime transport in bulk according to

IMO instruments

Not applicable

UN "Model Regulation"

Not applicable

SECTION 15: REGULATORY INFORMATION

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

| Name | 3-O-Ethyl Ascorbic Acid CAS:86404-04-8 |
|--------------------------------------------------------------------|-------------------------------------------|
| Inventory - United States - Toxic Substances Control Act (TSCA) | N |
| Inventory - Canada - Domestic Substances List (DSL) | N |
| Inventory - Canada - Non-Domestic Substances List (NDSL) | N |
| Inventory - Canada - Revised In Commerce List (R-ICL) | N |
| ECHA Inventory of substances | Y |
| Japan Existing and New Chemical Substances (ENCS) | N |
| Inventory of Existing Chemical Substances in China (IECSC) | Y |
| Korean Existing and Evaluated Chemical Substances (KECL) | N |
| Philippines Inventory of Chemicals and Chemical Substances (PICCS) | N |
| Australian Inventory of Industrial Chemicals (AIIC) | Y |
| New Zealand Inventory of Chemicals | Y |
| TCSI - Taiwan Chemical Substance Inventory | Y |
| OECD - List of High Production Volume Chemicals | N |

Y : listed, N : not listed, E : exempted

Directive 2004/42/EC

Seveso category

Substance is not listed.

Directive 2011/65/EU on the restriction of the use of certain hazardous substances in electrical and electronic equipment - Annex II

Substance is not listed.

Regulation (EU) 2019/1148

Annex I - RESTRICTED EXPLOSIVES PRECURSORS (Upper limit value for the purpose of licensing under Article 5(3))

Substance is not listed.

Annex II - REPORTABLE EXPLOSIVES PRECURSORS

Substance is not listed.

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Regulation (EC) No 273/2004 on drug precursors

Substance is not listed.

Regulation (EC) No 111/2005 laying down rules for the monitoring of trade between the Community and third countries in drug precursors

Substance is not listed.

Regulation (EC) No 1005/2009 on substances that deplete the ozone layer – ANNEX I (Ozone-depleting potential)

Substance is not listed.

National regulations

Other regulations, limitations and prohibitive regulations

Not determined

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

Substance is not listed.

15.2 Chemical safety assessment

A chemical safety assessment has not been carried out.

SECTION 16: OTHER INFORMATION

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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