



Vetro Power Nano Electro Protect

MATERIAL SAFETY DATA SHEET (MSDS)

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier

Product name : Vetro Power Nano Electro Protect
Product code :

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

1.2.1. Vetro Power Nano Electro Protect

1.3. Details of the supplier of the safety data sheet

ZYAX Chem LLP
3rd Floor, Kamer Building,
38 Cawasji Patel Street, Fort,
Mumbai - 400001, India.
Contact No: +91 8779240420
info@zyax.in - www.zyax.in

1.4. Emergency telephone number

Emergency number : +91 22 2757 3899

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Classification according to Regulation (EC) No. 1272/2008 [CLP]

Flammable liquids, Category 2 H225

Full text of H- and EUH-statements: see section 16

Adverse physicochemical, human health and environmental effects

Highly flammable liquid and vapour.

Not classified

Adverse physicochemical, human health and environmental effects

To our knowledge, this product does not present any particular risk, provided it is handled in accordance with good occupational hygiene and safety practice.

2.2. Label elements

Labelling according to Regulation (EC) No. 1272/2008 [CLP] No labelling applicable

2.3. Other hazards

Other hazards which do not result in classification : Exercise customary precautions when handling chemicals.

This substance/mixture does not meet the PBT criteria of REACH regulation, annex XIII

This substance/mixture does not meet the vPvB criteria of REACH regulation, annex XIII

Contains no PBT/vPvB substances $\geq 0.1\%$ assessed in accordance with REACH Annex XIII

The mixture does not contain substance(s) included in the list established in accordance with Article 59(1) of REACH for having endocrine disrupting properties, or is not identified as having endocrine disrupting properties in accordance with the criteria set out in Commission Delegated Regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at a concentration equal to or greater than 0,1 %

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

3.1. Substances

Not applicable

3.2. Mixtures

This mixture does not contain any substances to be mentioned according to the criteria of section 3.2 of REACH Annex II

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This mixture does not contain any substances to be mentioned according to the criteria of section 3.2 of REACH Annex II

SECTION 4: FIRST AID MEASURES

4.1 Description of first aid measures

First-aid measures after inhalation	: Remove person to fresh air and keep comfortable for breathing.
First-aid measures after skin contact	: Wash skin with plenty of water. If skin irritation or rash occurs: Get medical advice/attention.
First-aid measures after eye contact	: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Obtain medical attention if pain, blinking or redness persists.
First-aid measures after ingestion	: Rinse mouth out with water. Do not induce vomiting. medical advice.

4.2 Most important symptoms and effects, both acute and delayed No additional information available

4.3 Indication of any immediate medical attention and special treatment needed Treat symptomatically.

SECTION 5: Firefighting measures

5.1 Extinguishing media

Suitable extinguishing media	: Water spray. Dry powder. Foam. Carbon dioxide.
Unsuitable extinguishing media	: high volume water jet.

5.2 Special hazards arising from the substance or mixture

Hazardous decomposition products in case of fire	: Highly flammable liquid and vapour. Hazardous decomposition products in case of fire : Toxic fumes may be released. Carbon oxides (CO, CO2).
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Advice for firefighters	: Cool down the containers exposed to heat with a water spray. Be careful to flashback of fire. Protection during firefighting : Do not attempt to take action without suitable protective equipment. Self-contained breathing apparatus. Complete protective clothing.
Protection during firefighting	
Other information	: Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations. Do not allow run-off from fire-fighting to enter drains or water courses.

SECTION 6: Accidental release measures

Personal precautions, protective equipment and emergency procedures

6.1 General measures	: No flames, no sparks. Eliminate all sources of ignition.
6.1.1. For non-emergency personnel Emergency procedures	: Ventilate spillage area.
6.1.2. For emergency responders Protective equipment	: Do not attempt to take action without suitable protective equipment. For further information refer to section 8: "Exposure controls/personal protection".

Environmental precautions

6.2 Avoid release to the environment. Prevent entry to sewers and public waters. Notify authorities if product enters sewers or public waters.	
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6.3 Methods and material for containment and cleaning up

Methods for cleaning up : Take up liquid spill into absorbent material.
Other information : Notify authorities if product enters sewers or public waters.
Dispose of materials or solid residues at an authorized site.

6.4 Reference to other sections

For further information refer to section 13.

SECTION 7: HANDLING AND STORAGE

7.1 Precautions for safe handling

Precautions for safe handling : Ensure good ventilation of the work station.
Hygiene measures : Do not eat, drink or smoke when using this product. Always wash hands after handling the product. Take off immediately all contaminated clothing and wash it before reuse.

7.2 Conditions for safe storage, including any incompatibilities

Storage conditions : Store in a well-ventilated place. Keep cool. Keep container tightly closed.
Incompatible products : Oxidizing agent.
Heat and ignition sources : Keep away from sources of ignition - No smoking.
Information on mixed storage : Keep away from any flames or sparking source.
Storage area

7.3 Specific end use(s)

Keep away from oxidizing agents.
Store away from heat. Protect from sunlight.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1. Control parameters

8.1.1 National occupational exposure and biological limit values

ethanol (64-17-5) Ireland - Occupational Exposure Limits , Local name - Ethanol [Ethyl alcohol], OEL STEL 1000 ppm
Chemical Agents Code of Practice 2021

8.1.2. Recommended monitoring procedures

No additional information available

8.1.3. Air contaminants formed

No additional information available

8.1.4. DNEL and PNEC

No additional information available

8.1.5. Control banding

No additional information available

8.2. Exposure controls

8.2.1. Appropriate engineering controls

Appropriate engineering controls:
Ensure good ventilation of the work station.

8.2.2. Personal protection equipment

8.2.2.1. Eye and face protection

Eye protection:
Safety glasses

8.2.2.2. Skin protection

Skin and body protection:

Long sleeved protective clothing

Hand protection:

In case of repeated or prolonged contact wear gloves.

Please follow the instructions related to the permeability and the penetration time provided by the manufacturer.

Choosing the proper glove is a decision that depends not only on the type of material, but also on other quality features, which differ for each manufacturer.

Material : Neoprene rubber (HNBR), Permeation : 6 (> 480 minutes), Thickness (mm) : 0,75 , Standard : EN ISO 374

8.2.2.3. Respiratory protection

Respiratory protection:

Respiratory protection: Wear breathing apparatus if exposed to vapours/dusts/aerosols. Filter Type: ABEK

8.2.2.4. Thermal hazards

No additional information available

8.2.3. Environmental exposure controls

Environmental exposure controls:

Avoid release to the environment.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties

Physical state	: Liquid
Colour	: Colourless.
Odour	: alcoholically.
Odour threshold	: Not available
Melting point	: > 78 °C
Freezing point	: Not available
Boiling point	: > 100 °C
Flammability	: Not available
Explosive limits	: Not available
Lower explosion limit	: 3,5 vol % Ethanol
Upper explosion limit	: 15 vol % Ethanol
Flash point	: 12 °C Ethanol
Auto-ignition temperature	: Not available
Decomposition temperature	: Not available
pH	: 2,1 – 2,4
Viscosity, kinematic	: Not available
Solubility	: Miscible with water.
Partition coefficient n-octanol/water (Log Kow)	: Not available
Vapour pressure	: Not available
Vapour pressure at 50 °C	: Not available
Density	: ≈ 0,8 g/ml
Relative density	: Not available
Relative vapour density at 20 °C	: Not available
Particle characteristics	: Not applicable

9.2 Other information

9.2.1. Information with regard to physical hazard classes

No additional information available

9.2.2. Other safety characteristics

No additional information available

SECTION 10: STABILITY AND REACTIVITY

- 10.1 Reactivity
Highly flammable liquid and vapour.
- 10.2 Chemical stability
Stable under normal conditions.
- 10.3 Possibility of hazardous reactions
In use, may form flammable vapour-air mixture.
- 10.4 Conditions to avoid
Avoid contact with hot surfaces. Heat. No flames, no sparks. Eliminate all sources of ignition.
- 10.5 Incompatible materials
Oxidizing agent.
- 10.6 Hazardous decomposition products
Under normal conditions of storage and use, hazardous decomposition products should not be produced.

SECTION 11: TOXICOLOGICAL INFORMATION

- 11.1 Information on hazard classes as defined in Regulation (EC) No 1272/2008
- | | |
|-----------------------------|------------------|
| Acute toxicity (oral) | : Not classified |
| Acute toxicity (dermal) | : Not classified |
| Acute toxicity (inhalation) | : Not classified |
- ethanol (64-17-5)
- | | |
|---------------|---|
| LD50 oral rat | : 10470 mg/kg bodyweight Animal: rat, Guideline: OECD Guideline 401 (Acute Oral Toxicity), 95% CL: 9720 - 11380 |
| LD50 oral | : 8300 mg/kg bodyweight Animal: mouse |
- Trimethoxy(2-methylpropyl)silane (18395-30-7)
- | | |
|---------------|--|
| LD50 oral rat | : > 2000 mg/kg bodyweight Animal: rat, Guideline: OECD Guideline 401 (Acute Oral Toxicity) |
|---------------|--|
- | | |
|-----------------------------------|-----------------------------------|
| Skin corrosion/irritation | : Not classified
pH: 2,1 - 2,4 |
| Serious eye damage/irritation | : Not classified
pH: 2,1 - 2,4 |
| Respiratory or skin sensitisation | : Not classified |
| Germ cell mutagenicity | : Not classified |
| Carcinogenicity | : Not classified |
| Reproductive toxicity | : Not classified |
| STOT-single exposure | : Not classified |
| STOT-repeated exposure | : Not classified |
| Aspiration hazard | : Not classified |
- Trimethoxy(2-methylpropyl)silane (18395-30-7)
- | | |
|----------------------|--------------------------------------|
| STOT-single exposure | : May cause drowsiness or dizziness. |
|----------------------|--------------------------------------|
- ethanol (64-17-5)
- | | |
|----------------------------|---|
| LOAEL (oral, rat, 90 days) | : 3200 mg/kg bodyweight Animal: rat, Animal sex: male, Guideline: OECD Guideline 408 (Repeated Dose 90-Day Oral Toxicity Study in Rodents) |
| NOAEL (oral, rat, 90 days) | : (Repeated Dose 90-Day Oral Toxicity Study in Rodents) NOAEL (oral, rat, 90 days) 1730 mg/kg bodyweight Animal: rat, Animal sex: male, Guideline: OECD Guideline 408 (Repeated Dose 90-Day Oral Toxicity Study in Rodents), Remarks on results: other: |

NOAEL (subchronic, oral, animal/male, 90 days) : < 9700 mg/kg bodyweight Animal: mouse, Animal sex: male, Guideline: EPA OPPTS 870.3100 (90-Day Oral Toxicity in Rodents)

NOAEL (subchronic, oral, animal/female, 90 days) : > 9400 mg/kg bodyweight Animal: mouse, Animal sex: female, Guideline: EPA OPPTS

Trimethoxy(2-methylpropyl)silane (18395-30-7)

NOAEL (oral, rat, 90 days) : ≥ 1000 mg/kg bodyweight Animal: rat, Guideline: OECD Guideline 407 (Repeated Dose 28- Day Oral Toxicity Study in Rodents)

NOAEC (inhalation, rat, vapour, 90 days) : ≥ 2,54 mg/l air Animal: rat, Guideline: OECD Guideline 413 (Subchronic Inhalation Toxicity:

Trimethoxy(2-methylpropyl)silane (18395-30-7)

Viscosity, kinematic : 0,86 mm²/s

- 11.2 Information on other hazards
No additional information available

SECTION 12: ECOLOGICAL INFORMATION

12.1. Toxicity

Ecology - general : We have no quantitative data concerning the ecological effects of this product.
Hazardous to the aquatic environment, short-term (acute) : Not classified

Hazardous to the aquatic environment, long-term (chronic) : Not classified

Additional information
ethanol (64-17-5)

LC50 - Fish [1] : 14,2 g/l Test organisms (species): Pimephales promelas

EC50 - Crustacea [1] : 10000 mg/l Test organisms (species): Daphnia magna

EC50 96h - Algae [1] : 22000 mg/l Test organisms (species): Pseudokirchneriella subcapitata (previous names:

NOEC (chronic) : 9,6 mg/l Test organisms (species): Daphnia magna Duration: '9 d'

Trimethoxy(2-methylpropyl)silane

LC50 - Fish [1] : > 100 mg/l Test organisms (species): Danio rerio (previous name: Brachyda-

EC50 - Crustacea [1] : > 864 mg/l Test organisms (species): Daphnia magna

EC50 96h - Algae [1] : > 1170 mg/l Test organisms (species): Desmodesmus subspicatus (previous name:

12.2. Persistence and degradability

Liquid Electronic Grade Coating
Persistence and degradability

: The product is partially biodegradable. Significant residues remain. Ethanol. Readily

ethanol (64-17-5)

Persistence and degradability : Rapidly degradable

Trimethoxy(2-methylpropyl)silane

Persistence and degradability : Rapidly degradable

12.3. Bioaccumulative potential

No additional information available

12.4. Mobility in soil

No additional information available

12.5. Results of PBT and vPvB assessment

This substance/mixture does not meet the PBT criteria of REACH regulation, annex XIII

This substance/mixture does not meet the vPvB criteria of REACH regulation, annex XIII

12.6. Endocrine disrupting properties

No additional information available

12.7. Other adverse effects

No additional information available

SECTION 13: DISPOSAL CONSIDERATIONS

13.1. Waste treatment methods

Waste treatment methods

: Dispose of contents/container in accordance with licensed collector's sorting instructions.

Product/Packaging disposal recommendations : Dispose in a safe manner in accordance with local/national regulations.

Additional information

: Waste code can't be determined according to the European Waste Catalogue (EWC), since it depends on the use of the product.
Waste codes should be assigned by the user, preferably in discussion with the waste disposal authorities.

R code/ D code

: D10 - Incineration on land

SECTION 14: TRANSPORT INFORMATION

	ADR	IMDG	IATA
14.1	UN number or ID number UN 1170	UN 1170	UN 1170
14.2	UN proper shipping name ETHANOL SOLUTION (ETHYL ALCOHOL SOLUTION)	ETHANOL SOLUTION (ETHYL ALCOHOL SOLUTION)	ETHANOL SOLUTION (ETHYL ALCOHOL SOLUTION)
14.3	Transport hazard class(es) UN 1170 ETHANOL SOLUTION (ETHYL ALCOHOL SOLUTION),3, II, (D/E)	UN 1170 ETHANOL SOLUTION (ETHYL ALCOHOL SOLUTION), 3, II, (D/E)	UN 1170 ETHANOL SOLUTION (ETHYL ALCOHOL SOLUTION), 3, II, (D/E)
14.4	Packing group II	II	II
14.5	Environmental hazards Dangerous for the environment: No	Dangerous for the environment: No	Dangerous for the environment: No

No supplementary information available

14.6. Special precautions for user

Overland transport

Classification code (ADR) : F1
 Special provisions (ADR) : 144, 601
 Limited quantities (ADR) : 11
 Excepted quantities (ADR) : E2
 Packing instructions (ADR) : P001, IBC02, R001
 Mixed packing provisions (ADR) : MP19
 Portable tank and bulk container instructions (ADR) : T4
 Portable tank and bulk container special provisions (ADR) : TP1

Tank code (ADR) : LGBF
 Vehicle for tank carriage : FL
 Transport category (ADR) : 2
 Special provisions for carriage - Operation (ADR) : S2, S20
 Hazard identification number (Kemler No.) : 33
 Tunnel restriction code (ADR) : D/E

Transport by sea

Special provisions (IMDG) : 144
 Limited quantities (IMDG) : 1 L
 Excepted quantities (IMDG) : E2
 Packing instructions (IMDG) : P001
 IBC packing instructions (IMDG) : IBC02
 Tank instructions (IMDG) : T4
 Tank special provisions (IMDG) : TP1
 EmS-No. (Fire) : F-E
 EmS-No. (Spillage) : S-D
 Stowage category (IMDG) : A
 Properties and observations (IMDG) : Colourless, volatile liquids. Pure ETHANOL: flashpoint 13°C c.c.
 Explosive limits: 3.3% to 19%. Miscible with water.

Air transport

PCA Excepted quantities (IATA) : E2
 PCA Limited quantities (IATA) : Y341
 PCA limited quantity max net quantity (IATA) : 1L
 PCA packing instructions (IATA) : 353
 PCA max net quantity (IATA) : 5L
 CAO packing instructions (IATA) : 364
 CAO max net quantity (IATA) : 60L
 Special provisions (IATA) : A3, A58, A180
 ERG code (IATA) : 3L

14.7. Maritime transport in bulk according to IMO instruments

Not applicable

SECTION 15: REGULATORY INFORMATION

15.1.1. EU-Regulations

REACH Annex XVII (Restriction List)
 Contains no substance(s) listed on REACH Annex XVII (Restriction Conditions)
 REACH Annex XIV (Authorisation List)
 Contains no substance(s) listed on REACH Annex XIV (Authorisation List)
 REACH Candidate List (SVHC)

Contains no substance(s) listed on the REACH Candidate List

PIC Regulation (Prior Informed Consent)

Contains no substance(s) listed on the PIC list (Regulation EU 649/2012 concerning the export and import of hazardous chemicals)

POP Regulation (Persistent Organic Pollutants)

Contains no substance(s) listed on the POP list (Regulation EU 2019/1021 on persistent organic pollutants)

Ozone Regulation (1005/2009)

Contains no substance(s) listed on the Ozone Depletion list (Regulation EU 1005/2009 on substances that deplete the ozone layer)

Explosives Precursors Regulation (2019/1148)

Contains no substance(s) listed on the Explosives Precursors list (Regulation EU 2019/1148 on the marketing and use of explosives precursors)

Drug Precursors Regulation (273/2004)

Contains no substance(s) listed on the Drug Precursors list (Regulation EC 273/2004 on the manufacture and the placing on market of certain substances used in the illicit manufacture of narcotic drugs and psychotropic substances)

15.1.2. National regulations

No additional information available

15.2. Chemical safety assessment

No chemical safety assessment has been carried out

SECTION 16: OTHER INFORMATION

The information given is based on our knowledge of this product at the time of publication. It is given in good faith. The attention of the user is drawn to the possible risks incurred by using the products for purposes other than those it is intended for. It is the sole responsibility of the user to take all precautions required in handling the product. We as manufacturer give the guarantee for the quality of the product.