# Material Safety Data Sheet

## 1. Identification of the Substance/Preparation and the Company/Undertaking

Substance or preparation trade name: 316L Stainless Steel TIG Rod
Unique reference numbers(s): SR3510, SR3512, SR3516, SR3520, SR3524, SR3532

Company/undertaking name & address: Parweld Ltd,
Long Bank,
Bewdley,
Worcs,

Telephone: 01299 266800
Emergency telephone number: 01299 266800

## 2. Composition

| Substance: | % content: | CAS Number: |
|---|---|---|
| Si | 1 | 7440-21-3 |
| Mn | 10 | 7439-96-5 |
| Cr | 30 | 7440-47-3 |
| Ni | 36 | 7440-02-0 |
| Mo | 5 | 7439-98-7 |
| Nb | 2 | 7440-03-1 |
| Cu | 2 | 7440-50-8 |
| Fe | Bal | 7439-89-6 |

## 3. Hazards Identification

There are no recognised hazards associated directly with unused rods prior to welding. Packaged consumables may be heavy, and should be handled and stored with care. When using these electrodes as part of the welding process additional potential hazards are likely:

Electric shock from the welding equipment or electrode. This can be fatal.
Hot metal spatter and heat, which can cause burns to the hand and body, and may cause fire if in contact with combustible materials.
UV, IR and light radiation from the arc, which can produce ‘arc eye’ and possible eye damage to unprotected eyes. WEAR SUITABLE PROTECTIVE EQUIPMENT.

Fumes produced from the electrodes, material being welded and the arc radiation:

- Particulate fume Gaseous fume such as ozone and nitrogen oxides from the action of arc radiation on the atmosphere.
- Short term inhalation of these fumes and gases may lead to irritation of the nose, throat and eyes.
- Long term overexposure or inhalation of high levels of fumes may result in harmful effects to the respiratory system, central nervous system and lungs.

## 4. First aid measures

Skin contact: If burnt from a hot rod or arc radiation, rinse with cold water and seek medical attention
Eye contact: Radiation burns from the Arc seek medical attention.
Inahalation: If breathing is dificult, move into freah air and seek medical attention

## 5. Fire fighting measures

Non specific for the welding consumable

## 6. Accidental release measures

Personal precautions:None
Environmental precautions: refer to sections 12, 13
Methods for cleaning: Refer section 13

## 7. Handling and storage

Handling: Do not ingest Handle with care to aviod cuts
Storage: Store in orginal packaging anf keep away from strong acids or alkalines which may cause a chemical reaction.

## 8. Exposure Controls

Engineering measures:

Welders should not touch live electrical parts, and should insulate themselves from the work and the ground. Manufacturer's guidelines for the use of electrical welding machines should be observed at all times. Welders and co-workers should be educated about the health hazards associated with welding fume, and trained to keep their heads out of the fume plume. During welding, fumes and gases will be produced and emitted from the welding process. The content of the fume is dependent on the electrode type and base material being welded. The amount and concentration of fume generated is dependent on factors such as current, voltage, welding practices and number of welders in a given area. By following recommended welding practices, fume production can sometimes be minimised. Consult the Safety Data Sheets for the materials being welded. Gaseous ozone and nitrous oxides are also formed by arc radiation. In some cases ozone levels can be high and additional controls may be needed. The individual exposure limits (when specified) for the constituents mentioned above are given below. Fume exposure should be controlled to below the recognised exposure limit for each of the individual constituents, and to below 3.5 $mg/m^3$ for the total particulate fume.

Personal protection equipment:

Use respirator in confined spaces. Wear full body protection to protect against heat and UV radiation, ensure all materials are suitable for use with Arc welding procceses.

## 9. Physical and chemical properties

| | |
|---|---|
| Appearance: | Solid Nonvolatile |
| Odour: | Odourless |
| Solubility: | Insoluable |

## 10. Stability and reactivity

**Conditions to avoid:**

Materials to avoid: Contact with Strong Acids may result in release of gasious decomposition products.

**Hazardous decomposition products:** Welding fume constituants include oxides of Iraon, manganeses nickel and chromoium. Gasoius products would include Car oxides, Nitrogen, Oxides and Ozone. Please note that the base material being welded and and surface coatings or contaminations will affect the fume content.

## 11. Toxicological information

**Acute toxicity:** Over exposure to welding fume and dust may result in symptoms like dizzyness, nausea, dryness or irritation of the nose thoroat or eyes.

**General**: Inhalation of welding fume can be dangerous to you health. The exact classification of the welding fume cam be difficlut as it will vary dependant upon the base materials being welded suface coatings etc.

**Excessive exposure may affect human health as follows**:May affect Pumonary function. Welding fumes and dust may contaion chromium and Nickel compounds which are suspected to be canser causing agents.

**Skin contact:** Nickel is a skin sensitiser

## 12. Ecological information

The consumable material could degrade into its orginal components

## 13 Disposal Considerations

Scrap or waste material can be recycled in compliance with local laws

## 14. Transport information

No restrictions apply

## 15. Regulatory information

Nickel is clasified as a hazadous material

Risk Phrases R40, R43

Safety Phrases S23, S36/37/39, S51

## 16. Other Information

The customer should provide this Materials Safety Data Sheet to any person involved in the materials use or further distribution. PARWELD requests the users (or distributors) of this product to read this Materials Safety Data Sheet carefully before usage.
Additional information on welding safety can be obtained from: The Health and safety executive The information contained in this Material Safety Data Sheet relates only to the specific materials designated and may not be valid for such material used in combination with any other material or in any process. Information is given in good faith and is based on the latest information available to PARWELD and is, to the best of Parwelds' knowledge and belief, accurate and reliable at the time of preparation. However, no representation, warranty or guarantee is made as to the accuracy, reliability or completeness of the information, and PARWELD assumes no responsibility and disclaims any liability incurred in using this information. The product is supplied on the condition that the user accepts the responsibility to satisfy himself as to the suitability and completeness of such information for his own particular use. Freedom from patent rights must not be assumed.