

IPS		MATERIAL SAFETY DATA SHEET		Date Revised: OCT 2005																									
WELD-ON				Supersedes: AUG 2005																									
Information on this form is furnished solely for the purpose of compliance with the Occupational Safety and Health Act and shall not be used for any other purpose. IPS Corporation urges the customers receiving this Material Safety Data Sheet to study it carefully to become aware of the hazards, if any, of the product involved. In the interest of safety, you should notify your employees, agents and contractors of the information on this sheet.																													
SECTION I																													
MANUFACTURER'S NAME IPS Corporation ADDRESS 600 Ellis road, Durham, NC 27703			Transportation Emergencies: CHEMTREC: (800) 424-9300 Medical Emergencies: 3 E COMPANY (24 Hour No.) (800) 451-8346 Business: (919) 598-2400																										
CHEMICAL NAME and FAMILY Acrylic Reactive Adhesive Mixture of Polymeric Resins and Methyl Methacrylate Monomer			TRADE NAME; WELD-ON STRUCTURAL SERIES -- SS 230 SS 230 HV (High Viscosity) - Component A of 2-component adhesive FORMULA: Proprietary																										
SECTION II - HAZARDOUS INGREDIENTS																													
None of the ingredients below are listed as carcinogens by IARC, NTP or OSHA																													
	CAS#	APPROX %	ACGIH-TLV	ACGIH-STEL	OSHA-PEL	OSHA-STEL																							
Synthetic Polymer Resin	NON/HAZ		N/A		N/A																								
Methyl Methacrylate Monomer, Stabilized	80-62-6	<49	100 PPM		100 PPM																								
Methacrylic Acid	79-41-4	<5	20 PPM (Skin)	N/E	N/E	N/E																							
Styrene Monomer, Stabilized	100-42-5	<5	20 PPM	40 PPM	100 PPM	200 PPM Ceil.																							
All of the constituents of Weld-On adhesive products are either listed on the TSCA inventory of chemical substances maintained by the US EPA and the Canadian Domestic Substance List or are exempt therefrom. They are also compliant with the requirements of the European Directive on HoHS (Restriction of Hazardous Substances).																													
*Title III Section 313 Supplier Notification: This product contains toxic chemicals subject to the reporting requirements of Section 313 of the Emergency Planning and Community Right-To-Know Act of 1986 and of 40CFR372. This information must be included in all MSDS's that are copied and distributed for this material.																													
BULK SHIPPING INFORMATION / CONTAINERS LARGER THAN ONE LITER DOT Shipping Name: Adhesive DOT Hazard Class: 3 Identification Number: UN 1133 Packaging Group: II Label Required: Flammable Liquid			SPECIAL HAZARD DESIGNATIONS <table border="1"> <thead> <tr> <th></th> <th>HMIS</th> <th>NFPA</th> <th>HAZARD RATING</th> </tr> </thead> <tbody> <tr> <td>HEALTH:</td> <td>2</td> <td>2</td> <td>0 - MINIMAL</td> </tr> <tr> <td>FLAMMABILITY:</td> <td>3</td> <td>3</td> <td>1 - SLIGHT</td> </tr> <tr> <td>REACTIVITY:</td> <td>1</td> <td>1</td> <td>2 - MODERATE</td> </tr> <tr> <td>PROTECTIVE EQUIPMENT:</td> <td></td> <td></td> <td>3 - SERIOUS</td> </tr> <tr> <td></td> <td></td> <td></td> <td>4 - SEVERE</td> </tr> </tbody> </table>				HMIS	NFPA	HAZARD RATING	HEALTH:	2	2	0 - MINIMAL	FLAMMABILITY:	3	3	1 - SLIGHT	REACTIVITY:	1	1	2 - MODERATE	PROTECTIVE EQUIPMENT:			3 - SERIOUS				4 - SEVERE
	HMIS	NFPA	HAZARD RATING																										
HEALTH:	2	2	0 - MINIMAL																										
FLAMMABILITY:	3	3	1 - SLIGHT																										
REACTIVITY:	1	1	2 - MODERATE																										
PROTECTIVE EQUIPMENT:			3 - SERIOUS																										
			4 - SEVERE																										
SHIPPING INFORMATION FOR CONTAINERS LESS THAN ONE LITER DOT Shipping Name: Consumer Commodity DOT Hazard Class: ORM-D			B = Eye, Hand/Skin Protection (Normal use or application & spill clean-up activities) H = Eye, Hand/Skin and Respiratory Protection plus Impermeable Apron (When risk of immersion and/or splashing is present)																										
SECTION III - PHYSICAL DATA																													
APPEARANCE Off-White, viscous liquid or paste		ODOR Distinct Strong Odor		BOILING POINT (°F/°C) 214°F (102°C) Based on Methyl Methacrylate Monomer																									
SPECIFIC GRAVITY @ 73°F ± 3.6° (23°C ± 2°) Typical 0.960 ± 0.040		VAPOR PRESSURE (mm Hg.) 29 mm Hg. @ 68°F (20°C) based on Methyl Methacrylate Monomer		PERCENT VOLATILE BY VOLUME (%) Approx: 50 -75 %; Volatile content is a reactive diluent. Evaporation is minimal in normal use.																									
VAPOR DENSITY (Air = 1) 3.46 based on Monomer		EVAPORATION RATE (BUAC = 1) < 1		SOLUBILITY IN WATER Slight																									
SECTION IV - FIRE AND EXPLOSION HAZARD DATA																													
FLASH POINT 51°F (10.6°C) T.C.C. based on Monomer		FLAMMABLE LIMITS (Percent by Volume)		LEL 2.1	UEL 12.5																								
FIRE EXTINGUISHING MEDIA Foam, carbon dioxide, dry chemical, water fog (by trained personnel).																													
SPECIAL FIRE FIGHTING PROCEDURES Full protective equipment, including self-contained breathing apparatus, is recommended. Cool containers of material exposed to heat with cold water spray. Use of water fog by trained personnel can extinguish small/large fires and avoid water flow or water streams distributing burning material or contaminated water over a large area or into sewers or storm drains. Fight fires from a safe distance or protected area.																													
UNUSUAL FIRE AND EXPLOSION HAZARDS Sealed containers exposed to elevated temperatures may rupture due to polymerization or vapor expansion. Vapors are heavier than air and may travel to source(s) of ignition at or near floor or lower level(s) and flash back. Susceptible to spontaneous heating. Considered a fire hazard because of low flash point.																													

SECTION V - HEALTH HAZARD DATA

PRIMARY ROUTES

OF ENTRY: X Inhalation X Skin Contact _____ Eye Contact _____ Ingestion

EFFECT OF OVEREXPOSURE

ACUTE:
Inhalation: Exposure may result in nausea, drowsiness, dizziness, headache and other CNS effects. Can cause irritation of eyes and nasal passages.
Skin Contact: Skin irritant. Potential skin sensitizer. Repeated or prolonged contact may result in skin irritation, contact dermatitis, rash, itching, swelling.
Eye Contact: Direct exposure may result in irritation with corneal or conjunctival inflammation.
Ingestion: Moderately toxic. Do not induce vomiting. Obtain prompt medical attention.
CHRONIC: (LABORATORY ANIMALS)
Inhalation Toxicity described in animals exposed by inhalation include inflammation of the nasal cavity and changes in nasal sensory cells and slight decrease in body weight.
Ingestion Toxicity described in animals exposed by ingestion include decreased body weight and increased relative kidney weight at high dose levels.

REPRODUCTIVE EFFECTS	TERATOGENICITY	MUTAGENICITY	EMBRYOTOXICITY	SENSITIZATION TO PRODUCT	SYNERGISTIC PRODUCTS
N. AP.	N. AP.	N. AP.	N. AP.	N. AP.	N. AV.

MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE: This material may aggravate an existing dermatitis. Individuals with pre-existing diseases of the lungs, liver or kidney may have increased susceptibility to the toxicity of excessive exposures.

EMERGENCY AND FIRST AID PROCEDURES

Inhalation: Remove patient to fresh air and if breathing stopped, give artificial respiration. If breathing is difficult, give oxygen. Contact physician immediately.
Eye Contact: Immediately flush eyes with water for 15 minutes and contact a physician.
Skin Contact: Wash skin with soap and water for at least 15 minutes. If irritation develops, get medical attention.
Ingestion: Give 1 or 2 glasses of water or milk. Do not induce vomiting. Call physician or poison control center immediately.

SECTION VI - REACTIVITY

STABILITY	UNSTABLE		CONDITIONS TO AVOID: Exposure to fire, heat, sparks, open flame and other sources of ignition, direct sunlight or contact with oxidizing materials.
	STABLE	X	

INCOMPATIBILITY
(MATERIALS TO AVOID) Reducing and oxidizing agents.

HAZARDOUS DECOMPOSITION PRODUCTS
Oxides of carbon, oxides of nitrogen, hydrogen cyanide, hydrocarbons, dense smoke and gases upon combustion.

HAZARDOUS	MAY OCCUR	X	CONDITIONS TO AVOID Keep away from heat, sparks, open flame and other sources of ignition.
POLYMERIZATION	WILL NOT OCCUR		

SECTION VII - SPILL OR LEAK PROCEDURES

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED
Eliminate all ignition sources. Avoid exposure of personnel to toxic concentration of vapor and guard against accidental fire and explosion. Contain liquid with sand, earth or nonflammable absorbent material and transfer into steel drums for recovery or disposal. Prevent liquid from entering drains.

WASTE DISPOSAL METHOD
Follow local, State and Federal regulations. Material should not be allowed to drain into domestic sewer or storm drains. Consult disposal expert.

SECTION VIII - SPECIAL PROTECTION INFORMATION

RESPIRATORY PROTECTION (Specify type)
Atmospheric levels should be maintained below established exposure limits contained in Section II. If airborne concentrations exceed those limits, use of a NIOSH approved organic vapor cartridge respirator is recommended. The effectiveness of an air purifying respirator is limited. Use it only for a single short-term exposure. For emergency and other conditions where short-term exposure guidelines may be exceeded, use an approved positive pressure self-contained breathing apparatus.

VENTILATION
Use with adequate ventilation (approximately ten (10) or more air changes per hour). Provide sufficient ventilation in volume and pattern to keep contaminants below applicable exposure limits set forth in Section II. Open doors and/or windows usually ensure airflow and air changes. Use local exhaust ventilation to remove airborne contaminants from employee breathing zone. If mechanical ventilation is necessary, use only explosion-proof ventilation equipment.

PROTECTIVE GLOVES PVA coated rubber gloves for frequent dipping/immersion. Use of latex/nitrile surgical gloves or solvent resistant barrier creme should provide adequate protection when normal adhesive bonding practices and procedures for small quantity mixing, application or spill clean-up are used.	EYE PROTECTION Splashproof chemical goggles, face shield, safety glasses/spectacles with brow guards and side shields, etc. as appropriate for exposure.
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OTHER PROTECTIVE EQUIPMENT AND HYGIENIC PRACTICES
Impervious apron and a source of running water to flush or wash the eyes and skin in case of contact.

SECTION IX - SPECIAL PRECAUTIONS

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORING
Store in a cool dark place below 70°F (21°C). Keep away from all sources of heat, sparks, open flame and other sources of ignition. Close container after each use. Ground containers when pouring. Use with adequate ventilation. Train employees on all special handling procedures before they work with this product.

OTHER PRECAUTIONS
Follow all precautionary information given on container labels and product bulletins, etc. All material handling equipment should be electrically grounded.

The information contained herein is based on data considered accurate. However, no warranty is expressed or implied regarding the accuracy of this data or the results to be obtained from the use thereof.

IPS WELD-ON		MATERIAL SAFETY DATA SHEET		Date Revised: JAN 2006 Supersedes: SEP 2005	
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SECTION I					
MANUFACTURER'S NAME IPS Corporation ADDRESS 600 Ellis Road, Durham, NC 27703			Transportation Emergencies: CHEMTREC: (800) 424-9300 Medical Emergencies: 3 E COMPANY (24 Hour No.) (800) 451-8346 Business: (919) 598-2400		
CHEMICAL NAME and FAMILY Acrylic Reactive Adhesive Activator Mixture of Organic Peroxide, Benzoate Esters and Synthetic Resins		TRADE NAME: WELD-ON STRUCTURAL SERIES -- 200 Series Component B SS 208, SS 214, SS 218, SS 605, SS 214 HV, SS 216 HV, SS 218 HV & SS 220HV Activators FORMULA: Proprietary			
SECTION II - HAZARDOUS INGREDIENTS					
None of the ingredients below are listed as carcinogens by IARC, NTP or OSHA					
	CAS#	APPROX %	ACGIH-TLV	ACGIH-STEL	OSHA-PEL OSHA-STEL
Synthetic Polymer Resin	NON/HAZ				
Blended Mixture of Benzoate Esters	NON/HAZ	<70*	N/A		N/A
55% Benzoyl Peroxide paste in proprietary plasticizer	94-36-0	<25*	5 mg/m ³		5 mg/m ³
All of the constituents of Weld-On adhesive products are either listed on the TSCA inventory of chemical substances maintained by the US EPA and the Canadian Domestic Substance List or are exempt therefrom. They are also compliant with the requirements of the European Directive on HoHS (Restriction of Hazardous Substances).					
*Title III Section 313 Supplier Notification: This product contains toxic chemicals subject to the reporting requirements of Section 313 of the Emergency Planning and Community Right-To-Know Act of 1986 and of 40CFR372. This information must be included in all MSDS's that are copied and distributed for this material.					
BULK SHIPPING INFORMATION / CONTAINERS LARGER THAN ONE GALLON			SPECIAL HAZARD DESIGNATIONS		
DOT Shipping Name: Not Regulated			HMIS NFPA HAZARD RATING		
DOT Hazard Class: Not Regulated			HEALTH: 1 1 0 - MINIMAL		
Identification Number: Not Regulated			FLAMMABILITY: 1 1 1 - SLIGHT		
Packaging Group: Not Regulated			REACTIVITY: 1 1 2 - MODERATE		
Label Required: Not Regulated			PROTECTIVE 3 - SERIOUS		
			EQUIPMENT: B 4 - SEVERE		
SHIPPING INFORMATION FOR CONTAINERS LESS THAN 1 GALLON			B = Eye, & Hand/Skin Protection		
DOT Shipping Name: Consumer Commodity					
DOT Hazard Class: ORM-D					
SECTION III - PHYSICAL DATA					
APPEARANCE White or gray, viscous liquid		ODOR Mild Ester		BOILING POINT (°F/°C) N/A	
SPECIFIC GRAVITY @ 73°F ± 3.6° (23°C ± 2°) Typical 1.087 ± 0.040		VAPOR PRESSURE (mm Hg.) N/A		PERCENT VOLATILE BY VOLUME (%) 0	
VAPOR DENSITY (Air = 1) N/A		EVAPORATION RATE (BUAC = 1) N/A		SOLUBILITY IN WATER Insoluble	
SECTION IV - FIRE AND EXPLOSION HAZARD DATA					
FLASH POINT 420°F (217°C) T.C.C.		FLAMMABLE LIMITS (Percent by Volume)		LEL	UEL
				-	-
FIRE EXTINGUISHING MEDIA Foam, carbon dioxide, dry chemical, water fog (by trained personnel).					
SPECIAL FIRE FIGHTING PROCEDURES Evacuate enclosed areas. Stay upwind. Full protective equipment, including self-contained breathing apparatus, is recommended. Fight fires from a safe distance or protected area. Use of a water fog by trained personnel can extinguish small/large fires and avoid water flow or water streams/spray distributing burning material or contaminated water over a large area or into sewers or storm drains. Use water spray to cool containers, to flush spills from source of ignition and to disperse vapors.					
UNUSUAL FIRE AND EXPLOSION HAZARDS Sealed containers exposed to elevated temperatures may rupture.					

SECTION V - HEALTH HAZARD DATA

PRIMARY ROUTES

OF ENTRY: X Inhalation X Skin Contact _____ Eye Contact _____ Ingestion

EFFECT OF OVEREXPOSURE

ACUTE:

Inhalation: May cause irritation of nose, throat and lungs.
Skin Contact: Prolonged exposure/contact may cause moderate skin irritation and redness (dermatitis).
Eye Contact: May cause eye irritation.
Ingestion: May cause nausea, vomiting and diarrhea.

CHRONIC:

None Known.

REPRODUCTIVE EFFECTS	TERATOGENICITY	MUTAGENICITY	EMBRYOTOXICITY	SENSITIZATION TO PRODUCT	SYNERGISTIC PRODUCTS
N. AP.	N. AP.	N. AP.	N. AP.	N. AP.	N. AV.

MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE: None Known.

EMERGENCY AND FIRST AID PROCEDURES

Inhalation: If overcome by vapors, remove patient to fresh air and if breathing is stopped, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention.
Eye Contact: Immediately flush eyes with flowing water for 15 minutes and get medical attention.
Skin Contact: Remove contaminated clothing and shoes. Launder before reuse. Wash skin thoroughly with soap and water for at least 15 minutes. If irritation develops, get medical attention.
Ingestion: If swallowed, do not induce vomiting as it increases aspiration hazards. Contact physician or poison control center immediately. Follow directions of medical personnel.

SECTION VI - REACTIVITY

STABILITY	UNSTABLE		CONDITIONS TO AVOID Thermal decomposition. Contamination.	ACTIVE OXYGEN CONTENT
	STABLE	X	Keep away from heat, sparks, open flame and other sources of ignition.	< 1%

INCOMPATIBILITY

(MATERIALS TO AVOID) Strong acids, strong bases, strong alkalis, reducing agents, accelerators, reactive metals.

HAZARDOUS DECOMPOSITION PRODUCTS

Flammable and toxic vapors and Biphenyl (TLV 0.2ppm). Combustion will produce carbon dioxide and probably carbon monoxide.

HAZARDOUS POLYMERIZATION	MAY OCCUR		CONDITIONS TO AVOID Keep away from heat above 110°F (44°C), sparks, open flame and other sources of ignition. Do not store above 100°F (38°C).
	WILL NOT OCCUR	X	

SECTION VII - SPILL OR LEAK PROCEDURES

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED

Eliminate all ignition sources. Wet material with water. Sweep and scoop up using non-sparking tools and dispose of immediately.

WASTE DISPOSAL METHOD

Observe all local, State and Federal regulations concerning health and environmental exposures. Consult local, State or Federal authorities or disposal expert for proper disposal procedures.

SECTION VIII - SPECIAL PROTECTION INFORMATION

RESPIRATORY PROTECTION, when used with Component "A", (Specify type)

Atmospheric levels should be maintained below established exposure limits contained in Section II. If airborne concentrations exceed those limits, use of a NIOSH approved organic vapor cartridge respirator is recommended. The effectiveness of an air purifying respirator is limited. Use it only for a single short-term exposure. For emergency and other conditions where short-term exposure guidelines may be exceeded, use an approved positive pressure self-contained breathing apparatus.

VENTILATION (When used with Component "A")

Use with adequate ventilation (approximately ten (10) or more air changes per hour). Provide sufficient ventilation in volume and pattern to keep contaminants below applicable exposure limits set forth in Section II. Open doors and/or windows usually ensure airflow and air changes. Use local exhaust ventilation to remove airborne contaminants from employee breathing zone. If mechanical ventilation is necessary, use only explosion-proof ventilation equipment.

PROTECTIVE GLOVES Nitrile or neoprene rubber gloves for frequent dipping/immersion. Use of latex/nitrile surgical gloves or solvent resistant barrier creme should provide adequate protection when normal adhesive bonding practices and procedures are used and for spill clean-up.

EYE PROTECTION Splashproof chemical goggles, face shield, safety glasses (spectacles) with brow guards and side shields, etc. as appropriate for exposure.

OTHER PROTECTIVE EQUIPMENT AND HYGIENIC PRACTICES

Impervious apron and a source of running water to flush or wash the eyes and skin in case of contact.

SECTION IX - SPECIAL PRECAUTIONS

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORING

Store in the shade between 40°F - 100°F (5°C - 38°C). Keep away from heat, sparks, open flame and other sources of ignition. Close container after each use. Avoid contact with eyes, skin and clothing. Wash thoroughly after handling. Train employees on all special handling procedures before they work with product.

OTHER PRECAUTIONS

Follow all precautionary information given on container label, product bulletins and application instructions. All material handling equipment should be electrically grounded when handling Component "A".

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