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SECTION I - GENERAL INFORMATION

 CHEMICAL NAME & SYNONYMS | TRADE NAME & SYNONYMS
 N/A | STUD PULL ELECTRODE

 CHEMICAL FAMILY | FORMULA
 N/A | X<--MIXTURE

 MANUFACTURERS NAME:
 DURATRODE, A PARTSMASER CO., DIV OF NCH

 ADDRESS (NUMBER, STREET, CITY, STATE & ZIP CODE)
 P.O. BOX 152170
 IRVING, TX 75015

 PREPARED BY: | PRODUCT CODE NUMBER | EMERGENCY TELEPHONE NUMBER
 MICHAEL COLE/T.S.CHEM. | 20105000 | 214-438-1381

SECTION II- HAZARDOUS INGREDIENTS

THE HAZARDS PRESENTED BELOW ARE THOSE OF THE INDIVIDUAL COMPONENTS AS THE PRODUCT MIXTURE HAS NOT BEEN TESTED AS A WHOLE.

CHEMICAL NAME (INGREDIENTS)	HAZARD	TLV*	PEL*	CAS#
CHROMIUM	IRRITANT	1MG/M3	1MG/M3	7440-47-3
MANGANESE	IRRITANT	C5 MG/M3	C5 MG/M3	7439-96-5
MOLYBDENUM	IRRITANT	5MG/M3	5MG/M3	7439-98-7
IRON	IRRITANT	NONE	NONE	7439-89-6
NICKEL (SEE SECTION VI)	CARC.	1MG/M3	1 MG/M3	7440-02-0
CALCIUM CARBONATE SOURCE-3*) SECT	IRRITANT	10MG/M3	5MG/M3	1317-65-3

ION VI FOR MORE INFO. -TOXICITY

STUD PULL ELECTRODE

SECTION III - PHYSICAL DATA PAGE : 02

BOILING PT. (FAHRENHEIT)	N/A	SPEC GRAVITY (H20=1)	N/A
VAPOR PRESSURE (MM HG)	N/A	COLOR	N/A
VAPOR DENSITY (AIR=1)	N/A	ODOR	N/A
PH @ 100%	N/A	CLARITY	N/A
PERCENT VOLATILE BY VOLUME (%)	N/A	EVAPORATION RATE (BU AC = 1)	N/A
SOLUBILITY IN WATER	N/A		
VISCOSITY	N/A		

SECTION IV - FIRE AND EXPLOSION HAZARD

 FLASH POINT (METHOD USED) | FLAMMABLE LIMITS | LEL | UEL
 N/A | N/A | N/A | N/A
 EXTINGUISHING MEDIA "ALCOHOL" | DRY | WATER |
 <--FDAM <--FDAM <--CO2 <--CHEMICAL <--SPRAY <--OTHER
 SPECIAL FIRE FIGHTING PROCEDURES
 SEE AMERICAN NATIONAL STANDARD Z49.1, SAFETY IN WELDING AND CUTTING, PUBLISHED BY THE AMERICAN WELDING SOCIETY AND OSHA PUBLICATION 2206(29 C.F.R. 192 1910)

UNUSUAL FIRE & EXPLOSION HAZARDS
 NON-FLAMMABLE WELDING ARC AND SPARK CAN IGNITE COMBUSTIBLES.

NFPA HAZARD RATING (0=INSIGNIFICANT; 1=SLIGHT; 2=MODERATE; 3=HIGH; 4=EXTREME):
 2 <--HEALTH 0 <--FLAMMABILITY 0 <--REACTIVITY W* <--SPECIAL

SECTION V - HEALTH HAZARD DATA

THRESHOLD LIMIT VALUE :
 NOT ESTABLISHED FOR MIXTURE SEE SECTION II

EFFECTS OF OVEREXPOSURE - ACUTE - (SHORT TERM EXPOSURE)
 FUMES AND GASES CAN BE DANGEROUS TO YOUR HEALTH. SHORT TERM OVEREXPOSURE

TO WELDING FUMES MAY RESULT IN DISCOMFORT SUCH AS: DIZZINESS, NAUSEA, OR DRYNESS OR IRRITATION OF NOSE, THROAT, OR EYES.

LONG TERM OVEREXPOSURE MAY LEAD TO SIDEROSIS (IRON DEPOSITS IN THE LUNG) AND IS BELIEVED BY SOME INVESTIGATORS TO AFFECT PULMONARY FUNCTION. ARC RAYS CAN INJURE EYES AND BURN SKIN. ELECTRIC SHOCK CAN KILL.

PRIMARY ROUTE OF ENTRY: <-- INHALATION <-- INGESTION <-- ABSORPTION

EMERGENCY & FIRST AID PROCEDURES

INHALATION:
REMOVE FROM EXPOSURE AREA AND CALL FOR MEDICAL AID. ADMINISTER OXYGEN IF BREATHING IS DIFFICULT. IF NOT BREATHING BEGIN ARTIFICIAL RESPIRATION. IF NO DETECTABLE PULSE, BEGIN EXTERNAL HEART MASSAGE. EMPLOY FIRST AID TECHNIQUES RECOMMENDED BY THE AMERICAN RED CROSS. IN CASE OF ELECTRICAL SHOCK, TURN OFF POWER PRIOR TO REMOVAL FROM EXPOSURE AREA AND ADMINISTER FIRST AID.

EYE CONTACT:
FLUSH WITH WATER FOR AT LEAST 15 MINUTES.

SKIN CONTACT:
REMOVE CONTAMINATED CLOTHING. WASH SKIN WITH SOAP AND WATER.

INGESTION:
DO NOT INDUCE VOMITING. OBTAIN MEDICAL ATTENTION.

NOTES TO PHYSICIAN:
N/A

SECTION VI - TOXICITY INFORMATION

PRODUCT CONTAINS CHEMICAL LISTED AS CARCINOGEN OR POTENTIAL CARCINOGEN BY:

IARC	<--YES	NTP	<--YES	OSHA	<--YES	ACGIH	<--YES	OTHER	X<--YES
	X<--NO		X<--NO		X<--NO		X<--NO		X<--NO

HAZARDOUS MIXTURES CONT.:

	CAS#	EXPOSURE LIMIT MG/M3	SOURCE
TITANIUM DIOXIDE	13463-67-7	15/10	(1)*/(2)
SILICON DIOXIDE	60876-86-0	0.1/0.1	(1)*/(2)
SODIUM ALUMINUM FLOURIDE	15096-82-3	2.5/2.5	(1)*/(2)

(1)* OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION, 29 C.F.R. 1910.1000 PERMISSIBLE EXPOSURE LIMIT (PEL).
(2)* AMERICAN CONFERENCE OF GOVERNMENTAL INDUSTRIAL HYGIENISTS (ACGIH) THRESHOLD LIMIT (TLV(R)).
(3)* NOT KNOWN; NUISANCE PARTICULATE CONCENTRATION PER ACGIH IS 10MG/M3.
**THIS INGREDIENT IS LISTED ON CALIFORNIA PROPOSITION 65 AS A CARCINOGEN.

SECTION VII - REACTIVITY DATA

STUD PULL ELECTRODE

(CONTINUED)

SECTION VII - REACTIVITY DATA

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STABILITY	X<--STABLE	<--UNSTABLE	CONDITIONS TO AVOID
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REFER TO REFERENCES FOR FURTHER INFORMATION (SECTION XII)

INCOMPATIBILITY (MATERIALS TO AVOID)
N/A

HAZARDOUS DECOMPOSITION PRODUCTS

REFER TO REFERENCES FOR FURTHER INFORMATION (SECTION XII)

HAZARDOUS	WILL NOT OCCUR	MAY OCCUR	CONDITIONS TO AVOID
POLYMERIZATION	X <--OCCUR	<--OCCUR	

SECTION VIII - SPILL OR LEAK PROCEDURES

STEPS TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED

N/A

WASTE DISPOSAL METHOD
PREVENT WASTE FROM CONTAMINATING SURROUNDING ENVIRONMENT. DISCARD ANY PRODUCT, RESIDUE, DISPOSABLE CONTAINER, OR LINER IN AN ENVIRONMENTALLY ACCEPTABLE MANNER, IN FULL COMPLIANCE WITH FEDERAL, STATE AND LOCAL REGULATIONS.

NEUTRALIZING AGENT
N/A

SECTION IX - SPECIAL PROTECTION INFORMATION

REQUIRED VENTILATION
USE ENOUGH VENTILATION, LOCAL EXHAUST AT THE ARC, OR BOTH, TO KEEP THE FUMES AND GASES BELOW THE TLV'S IN THE WORKERS BREATHING ZONE AND THE GENERAL AREA. TRAIN THE WELDOR TO KEEP HIS HEAD OUT OF THE FUMES.

RESPIRATORY PROTECTION
WELD FUME RESPIRATOR OR AIRLINE RESPIRATOR FOR CONFINED SPACE OR WHERE EXPOSURES ARE ABOVE TLV.

PROTECTIVE GLOVES
WELDOR GLOVES

EYE PROTECTION
SHADED LENS

OTHER PROTECTION
WELDOR'S PROTECTIVE CLOTHING.

SECTION X - STORAGE AND HANDLING INFORMATION

STORAGE TEMPERATURE
00000<--MAX 00000<--MIN | INDOOR | HEATED | REFRIGERATED | OUTDOOR

PRECAUTIONS TO BE TAKEN IN HANDLING & STORING
ARC AND SPARKS COULD BE THE SOURCE OF IGNITION OF
COMBUSTIBLE PRODUCTS.

OTHER PRECAUTIONS
N/A

SECTION XI - REGULATORY INFORMATION

CHEMICAL NAME	C.A.S. NUMBER	UPPER % LIMIT
CHROMIUM	7440-47-3	11-30
MANGANESE	7439-96-5	1-10
NICKEL	7440-02-0	1-10

THOSE INGREDIENTS LISTED ABOVE ARE SUBJECT TO THE REPORTING REQUIREMENTS OF
313 OF TITLE III OF THE SUPERFUND AMENDMENTS AND REAUTHORIZATION ACT OF
1986 AND 40 CFR PART 272.

IF USE (USE EXEMPTION) APPEARS UNDER UPPER % LIMIT, END USERS ARE EXEMPT
FROM NOTIFICATION BECAUSE THE PRODUCT IS USED AND LABELED FOR ROUTINE
JANITORIAL WORK, OR THE PRODUCT IS USED AND LABELED FOR FACILITY GROUNDS
MAINTENANCE (SUCH AS FERTILIZERS AND HERBICIDES), OR THE PRODUCT IS USED AND
LABELED FOR MAINTAINING MOTOR VEHICLES.

SECTION XII - TRANSPORTATION * (FOR FUTURE USE)

APPLICABLE REGULATIONS
<--49 CFR <--IMCO <--TARIFF 6 D <--IATA <--MILITARY AIR (AFR 71-4)

SHIPPING NAME
HAZARD CLASS | ID NUMBER | REPORT QTY

STUD PULL ELECTRODE

(CONTINUED) SECTION XII - TRANSPORTATION * (FOR FUTURE USE) PAGE : 06

LABELS | LIMITED QTY

UNIT CONTAINER

DOT SPS CONTAINER | NET EXPLOSIVE WT.

AEROSOL PROPELLANT(S)

SECTION XIII - REFERENCES

MANUFACTURER'S MATERIAL SAFETY DATA SHEET.

ADDITIONAL INFORMATION SECTION VII REACTIVITY DATA:
WHEN THE ELECTRODE IS CONSUMED, THE FUME AND GAS DECOMPOSITION PRODUCTS ARE
DIFFERENT IN PERCENT AND FORM FROM THE INGREDIENTS LISTED IN SECTION II.
THESE COMPONENTS ARE ALWAYS PRESENT AS COMPLEX COMPOUNDS AND NOT AS METALS.
(CHARACTERIZATION OF ARC WELDING FUME: AMERICAN WELDING SOCIETY). REASONAB-
LY EXPECTED FUME CONSTITUENTS FROM THESE PRODUCTS WOULD INCLUDE FLUORIDES AND
COMPLEX OXIDES OF IRON, CHROMIUM, NICKEL, MANGANESE, AND SILICON. COMPLE
X OXIDES CONTAINING MOLYBDENUM, AND COPPER WILL BE FOUND IN THE FUMES OF TH
ESE PRODUCTS CONTAINING THESE ELEMENTS. THE FUME LIMIT FOR CR VI (0.05MG/M3)
WILL BE REACHED BEFORE THE GENERAL LIMIT OF 5MG/M3 FOR FUMES IS REACHED. MO
NITOR FUMES FOR CR VI LEVEL. GASEOUS REACTION PRODUCTS MAY INCLUDE CARBON M
ONOXIDE AND CARBON DIOXIDE. OZONE AND NITROGEN OXIDES MAY BE FORMED BY THE
RADIATION FROM THE ARC.
W* DO NOT USE WATER TO EXTINGUISH MOLTEN METAL BECAUSE HAZARDOUS METAL
FUMES MAY BE FORMED. USE WATER TO KEEP METAL COOL IN A FIRE SITUATION.

THE INFORMATION CONTAINED HEREIN IS BASED ON DATA CONSIDERED
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OR DISPOSAL OF THE PRODUCT IN A MANNER NOT RECOMMENDED ON THE
PRODUCT LABEL. USERS ASSUME ALL RISKS ASSOCIATED WITH SUCH
UNRECOMMENDED USE, STORAGE, OR DISPOSAL OF THE PRODUCT.