SECTION 1. PRODUCT AND COMPANY IDENTIFICATION

Product name	:	VC Sodium Ascorbate regular
Substance name	:	3-Oxo-L-gulofuranolactone sodium
CAS-No.	:	134-03-2

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

Use of the Substance/Mixture	:	For the fortification of foods, Additive for the stabilisation of foods, Ingredient/additive for dietary supplements, Ingredient for pharmaceutical products

1.3 Details of the supplier of the safety data sheet

Company	:	DSM Nutritional Products 45 Waterview Blvd US-07054-1298 Parsippany
Telephone	:	(908) 475-7373
Telefax	:	(908) 475-7406
E-mail address Responsible/issuing person	:	sds.nutritionalproducts@dsm.com

Distributed By:

atpgroup

2 Madison Ave. Larchmont, NY 10538

Ph: 914-834-1881 Fax: 914-834-4611

1.4 Emergency telephone number

Emergency # 1-800-424-9300 (24 HR CHEMTREC)

SECTION 2. HAZARDS IDENTIFICATION

Emergency Overview

Appearance	Crystalline powder
Colour	white, pale yellow
Odour	odourless

GHS Classification

Combustible dust :

GHS Label element

Signal word : Warning

Hazard statements : May form combustible dust concentrations in air

Potential Health Effects

Aggravated Medical Condition : None known.

Symptoms of Overexposure : No specific symptoms known.

Experience with human exposure

Ingestion : Oral intake up to 9 g ascorbic acid per day does not produce any serious toxic effects. However, diarrhoea can occur even with lower consumption levels.

Carcinogenicity:

IARC No component of this product present at levels greater than or

equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

OSHA No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.

NTP No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.

Additional hazards and advice

Risk of dust explosion.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Synonyms : L-Ascorbic acid, monosodium salt
Vitamin C, sodium salt
Sodium (R)-5-[(S)-1,2-dihydroxyethyl]-3,4-dihydroxy-5H-furan-2-one

Brief description of the product : Substance

Molecular formula : C6-H7-O6 .Na

Hazardous components

No hazardous ingredients

Further ingredients

Component	CAS-No.	Weight percent
sodium ascorbate	134-03-2	99 - 100

SECTION 4. FIRST AID MEASURES

General advice : No hazards which require special first aid measures.

If inhaled : Move to fresh air.
If symptoms persist, call a physician.

In case of skin contact : Take off contaminated clothing and shoes immediately.
Wash off with soap and plenty of water.

In case of eye contact : Flush eyes with water as a precaution.
Remove contact lenses.
Protect unharmed eye.
Keep eye wide open while rinsing.

If swallowed : Clean mouth with water and drink afterwards plenty of water.
Do not give milk or alcoholic beverages.
Never give anything by mouth to an unconscious person.

Most important symptoms and effects, both acute and delayed : No specific symptoms known.

Notes to physician : Treat symptomatically.

SECTION 5. FIREFIGHTING MEASURES

Flammable properties

Flash point : Not applicable

Fire fighting

Suitable extinguishing media : Water
Foam

Further information : Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations.
Consider dust explosion hazard.

Protective equipment and precautions for firefighters

Specific hazards during fire-fighting : None known.

Special protective equipment for firefighters : In the event of fire, wear self-contained breathing apparatus.

SECTION 6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures : Use personal protective equipment.
Avoid dust formation.

Environmental precautions : Try to prevent the material from entering drains or water courses.

Methods and materials for containment and cleaning up : Pick up and arrange disposal without creating dust.

SECTION 7. HANDLING AND STORAGE

Advice on safe handling : For personal protection see section 8.

Advice on protection against fire and explosion : Avoid dust formation.
Provide appropriate exhaust ventilation at places where dust is formed.
Take precautionary measures against static discharges.

Conditions for safe storage : Protect from humidity.

Keep container tightly closed and dry.

Storage temperature : < 77 °F (< 25 °C)

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Components with workplace control parameters

Contains no substances with occupational exposure limit values.

Personal protective equipment

Respiratory protection	:	No personal respiratory protective equipment normally required. In case of high dust concentration use a dust mask applicable to local conditions.
Hand protection	:	Glove material: for example nitrile rubber Consider the hazard characteristics of this product and any special workplace conditions when selecting the appropriate type of protective gloves.
Eye protection	:	Safety glasses with side-shields
Skin and body protection	:	Choose body protection according to the amount and concentration of the dangerous substance at the work place.
Hygiene measures	:	Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties

Appearance	:	Crystalline powder
Colour	:	white - pale yellow
Odour	:	odourless
Odour Threshold	:	No information available.
pH	:	7.0 - 8.0 (10%) (as aqueous solution)
Melting point/range	:	ca. 232 °C (OECD Test Guideline 102) Decomposes before melting.
Boiling point/boiling range	:	Could not be determined due to decomposition.
Flash point	:	Not applicable
Flammability (solid, gas)	:	not highly flammable (Method: Flammability (solids)) May form combustible dust concentrations in air
Vapour pressure	:	< 0.001 hPa (at 25 °C; OECD Test Guideline 104)
Relative vapour density	:	Not applicable
Relative density	:	1.88 (at 20 °C; OECD Test Guideline 109)
Water solubility	:	642.6 g/l (20 °C, pH 6.5; OECD Test Guideline 105) 780 g/l (75 °C)
Solubility in other solvents	:	Ethanol: slightly soluble Ether: practically insoluble

Partition coefficient: n-octanol/water	:	log Pow < -4.2 (21.9 °C, pH 6.6; OECD Test Guideline 117)
Auto-ignition temperature	:	not auto-flammable (Tested according to Directive 92/69/EEC.)
Thermal decomposition	:	Decomposes on heating. Potential for exothermic hazard
Explosive properties	:	Not explosive
Oxidizing properties	:	Not oxidizing

9.2 Other information

Combustibility index for deposited dust	:	2 (ca. 22 °C)
Dust explosion class	:	St(H)1 (Milled sample, Median value of the tested sample 0.0196 mm; The value was determined in the modified Hartmann tube.)
Minimum ignition energy	:	> 300 - 1,000 mJ (Milled sample, Median value of the tested sample 0.0196 mm) The Minimum ignition energy (MIE) of a dust/air mix depends on the particle size the water content and the temperature of the dust. The finer and the dryer the dust the lower the MIE.
	:	General remark: The indicated dust explosion characteristics are only valid for this product and are sensitive to the sample's parameters.
Minimum ignition temperature of a dust/air mix	:	> 610 °C (Median value of the tested sample 0.0196 mm) determined in the BAM oven
Molecular weight	:	198.11 g/mol
Impact sensitivity	:	Not impact sensitive.
Surface tension	:	74 mN/m (0.1 %, ca. 20 °C, OECD Test Guideline 115)

SECTION 10. STABILITY AND REACTIVITY

Reactivity	:	No hazards to be specially mentioned.
Chemical stability	:	Stable under recommended storage conditions.
Possibility of hazardous reactions	:	Dust may form explosive mixture in air.
Conditions to avoid	:	Heat
Incompatible materials	:	Strong acids and strong bases Strong oxidizing agents
Hazardous decomposition products	:	No decomposition if used as directed.

SECTION 11. TOXICOLOGICAL INFORMATION

Acute oral toxicity	:	LD50 (Rat): 16,300 mg/kg
	:	LD50 (Mouse): 17,531 mg/kg
Acute inhalation toxicity	:	No data available
Acute dermal toxicity	:	Acute toxicity estimate : > 5,000 mg/kg (Calculation method)
Skin irritation	:	No skin irritation (Rabbit, 4 h) temporary redness
Eye irritation	:	No eye irritation (Rabbit, Draize Test) temporary redness
	:	Dust contact with the eyes can lead to mechanical irritation.
Sensitisation	:	Does not cause skin sensitisation. (Mouse, Local Lymph Node Assay (LLNA), OECD Test Guideline 429)
Carcinogenicity	:	No indication for carcinogenicity known.
Genotoxicity in vivo	:	No indication for human genotoxicity known.
Reproductive toxicity	:	This information is not available.
Teratogenicity	:	No indication for teratogenicity known.
STOT - single exposure (Acute exposure)	:	The substance or mixture is not classified as specific target organ toxicant, single exposure.
STOT - repeated exposure	:	This information is not available.
Experience with human exposure: Ingestion	:	Oral intake up to 9 g ascorbic acid per day does not produce any serious toxic effects. However, diarrhoea can occur even with lower consumption levels.
Aspiration toxicity	:	No aspiration toxicity classification

SECTION 12. ECOLOGICAL INFORMATION

Toxicity

Toxicity to fish	:	Salmo gairdneri (rainbow trout)

LC50 (48 h) > 1,000 mg/l

Toxicity to daphnia and other aquatic invertebrates : Daphnia magna (Water flea)
EC50 (48 h) 74 mg/l
(OECD Test Guideline 202)

Toxicity to algae : Pseudokirchneriella subcapitata (microalgae)
EC50 (72 h) > 74 mg/l
(OECD Test Guideline 201)
: NOEC (72 h) >= 74 mg/l

Toxicity to bacteria : activated sludge
(28 d) 80 mg/l
No inhibition was observed under the biodegradation test conditions.
(OECD Test Guideline 301A)

Persistence and degradability

Biodegradability : Readily biodegradable
99 % (28 d)
(OECD Test Guideline 301A)

Bioaccumulative potential

Partition coefficient: n-octanol/water : log Pow < -4.2 (21.9 °C , pH 6.6; OECD Test Guideline 117)

Mobility in soil

Distribution among environmental compartments : No data available

Surface tension : 74 mN/m (0.1 %, ca. 20 °C, OECD Test Guideline 115)

Results of PBT and vPvB assessment

Assessment : The substance does not fullfill the PBT criteria.
: The substance does not fullfill the vPvB criteria.

Other adverse effects

Regulation 40 CFR Protection of Environment; Part 82 Protection of Stratospheric Ozone - CAA Section 602 Class I Substances

Remarks This product neither contains, nor was manufactured with a Class I or Class II ODS as defined by the U.S. Clean Air Act Section 602 (40 CFR 82, Subpt. A, App.A + B).

Additional ecological information : Harmful to aquatic organisms.

SECTION 13. DISPOSAL CONSIDERATIONS

Disposal methods

Waste from residues : Discharge into the environment must be avoided.
Do not contaminate ponds, waterways or ditches with chemi-

cal or used container.
Do not dispose of waste into sewer.
Offer surplus and non-recyclable solutions to a licensed disposal company.

User must determine if any wastes generated exhibit hazardous characteristics as per 40 CFR Part 261 or other national / local legislation.

Contaminated packaging : Dispose of as unused product.
Do not re-use empty containers.
Empty containers should be taken to an approved waste handling site for recycling or disposal.

SECTION 14. TRANSPORT INFORMATION

International Regulation

UNRTDG
Not regulated as a dangerous good

IATA-DGR
Not regulated as a dangerous good

IMDG-Code
Not regulated as a dangerous good

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code
Not applicable for product as supplied.

National Regulations

49 CFR
Not regulated as a dangerous good

Remarks : Not classified as dangerous in the meaning of transport regulations.

SECTION 15. REGULATORY INFORMATION

TSCA list : Not relevant

Not relevant

EPCRA - Emergency Planning and Community Right-to-Know Act

CERCLA Reportable Quantity

Components	CAS-No.	Component RQ (lbs)	Calculated product RQ (lbs)
methanol	67-56-1	5000	*

*: Calculated RQ exceeds reasonably attainable upper limit.

SARA 304 Extremely Hazardous Substances Reportable Quantity
This material does not contain any components with a section 304 EHS RQ.

SARA 311/312 Hazards : No SARA Hazards

SARA 302 : No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.

SARA 313 : This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

Clean Air Act

This product does not contain any hazardous air pollutants (HAP), as defined by the U.S. Clean Air Act Section 12 (40 CFR 61).
This product does not contain any chemicals listed under the U.S. Clean Air Act Section 112(r) for Accidental Release Prevention (40 CFR 68.130, Subpart F).
This product does not contain any chemicals listed under the U.S. Clean Air Act Section 111 SOCMI Intermediate or Final VOC's (40 CFR 60.489).

Clean Water Act

This product does not contain any Hazardous Substances listed under the U.S. CleanWater Act, Section 311, Table 116.4A.
This product does not contain any Hazardous Chemicals listed under the U.S. CleanWater Act, Section 311, Table 117.3.
This product does not contain any toxic pollutants listed under the U.S. Clean Water Act Section 307

Massachusetts Right To Know

No components are subject to the Massachusetts Right to Know Act.

Pennsylvania Right To Know

sodium ascorbate	134-03-2	90 - 100 %
methanol	67-56-1	0 - 0.1 %

New Jersey Right To Know

sodium ascorbate	134-03-2	90 - 100 %

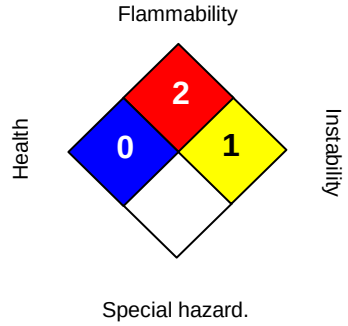
The components of this product are reported in the following inventories:

TSCA : On TSCA Inventory

SECTION 16. OTHER INFORMATION

Further information

NFPA:



HMIS III:

HEALTH	0
FLAMMABILITY	2
PHYSICAL HAZARD	1

0 = not significant, 1 =Slight,
2 = Moderate, 3 = High
4 = Extreme, * = Chronic

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.

Abbreviations: ACGIH = American Conference of Governmental Industrial Hygienists. CERCLA = Comprehensive Environmental Response, Compensation and Liability Act. CFR = Code of Federal Regulations. CPR = Controlled Products Regulations. DSL = Canadian Domestic Substance List. DOT = Department of Transportation. EINECS = European Inventory of New and Existing Chemical Substances. EPA = Environmental Protection Agency. HCS = Hazardous Communication Standard. HEPA = High Efficiency Particulate Air. HMIS = Hazardous Material Identification System. IARC = International Agency for Research on Cancer. IATA = International Air Transport Association. IMDG = International Maritime Dangerous Good. NFPA = National Fire Protection Association. NIOSH = National Institute of Occupational Safety and Health. NJTSR = New Jersey Trade Secret Registry. NTP = National Toxicology Program. OSHA = Occupational Safety and Health Administration. SARA = Superfund Amendments and Reauthorization Act. TDG = Transportation of Dangerous Goods. TLV = Threshold Limit Value. TSCA = Toxic Substance Control Act. WHMIS = Workplace Hazardous Materials Information System.