**IPS**
**WELD-ON**

# MATERIAL SAFETY DATA SHEET

Date Revised: OCT 2006
Supersedes: JAN 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: (310) 898-3300**

**CHEMICAL NAME and FAMILY**
Acrylic Reactive Adhesive
Mixture of Polymeric Resins and Methyl Methacrylate Monomer

**TRADE NAME:** WELD-ON STRUCTURAL SERIES -- 300 Series
WELD-ON SS 305, SS 310, SS 315, SS 316, SS340, SS 341 Adhesives, Component A
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 | 50 - 60* | 100 PPM | | 100 PPM | |
| Methacrylic Acid | 79-41-4 | 1 - 10 | 20 PPM (Skin) | N/E | N/E | N/E |

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.

*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.

Under some circumstances, mutagenic changes have been observed with Methyl Methacrylate in animal studies. Precautions should be taken to avoid unnecessary exposure to this cement.

**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 |

**SHIPPING INFORMATION FOR CONTAINERS LESS THAN ONE LITER**

| | |
|---|---|
| DOT Shipping Name: | Consumer Commodity |
| DOT Hazard Class: | ORM-D |

**SPECIAL HAZARD DESIGNATIONS**

| | HMIS | NFPA | HAZARD RATING |
|---|---|---|---|
| HEALTH: | 2 | 2 | 0 - MINIMAL |
| FLAMMABILITY: | 3 | 3 | 1 - SLIGHT |
| REACTIVITY: | 1 | 1 | 2 - MODERATE |
| PROTECTIVE | | | 3 - SERIOUS |
| EQUIPMENT: | B - H | | 4 - SEVERE |

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**<br>Off-White, heavy viscous liquid | **ODOR**<br>Distinct Odor | **BOILING POINT (°F/°C)**<br>214°F (102°C) Based on Methyl Methacrylate Monomer |
| **SPECIFIC GRAVITY @ 73°F ± 3.6° (23°C ± 2°)**<br>Typical 0.960 ± 0.040 | **VAPOR PRESSURE (mm Hg.)**<br>29 mm Hg. @ 68°F (20°C) based on Methyl Methacrylate Monomer | **PERCENT VOLATILE BY VOLUME (%)**<br>Approx: 50 -70 % |
| **VAPOR DENSITY (Air = 1)**<br>3.46 based on Monomer | **EVAPORATION RATE (BUAC = 1)**<br>Approx. 3 | **SOLUBILITY IN WATER**<br>1.6 Based on Monomer |

## SECTION IV - FIRE AND EXPLOSION HAZARD DATA

| FLASH POINT | FLAMMABLE LIMITS | LEL | UEL |
|---|---|---|---|
| 51°F (10.6°C) T.C.C. | (Percent by Volume) | 2.1 | 12.5 |

**FIRE EXTINGUISHING MEDIA**

Ansul "Purple K" potassium bicarbonate dry chemical, any appropriately sized ABC dry chemical, carbon dioxide, or foam extinguisher can be used for small fires. Use of a water fog by trained personnel can extinguish small/large fires.

**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 explosively due to polymerization. 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 conjuctival inflammation. |
| Ingestion: | Moderately toxic. Do not induce vomiting and obtain prompt medical attention. |

**CHRONIC:**

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

INCOMPATIBILITY
(MATERIALS TO AVOID) Reducing and oxidizing agents.

HAZARDOUS DECOMPOSITION PRODUCTS
This product gives out carbon monoxide (CO), carbon dioxide ($CO^2$) and smoke upon combustion. Generates heat when mixed with oxidizing materials.

| HAZARDOUS POLYMERIZATION | | | CONDITIONS TO AVOID |
|---|---|---|---|
| | MAY OCCUR | X | Keep away from heat, sparks, open flame and other sources of ignition. |
| | 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 with full face-piece 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.

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), but do not freeze. 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 label, product bulletins and our solvent cementing literature. All material handling equipment should be electrically grounded.

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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: (310) 898-3300**

**CHEMICAL NAME and FAMILY**
Acrylic Reactive Adhesive Activator
Mixture of Organic Peroxide, Resin and Esters

**TRADE NAME:** WELD-ON STRUCTURAL SERIES -- 300 Series
WELD-ON SS 605 (black) or SS 214 (white) Activators, Component B
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 | 55 - 70* | 5 mg/m³ | | 5 mg/m³ | |
| 55% Benzoyl Peroxide paste in proprietary plasticizer | 94-36-0 | 10 - 25* | 5 mg/m³ | | 5 mg/m³ | |

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.

*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**

| | |
|---|---|
| DOT Shipping Name: | Not Regulated |
| DOT Hazard Class: | Not Regulated |
| Identification Number: | Not Regulated |
| Packaging Group: | Not Regulated |
| Label Required: | Not Regulated |

**SHIPPING INFORMATION FOR CONTAINERS LESS THAN 1 GALLON**

| | |
|---|---|
| DOT Shipping Name: | Consumer Commodity |
| DOT Hazard Class: | ORM-D |

**SPECIAL HAZARD DESIGNATIONS**

| | HMIS | NFPA | HAZARD RATING |
|---|---|---|---|
| HEALTH: | 1 | 1 | 0 - MINIMAL |
| FLAMMABILITY: | 1 | 1 | 1 - SLIGHT |
| REACTIVITY: | 0 | 0 | 2 - MODERATE |
| PROTECTIVE | | | 3 - SERIOUS |
| EQUIPMENT: | B | | 4 - SEVERE |

B = Eye, & Hand/Skin Protection

## SECTION III - PHYSICAL DATA

| | | |
|---|---|---|
| **APPEARANCE**<br>White, black or gray viscous liquid | **ODOR**<br>Mild Ester | **BOILING POINT (°F/°C)**<br>N/A |
| **SPECIFIC GRAVITY @ 73°F ± 3.6° (23°C ± 2°)**<br>Typical 1.087 ± 0.040 | **VAPOR PRESSURE (mm Hg.)**<br>N/A | **PERCENT VOLATILE BY VOLUME (%)**<br>Approx: 6 - 10% |
| **VAPOR DENSITY (Air = 1)**<br>N/A | **EVAPORATION RATE (BUAC = 1)**<br>N/A | **SOLUBILITY IN WATER**<br>Insoluable |

## SECTION IV - FIRE AND EXPLOSION HAZARD DATA

| FLASH POINT | FLAMMABLE LIMITS | LEL | UEL |
|---|---|---|---|
| 420°F (217°C) T.C.C. | (Percent by Volume) | - | - |

**FIRE EXTINGUISHING MEDIA**
Ansul "Purple K" potassium bicarbonate dry chemical, any appropriately sized ABC dry chemical, carbon dioxide or foam extinguisher can be used for small fires. Use of a water fog by trained personnel can extinguish small/large fires.

**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 explosively due to polymerization. Vapors are heavier than air and may travel to source(s) of ignition at or near ground or lower levels and flash back. Susceptible to spontaneous heating. Considered a mild fire hazard because of low flash point. Peroxides and decomposition products are flammable and can ignite with explosive force if confined.

## 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 and/or damage.
Ingestion: Moderately toxic. May cause nausea, vomiting and diarrhea.

**CHRONIC:**

Dibutyl Phthalate may cause moderate eye burning. Extremely high concentrations have caused embryotoxic effects in laboratory animals. High oral doses have caused damage to the sperm producing cells of the testis. Ingestion studies on laboratory animals showed that very high oral doses caused increased liver and kidney weights.

| 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: Existing skin and lung disorders such as asthma or inflammatory or fibrotic pulmonary diseases may be aggravated by excessive exposure to this material.

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. Contact physician or poison control center immediately.

## SECTION VI - REACTIVITY

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

INCOMPATIBILITY

(MATERIALS TO AVOID) Strong acids, strong bases, strong alkalies, 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 | | | CONDITIONS TO AVOID |
|---|---|---|---|
| | MAY OCCUR | | Keep away from heat above 130°F (55°C), sparks, open flame |
| | WILL NOT OCCUR | X | and other sources of ignition. Do not store above 100°F (38°C). |

## 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 (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 with full face-piece 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 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 adhesi 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

Do not allow to freeze. 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. Ground containers when pouring. 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 our solvent cementing literature. All material handling equipment should be electrically grounded.