Material
Safety
Data
Sheet

Date Received: 05/15/06

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1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Product Name:	Hot Max Model 23076 and 23077 E4043 Aluminum SMAW Electrodes
Distributor Name:	KDAR Company
Address:	1 Mulch Lane, St. Louis, MO 63044
Telephone:	(314) 692-8555 M-F 8-5 PM, CST

2. COMPOSITION/INFORMATION ON INGREDIENTS

PREPARATION:
Core wire: Al — Bal., Si<13.0%

Hazardous ingredients:

Important: This section covers the materials of which the products are manufactured. The fumes and gases produced during normal use of this product are covered in Section V. The term "Hazardous' in "Hazardous Material" should be interpreted as a term required and defined in OSHA Hazard Communication Standard 29CFR 1910-1200 and it does not necessarily imply the existence of hazard. The chemicals or compounds reportable by Section 313 of SARA are marked by the symbol #.

INGREDIENTS	CAS#	% RANGE	OSHA PEL mg/m³	ACGIH-TLV mg/m3	CARCINOGENICITY	R-PHASE
Aluminium	7429-90-5	65-75	5 (as fume)	5 (as fume)	NO	
Silicon	7440-21-3	5-16	10	10	NO	
Aluminium Fluoride	7784-18-1	1-11	2.5 (as F)	2.5 (as F)	NO	
(Aluminium Fume)			5 (Al fume)	5 (Al fume)	NO	
Lithium Fluoride	7789-24-4	1-11	2.5 (as F)	2.5 (as F)	NO	
Magnesium Fluoride	7783-40-6	1-11	2.5 (as F)	2.5 (as F)	NO	
Potassium Chloride	7447-40-7	1-11	Not Regstrd.	Not Regstrd.	NO	
Potassium Fluoride	7789-23-3	2-12	2.5 (as F)	2.5 (as F)	NO	
Sodium Chloride	7647-14-5	1-11	Not Regstrd.	Not Regstrd.	NO	

3. HAZARD IDENTIFICATION

Effects of acute exposure:
Route(s) of entry: Inhalation and skin contact.

Eye and Skin: when welding, arc rays can injure eyes and burn skin

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Inhalation: Exposure to dust and welding fumes may cause irritation to upper respiratory tract. May cause respiratory sensitisation in susceptible individuals.

Reasonable expected decomposition products from normal use of these products include a complex of the oxides of the materials listed in Section 2, as well as carbon monoxide, carbon dioxide, ozone, and nitrogen oxides (refer to "Characterization of Arc Welding Fume" available from the American Welding Society). The only way to determine the true identity of the decomposition products is by sampling and analysis. The composition and quantity of the fumes and gases to which a worker may be overexposed can be determined from a sample obtained from inside the welder's helmet, if worn, or in the worker's breathing zone. See ANSI/AWS F1.1 "Method for Sampling Airborne Particles Generated by Welding and Allied Processes." Available from the American Welding Society.

Ingestion: Amounts ingested incidental to industrial handling are not likely to cause injury. Single dose oral toxicity is low.

Effects of chronic exposure: Refer to section 11 for specific toxicological information.

4. FIRST AID MEASURES

Inhalation: Remove victim to fresh air if effects occur.

Skin: Wash off with soap and plenty of water.

Eyes: Irrigate with water for several minutes.

Ingestion: Rinse mouth.

Note to physician: No particular advice.

5. FIRE FIGHTING MEASURES

Means of extinguishing: No danger requiring special measures.

Special protective equipment when fighting fire: none.

6. ACCIDENTAL RELEASE MEASURES

Individual precautions: Avoid dust formation/ breathing dust.

Environment protection precautions: No particular indications.

Cleaning measures: Remove spoiled product mechanically.

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7. HANDLING AND STORAGE

7.1 HANDLING
With standard transportation equipment.

7.2 STORAGE
Store in a dry place in closed packages.

8. EXPOSURE CONTROLS/ PERSONAL PROTECTION

Technical measures: Use adequate local exhaust for welding fumes.
Avoid grinding dust inhalation.

Exposure limits: see section 2.

Personal protection:

- **Respiratory protection:** use an air purifying dust respirator.
- **Hands protection:** wear appropriate gloves to prevent skin contact.
- **Eyes protection:** welder's helmets.
- **Skin protection:** wear appropriate overalls to prevent skin or body contact.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical state: solid.

Odor: none

PH: non applicable

Melting point: 1160-1300° F, 620-700° C

Relative density: 6-9 g/cm3

Solubility: insoluble in water

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10. STABILITY AND REACTIVITY

STABILITY
Conditions to avoid: not applicable.

Materials to avoid: reacts with acids.

Hazardous decomposition products: unknown.

11. TOXICOLOGICAL INFORMATION

Effects of acute exposure

Toxicity to animals: unknown

Local effects: not applicable.

Inhalation: not applicable for the product. For welding fumes see section 3.

Ingestion: not applicable.

Contact with skin: no adverse effects expected.

12. ECOLOGICAL INFORMATION

About product: data are unknown

About ingredients: data are unknown.

13. DISPOSAL CONSIDERATIONS

Product: For product elimination, consult recycling companies or appropriate local authority.
Package: May be disposed in approved landfills provided local regulations are observed.

14. TRANSPORT INFORMATION

INTERNATIONAL REGULATIONS:

Land shipment: no hazard
- Rail / route (RID/ADR):

Sea shipment: no hazard

Shipment by air: no hazard

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15.REGULATORY INFORMATION

Label CEE: not necessary

Danger symbols and indications:

R-Phrases:

S-Phrases:

16.OTHER INFORMATION

The information in this document is believed to be correct as of the date issued. However, no warranty is expressed to be implied regarding the accuracy or completeness of this information. This information and product are furnished on the condition that the person receiving them shall make his own determinations as to the suitability of the product for his particular purpose and on the condition that he assume the risk of his use thereof.

This Material Safety Data Sheet complies with the EC directives 91/155/EEC and 93/112/EEC
Including modifications 2001/58/EC.
Complies with OHSA Communication Standard 29 CFR 1910.1200 and Superfund Amendments and Reauthorization Act (SARA) of 1986 Public Law 99-499