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SAFETY DATA SHEET
Version 1.1 - EN

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

1.1. Product identifier

Product Name Vinegar and Natural Flavor
Trade name Verdad® Ovvio 410

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

Recommended Use Food.
Uses advised against No information available.

1.3. Details of the supplier of the safety data sheet

Purac Biochem bv
Arkelsedijk 46
NL-4206 AC Gorinchem
The Netherlands
Tel.: +31 183 695695
Fax: +31 183 695604
E-mail: sds@corbion.com

1.4. Emergency telephone number

UK National Health Service (NHS) call 111 or, in life-threatening emergencies, call 999

WAL National Health Service (NHS) call 0845 46 47

IE National Poisons Information Centre
+353 1 809 2566 or +353 1 837 9964 (only for healthcare professionals)

Purac Biochem
+31 183 695695

SECTION 2: HAZARDS IDENTIFICATION

2.1. Classification of the substance or mixture

Classification according to EU
Regulation 1272/2008/EC
Skin corrosion/irritation Category 1A - H314
Serious eye damage/eye irritation Category 1 - H318

For the full text of the H-Statements mentioned in this section, see Section 16

2.2. Label elements



Signal word	Danger
Hazard Statements	H314 - Causes severe skin burns and eye damage
Precautionary Statements	P280 - Wear protective gloves/protective clothing/eye protection/face protection P264 - Wash hands 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 P303 + P361 + P353 - IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower
Contains	Mixture based on Vinegar and Natural Flavor.

2.3 Other hazards

This product does not meet the criteria for PBT or vPvB in accordance with Annex XIII of REACH.

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

3.2 Mixtures

Substance/mixture Mixture based on Vinegar and Natural Flavor

Substance	Weight %
Natural Flavor	<10
Vinegar	60 - 80

For the full text of the H-Statements mentioned in this section, see Section 16.

SECTION 4: FIRST AID MEASURES

4.1. Description of first aid measures

General advice	Keep person warm and at rest. When symptoms persist or in all cases of doubt seek medical advice. Wash contaminated clothing before reuse.
Eye contact	Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. If easy to do, remove contact lenses. Consult a physician.
Skin contact	Wash off immediately with soap and plenty of water while removing all contaminated clothes and shoes. Get medical attention immediately if symptoms occur.
Ingestion	Rinse mouth. Get medical attention immediately if symptoms occur.
Inhalation	Move to fresh air. Get medical attention immediately if symptoms occur.
Protection of first-aiders	Use personal protective equipment. Avoid contact with skin, eyes and clothing.

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

Main symptoms	If on skin: May cause burns, Pain, Redness. If in eyes: May cause burns. May cause redness, itching, and pain.
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4.3. Indication of any immediate medical attention and special treatment needed

Notes to physician	Treat symptomatically.
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SECTION 5: FIREFIGHTING MEASURES

5.1. Extinguishing media

Suitable Extinguishing Media	Water spray, Foam, Dry powder, Carbon dioxide (CO ₂).
Unsuitable Extinguishing Media	Do not use a solid water stream as it may scatter and spread fire.

5.2. Special hazards arising from the substance or mixture

Special Hazard	None in particular.
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5.3. Advice for firefighters

Fire fighting measures	Evacuate non-essential personnel. Move containers from fire area if you can do it without risk. Keep containers and surroundings cool with water spray. Prevent fire extinguishing water from contaminating surface water or the ground water system.
Special protective equipment for fire-fighters	Wear self-contained breathing apparatus and protective suit.

SECTION 6: ACCIDENTAL RELEASE MEASURES

6.1. Personal precautions, protective equipment and emergency procedures

Evacuate personnel to safe areas. Do not touch or walk through spilled material. Avoid contact with skin, eyes and clothing. Avoid breathing vapours or mists. Use personal protective equipment. Ensure adequate ventilation.

6.2. Environmental precautions

Should not be released into the environment. Prevent further leakage or spillage if safe to do so.

6.3 Methods and material for containment and cleaning up

Large amounts: Prevent further leakage or spillage if safe to do so. Dike to collect large spills. Use a non-combustible material like vermiculite, sand or earth to soak up the product and place into a container for later disposal. Sweep up and shovel into suitable containers for disposal. Following product recovery, flush area with water. Small amounts: Wipe up with absorbent material (e.g. cloth, fleece). After cleaning, flush away traces with water. Never return spills in original containers for re-use.

6.4. Reference to other sections

See sections 8 and 13.

SECTION 7: HANDLING AND STORAGE

7.1 Precautions for safe handling

Handle in accordance with good industrial hygiene and safety practice. Avoid contact with skin, eyes and clothing. Avoid breathing vapours or mists. Ensure adequate ventilation. Wear personal protective equipment. Wash hands thoroughly after handling. Do not eat, drink or smoke when using this product.

7.2. Conditions for safe storage, including any incompatibilities

Store in accordance with local regulations. Keep containers tightly closed in a cool, well-ventilated place.

7.3. Specific end use(s)

Exposure scenario Not available.

Other information Not available.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION
8.1. Control parameters
Exposure Limits

Substance	European Union	The United Kingdom	France	Spain	Germany
Vinegar	TWA 10 ppm deleted with effect from August 21, 2018 TWA 25 mg/m ³ deleted with effect from August 21, 2018		STEL: 10 ppm TWA: 25 mg/m ³	STEL: 15 ppm STEL: 37 mg/m ³ TWA: 10 ppm TWA: 25 mg/m ³	TWA: 10 ppm TWA: 25 mg/m ³ Ceiling / Peak: 20 ppm Ceiling / Peak: 50 mg/m ³

Substance	Italy	Portugal	Netherlands	Denmark	Poland
Vinegar		STEL: 15 ppm TWA: 10 ppm TWA: 25 mg/m ³	TWA: 25 mg/m ³	TWA: 10 ppm TWA: 25 mg/m ³	STEL: 50 mg/m ³ TWA: 25 mg/m ³

Substance	Belgium	Sweden	Hungary	Finland	Czech Republic
Vinegar		5 ppm TLV NGV; 13 mg/m ³ TLV NGV Indicative STEL 25 mg/m ³	STEL: 25 mg/m ³ TWA: 25 mg/m ³	TWA: 5 ppm TWA: 13 mg/m ³ STEL: 10 ppm STEL: 25 mg/m ³	Ceiling: 35 mg/m ³ TWA: 25 mg/m ³

Legend:

STEL - Short Term Exposure Limit

TWA - Time-Weighted Average

Biological Limit Values Not established.

Recommended monitoring procedures No information available.

Derived No Effect Level (DNEL) No information available

Substance	Worker - inhalative, long-term - local	Worker - dermal, long-term - local	Worker - inhalative, short-term - local	Worker - dermal, short-term - local
Vinegar	25 mg/m ³		25 mg/m ³	

Predicted No Effect Concentration (PNEC)

Substance	Freshwater	Marine water	Intermittent release	Sewage treatment plant	Freshwater sediment	Marine sediment	Soil	Oral
Natural Flavor	1.3 mg/L			10 mg/L				

8.2. Exposure controls

Appropriate engineering controls	Ensure adequate ventilation, especially in confined areas. Ensure that eyewash stations and safety showers are close to the workstation location.
Individual protection measures, such as personal protective equipment	
Eye protection	Tightly fitting safety goggles (EN166).
Hand Protection	Protective gloves (EN374): Natural Rubber (0.5 mm), Polychloroprene (CR) (0.5 mm), Butyl rubber (0.5 mm), Fluorinated rubber (FKM) (0.4 mm). Break through time: 8 hours. Nitrile rubber (NBR) (0.35 mm). Break through time <=4 hours.
Skin and body protection	Long sleeved clothing.
Respiratory protection	None under normal use conditions. In case of insufficient ventilation wear suitable respiratory equipment. Use the indicated respiratory protection if the occupational exposure limit is exceeded and/or in case of product release.
Recommended Filter Type	Gasfilter: E, yellow.
Hygiene Measures	Handle in accordance with good industrial hygiene and safety practice. Workers must be trained in the proper use and handling of this product as required under applicable regulations. Do not eat, drink or smoke when using this product. Wash hands before breaks and immediately after handling the product. Wash contaminated clothing before re-use.
Environmental Exposure Controls	The product should not be allowed to enter drains, water courses or the soil.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

9.1. Information on basic physical and chemical properties

Physical state @20°C	Liquid
Colour	Brownish
Odour	No information available
pH	3.5 - 5.5
Melting/freezing point	Not applicable
Boiling point/boiling range	No information available
Flash point	No information available
Evaporation rate	No information available
Flammability (solid, gas)	No information available
Flammability Limits in Air	No information available
Explosive limits	Not applicable
Vapour pressure	No information available
Vapour density	No information available
Relative density	No information available
Solubility	
Water solubility	Soluble
Partition Coefficient (n-octanol/water)	No information available
Autoignition temperature	No information available
Decomposition temperature	No information available
Viscosity, dynamic	No information available
Explosive properties	No information available
Oxidising properties	No information available

9.2 Other information

Density	1100 - 1250 kg/m ³
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SECTION 10: STABILITY AND REACTIVITY

10.1. Reactivity

None known.

10.2. Chemical stability

Stable under recommended storage conditions.

10.3 Possibility of hazardous reactions

Hazardous polymerisation does not occur.

10.4. Conditions to avoid

Temperatures above 200 °C / 392 °F.

10.5. Incompatible materials

Oxidizing agents

10.6. Hazardous decomposition products

None under normal use.

SECTION 11: TOXICOLOGICAL INFORMATION

11.1. Information on toxicological effects

Acute toxicity
Ingestion No known effect.
Skin contact No known effect.
Inhalation No known effect.

Substance	LD50 Oral	LD50 Dermal	LC50 Inhalation
Vinegar	3310 mg/kg (Rat)	1060 mg/kg (Rabbit)	11.4 mg/L (Rat) 4 h

Skin corrosion/irritation Causes severe skin burns and eye damage.

Serious eye damage/irritation Causes serious eye damage.

Substance	Skin corrosion/irritation	Serious eye damage/irritation
Natural Flavor	OECD 404, In vivo, Rabbit, solution (88 %) Result: Irritating	CEET, Ex vivo, solution (88 %) Result: Severe eye irritation

Respiratory or skin sensitisation No known effect

Germ cell mutagenicity Not known to cause heritable genetic damage.

Carcinogenicity Contains no ingredient listed as a carcinogen.

Reproductive toxicity Not known to cause birth defects or have a deleterious effect on a developing fetus. Not known to adversely affect reproductive functions and organs.

STOT-single exposure No known effect.

STOT-repeated exposure No known effect.

Aspiration hazard No known effect.

SECTION 12: ECOLOGICAL INFORMATION

12.1. Toxicity

Contains no substances known to be hazardous for the environment.

Substance	Toxicity to algae	Toxicity to fish	Toxicity to microorganisms	Toxicity to daphnia and other aquatic invertebrates
Vinegar		79: 96 h Pimephales promelas mg/L LC50 static 75: 96 h Lepomis macrochirus mg/L LC50 static		65: 48 h Daphnia magna mg/L EC50 Static 47: 24 h Daphnia magna mg/L EC50

12.2. Persistence and degradability

Biodegradable

12.3. Bioaccumulative potential

Bioaccumulation is unlikely.

Substance	Log P _{ow}	Bioconcentration factor (BCF)
Natural Flavor	-0.62	
Vinegar	-0.31	

12.4. Mobility in soil

No information available.

12.5. Results of PBT and vPvB assessment

This preparation contains no substance considered to be persistent, bio-accumulating nor toxic (PBT). This preparation contains no substance considered to be very persistent nor very bio-accumulating (vPvB).

12.6. Other adverse effects

No information available.

SECTION 13: DISPOSAL CONSIDERATIONS

13.1. Waste treatment methods

Waste from residues / unused products Dispose of in accordance with local regulations.

Contaminated packaging Empty containers should be taken to an approved waste handling site for recycling or disposal.

SECTION 14: TRANSPORT INFORMATION

According to: ADR, RID, ADN, IMDG, IATA/ICAO.

14.1. UN number

Not classified. According to ADR (2017) chapter 3.3, special provision 647 is applicable for this product.

14.2. UN proper shipping name

Not regulated.

14.3. Transport hazard class(es)

Not regulated.

14.4. Packing group

Not regulated. Take ADR, 2017 special provision 647 into account for the packaging of this product.

14.5 Environmental hazards

Not applicable.

14.6 Special precautions for user

Not applicable.

14.7 Transport in bulk according to Annex II of MARPOL and the IBC Code

Not applicable.

SECTION 15: REGULATORY INFORMATION

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

Restrictions on use	None.
Other Regulations	No information available
WGK Classification	Non-hazardous to water (WGK 0)

Take note of Dir 94/33/EC on the protection of young people at work. .

15.2 Chemical safety assessment

Not available.

SECTION 16: OTHER INFORMATION

Full text of H-Statements referred to under sections 2 and 3	H226 - Flammable liquid and vapour H314 - Causes severe skin burns and eye damage H315 - Causes skin irritation H318 - Causes serious eye damage
Revision Note	Indication of the changes made to the previous version of the SDS: Section 3.
Training Advice	Workers must be trained in the proper use and handling of this product as required under applicable regulations.
Abbreviations and acronyms	REACH: Registration, Evaluation, Authorisation and Restriction of Chemical substances EC: European Commission STOT: Specific Target Organ Toxicity PBT: Persistent, Bioaccumulative, Toxic vPvB: very Persistent and very Bioaccumulating ADR: Accord européen relatif au transport international des marchandises Dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road) 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) IMDG: International Maritime Dangerous Goods Code ICAO: International Civil Aviation Organization
SDS No.	CO00131
Subformat	COEU

This safety data sheet complies with the requirements of Regulation (EC) No. 1907/2006 and Regulation (EC) No. 2015/830. Label element according to Regulation (EC) No 1272/2008.

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