



Raajratna Electrodes Pvt. Ltd.

Manufacturer & Exporter of Welding Consumables

An ISO 9001:2015 Company & Government Recognized Export House

SAFATY DATA SHEET---SUBMERGED ARC WELDING FLUXES

1. IDENTIFICATION :

Product Identifier : Raajmelt submerged Arc welding fluxes
Manufacturer / Supplier : RAAJRATNA ELECTRODES PVT. LTD.
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Application and use : Submerged Arc Welding Fluxes

Trade Name :

Brand Name	AWS/ASME
Raajmelt 1	SFA/A 5.17 F7AZ-EL8
Raajmelt 2	SFA/A 5.17 F7A0-EM12K
Raajmelt 3	SFA/A 5.17 F7A2-EH14
Raajmelt Spl	SFA/A 5.17 F7A2-EA2
Raajmelt 4	SFA/A 5.17 F7A5-EM12K
Raajmelt SS	---
Raajmelt 61	SFA/A 5.17 F7A0-EL8, F7A2-EM12K
Raajmelt 81	SFA/A 5.17, F7AZ-EL , F7A0-EM12K
Raajmelt B62	AWS: SFA/A 5.17F7A5-EM12K, F7P6-EM12K

2. HAZARD IDENTIFICATION :

The products described in Section 1 are not classified as hazardous according to applicable GHS hazard classification criteria as required and defined in OSHA Hazard Communication Standard (29 CFR Part 1910.1200)

Hazard pictograms (GHS-US) :



Signal word (GHS-US) : Danger

Heat : Spatter, melting metals and arc rays can cause burns injuries and Start fires.

Arc Rays : Arc rays can severely damage eyes

Shock : Electrical shock can kill.

Fumes : Chronic overexposure to welding fumes may affect pulmonary functions.



Emergency Overview: Granules in varying colors. These products are normally not considered hazardous as shipped. Gloves should be worn when handling to prevent contaminating hands with product dust.

3. Composition / Identification on ingredients :

This product is manufactured by agglomeration of calcined minerals. Flux Ingredients:

Chemical Identity	Weight %	Cas No
Aluminum Oxide	15 – 55	1344-28-1
Magnesium Oxide	10 – 30	1309-48-4
Manganese	0 - 15	7439-96-5
Sodium silicate	<10	1344-09-8
Potassium Silicate	<10	1312-76-1
Quartz	10 – 40	14808-60-7
Fluorides (as F)	10 - 50	7789-75-5
Wollastonite	<7.0	13983-17-0
Silicon	1 – 5	7440-21-3
Titanium dioxide	5 – 20	13463-67-7
Iron oxide	2 – 8	1309-37-1
Iron	1 - 5	7439-89-6
Calcium oxide	5 – 40	1305-78-8
Potassium oxide	<3	12136-45-7

4. FIRST AID MEASURES :

General: Move to fresh air and call for medical aid.

Inhalation : If breathing is difficult, provide fresh air and call physician.

Eye contact : For radiation burns due to arc flash, seek medical attention.

Skin contact : For skin burns from arc radiation, seek medical attention.

Electric shock: Disconnect and turn off the power and remove victim with non-conductive Materials. If not breathing, begin artificial respiration, preferably mouth-to-Mouth. Immediately seek medical treatment.

5. FIRE-FIGHTING MEASURES :

No specific for welding consumables.

As shipped, this product is nonflammable. However, welding arc and sparks can ignite combustibles and flammable products. Read and understand American National Standard Z49.1, "Safety in Welding, Cutting and Allied Processes" and National Fire Protection Association NFPA 51B, "Standard for Fire Prevention during Welding, Cutting and Other Hot Work" before using this product.

In case of fire in the surroundings: use appropriate extinguishing agent



6. ACCIDENTAL RELEASE MEASURE :

In the case of a release of solid welding consumable products, solid objects can be picked up and placed into a disposal container. Avoid release to the environment. If airborne dust and/or fume is present, use adequate engineering measures and, if needed, personal protection to prevent overexposure. Wear proper personal protective equipment while handling. Do not discard as general trash.

7. HANDLING AND STORAGE :

Handling : Do not ingest. Handle with care to avoid stings and cuts.

Storage : Fluxes should be stored in original packing in dry area. Keep separate from Chemical substances like acids which could cause chemical reactions.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION :

Chemical Identity	Case No	OSHA-PEL mg/m ³	ACGIH TLV mg/m ³
Aluminum Oxide	1344-28-1	15	5
Magnesium Oxide	1309-48-4	15	10
Manganese	7439-96-5	5.0	0.2
Sodium silicate	1344-09-8	-	10
Potassium Silicate	1312-76-1	-	-
Quartz	14808-60-7	0.1	0.025
Fluorides (as F)	7789-75-5	2.5	2.5
Wollastonite	13983-17-0	-	10
Silicon	7440-21-3	15	10
Titanium dioxide	13463-67-7	15	10
Iron oxide	1309-37-1	10	5
Iron	7439-89-6	15	10
Calcium oxide	1305-78-8	5	2
Potassium oxide	12136-45-7	-	10

TLV: Threshold Limit value

OSHA: Occupational Safety & Health Administration

PEL: Permissible Exposure Limit

ACGIH: American Conference of Government Industrial Hygienist

Engineering measures : Ensure sufficient ventilation and exhaust at the arc, to keep the welding fumes and gases away from the welder's breathing zone. Keep working place and protective clothing clean and dry. Train welder to avoid contact with live electrical parts and insulate conductive parts. Check condition of protective clothing and equipment on a regular basis.



Personal protective equipment : Use respirator or air supplied respirator when welding in a confined space. Wear hand, head, eyes and body protection like welder's gloves, helmet or face shield with filter lens, safety boots, apron, arm and shoulder protection. Keep protective clothing clean and dry.

9. PHYSICAL AND CHEMICAL PROPERTIES :

Welding consumables applicable to this sheet as shipped are nonreactive, nonflammable, non-explosive and essentially nonhazardous until welded.

Appearance	: Granules, Solid, non-volatile
Odor	: Odorless
Color	: Greyish
Solubility in water	: Insoluble
pH	: Not applicable
Relative density	: no data available
Viscosity	: Not applicable
Auto-Ignition temperature	: No data available
Vapor Pressure & density	: No data available

10. STABILITY AND REACTIVITY :

General: This product is intended for normal welding purpose

Stability : Stable under normal conditions.

Reactivity : May react in contact with strong acids to release gaseous acids decomposition products. Fume is produced during welding. Expected fume constituents include oxides of metal as iron, manganese, nickel and chromium. Expected gaseous products would include carbon oxides, nitrogen oxides and ozone. Contamination, dirt, surface protections, paint or primer on the base material can affect the composition of the fumes. Avoid heat contamination

11. TOXOLOGICAL INFORMATION :

General: inhalation of welding fumes, dust and gases can be dangerous to your health. Classification of welding fumes is difficult because of varying base materials, coatings, air contamination and processes.

Acute toxicity : overexposure to welding fumes and dust may result in symptoms like dizziness, nausea, dryness or irritation of the nose, throat or eyes.

Chronic toxicity: Overexposure to welding fumes and dust may affect the pulmonary function. Welding fumes and dust may contain chromium and nickel compounds, e.g. Cr⁶⁺, which are suspected of being cancer causing agents.

Dermatological toxicity: Nickel is classified as a skin sensitizer can cause skin sensitization in susceptible individuals through prolonged contact with the skin.

Medical Conditions Aggravated By Exposure: Persons with pre-existing impaired lung functions (asthma-like conditions). Persons with a pacemaker should not go near welding and cutting operations until they have consulted their doctor and obtained information from the manufacturer of the device. Respirators are to be worn only after being medically cleared by your company-designated physician.

Emergency and First Aid Process: Call for medical aid. Employ first aid techniques recommended by the American Red Cross. If irritation or flash burns develop after exposure, consult a physician.



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Carcinogenicity: Silica (crystalline quartz) is classified as IARCE Group 1 and NTP Group K carcinogens. Titanium dioxide and welding fumes are classified as IARC Group 2B carcinogens.

12. ECOLOGICAL INFORMATION :

Welding consumables and materials could degrade into components originating from the consumables or from the materials used in the welding process. Acute and chronic hazard to aquatic environment are not classified.

13. DISPOSAL CONSIDERATIONS :

Surplus and scrap (waste) are valuable commodities that can be reused. Products, surplus and packaging should, if possible, be recycled or discarded in full compliance with federal and local regulations.

14. TRNSPORT INFORMATION :

No international regulations or restriction are applicable.

15. REGULATORY INFORMATION :

Protect yourself and others. Read and understand this label. Fumes and Gases can be dangerous to your health. ARC RAYS can injure and burn skin. Electric Shock can kill.

Read and understand the manufacturer's instruction and employer's safety practice. Keep your head out of the fumes. Use enough ventilation, exhaust at the arc, or both to keep fumes and gases away from breathing zone and the general area. Wear correct eye, ear and body protection. Do not touch live electrical parts.

Canadian Controlled Products Regulations:

This product has been classified in accordance with the hazard criteria of the CPR and the SDS contains all of the information required by the CPR

Canadian Environmental Protection Act (CEPA): All constituents of these products are on the Domestic Substance List (DSL)

Canadian WHMIS Classification: Class D; Division 2, Subdivision A

US Federal Regulations:

California Proposition 65: Warning: These products contain or produce a chemical known to the State of California to cause cancer and birth defects (or other reproductive harm). (California Health & Safety Code Section 25249.5 et seq.)

United States EPA Toxic Substance Control Act: All constituents of these products are on the TSCA inventory list or are excluded from listing.

CERCLA/SARA TITLE III: Reportable Quantities (RQs) and/or Threshold Planning Quantities (TPQs)

Ingredient name	RQ(lb)	TPQ (lb)
Products on this SDS are a solid solution in the form of a solid article.	---	----



Spills or releases resulting in the loss of any ingredient at or above its RQ require immediate notification to the National Response Center and to your Local Emergency Planning Committee

Section 311 Hazard Class: As shipped: Immediate In use: Immediate delayed

16. OTHER INFORMATION :

We refer to:

USA: American National Standard Z49.1 "Safety in Welding and Cutting", American Welding Society, 550 North Le Jeune Road, Miami, Florida 33135; OSHA Safety and health Standard, 29CFR 1910, U.S. Gov. Printing Office, Washington, D.C. 20402; American Conference of Governmental Hygienists (ACGIH), Threshold Limit Values and Biological Exposures Indices, 6500 Glenway Ave., Cincinnati, Ohio 45211 U.S.A.

UK: WMA Publication 236 and 237. "Hazards from Welding fume", "The arc welder at work, some general aspects of health and safety".

CANADA: CSA Standard CAN/CSA-W117.2-01 "Safety in Welding, Cutting and Allied Processes"

The following Hazard Statements, provided in the OSHA Hazard Communication Standard (29 CFR Part 1910.1200)

H252 Self-heating in large quantities; may catch fire

H315 Causes skin irritation

H319 Causes serious eye irritation

H332 Harmful if inhaled

H335 May cause respiratory irritation

H373 May cause damage to organs

Disclaimer: RAAJRATNA Company believes this data sheet to be accurate and to reflect qualified expert opinion regarding current research. However RAAJRATNA Company cannot make any expressed or implied warranty as to this information.