Chem-Impex International Inc.

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SAFETY DATA SHEET

SECTION 1. CHEMICAL IDENTIFICATION

CATALOG #:	47078
NAME:	Carbonyl iron powder (Micro-sized) (4~8 micron)
SYNONYMS:	
24 HOUR EMERGENCY TELEPHONE:	(800) 535-5053(USA) 352-323-3500 (INTERNATIONAL)
TO REQUEST AN MSDS:	(800) 869-9290
CUSTOMER SERVICE:	(630) 766-2112

SECTION 2. HAZARDS IDENTIFICATION

CLASSIFICATION OF THE SUBSTANCE OR MIXTURE

GHS CLASSIFICATION IN ACCORDANCE WITH 29 CFR 1910 (OSHA HCS) FLAMMABLE SOLIDS (CATEGORY 1), H228 FOR THE FULL TEXT OF THE H-STATEMENTS MENTIONED IN THIS SECTION, SEE SECTION 16.

PICTOGRAM

DANGER

SIGNAL WORD DA

HAZARD STATEMENT(S)

H228 FLAMMABLE SOLID.

PRECAUTIONARY STATEMENT(S)

P210	KEEP AWAY FROM HEAT/SPARKS/OPEN FLAMES/HOT SURFACES NO SMOKING.
P240	GROUND/BOND CONTAINER AND RECEIVING EQUIPMENT.
P241	USE EXPLOSION-PROOF ELECTRICAL/ VENTILATING/
	LIGHTING EQUIPMENT.
P280	WEAR PROTECTIVE GLOVES/ EYE PROTECTION/ FACE
	PROTECTION.
P370 + P378	IN CASE OF FIRE: USE DRY SAND, DRY CHEMICAL OR
	ALCOHOL-RESISTANT FOAM FOR EXTINCTION.
HAZARDS NOT	NONE

HAZARDS NOT OTHERWISE CLASSIFIED (HNOC) OR NOT COVERED BY GHS

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

MF:	Fe
MW:	55.85
CAS-NO.	7439-89-6

PURITY: $\geq 99.7\%$ (Trace metals basis)

HAZARDOUS COMPONENTS

COMPONENT	CLASSIFICATION	CONCENTRATION
Carbonyl iron powder (Micro-sized) (4~8 micron)		
	FLAM. SOL. 2; 2; H228, H252	<= 100 %

FOR THE FULL TEXT OF THE H-STATEMENTS MENTIONED IN THIS SECTION, SEE SECTION 16.

SECTION 4. FIRST-AID MEASURES

DESCRIPTION OF FIRST AID MEASURES

GENERAL ADVICE CONSULT A PHYSICIAN. SHOW THIS SAFETY DATA SHEET TO THE DOCTOR IN ATTENDANCE.MOVE OUT OF DANGEROUS AREA. **IF INHALED** IF BREATHED IN, MOVE PERSON INTO FRESH AIR. IF NOT BREATHING, GIVE ARTIFICIAL RESPIRATION. CONSULT A PHYSICIAN. IN CASE OF SKIN WASH OFF WITH SOAP AND PLENTY OF WATER. CONTACT CONSULT A PHYSICIAN. IN CASE OF EYE FLUSH EYES WITH WATER AS A PRECAUTION. CONTACT **IF SWALLOWED** DO NOT INDUCE VOMITING. NEVER GIVE ANYTHING BY MOUTH TO AN UNCONSCIOUS PERSON. RINSE MOUTH WITH WATER. CONSULT A PHYSICIAN. THE MOST IMPORTANT KNOWN SYMPTOMS AND **MOST IMPORTANT** SYMPTOMS AND EFFECTS ARE DESCRIBED IN THE LABELLING (SEE **EFFECTS, BOTH ACUTE** SECTION 2.2) AND/OR IN SECTION 11. AND DELAYED **INDICATION OF ANY** NO DATA AVAILABLE **IMMEDIATE MEDICAL ATTENTION AND** SPECIAL TREATMENT NEEDED

SECTION 5. FIRE AND EXPLOSION DATA

EXTINGUISHING MEDIA

SUITABLE EXTINGUISHING MEDIA	SPECIAL POWDER AGAINST METAL FIREUSE WATER SPRAY, ALCOHOL-RESISTANT FOAM, DRY CHEMICAL OR CARBON DIOXIDE.
SPECIAL HAZARDS ARISING FROM THE SUBSTANCE OR MIXTURE	IRON OXIDES
ADVICE FOR FIREFIGHTERS	WEAR SELF CONTAINED BREATHING APPARATUS FOR FIRE FIGHTING IF NECESSARY.
FURTHER INFORMATION	USE WATER SPRAY TO COOL UNOPENED CONTAINERS.

SECTION 6. ACCIDENTAL RELEASE MEASURES

PERSONAL	AVOID DUST FORMATION. AVOID BREATHING
PRECAUTIONS,	VAPOURS, MIST OR GAS. ENSURE ADEQUATE
PROTECTIVE	VENTILATION.
EQUIPMENT AND	REMOVE ALL SOURCES OF IGNITION. EVACUATE
EMERGENCY	PERSONNEL TO SAFE AREAS.
PROCEDURES	FOR PERSONAL PROTECTION SEE SECTION 8.
ENVIRONMENTAL	PREVENT FURTHER LEAKAGE OR SPILLAGE IF SAFE
PRECAUTIONS	TO DO SO. DO NOT LET PRODUCT ENTER DRAINS.
METHODS AND MATERIALS FOR CONTAINMENT AND CLEANING UP	SWEEP UP AND SHOVEL. CONTAIN SPILLAGE, AND THEN COLLECT WITH AN ELECTRICALLY PROTECTED VACUUM CLEANER OR BY WET-BRUSHING AND PLACE IN CONTAINER FOR DISPOSAL ACCORDING TO LOCAL REGULATIONS (SEE SECTION 13). KEEP IN SUITABLE, CLOSED CONTAINERS FOR DISPOSAL. CONTAIN SPILLAGE, PICK UP WITH AN ELECTRICALLY PROTECTED VACUUM CLEANER OR BY WET- BRUSHING AND TRANSFER TO A CONTAINER FOR DISPOSAL ACCORDING TO LOCAL REGULATIONS (SEE SECTION 13).
REFERENCE TO OTHER SECTIONS	FOR DISPOSAL SEE SECTION 13.

SECTION 7. HANDLING AND STORAGE

PRECAUTIONS FOR SAFE HANDLING	AVOID FORMATION OF DUST AND AEROSOLS. FURTHER PROCESSING OF SOLID MATERIALS MAY RESULT IN THE FORMATION OF COMBUSTIBLE DUSTS. THE POTENTIAL FOR COMBUSTIBLE DUST FORMATION SHOULD BE TAKEN INTO CONSIDERATION BEFORE ADDITIONAL PROCESSING OCCURS. PROVIDE APPROPRIATE EXHAUST VENTILATION AT PLACES WHERE DUST IS FORMED.KEEP AWAY FROM SOURCES OF IGNITION - NO SMOKING.TAKE MEASURES TO PREVENT THE BUILD UP OF ELECTROSTATIC CHARGE.
	CHARGE. HANDLE IN ACCORDANCE WITH GOOD INDUSTRIAL HYGIENE AND SAFETY PRACTICE. WASH HANDS BEFORE BREAKS AND AT THE END OF WORKDAY. FOR PRECAUTIONS SEE SECTION 2.2.

CONDITIONS FOR SAFE
STORAGE, INCLUDING
ANY INCOMPATIBILITIESKEEP CONTAINER TIGHTLY CLOSED IN A DRY AND
WELL-VENTILATED PLACE.
STORE UNDER INERT GAS. MOISTURE SENSITIVE.
KEEP IN A DRY PLACE.STORAGE CLASS (TRGS 510): 4.1B: FLAMMABLE SOLID
HAZARDOUS MATERIALSStore at RTSPECIFIC END USE(S)APART FROM THE USES MENTIONED IN SECTION 1.2
NO OTHER SPECIFIC USES ARE STIPULATED.

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

CONTROL PARAMETERS

COMPONENTS WITHCONTAINS NO SUBSTANCES WITH OCCUPATIONALWORKPLACE CONTROLEXPOSURE LIMIT VALUES.PARAMETERSEXPOSURE LIMIT VALUES.

EXPOSURE CONTROLS

APPROPRIATE	HANDLE IN ACCORDANCE WITH GOOD INDUSTRIAL
ENGINEERING	HYGIENE AND SAFETY PRACTICE. WASH HANDS
CONTROLS	BEFORE BREAKS AND AT THE END OF WORKDAY.

PERSONAL PROTECTIVE EQUIPMENT

EYE/FACE PROTECTION SAFETY GLASSES WITH SIDE-SHIELDS CONFORMING TO EN166 USE EQUIPMENT FOR EYE PROTECTION TESTED AND APPROVED UNDER APPROPRIATE GOVERNMENT STANDARDS SUCH AS NIOSH (US) OR EN 166(EU).

SKIN PROTECTION	HANDLE WITH GLOVES. GLOVES MUST BE INSPECTED PRIOR TO USE. USE PROPER GLOVE REMOVAL TECHNIQUE (WITHOUT TOUCHING GLOVE''S OUTER SURFACE) TO AVOID SKIN CONTACT WITH THIS PRODUCT. DISPOSE OF CONTAMINATED GLOVES AFTER USE IN ACCORDANCE WITH APPLICABLE LAWS AND GOOD LABORATORY PRACTICES. WASH AND DRY HANDS.
	FULL CONTACT MATERIAL: NITRILE RUBBER MINIMUM LAYER THICKNESS: 0.11 MM BREAK THROUGH TIME: 480 MIN MATERIAL TESTED:DERMATRIL (KCL 740, SIZE M)
	SPLASH CONTACT MATERIAL: NITRILE RUBBER MINIMUM LAYER THICKNESS: 0.11 MM BREAK THROUGH TIME: 480 MIN MATERIAL TESTED:DERMATRIL (KCL 740, SIZE M)
	IF USED IN SOLUTION, OR MIXED WITH OTHER SUBSTANCES, AND UNDER CONDITIONS WHICH DIFFER FROM EN 374, CONTACT THE SUPPLIER OF THE EC APPROVED GLOVES. THIS RECOMMENDATION IS ADVISORY ONLY AND MUST BE EVALUATED BY AN INDUSTRIAL HYGIENIST AND SAFETY OFFICER FAMILIAR WITH THE SPECIFIC SITUATION OF ANTICIPATED USE BY OUR CUSTOMERS. IT SHOULD NOT BE CONSTRUED AS OFFERING AN APPROVAL FOR ANY SPECIFIC USE SCENARIO.
BODY PROTECTION	FLAME RETARDANT ANTISTATIC PROTECTIVE CLOTHING, THE TYPE OF PROTECTIVE EQUIPMENT MUST BE SELECTED ACCORDING TO THE CONCENTRATION AND AMOUNT OF THE DANGEROUS SUBSTANCE AT THE SPECIFIC WORKPLACE.
RESPIRATORY PROTECTION	WHERE RISK ASSESSMENT SHOWS AIR-PURIFYING RESPIRATORS ARE APPROPRIATE USE A FULLFACE PARTICLE RESPIRATOR TYPE N100 (US) OR TYPE P3 (EN 143) RESPIRATOR CARTRIDGES AS A BACKUP TO ENGINEERING CONTROLS. IF THE RESPIRATOR IS THE SOLE MEANS OF PROTECTION, USE A FULL-FACE SUPPLIED AIR RESPIRATOR. USE RESPIRATORS AND COMPONENTS TESTED AND APPROVED UNDER APPROPRIATE GOVERNMENT STANDARDS SUCH AS NIOSH (US) OR CEN (EU).
CONTROL OF ENVIRONMENTAL EXPOSURE	PREVENT FURTHER LEAKAGE OR SPILLAGE IF SAFE TO DO SO. DO NOT LET PRODUCT ENTER DRAINS.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

INFORMATION ON BASIC PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE	Black powder
ODOUR	NO DATA AVAILABLE
ODOUR THRESHOLD	NO DATA AVAILABLE
PH	NO DATA AVAILABLE
MELTING	
POINT/FREEZING POINT	
INITIAL BOILING POINT	
AND BOILING RANGE	
FLASH POINT	
EVAPORATION RATE	NO DATA AVAILABLE
FLAMMABILITY (SOLID,	THE SUBSTANCE OR MIXTURE IS A FLAMMABLE SOLID
GAS)	WITH THE CATEGORY 1.
UPPER/LOWER	NO DATA AVAILABLE
FLAMMABILITY OR	
EXPLOSIVE LIMITS	
VAPOUR PRESSURE	NO DATA AVAILABLE
VAPOUR DENSITY	NO DATA AVAILABLE
RELATIVE DENSITY	Bulk density 2.2 - 3.2 g/cm3
WATER SOLUBILITY	INSOLUBLE
PARTITION COEFFICIENT:	NO DATA AVAILABLE
N- OCTANOL/WATER	
AUTO-IGNITION	NO DATA AVAILABLE
TEMPERATURE	
DECOMPOSITION	NO DATA AVAILABLE
TEMPERATURE	
VISCOSITY	NO DATA AVAILABLE
EXPLOSIVE PROPERTIES	NO DATA AVAILABLE
OXIDIZING PROPERTIES	NO DATA AVAILABLE

OTHER SAFETY INFORMATION

BULK DENSITY 2,500.0 - 3,500.0 KG/M3

SECTION 10. STABILITY AND REACTIVITY

REACTIVITY	NO DATA AVAILABLE
CHEMICAL STABILITY	STABLE UNDER RECOMMENDED STORAGE CONDITIONS.
POSSIBILITY OF HAZARDOUS REACTIONS	NO DATA AVAILABLE
CONDITIONS TO AVOID	HEAT, FLAMES AND SPARKS.

INCOMPATIBLEACIDS, OXYGEN, STRONG OXIDIZING AGENTS,MATERIALSHALOGENS, PHOSPHORUS

HAZARDOUS DECOMPOSITION PRODUCTS IN THE EVENT OF FIRE: SEE SECTION 5

SECTION 11. TOXICOLOGICAL INFORMATION

INFORMATION ON TOXICOLOGICAL EFFECTS ACUTE TOXICITY LD50 ORAL - RAT - 30,000 MG/KG REMARKS: (RTECS) INHALATION: NO DATA AVAILABLE DERMAL: NO DATA AVAILABLE NO DATA AVAILABLE SKIN NO DATA AVAILABLE **CORROSION/IRRITATION** SERIOUS EYE NO DATA AVAILABLE **DAMAGE/EYE IRRITATION RESPIRATORY OR SKIN** NO DATA AVAILABLE **SENSITISATION** GERM CELL NO DATA AVAILABLE **MUTAGENICITY** CARCINOGENICITY IARC: NO COMPONENT OF THIS PRODUCT PRESENT AT LEVELS GREATER THAN OR EQUAL TO 0.1% IS IDENTIFIED AS PROBABLE, POSSIBLE OR CONFIRMED HUMAN CARCINOGEN BY IARC. ACGIH: NO COMPONENT OF THIS PRODUCT PRESENT AT LEVELS GREATER THAN OR EQUAL TO 0.1% IS IDENTIFIED AS A CARCINOGEN OR POTENTIAL CARCINOGEN BY ACGIH. NTP: NO COMPONENT OF THIS PRODUCT PRESENT AT LEVELS GREATER THAN OR EOUAL TO 0.1% IS IDENTIFIED AS A KNOWN OR ANTICIPATED CARCINOGEN BY NTP. OSHA: NO COMPONENT OF THIS PRODUCT PRESENT AT LEVELS GREATER THAN OR EQUAL TO 0.1% IS ON OSHA S LIST OF REGULATED CARCINOGENS.

REPRODUCTIVE TOXICITY NO DATA AVAILABLE

SPECIFIC TARGET ORGAN TOXICITY - SINGLE EXPOSURE	NO DATA AVAILABLE
SPECIFIC TARGET ORGAN TOXICITY - REPEATED EXPOSURE	NO DATA AVAILABLE
ASPIRATION HAZARD	NO DATA AVAILABLE
ADDITIONAL INFORMATION	RTECS: NOT AVAILABLE
	OVERDOSE OF IRON COMPOUNDS MAY HAVE A CORROSIVE EFFECT ON THE GASTROINTESTINAL MUCOSA AND BE FOLLOWED BY NECROSIS, PERFORATION, AND STRICTURE FORMATION. SEVERAL HOURS MAY ELAPSE BEFORE SYMPTOMS THAT CAN INCLUDE EPIGASTRIC PAIN, DIARRHEA, VOMITING, NAUSEA, AND HEMATEMESIS OCCUR. AFTER APPARENT RECOVERY A PERSON MAY EXPERIENCE METABOLIC ACIDOSIS, CONVULSIONS, AND COMA HOURS OR DAYS LATER. FURTHER COMPLICATIONS MAY DEVELOP LEADING TO ACUTE LIVER NECROSIS THAT CAN RESULT IN DEATH DUE TO HEPATIC COMA. LONG TERM INHALATION EXPOSURE TO IRON (OXIDE FUME OR DUST) CAN CAUSE SIDEROSIS. SIDEROSIS IS CONSIDERED TO BE A BENIGN PNEUMOCONIOSIS AND DOES NOT NORMALLY CAUSE SIGNIFICANT PHYSIOLOGIC IMPAIRMENT.

SIDEROSIS CAN BE OBSERVED ON X-RAYS WITH THE LUNGS HAVING A MOTTLED APPEARANCE.

TO THE BEST OF OUR KNOWLEDGE, THE CHEMICAL, PHYSICAL, AND TOXICOLOGICAL PROPERTIES HAVE NOT BEEN THOROUGHLY INVESTIGATED.

SECTION 12. ECOLOGICAL INFORMATION

TOXICITY	NO DATA AVAILABLE
PERSISTENCE AND DEGRADABILITY	THE METHODS FOR DETERMINING THE BIOLOGICAL DEGRADABILITY ARE NOT APPLICABLE TO INORGANIC SUBSTANCES.
BIOACCUMULATIVE POTENTIAL	NO DATA AVAILABLE

MOBILITY IN SOIL	NO DATA AVAILABLE
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RESULTS OF PBT ANDPBT/VPVB ASSESSMENT NOT AVAILABLE AS**VPVB ASSESSMENT**CHEMICAL SAFETY ASSESSMENT NOT
REQUIRED/NOT CONDUCTED

OTHER ADVERSE EFFECTS NO DATA AVAILABLE

SECTION 13. DISPOSAL CONSIDERATIONS

WASTE TREATMENT METHODS

PRODUCT	BURN IN A CHEMICAL INCINERATOR EQUIPPED WITH
	AN AFTERBURNER AND SCRUBBER BUT EXERT EXTRA
	CARE IN IGNITING AS THIS MATERIAL IS HIGHLY
	FLAMMABLE. OFFER SURPLUS AND NON-RECYCLABLE
	SOLUTIONS TO A LICENSED DISPOSAL COMPANY.

CONTAMINATED DISPOSE OF AS UNUSED PRODUCT. PACKAGING

SECTION 14. TRANSPORT INFORMATION

DOT (US)	
PROPER SHIPPING NAME:	METAL POWDER, FLAMMABLE, N.O.S. (Carbonyl iron powder (Micro-sized) (4~8 micron))
UN NUMBER:	3089
CLASS:	4.1
PACKING GROUP:	III
REPORTABLE QUANTITY	
(RQ):	
POISON INHALATION	NO
HAZARD:	
IMDG	
PROPER SHIPPING NAME:	METAL POWDER, FLAMMABLE, N.O.S. (Carbonyl iron powder (Micro-sized) (4~8 micron))
UN NUMBER:	3089
CLASS:	4.1
PACKING GROUP:	III
EMS-NO:	F-G, S-G
IATA	
PROPER SHIPPING NAME:	METAL POWDER, FLAMMABLE, N.O.S. (Carbonyl iron powder (Micro-sized) (4~8 micron))
UN NUMBER:	3089
CLASS:	4.1
UN NUMBER:	powder (Micro-sized) (4~8 micron)) 3089

SECTION 15. REGULATORY INFORMATION

III

SARA 302 COMPONENTS NO CHEMICALS IN THIS MATERIAL ARE SUBJECT TO THE REPORTING REQUIREMENTS OF SARA TITLE III, SECTION 302.

SARA 313 COMPONENTS THIS MATERIAL DOES NOT CONTAIN ANY CHEMICAL COMPONENTS WITH KNOWN CAS NUMBERS THAT EXCEED THE THRESHOLD (DE MINIMIS) REPORTING LEVELS ESTABLISHED BY SARA TITLE III, SECTION 313.

SARA 311/312 HAZARDS FIRE HAZARD

MASSACHUSETTS RIGHT	NO COMPONENTS ARE SUBJECT TO THE
TO KNOW COMPONENTS	MASSACHUSETTS RIGHT TO KNOW ACT.

PENNSYLVANIA RIGHT TO KNOW COMPONENTS

CAS-NO. 7439-89-6 **REVISION DATE**

Carbonyl iron powder (Microsized) (4~8 micron)

NEW JERSEY RIGHT TO KNOW COMPONENTS

CAS-NO. Carbonyl iron powder (Micro-7439-89-6 sized) (4~8 micron)

REVISION DATE

CALIFORNIA PROP. 65 COMPONENTS

THIS PRODUCT DOES NOT CONTAIN ANY CHEMICALS KNOWN TO STATE OF CALIFORNIA TO CAUSE CANCER, BIRTH DEFECTS, OR ANY OTHER REPRODUCTIVE HARM.

SECTION 16. OTHER INFORMATION

FULL TEXT OF H-STATEMENTS REFERRED TO UNDER SECTIONS 2 AND 3. H228 FLAMMABLE SOLID.

N	ASDS LEGEND	
N	/W:	MOLECULAR WEIGHT
N	/IF:	MOLECULAR FORMULA
V	VOC:	VOLATILE ORGANIC COMPOUNDS
A	ACGIH:	AMERICAN CONFERENCE OF GOVERNMENENTAL INDUSTRIAL
		HYGINISTS
C	CAS:	CHEMICAL ABSTRACTS SERIVE REGISTRY NUMBER
C	OSHA:	OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION
N V A	AF: /OC: ACGIH: CAS:	MOLECULAR FORMULA VOLATILE ORGANIC COMPOUNDS AMERICAN CONFERENCE OF GOVERNMENENTAL INDUSTRIAL HYGINISTS CHEMICAL ABSTRACTS SERIVE REGISTRY NUMBER

PEL:PERMISSIBLE EXPOSURE LIMIT (OSHA)TLV:THRESHOLD LIMIT VALUE (ACGIH)

IMPORTANT:

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REVISION DATE: 05/20/2024