

MATERIAL SAFETY DATA SHEET

HMIS CODES:

H	F	R	P
2	0	1	H

May be used to comply with OSHA's Hazard Communication Standard, 29 CFR 1910.1200. Standard must be consulted for specific requirements.

U.S. Department of Labor
Occupational Safety and Health Administrator
(Non-Mandatory Form)
Form Approved OMB No. 1218-0072

IDENTITY (AS USED ON LABEL AND LIST):

S39 LIQUID WATER SOLUBLE SOLDER FLUX S39

NOTE: Blank spaces are not permitted. If any item is not applicable, or no information is available, the space must be marked to indicate that.

Section IManufacturer's Name:
J.C. WHITLAM MANUFACTURING COMPANYEmergency Telephone Number:
CHEM-TEL (800) 255-3924Address (Number, Street, City, State, and ZIP Code):
200 WEST WALNUT STREETTelephone Number for Information:
(330) 334 - 2524

P.O. BOX 380

Date Prepared: January 1, 2010

WADSWORTH, OHIO 44282-0380

Signature of Preparer (optional):

Section II - Hazardous Ingredients/Identity Information

HAZARDOUS COMPONENTS (SPECIFIC CHEMICAL IDENTITY: COMMON NAME(S))	OSHA PEL	ACGIH TLV	OTHER LIMITS Recommended	% (optional)
ZINC CHLORIDE [CAS#7646-85-7]	N/A	N/A	> 25 ≤ 50	N/A
AMMONIUM CHLORIDE [CAS#12125-02-9]	N/A	N/A	> 10 ≤ 25	N/A
1,2 - ETHANEDIOL [CAS#64-17-5]	N/A	N/A	> 10 ≤ 25	N/A
SHIPPING INFORMATION: CORROSIVE LIQUID, n.o.s. 8, UN1760, PGIII (ZINC CHLORIDE)				

Section III - Physical/Chemical Characteristics

Boiling Point: 186°F (75°C)	Specific Gravity (H2O =1): 1.44 g/cm ²	
Vapor Pressure (mm Hg): 23 hPa (17 mm Hg)	Melting Point: N/A	
Vapor Density (AIR = 1): N/A	Evaporation Rate (Butyl Acetate = 1): N/A	
Viscosity at 68°F (20°C): 200 mPas	Solubility in Water: MISCIBLE	pH at 68°F (20°C): 3.0
Ignition Temperature: 770°F (410°C)	Auto Igniting: THIS PRODUCT WILL NOT SELF-IGNITE	
Appearance and Odor: CLEAR THIN LIQUID, MILD SWEET ODOR		
VOC Statement: VOC AS MANUFACTURED LESS THAN 50 GRAMS/LITER (G/L).		

Section IV - Fire and Explosion Hazard Data

Flash Point (Method Used): > 212°F (> 100°C) TTC	Flammable Limits:	LEL: 3.2 Vol%	UEL: 53.0 Vol%
Extinguishing Media: ABC FIRE EXTINGUISHER OR WATER			

Special Fire Fighting Procedures: EXPOSURE TO THE BREAKDOWN PRODUCTS CAN POSE A HAZARD TO HEALTH. SUITABLE BREATHING APPARATUS MAY BE NECESSARY. COOL CONTAINERS WHICH HAVE BEEN EXPOSED TO FIRE WITH WATER.

Unusual Fire and Explosion Hazards: NON-COMBUSTIBLE, DOES NOT PRESENT AN EXPLOSION HAZARD

Section V - Reactivity Data	S39 LIQUID WATER SOLUBLE SOLDER FLUX S39
------------------------------------	-------------------------------------------------

Stability:	Unstable:		Conditions to Avoid:
	Stable:	X	

Incompatibility (Materials to Avoid): AVOID ANY CONTACT WITH OXIDIZING AGENTS, STRONG ALKALINE AND STRONG ACIDIC MATERIALS IN ORDER TO PREVENT EXOTHERMIC REACTIONS.

Hazardous Decomposition or Byproducts: IF EXPOSED TO HIGH TEMPERATURES, HAZARDOUS BREAKDOWN PRODUCTS CAN ARISE SUCH AS SMOKE, CARBON MONOXIDE, CARBON DIOXIDE, NITROGEN OXIDES, GASES AND CHLORINE-CONTAINING DECOMPOSITION PRODUCTS.

Hazardous Polymerization:	May Occur:		Conditions to Avoid:
	Will Not Occur:	X	

Section VI - Health Hazard Data

Route(s) of Entry:	Inhalation? YES	Skin? YES	Ingestion? YES
--------------------	-----------------	-----------	----------------

Health Hazards (Acute and Chronic): INHALATION: MOVE PATIENT TO OUTSIDE AIR AND KEEP THEM WARM. IF PATIENT IS NOT BREATHING, GIVE ARTIFICIAL RESPIRATION. EYES: RINSE EYES FOR 10 MINUTES. CONSULT A DOCTOR. SKIN: TAKE OFF CONTAMINATED CLOTHING. WASH SKIN THOROUGHLY WITH SOAP AND WATER. DO NOT USE SOLVENTS OR THINNERS. INGESTION: IF PRODUCT HAS BEEN INGESTED, CONSULT A DOCTOR IMMEDIATELY. DO NOT INDUCE VOMITING.

Carcinogenicity:	NTP? NO	IARC Monographs? NO	OSHA Regulated? NO
------------------	---------	---------------------	--------------------

Signs and Symptoms of Exposure: INHALATION: SHORTNESS OF BREATH. EYES: BURNING SENSATION FROM FUMING OR SPLASH. SKIN: RED AND IRRITATED SKIN. BURNING SENSATIONS. INGESTION: SICK TO STOMACH. BURNING OF THROAT.

Medical Conditions Generally Aggravated by Exposure: NONE REPORTED.

Emergency and First Aid Procedures: INHALATION: MOVE PATIENT TO FRESH AIR. IF PATIENT IS NOT BREATHING, GIVE ARTIFICIAL RESPIRATION AND CALL DOCTOR. EYES: FLUSH WITH WATER FOR 10 MINUTES. CONTACT A DOCTOR. INGESTION: CALL DOCTOR. DO NOT INDUCE VOMITING.

Section VII - Precautions for Safe Handling and Use

Steps to Be Taken in Case Material is Released or Spilled: VENTILATE ROOM WELL. DO NOT INHALE VAPORS. DAM IN SPILLED MATERIAL AND ABSORB IT WITH NON-COMBUSTIBLE ABSORPTION MATERIALS: SAND, VERMICULITE. PROCESS MATERIALS ACCORDING TO LOCAL, STATE AND FEDERAL REGULATIONS. PREVENT IT FROM ENDING UP IN SEWERS OR SURFACE WATER.

Waste Disposal Method: DISPOSE OF ACCORDING TO FEDERAL, STATE AND LOCAL REGULATIONS.

Precautions to Be Taken in Handling and Storing: AVOID CONTACT WITH EYES AND SKIN. DO NOT INHALE VAPORS. SMOKING, EATING AND DRINKING MUST BE PROHIBITED IN ROOMS WHERE PRODUCT IS USED.

Other Precautions: ADHERE TO SAFETY AND HEALTH REGULATIONS AT THE PLACE OF WORK.

Section VIII - Control Measures

Respiratory Protection (Specify Type): USE OSHA APPROVED RESPIRATORY MASK

Ventilation:	Local Exhaust: RECOMMENDED TO CONTROL EXPOSURE.	Special: N/A
	Mechanical (General): NOT RECOMMENDED AS SOLE MEANS.	Other: N/A

Protective Gloves: RUBBER OR POLYETHYLENE GLOVES	Eye Protection: OSHA APPROVED SAFETY GOGGLES.
-----------------------------------------------------	--------------------------------------------------

Other Protective Clothing or Equipment: N/A

Work/Hygienic Practices: WASH HANDS BEFORE EATING OR USING TOILET FACILITIES.