	VENUS WIRE INDUSTRIES PRIVATE LIMITED	
	SAFETY DATA SHEET **STAINLESS STEEL WIRE/ WELDING WIRE**	V/02/09, Rev. 06 Rev. Date: 02.01.2021

SECTION 1:	**IDENTIFICATION- COMPANY AND PRODUCT**
Company Name:	**VENUS WIRE INDUSTRIES PRIVATE LIMITED**
Corporate Address:	Venus Wire Industries Pvt. Ltd. Mehta Mahal, Opera House, Mumbai 400004, India.
Manufacturing Address:	Takai-Adoshi Road, Atkargaon, Taluka: Khalapur, District: Raigad, Khopoli-410203, Maharashtra (India)
Phone No.:	+91-2192-304800/861,
Fax No.:	+91-2192-304850
Emergency Phone No.:	+9122 4978839, +919823698466 Language of the phone service shall be English or Hindi
Safety Data Sheet (SDS) No.:	V/02-09
Product Name and Specification:	Stainless Steel in wire form, according to various International standards (Ex. EN 10088-3,EN 10270-3, EN 10263- 5 , BS EN ISO 14343 ,AWS SFA5.9/5.14,A5.9/5.9M.
Trade Name:	Stainless Steel Grades 307Si/1.4370/18 8Mn Si, ER307, ER308, ER308L/1.4316/19 9 L,ER308H, ER308Si, ER308LSi/1.4316/ 19 9 L Si, ER308Mo, ER308LMo, ER309, ER309L/1.4332/23 12 L, ER309Si ER309LSi/1.4332/23 12 L Si, ER309Mo, ER309LMo/23 12 2 L/1.4459, ER310/ 1.4842/25 20, ER312/1.4337/ 29 9, ER316, ER316L/19 12 3 L/1.4430, ER316Si, ER316LSi/19 12 3 L Si/ 1.4430, ER316H, ER316Ti, ER317, ER317L/ 1.4438/18 15 3 L, ER318, ER318Si /19 12 3 Nb Si/1.4576, ER347/ 19 9 Nb/ 1.4551, ER347Si/19 9 Nb Si/1.4551, ER-385, ER410, ER410NiMo/13 4, ER420, ER430/1.4015, ER430LNb ,ER630,ER2209/22 9 3 NL, ER2594, 904L/1.44539, 302HQ/ 1.4567, AISI-301/1.4310, AISI-302/1.4310, AISI-304L/1.4306 / 1.4307, AISI-304/ 1.4301, AISI-316/1.4401, AISI-316L/1.4404, 1.4432, AISI-303/1.4305, AISI-305/1.4303, AISI-314/1.4845, AISI-316Ti/1.4571, AISI-321/1.4541, AISI-409/1.4512, AISI-410/1.4006, AISI-420/1.4021/1.4028, AISI-430/1.4016, AISI-431/1.4057, AISI-434/1.4113, 430LNb/1.4511, AISI-309S/ 1.4833, AISI-309,1.4828, 204Cu/1.4597, AISI-201/1.4372, AISI-202/1.4371, AISI-310S/1.4845, AISI-310/1.4841, 2304/ 1.4362, 2205/1.4462, SUS XM7, 302HQ, ER- NiCrMo-3, ER- NiCr-3.

SECTION 2:	**HAZARD (S) IDENTIFICATION**
Hazard Rating (HIMIS):	Health-3 Flammability-0 Reactivity-0 Other-2
HIMIS Designated Key:	4-Severe Hazard 3-Serious Haza 2-Moderate Hazard 1-Slight Hazard 0-Minimal Hazard
Hazard Class and category code EC 1272/2008 Car.2 STOT RE 1* SKIN Sens 1 Hazard Class and category code EC 67/548/EEC8 Car.2 STOT RE 1* SKIN Sens 1 *Ni=or>10% are classified as STOT RE 1* *Ni=1 to 10% are classified as STOT RE 2* *Ni=<1% not classified	Hazard statement Code H351 H372 H317 Hazard Statement code Carc . CAT 3 R40 T: R48/23 R43

SECTION 3: COMPOSITION / INFORMATION ON INGREDIENTS

INGREDIENTS	% BY WEIGHT	CAS NUMBER	EC NUMBER	ACGIH TLV (mg/m^3)	H-SYMBOL	R-PHRASES	SEC 313
Iron	Balance	7439-89-6	231-096-4	10 AS Fe_2O_3	NA	NA	NA
Chromium	11.5-37.0	7440-47-3	231-157-5	0.05 Chromium VI	NA	NA	YES
Nickel	0.06-37.0	7440-02-0	231-111-4	1	Xn	R40/R43	YES
Manganese	0.6-14.0	7439-96-5	231-105-1	1	NA	NA	YES
Silicon	0.30-5.0	7440-21-3	231-130-8	3 AS SiO_2	NA	NA	NA
Molybdenum	0.05-6.0	7439-98-7	231-107-2	10	NA	NA	NA
Carbon	0-1.0	7440-44-0	231-153-3	2	NA	NA	NA
Phosphorus	0-0.50	7723-14-0	231-768-7	0.02-0.1	NA	NA	NA
Aluminum	<0.1	7429-90-3	231-072-3	NA	NA	NA	NA
Cobalt	<0.3	7440-48-4	231-158-0	NA	Xn	R42/R43	NA
Sulfur	0-0.50	7704-34-9	231-722-6	NA	NA	NA	NA
Nitrogen	0-0.50	7727-37-9	231-783-9	NA	NA	NA	NA
Copper	0-5.0	7440-50-8	231-159-6	1	NA	NA	NA
Titanium	0-1.0	7440-32-6	231-142-3	NA	NA	NA	NA
Niobium	0-1.0	7440-03-1	231-113-5	NA	NA	NA	NA

Xn = Harmful, R40 = Possible risks of irreversible effects, R43 = May cause sensitization by skin contact.
EC1272/2008, Car.2 H351, STOT RE 1 H372, SKIN SENS 1 H317

EC67/548/EEC, Cat.3R40, T:R48/23, SKIN Sens 1R43

SECTION 4:	**FIRST AID MEASURES**
Emergency & First Aid:	No first aid measures required for un used wire , during welding refer below **Inhalation** In case of breathing difficulties, bring the patient to fresh air and ask him/ her to breathe deeply. **Skin burns** Submerge effected area in cold water until burning sensation ceases and refer for immediate medical attention **Electric Shock** If necessary resuscitate and seek immediate medical attention. Nickel and Chromium compounds are required by OSHA to be considered carcinogenic. Consult Doctor if skin burns from radiation. Wash the eyes with eyewash solution. Remove to fresh air, obtain medical attention. Employ first aid techniques recommended by Red Cross.
SECTION 5:	**FIRE FIGHTING MEASURES**
Flash Point:	Nonflammable
Extinguishing Media:	No specific recommendations for welding consumables.
Special Procedures:	See below
Unusual Hazards:	No specific measures required when stainless steel wire not used in welding. Welding arc and sparks can ignite combustibles and flammables Refer to American National Standard Z49.1 for fire prevention during the use of welding and allied procedures.
SECTION 6:	**ACCIDENTAL RELEASE MEASURES**
Not applicable to steel in solid state:	
SECTION 7:	**HANDLING AND STORAGE**
Handling And Storage Precautions:	The straps or bands used to secure wire in coils, carriers and boxes may spring back when straps/bands are cut, could cause eye/ injury to body. Sharp edges may cause injury to body. Product is stable in storage. The atmosphere in the warehouse should not be humid. To Prevent contamination like Dust, moisture packaging opened boxes shall covered. In case of welding, use exhausts system. Make sure inhaled air does not contain fume constituents above permissible exposure

	levels. Other precautions for additional safety information on welding and cutting, see American standard Z49.1-1983, safety in welding and cutting, and the welding handbook, vol. 1, chapter 9, safe practices in welding and cutting, both available from American Welding Society Inc., 550 N.W. Lejune Rd., PO Box 351040, Miami, Fl 33135. Phone 305-443-9353.
Other Precautions	NA
SECTION 8:	**EXPOSURE CONTROLS/PERSONAL PROTECTION**
Routes Of Entry:	Inhalation, skin, ingestion
Health Hazards:	Electric arc-welding may create: fumes and gases can be dangerous. Arc rays can injure eyes and burn skin. Electric shocks can kill.
Carcinogenicity:	The State of California requires the following information: Warning: This product contains chemicals known to the State of California to cause cancer.
Signs & Symptoms Of Exposure:	See below
Medical Conditions From Exposure:	Short term to welding fumes-dizziness nausea, dryness & irritation of nose, eyes and throat, chest tightness, fever, allergic reaction. Long term siderosis, believed to affect pulmonary function.
Additional Information:	NA
Respiratory Measures:	Use respirator or air supplied respirator when welding or brazing in confined space, or where local exhaust or ventilation is not sufficient to keep exposure values within safe limits.
Ventilation:	Use enough local ventilation and local exhaust at arc to keep away fumes and gases from worker's breathing zone and general area, trained worker to wear PPE to avoid fumes and gases.
Protective Gloves:	See other protective equipment.
Eye / Body Protection:	Wear hand, eyes, ear and body protection like welders gloves, helmet, face shield with filter lens, protective screens, apron, safety boots, and flash goggles. Keep protective clothing clean and dry.
Other Protective Equipment:	Hand, head, body protection to prevent injury from radiation, sparks and electrical shock. Do not touch live electrical parts and insulate from work and ground.
Work/Hygienic Practices:	For maximum safety: be certified for, and wear respirator at all times when welding or brazing.
SECTION 9:	**PHYSICAL AND CHEMICAL PROPERTIES**

Magnetism:	Austenitic stainless steel is non-magnetic at annealed condition. Duplex, ferritic and martensitic stainless steels are Ferro-magnetic.
Melting Point:	Approximately 1600-2100 ^{0}C depending on alloy grade
Water solubility:	Insoluble
Density (Air=1):	7.7-8.1g/cm^3
Thermal expansion at room temp.:	10-18x10-6 per degree centigrade.
Thermal Conductivity:	20-30 W/m °C
Evaporation Rate:	NA
Appearance and Odor:	Bare Filler Metals/Stainless Steel Wire Are Solid Wire , Shiny Bright Steel Appearance or in matt finish AND ARE ODOURLESS

SECTION 10:	**STABILITY AND REACTIVITY**
Stability:	Stable
Conditions To Avoid:	No specific action required in use /prior to use, In case of filler wire prohibit welding in areas where solvents are used because halogenated solvents may produce toxic/irritant gases.
Hazardous Polymerization:	NA
Incompatibility:	None

Fume Analysis: Wt % (Welding):

Fe	Mn	Ni	Cr	Cu	Pb	F
30-35	5-15	6-8	7-15	0.5	<0.1	--

Hazard Decomposition Products:	The composition and quality of welding fumes and gases are dependent upon the metal being welded, the process, procedure and electrodes used. Other conditions which also influence the composition and quantity of fumes and gases to which workers may be exposed include: coating of metal being welded (such as paint plating, or galvanizing), the number of welders and volume of the work area, the quality and amount of ventilation, the position of welder's head with respect to fume plume, and the presence of contaminants in atmosphere (chlorinated hydrocarbon vapors from cleaning and degreasing activities). When electrode is consumed the fume and gas decomposition products generated are different in percent and form ingredients in section 3, fume and gas decomposition products and not ingredients in electrode are important, concentration of given fume or gas component may decrease or increase by many time original concentration. New compounds in electrode may form. Decomposition products of normal operation include those originating form volatilization, reaction, or oxidation of materials in section 3, plus those from base metal and coating etc., as noted above. Reasonably expected fume constituents of product could include primarily oxides of iron; secondarily

	oxides of chromium, nickel, manganese, silicon and molybdenum. Present OSHA exposure limits for hexavalent-chromium is .05 mg/m^3 and nickel 1mg/m^3 which will result in significant reduction from 5mg/m^3 general fume level. Gaseous reaction in products may include carbon monoxide and carbon dioxide, ozone and nitrogen oxides may be formed by the radiation from arc, in addition to shielding gases like argon and helium when employed one recommended way to determine composition and quantity of fumes and gases are to take air sample from inside welder's helmet if worn or in breathing zone. See ANSI/AWS fil- 87, available from the American Welding Society. See AWS publication. "Fumes and gases in the welding environment" and AWS "Effects of welding on health 1x".
SECTION 11:	**TOXICOLOGICAL INFORMATION**
Carcinogenicity Information:	Nickel And Chromium and their compounds are on the list of International Agency for Research on Cancer as Carcinogenic.
SECTION 12:	**ECOLOGICAL INFORMATION**
Aquatic Environment:	Welding process can affect the environment if fume is released directly into the atmosphere. Cr (VI) is suspected of being very toxic to aquatic organisms and may cause long term adverse effect in the aquatic environment.
SECTION 13:	**DISPOSAL CONSIDERATIONS**
Prevent waste from contaminating surrounding environment. Discard any product residue. Disposable container or liner in environmentally acceptable manner, in full compliance with federal, state and local regulations. Use recycling procedures if available.	
SECTION 14:	**TRANSPORT INFORMATION**
No international regulations or restrictions are applicable. Not a hazardous material for shipping.	
SECTION 15:	**REGULATORY INFORMATION**
Authorization:	The substances are not listed for authorization.
Restriction in use:	Not applicable.
Other EU regulations:	ROHS2002/95/EC,1907/2006/EC EU Directive 67/548/EC directive on dangerous substances EU Directive 2002/95/,EC 2002/95/EC on restriction on use of hazardous substances in automotive, electrical and electronic equipment. Chemical safety assessment: Not applicable

	Read & understand the manufacturer's instructions Ask for your employer's safety practices which should be based on manufacturer's hazard data available to him. Take precautions when welding and protect yourself and others.

SECTION 16:	**OTHER INFORMATION**

Revised to format of ANSI Standard Z400.1/Z129-1-2010
The Hazard rating recommended for the alloy grades covered by this SDS
NFPA
Fire -0
Health -0
Reactivity -0

This Safety Data Sheet is based on present knowledge and regulation.
Stainless Steels are not classified as mutagenic

Place: _Khopoli, Date: 02.01.2021	