

R & D METALS & CHEMICALS, INC -- 307 STAINLESS STEEL ALLOYS -- 3439-00-277-7550
===== Product Identification =====

Product ID:307 STAINLESS STEEL ALLOYS
MSDS Date:11/16/1994
FSC:3439
NIIN:00-277-7550
Status Code:A
MSDS Number: CLQJZ
=== Responsible Party ===
Company Name:R & D METALS & CHEMICALS, INC
Address:201C PERIMETER PARK
Box:22533
City:KNOXVILLE
State:TN
ZIP:37922-2233
Country:US
Info Phone
Num:423-531-6065 / FAX: 423-531-2044
Emergency Phone Num:800-424-9300
Chemtrec Ind/Phone:(800)424-9300
CAGE:56406

=== Contractor Identification ===
Company Name:R & D METALS & CHEMICALS, INC
Address:201C PERIMETER PARK
Box:22533
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Country:US
Phone:423-531-6065 / FAX: 423-531-2044
Contract Num:SP0490-96-D-41690
CAGE:56406

===== Composition/Information on Ingredients =====

Ingred Name:NICKEL
CAS:7440-02-0
RTECS #:QR5950000
= Wt:10.7
OSHA PE

L:1 MG/M3
ACGIH TLV:1 MG/M3
EPA Rpt Qty:100 LBS
DOT Rpt Qty:100 LBS

Ingred Name:CHROMIUM
CAS:7440-47-3
RTECS #:GB4200000
= Wt:21.5
OSHA PEL:1 MG/M3
ACGIH TLV:0.5 MG/M3
EPA Rpt Qty:1 LB
DOT Rpt Qty:1 LB

Ingred Name:MANGANESE
CAS:7439-96-5
RTECS #:OO9275000
= Wt:4.8
OSHA PEL:C5 MG/M3
ACGIH TLV:5 MG/M3

Ingred Name:IRON
CAS:7439-89-6
RTECS #:NO4565500
Fraction by Wt: BALANCE
OSHA PEL:NONE
ACGIH TLV:NONE

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===== Hazards Identification =====

Health Hazards Acute and

Chronic:ACUTE: SHORT TERM EXPOSURE TO WELDING

FUMES, GASES OR DUST MAY RESULT IN DISCOMFORT SUCH AS DIZZINESS, NAUSEA, FEVER, DRYNESS AND OR IRRITATION OF NOSE, THROAT, EYES. SKIN SENSITIVITY MAY ALSO BE NOTE D. ACUTE EXPOSURE CAN RESULT IN THE SAME SYMPTOMS EXCEPT TO A GREATER DEGREE AS WELL AS WATERY EYES, HEADACHE, BRATHING DIFFICULTY, FREQUENT COUGHING AND/OR CHEST PAINS. SOME GASES MAY CAUSE PULMONARY EDEMA, ASPHYXIATION AND EXCESSIVE EXPOSURE CAN BE FATAL. CH

Chronic: MAY RESULT IN

NEUROLOGICAL DAMAGE, LUNG FIBROSIS, PNEUMONICOCIS AND OTHER LUNG DISORDERS.

Explanation of Carcinogenicity:NICKEL AND CHROMIUM ARE CONSIDERED

POSSIBLE CARCINOGENS UNDER OSHA (29CFR 1910-1200). "SEE TOXICOLOGY"

Effects of Overexposure:***THIS PRODUCT POSES NO HEALTH HAZARD AS

SHIPPED*** BUT MAY POSE A HEALTH HAZARD DURING USE. ELECTRIC ARC WELDING RAYS CAN INJURE EYES & BURN SKIN. DUST, FUMES AND GASES CAN BE DANGEROUS TO YOUR HEAL TH. LUNG DAMAGE MAY

RESULT FROM
OVEREXPOSURE.

Medical Cond Aggravated by Exposure:SOME WORKERS MAY BE AFFECTED BY A
PREEXISTING CONDITION OR OTHER OCCUPATIONAL ILLNESS BECAUSE OF THE
WIDE VARIATION IN INDIVIDUAL SUSCEPTIBILITIES.

===== First Aid Measures =====

First Aid:IN CASE OF ELECTRICAL SHOCK, TURN OFF POWER PRIOR TO REMOVAL
FROM EXPOSURE AREA AND ADMINISTRATION OF FIRST AID. INHALATION:
REMOVE TO FRESH AIR. IF BREATHING IS DIFFICULT ADMINISTER OXYGEN

IF NOT BR EATHING BEGIN ARTIFICIAL RESPIRATION. IF NO DETECTABLE
PULSE BEGIN EXTERNAL HEART MASSAGE. SKIN: WASH AFFECTED AREA WITH
SOAP AND WATER. EYES: FLUSH WITH LARGE AMOUNTS OF FRESH AIR FOR AT
LEAST 15 MIN UTES. INGESTION: SEEK MEDICAL ATTENTION. IN ALL CASES
SEEK MEDICAL ATTENTION FOR FIRST AID.

===== Fire Fighting Measures =====

Flash Point:NONFLAMMABLE

Unusual Fire/Explosion Hazard:NONFLAMMABLE, HOWEVER, ARCS, SPARKS AND
MOLTE
N METAL CAN IGNITE FLAMMABLES AND COMBUSTIBLES OR CAUSE
EXPLOSIONS.

===== Accidental Release Measures =====

Spill Release Procedures:CLEAN UP ANY GRINDING DUST OR WASTE RESIDUES
AND PLACE IN SUITABLE DEPARTMENT OF TRANSPORTATION APPROVED
CONTAINERS AND DISPOSE OF IN FULL COMPLIANCE WITH FEDERAL, STATE
AND LOCAL REGULATIONS. AVOID I NHALATION AND SKIN EXPOSURE.

===== Exposure Controls/Personal Protection =====

Respiratory Protectio

n:USE WELD FUME RESPIRATOR OR AIR SUPPLIED

RESPIRATOR WHEN CUTTING, GRINDING OR WELDING IN A CONFINED SPACE OR
WHERE LOCAL EXHAUST OR GENERAL VENTILATION DOES NOT KEEP EXPOSURE
BELOW RECOMMENDED LIMITS. MONITOR THE AIR QUALITY INSIDE THE
WELDER'S HELMET, IF WORN, AND/OR THE WORKER'S BREATHING ZONE TO
DETERMINE IF A RESPIRATOR IS REQUIRED AND THE TYPE NEEDED.

Ventilation:USE ENOUGH VENTILATION TO KEEP DUST, FUMES AND GASES FROM
WORKER'S BREATHING ZONE AND GENERAL USE. KEE

P EXPOSURE BELOW
LIMITS.

Protective Gloves:WEAR GLOVES WHEN CUTTING, GRINDING OR WELDING.

Eye Protection:USE OSHA APPROVED GOGGLES, GLASSES AND/OR FACE SHIELD.

Other Protective Equipment:WEAR GLOVES & FLAME RETARDANT CLOTHING WHEN CUTTING, GRINDING OR WELDING. DO NOT EXPOSE SKIN TO RADIATION WHEN HOT CUTTING OR WELDING. PROVIDE PROTECTIVE SCREENS TO SHIELD OTHERS.

Work Hygienic Practices:DO NOT EXPOSE SKIN TO RADIATION WHEN NOT CUTTING OR WELDING.

Supplemental Safety and Health

RESPIRATORY PROTECTION: USE ONLY NIOSH APPROVED RESPIRATORS. EYE PROTECTION: USE OSHA APPROVED GOGGLES, GLASSES &/OR FACE SHIELD WHEN CUTTING, GRINDING OR WELDING. IN ADDITION, WHEN HOT CUTTING OR WELDING, WEAR WELDING HELMET OR FACE SHIELD WITH FILTER LENS. SELECT WELDING LENS SHADE FROM AWS PUBLICATION F2.2.

===== Physical/Chemical Properties =====

HCC:N1

Appearance and Odor:COVERED WELDING ELECTRODES ARE SOLID WIRE WITH A FLUX COATING.

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===== Stability and Reactivity Data =====

Hazardous Decomposition Products:GASEOUS REACTION PRODUCTS MAY INCLUDE CARBON MONOXIDE, OZONE AND NITROGEN OXIDES. CHLORINATED SOLVENTS MAY BE DECOMPOSED INTO TOXIC GASES SUCH AS PHOSGENE.

===== Toxicological Information =====

Toxicological Information:THE STUDIES FORMING THE BASIS FOR THIS CLASSIFICATION WERE FROM OPERATIONS OTHER THAN WELDING OF CHROMIUM OR NICKEL. THERE IS CONSIDERABLE CONTROVERSY ON THE EXTENT OF THE RESPIRATORY CANCER PROBLEMS DUE TO NICKEL & CHROMIUM. IN ADDITION A SMALL AMOUNT OF SILICA IS ALSO PRESENT & IT IS A PROBABLE CARCINOGEN. NEVERTHELESS EXPOSURES MUST BE MAINTAINED BELOW THE LEVELS SPECIFIED IN THE INGREDIENTS SECTION. *THE LIMIT FOR WELDING FUMES NOT OTHERWISE CLASSIFIED IS 5 MG/M3. SOME ELEMENTS OR COMPONENTS WILL EXCEED THEIR PELS/TLVS BEFORE THE TOTAL FUMES EXCEED 5 MG/M3.

===== Disposal Con

siderations =====

Waste Disposal Methods:DISPOSE OF IN FULL COMPLIANCE WITH FEDERAL,
STATE AND LOCAL REGULATIONS

===== Regulatory Information =====

SARA Title III Information:WELDING PRODUCTS LISTED IN THE INGREDIENTS
SECTION OF THIS MATERIAL SAFETY DATA SHEET CONTAIN TOXIC CHEMICALS
SUBJECT TO THE REPORTING REQUIREMENTS OF SECTION 313 OF TITLE III
OF THE SUPERFUND AMENDMENTS AND REAUTHORIZATION ACT OF 1986 AND
40CFR PART
372 OF THE FEDERAL REGISTER. REFER TO THE FOLLOWING
SOURCE FOR ADDITIONAL IMPORTANT INFORMATION: ANSI Z49.1 THE
AMERICAN WELDING SOCIETY. P.O. BOX 35 1040. MIAMI, FL 33135. DSHA
(29CFR 1910) U.S. DEPARTMENT OF LABOR. WASHINGTON, DC 20210.

===== Other Information =====

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