

# Vetro Power Metal & Stainless Steel Shield

## 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 Metal & Stainless Steel Protection  
Product code : -

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

1.2.1. Identified uses: Metal & Stainless Steel Protection

#### 1.3. Details of the supplier of the safety data sheet

**ZYAX Chem Pvt. Ltd.**  
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

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

Flammable liquids, Category 2

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

Adverse physicochemical, human health and environmental effects Highly flammable liquid and vapour.

#### 2.1. Label elements

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

Hazard pictograms (CLP)



GHS02

Signal word (CLP) : Danger

Hazard statements (CLP) : H225 - Highly flammable liquid and vapour.

Precautionary statements (CLP) : P102 - Keep out of reach of children.

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P210 - Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.  
P233 - Keep container tightly closed.  
P410 - Protect from sunlight.  
P243 - Take action to prevent static discharges.  
P262 - Do not get in eyes, on skin, or on clothing.  
P260 - Do not breathe vapours.  
P301 + P315 - IF SWALLOWED: Get immediate medical advice/attention.  
P501 - Dispose of contents/container to Collection point.

Child-resistant fastening : Not applicable  
Tactile warning : Applicable

### 2.3. Other hazards

Other hazards which do not result in classification : In use, may form flammable/explosive vapour-air mixture.  
May cause eye-irritation of susceptible persons.  
Repeated or prolonged skin contact may cause dermatitis and defatting.

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

Not applicable

| Name                                                                   | Product identifier                                                  | Conc. | Classification according to Regulation (EC) No. 1272/2008 [CLP] |
|------------------------------------------------------------------------|---------------------------------------------------------------------|-------|-----------------------------------------------------------------|
| ethanol<br>substance with national workplace exposure limit(s)<br>(GB) | CAS-No.: 64-17-5<br>EC-No.: 200-578-6<br>EC Index-No.: 603-002-00-5 | > 75  | Flam. Liq. 2, H225                                              |
| Trimethoxy(2-methylpropyl)silane                                       | CAS-No.: 18395-30-7<br>EC-No.: 242-272-5                            | 1 - 5 | Flam. Liq. 3, H226<br>Skin Irrit. 2, H315<br>STOT SE 3, H336    |

## 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 : Rinse skin with water/shower. Take off immediately all contaminated clothing.  
If symptoms persist call a doctor.  
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 : Do not induce vomiting. Rinse mouth out with water. Get immediate medical advice/attention. If possible, show the doctor this safety data sheet. Failing this, show the doctor the packaging or label.

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### 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

Fire hazard : Highly flammable liquid and vapour.

Hazardous decomposition products in case of fire : Toxic fumes may be released. Carbon oxides (CO, CO<sub>2</sub>).

### 5.3. Advice for firefighters

Firefighting instructions : 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.

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

### 6.1. Personal precautions, protective equipment and emergency procedures

General measures : No flames, no sparks. Eliminate all sources of ignition.

6.1.1. For non-emergency personnel

Emergency procedures : Ventilate spillage area. No open flames, no sparks, and no smoking.

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".

### 6.2. Environmental precautions

Avoid release to the environment. Prevent entry to sewers and public waters. Notify authorities if product enters sewers or public waters.

### 6.3. Methods and material for containment and cleaning up

Methods for cleaning up : Take up liquid spill into absorbent material.

Notify authorities if product enters sewers or public waters.

Other information

: 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. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Use only non-sparking tools.                                                                                                                                                                   |
| Hygiene measures              | : Use explosion-proof equipment. Wear personal protective equipment.<br>: Do not eat, drink or smoke when using this product. Always wash hands after handling the for safe handling product. Take off immediately all contaminated clothing and wash it before reuse. Prevent aerosol formation or splashes.<br>Do not inhale spray vapour. |

#### 7.2. Conditions for safe storage, including any incompatibilities

|                              |                                                                                                                                                     |
|------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------|
| Technical measures           | : Ground/bond container and receiving equipment. Take precautionary measures against static discharge. Ensure good ventilation of the work station. |
| 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.<br>Keep away from any flames or sparking source.                                                 |
| Information on mixed storage | : Keep away from oxidizing agents.                                                                                                                  |
| Storage area                 | : Store away from heat. Protect from sunlight.                                                                                                      |

#### 7.3. Specific end use(s)

No additional information available

### SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

#### 8.1. Control parameters

##### 8.1.1 National occupational exposure and biological limit values ethanol (64-17-5)

United Kingdom - Occupational Exposure Limits

|                       |                                       |
|-----------------------|---------------------------------------|
| Local name            | Ethanol                               |
| WEL TWA (OEL TWA) [1] | 1920 mg/m <sup>3</sup>                |
| WEL TWA (OEL TWA) [2] | 1000 ppm                              |
| Regulatory reference  | EH40/2005 (Fourth edition, 2020). HSE |

##### 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

Personal protective equipment symbol(s):

##### 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

Hand protection

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

##### 8.2.2.3. Respiratory protection

Respiratory protection:

Wear breathing apparatus if exposed to vapours/dusts/aerosols

Respiratory protection

| Device | Filter type | Condition | Standard |
|--------|-------------|-----------|----------|
|        | 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                                           | : alcohoolically.      |
| Odour threshold                                 | : Not available        |
| Melting point                                   | : Not available        |
| Freezing point                                  | : Not available        |
| Boiling point                                   | : > 78 °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            |
| pH solution concentration                       | : 5 %                  |
| 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       |

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

|                 |                              |
|-----------------|------------------------------|
| Boiling point   | 150 °C Atm. press.: 1013 hPa |
| Flash point     | 27 °C Atm. press.: 101,3 kPa |
| Vapour pressure | 190 Pa Temp.: 25 °C          |

#### 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

#### 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

#### ethanol (64-17-5)

IARC group 1 - Carcinogenic to humans

Reproductive toxicity : Not classified

STOT-single exposure : Not classified

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

STOT-single exposure May cause drowsiness or dizziness.

STOT-repeated exposure : Not classified

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|                                               |                                                                                                                                                                      |
|-----------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 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)                    | 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: |
| 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: 90-Day Study)                                                            |
| Aspiration hazard                             | : Not classified                                                                                                                                                     |
| Trimethoxy(2-methylpropyl)silane (18395-30-7) |                                                                                                                                                                      |
| Viscosity, kinematic                          | 0,86 mm <sup>2</sup> /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                                    | : The product contains organic halogens.                                          |

|                                               |                                                                                                                                              |
|-----------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------|
| ethanol (64-17-5)                             |                                                                                                                                              |
| 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: Raphidocelis subcapitata, Selenastrum capricornutum) |
| Trimethoxy(2-methylpropyl)silane (18395-30-7) |                                                                                                                                              |
| 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: Raphidocelis subcapitata, Selenastrum capricornutum) |

## 12.2. Persistence and degradability

|                               |                                                                                                         |
|-------------------------------|---------------------------------------------------------------------------------------------------------|
| NP Industrial                 |                                                                                                         |
| Persistence and degradability | The product is partially biodegradable. Significant residues remain.<br>Ethanol: Readily biodegradable. |

## 12.3. Bioaccumulative potential

No additional information available

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### 12.4. Mobility in soil

No additional information available

### 12.5. Results of PBT and vPvB assessment

See Section 4.5.

NP Industrial

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

R code/ D code : D10 - Incineration on land

## SECTION 14: TRANSPORT INFORMATION

In accordance with ADR / IMDG / IATA

| ADR                                                                                 | IMDG                                                                                | IATA                                                                                  |
|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|
| <b>14.1. UN number or ID number</b>                                                 |                                                                                     |                                                                                       |
| UN 1170                                                                             | UN 1170                                                                             | UN 1170                                                                               |
| <b>14.2. UN proper shipping name</b>                                                |                                                                                     |                                                                                       |
| ETHANOL SOLUTION (ETHYL ALCOHOL SOLUTION)                                           | ETHANOL SOLUTION (ETHYL ALCOHOL SOLUTION)                                           | Ethanol solution                                                                      |
| <b>Transport document description</b>                                               |                                                                                     |                                                                                       |
| UN 1170 ETHANOL SOLUTION (ETHYL ALCOHOL SOLUTION), 3, II, (D/E)                     | UN 1170 ETHANOL SOLUTION (ETHYL ALCOHOL SOLUTION), 3, II                            | UN 1170 Ethanol solution, 3, II                                                       |
| <b>14.3. Transport hazard class(es)</b>                                             |                                                                                     |                                                                                       |
| 3                                                                                   | 3                                                                                   | 3                                                                                     |
|  |  |  |

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|                                        |                                                           |                                   |
|----------------------------------------|-----------------------------------------------------------|-----------------------------------|
| <b>14.4. Packing group</b>             |                                                           |                                   |
| II                                     | II                                                        | II                                |
| <b>14.5. Environmental hazards</b>     |                                                           |                                   |
| Dangerous for the environment: No      | Dangerous for the environment: No<br>Marine pollutant: 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

Orange plates :

Tunnel restriction code (ADR) : D/E

EAC code : •2Y

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

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.