

SIFCO METACHEMICAL DIV OF SIFCO INDUSTRIES,INC. -- DALIC SOLUTION,NICKEL,2080,30208006  
-- 6810-01-197-7797

===== Product Identification =====

Product ID:DALIC SOLUTION,NICKEL,2080,30208006

MSDS Date:05/19/1997

FSC:6810

NIIN:01-197-7797

MSDS Number: BXYTL

=== Responsible Party ===

Company Name:SIFCO METACHEMICAL DIV OF SIFCO INDUSTRIES,INC.

Address:5708 SCHAAF ROAD

City:CLEVELAND

State:OH

ZIP:4413

1-1394

Country:US

Info Phone Num:216-524-0099 FAX 6331

Emergency Phone Num:216-881-8600; PAGER 216-557-7345

Preparer's Name:WERNER A. EHRENSCHNEIDER

CAGE:11924

=== Contractor Identification ===

Company Name:SIFCO SELECTIVE PLATING DIV OF SIFCO INDUSTRIES INC.

Address:5708 SCHAAF ROAD

Box:City:CLEVELAND

State:OH

ZIP:44131-1394

Country:US

Phone:216-524-0099/ FAX: -6331

CAGE:11924

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

Ingred Name:NICKEL SULFATE (SARA 313) (CERC  
LA)

CAS:7786-81-4

RTECS #:QR9350000

Fraction by Wt: 10 - 30%

Other REC Limits:NONE RECOMMENDED

OSHA PEL:1 MG(NI)/M3

ACGIH TLV:0.1 MG(NI)/M3; 9596

EPA Rpt Qty:100 LBS

DOT Rpt Qty:100 LBS

Ingred Name:FORMIC ACID (SARA 313) (CERCLA)

CAS:64-18-6

RTECS #:LQ4900000

Fraction by Wt: 3 - 7%

Other REC Limits:NONE RECOMMENDED

OSHA PEL:5 PPM

ACGIH TLV:5 PPM/10 STEL; 9596

EPA Rpt Qty:5000 LBS

DOT Rpt Qty:5000 LBS

Ingred Name:WATER

CAS:7732-18-5

RTECS #:ZC0110000

NE RECOMMENDED  
OSHA PEL:NOT RELEVANT  
ACGIH TLV:NOT RELEVANT

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

LD50 LC50 Mixture:LD50 (ORAL, RAT) IS UNKNOWN.  
Routes of Entry: Inhalation:YES Skin:NO Ingestion:YES  
Reports of Carcinogenicity:NTP:YES IARC:YES OSHA:NO  
Health Hazards Acute and Chronic:TARGET ORGANS:EYES, SKIN, LIVER,  
KIDNEY, NOSE & LUNGS. ACUTE- CORROSIVE. ORAL:MAY CAUSE IRRITATION,  
BURNS TO MOUTH, THROAT, STOMACH. MAY CAUSE LIVER, KIDNEY & GI  
DA  
MAGE. EYE:MAY CAUSE IRRITATION, BURN S. SKIN:MAY CAUSE  
SENSITIZATION. INHALE:VAPORS/MISTS IRRITATE NOSE & THROAT. CHRONIC-  
EYE, SKIN, LUNG, TEETH DAMAGE.  
Explanation of Carcinogenicity:CONTAINS NICKEL.  
Effects of Overexposure:IRRITATION, BURNS, PAIN, DIZZINESS, HEADACHE,  
ALLERGIC SKIN REACTION AND SENSITIZATION  
Medical Cond Aggravated by Exposure:PERSONS WITH PRE-EXISTING SKIN  
DISORDERS, EYE PROBLEMS OR IMPAIRED LIVER, KIDNEY OR RESPIRATORY  
FUNCTION OR PERSONS SENSITIVE TO NI  
CKEL MAY BE MORE SUSCEPTIBLE TO  
THE EFFECTS OF THIS PRODUCT.

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

First Aid:GET MEDICAL ATTENTION IMMEDIATELY. EYES/SKIN:IMMEDIATELY  
FLUSH WITH WATER FOR 15 MINUTES. HOLD EYELIDS OPEN. INHALED:REMOVE  
TO FRESH AIR. PROVIDE CPR/OXYGEN IF NECESSARY. ORAL:DO NOT INDUCE  
VOMITING EXCEPT ON ADVICE OF COMPETENT MEDICAL PERSONNEL. IF  
CONSCIOUS, RINSE MOUTH WITH WATER. DRINK PLENTY OF MILK/WATER, MILK  
OF MAGNESIA/FR  
ESH EGGS. NEVER GIVE ANYTHING BY MOUTH TO AN  
UNCONSCIOUS PERSON.

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

Flash Point:NONE  
Lower Limits:NOT RELEVANT  
Upper Limits:NOT RELEVANT  
Extinguishing Media:WATER SPRAY, CARBON DIOXIDE, FOAM OR DRY CHEMICAL  
FOR SURROUNDING FIRE. USE WATER SPRAY TO COOL FIRE EXPOSED  
CONTAINERS.  
Fire Fighting Procedures:WEAR FULL PROTECTIVE CLOTHING AND  
NIOSH-APPROVED SELF-CONTAINED BREATHING APPARATUS WITH FULL  
FACEPIECE OPERA

TED IN THE POSITIVE PRESSURE MODE.  
Unusual Fire/Explosion Hazard:CONTAINER MAY RUPTURE.

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

Spill Release Procedures:WEAR PROPER PROTECTIVE EQUIPMENT. VENTILATE AREA. DO NOT RELEASE INTO SOIL, SEWER, STREAM. STOP LEAK IF POSSIBLE. ABSORB SPILL WITH VERMICULITE OR SAND. SCRAPE UP OR SHOVEL INTO PROPER CONTAINER FOR L ATER DISPOSAL. REMOVE IGNITION SOURCES (HYDROGEN).

Neutralizing Agent:SODA ASH

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== Handling and Storage =====

Handling and Storage Precautions:STORE AT 60-90F, AWAY FROM EXTREME HEAT AND INCOMPATIBLE MATERIALS. KEEP CONTAINER TIGHTLY CLOSED WHEN NOT IN USE. DO NOT REMOVE LABEL.

Other Precautions:CORROSIVE. DO NOT GET IN EYES, ON SKIN, ON CLOTHING. AVOID BREATHING VAPORS/MIST. USE WITH ADEQUATE VENTILATION. EMPTY CONTAINERS RETAIN RESIDUE. KEEP OUT OF REACH OF CHILDREN. DO NOT INGEST.

===== Exposure Controls/Personal Protectio  
n =====

Respiratory Protection:NONE NORMALLY REQUIRED. IF TLV IS EXCEEDED OR FOR SYMPTOMS OF OVER EXPOSURE, WEAR NIOSH-APPROVED ACID MIST RESPIRATOR. IN EMERGENCY, WEAR A NIOSH-APPROVED POSITIVE-PRESSURE SELF-CONTAINED BREATHING AP PARATUS.

Ventilation:USE GENERAL OR LOCAL EXHAUST VENTILATION TO MEET TLV REQUIREMENTS.

Protective Gloves:BUTYL RUBBER, PVC OR NITRILE

Eye Protection:SAFETY GLASSES+SIDE SHIELD/CHEM GOGGLES

Other Protective Equipment:USE RUBBER SPLASH APRON A ND RUBBER BOOTS.

EYEWASH AND SAFETY SHOWER SHOULD BE LOCATED NEARBY.

Work Hygienic Practices:OBSERVE GOOD INDUSTRIAL HYGIENE PRACTICES AND RECOMMENDED PROCEDURES. WASH THOROUGHLY BEFORE EATING, DRINKING/SMOKING.

Supplemental Safety and Health

FORMULA CHANGED. FOR PREVIOUS FORMULATIONS, SEE PNI A OR B, SAME NSN. THE PH RANGE: 2.2 - 2.6.

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

HCC:C2

NRC/State Lic Num:NOT RELEVANT

Boiling Pt:>100.C, 212.F

Melt/Freeze

Pt: