SCIGRIP™ SG230-30-W

Two Component 10:1 Ratio Cartridge - Off White Adhesive

GHS SAFETY DATA SHEET

PRODUCT NAME: SCIGRIP™ SG230-30-W
PRODUCT USE: 2-Component Adhesive for bonding thermoplastics, metals and other composites
SUPPLIER: MANUFACTURER: IPS Corporation
600 Ellis Road, Durham, NC 27703 - United States
P.O. Box 12729, Research Triangle Park, NC 27709 - USA
Tel. 1-919-598-2400

EMERGENCY: Transportation: Tel. 800.424.9300, 703.527.3887 CHEMTREC (International)
Medical: Tel. 800.451.8346, 760.602.8703 3E Company (International)

SECTION 2 - HAZARDS IDENTIFICATION

GHS CLASSIFICATION:

Health Acute Toxicity: Category 4 Environmental Acute Toxicity: Category 3 Flammable Liquid: Category 2
Skin Irritation: Category 2 Chronic Toxicity: Category 4
Skin Sensitization: Category 1 Eye: Category 2

GHS LABEL: Signal Word: Danger WHMIS CLASSIFICATION: CLASS B, DIVISION 2

Hazard Statements:

H225 - Highly flammable liquid and vapor H315 - Causes skin irritation P233 - Keep container tightly closed P262: Do not get in eyes, on skin, or on clothing
H312 - Harmful in contact with skin H335 - May cause respiratory irritation
H302 - Harmful if swallowed H317 - May cause an allergic skin reaction P260 - Do not breathe vapor P271 - Use only outdoors or in a well-ventilated area

Precautionary Statements:

P233 - Keep container tightly closed P262: Do not get in eyes, on skin, or on clothing
P260 - Do not breathe vapor P271 - Use only outdoors or in a well-ventilated area

SECTION 3 - COMPOSITION/INFORMATION ON INGREDIENTS

Component "A" (SG230HVA Adhesive) Component "B" (SG208B-W Activator)

<table>
<thead>
<tr>
<th>CAS#</th>
<th>EINECS #</th>
<th>Pre-registration Number</th>
<th>% by Weight</th>
</tr>
</thead>
<tbody>
<tr>
<td>Methyl Methacrylate Monomer (MMA),* Stabilized</td>
<td>80-62-6</td>
<td>201-297-1</td>
<td>05-2116297731-37-0000</td>
</tr>
<tr>
<td>Methacrylic Acid (MAA)</td>
<td>79-41-4</td>
<td>201-204-4</td>
<td>05-2116297727-26-0000</td>
</tr>
<tr>
<td>Styrene*</td>
<td>100-42-5</td>
<td>202-851-5</td>
<td>05-2116297733-33-0000</td>
</tr>
<tr>
<td>Benzoyl Peroxide (BPO)*</td>
<td>94-36-0</td>
<td>202-327-6</td>
<td>05-2116297715-31-0000</td>
</tr>
</tbody>
</table>

All of the constituents of this adhesive product are listed on the TSCA inventory of chemical substances maintained by the US EPA, or are exempt from that listing.

*Indicates this chemical is subject to the reporting requirements of Section 313 of the Emergency Planning and Community Right-to-Know Act of 1986 (40CFR372).

SECTION 4 - FIRST AID MEASURES

Contact with eyes: Flush eyes immediately and plenty of water for 15 minutes and seek medical advice immediately.
Skin contact: Remove contaminated clothing and shoes. Wash skin thoroughly with soap and water. If irritation develops, seek medical advice.
Inhalation: Remove to fresh air. If breathing is stopped, give artificial respiration. If breathing is difficult, give oxygen. Seek medical advice.
Ingestion: Rinse mouth with water. Give 1 or 2 glasses of water or milk to dilute. Do not induce vomiting. Seek medical advice immediately.

SECTION 5 - FIREFIGHTING MEASURES

Suitable Extinguishing Media: Dry chemical powder, carbon dioxide gas, foam, Halon, water fog.
Unsuitable Extinguishing Media: Water spray or stream.
Exposure Hazards: Inhalation and dermal contact
Combustion Products: Oxides of carbon, oxides of nitrogen, hydrocarbons, acid smoke and gases
Protection for Firefighters: Self-contained breathing apparatus or full-face positive pressure air-supply masks.

SECTION 6 - ACCIDENTAL RELEASE MEASURES

Personal precautions: Keep away from heat, sparks and open flame. Provide sufficient ventilation, use explosion-proof exhaust ventilation equipment or wear suitable respiratory protective equipment. Prevent contact with skin or eyes (see section 8)
Environmental Precautions: Prevent product or liquids contaminated with product from entering sewers, drains, soil or open water course.
Methods for Cleaning up: Sand or other inert absorbant materials. Use non-sparking tools. Transfer to a closable vessel (Metal or polyethylene [PE]).

SECTION 7 - HANDLING AND STORAGE

Handling: Avoid breathing of vapor, avoid contact with eyes, skin and clothing.
Keep away from ignition sources, use only electrically grounded handling equipment and ensure adequate ventilation/fume exhaust hoods.
Do not eat, drink or smoke while handling.

Storage: Store in ventilated room or shade and away from direct sunlight. Keep container tightly closed when not in use.

SECTION 8 - PRECAUTIONS TO CONTROL EXPOSURE / PERSONAL PROTECTION

EXPOSURE LIMITS:

<table>
<thead>
<tr>
<th>Component</th>
<th>ACGIH TLV</th>
<th>ACGIH STEL</th>
<th>OSHA PEL</th>
<th>OSHA STEL</th>
</tr>
</thead>
<tbody>
<tr>
<td>Methyl Methacrylate Monomer</td>
<td>20 ppm skin</td>
<td>N/E</td>
<td>100 ppm</td>
<td>200 ppm</td>
</tr>
<tr>
<td>Methacrylic Acid</td>
<td>50 ppm</td>
<td>100 ppm</td>
<td>N/E</td>
<td></td>
</tr>
<tr>
<td>Styrene</td>
<td>5 ppm</td>
<td>N/E</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Benzoyl Peroxide</td>
<td>5 ppm</td>
<td>N/E</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Engineering Controls: Use local exhaust as needed.
Monitoring: Maintain breathing zone airborne concentrations below exposure limits.
Personal Protective Equipment (PPE):

Eye Protection: Avoid contact with eyes, wear splashproof chemical goggles, face shield, safety glasses (spectacles) with brow guards and side shields.
Skin Protection: Prevent contact with the skin as much as possible. Butyl rubber gloves should be used for frequent immersion.
Use of solvent-resistant gloves or solvent-resistant barrier cream should provide adequate protection when normal adhesive application practices and procedures are used for making structural bonds.
Respiratory Protection: Use in a well-ventilated room. Use local exhaust ventilation to remove airborne contaminants from employee breathing zone and to keep contaminants below levels listed above. With normal use, the Exposure Limit Value will not usually be reached. When limits are approached, use respiratory protection equipment.
GHS SAFETY DATA SHEET  
SCI GRI P™ SG230-30-W

Two Component 10:1 Ratio Cartridge - Off White Adhesive

SECTION 9 - PHYSICAL AND CHEMICAL PROPERTIES

Appearance:  
"A" - Off-white, viscous liquid, "B" - white viscous liquid

Odor:  
"A" - Strong Solvent Odor, "B" - Mild

pH:  
Not Applicable

Boiling Point:  
"A" - 100.5°C (212.9°F) Based on first boiling component: MMA

"B" - Not Established

Flash Point:  
"A" - 11.5°C (52.7°F) T.C.C. based on MMA, "B" - 84°C (184°F) for BPO

Specific Gravity:  
"A" - 0.970, "B" - 1.211 @23°C (73°F)

Solubility:  
"A" - Slight in Water (MMA, MAA), "B" - Insoluble in Water

Auto-ignition Temperature:  
"A" - 421°C (789.8°F), MMA, "B" - Not Established

Decomposition Temperature:  
"A" - Not Applicable, "B" - 110°C (230°F)

Odor Threshold:  
"A" - 0.75 ppm: MMA

SECTION 10 - STABILITY AND REACTIVITY

Stability:  
Stable, unless heated

Hazardous decomposition products:  
None in normal use. Oxides of carbon, oxides of nitrogen, hydrocarbons, acrid smoke and gases.

Conditions to avoid:  
Keep away from direct sunlight, heat, sparks, open flame and other ignition sources.

Incompatible Materials:  
Reducing and oxidizing agents and metal contaminants

SECTION 11 - TOXICOLOGICAL INFORMATION

Likely Routes of Exposure:  
Inhalation, Eye and Skin Contact

Acute symptoms and effects:  

Inhalation:  
Severe overexposure may result in nausea, dizziness, headache. Can cause drowsiness, irritation of eyes and nasal passages.

Eye Contact:  
Vapors slightly uncomfortable. Overexposure may result in severe eye injury with corneal or conjunctival inflammation on contact with the liquid.

Skin Contact:  
Liquid contact may remove natural skin oils resulting in skin irritation. Dermatitis may occur with prolonged contact.

Ingestion:  
May cause nausea, vomiting, diarrhea and mental sluggishness.

Chronic (long-term) effects:  
None known to humans

Toxicity:  
LD₅₀

Methyl Methacrylate Monomer (MMA)  
Oral: 7900 mg/kg (rat)  
Dermal: >35000 mg/kg (rabbit)

Inhalation: 3 hrs. 7093 PPM (rat)

Methacrylic Acid  
Oral: 1600 mg/kg (rat), Dermal: 500 mg/kg (rabbit)

Inhalation: 6.7 mg/l (rat)

Styrene  
Oral: 2650 mg/kg (rat)

Inhalation: 12000 PPM (rat)

Benzyol Peroxide  
Oral: 6400 mg/kg (rat)

Oral: 2 mg/ml 96 hours (guppy)

Toxicity:  
LC₅₀

Synergistic Products:  

Toxicity:  
LD₅₀

Methyl Methacrylate Monomer (MMA)  
Oral: 7900 mg/kg (rat), Dermal: >35000 mg/kg (rabbit)

Inhalation: 3 hrs. 7093 PPM (rat)

Methacrylic Acid  
Oral: 1600 mg/kg (rat), Dermal: 500 mg/kg (rabbit)

Inhalation: 6.7 mg/l (rat)

Styrene  
Oral: 2650 mg/kg (rat)

Inhalation: 12000 PPM (rat)

Benzyol Peroxide  
Oral: 6400 mg/kg (rat)

Oral: 2 mg/ml 96 hours (guppy)

Solubility:  
"A" - Slight in Water (MMA, MAA), "B" - Insoluble in Water

Evaporation Rate:  
"A" - > 1.0, "B" - <1 (BUAC = 1)

Auto-ignition Temperature:  
"A" - 28 mm Hg @ 20°C (68°F): MMA

Decomposition Temperature:  
"A" - Not Applicable, "B" - 110°C (230°F)

Vapor Pressure:  
"A" - Category 2, "B" - Category 4

Vapor Density:  
"A" - 3.0 (Air = 1), "B" - N/E

VOC Content:  
"A" - ≤ 50 g/l mixed, "B" - None

SECTION 12 - ECOLOGICAL INFORMATION

Ecotoxicity:  
None known

Degradability:  
Not Established

Bioaccumulation:  
Not Established

SECTION 13 - WASTE DISPOSAL CONSIDERATIONS

Follow local and national regulations. Consult local disposal expert.

SECTION 14 - TRANSPORT INFORMATION

Proper Shipping Name:  
Adhesives

Hazard Class:  
3

Secondary Risk:  
None

Identification Number:  
UN 1133

Packaging Group:  
PG II

Label Required:  
Class 3 Flammable Liquid

Marine Pollutant:  
No

TDG INFORMATION

TDG CLASS:  
FLAMMABLE LIQUID 3

SHIPPING NAME:  
ADHESIVES

UN NUMBER/PACKING GROUP:  
UN 1133, PG II

SECTION 15 - REGULATORY INFORMATION

Precautionary Label Information:  
Highly Flammable, Harmful

Ingredient Listings:  
USA TSCA, Europe EINECS, Canada DSL, Australia

AICS, Korea ECL/TCCL, Japan MITI (ENCS)

Risk Phrases:  
R-11 Highly Flammable

R-36/37/38 Irritating to eyes, respiratory system and skin

R-43 May cause sensitization by skin contact.

Safety Phrases:  
S-2 Keep out of reach of children

S-26 In case of contact with eyes, rinse immediately with plenty of water and seek medical advice

S-3 Keep in a cool place

S-36/37/39 Wear suitable protective clothing, gloves and eye/face protection

S-46 If swallowed, seek medical advice immediately and show this container or label

S-24/25 Avoid contact with skin and eyes.

S-3 Keep in a cool place

S-46 If swallowed, seek medical advice immediately and show this container or label

S-24/25 Avoid contact with skin and eyes.

SECTION 16 - OTHER INFORMATION

Specification Information:  
IPS, Safety Health & Environmental Affairs

All ingredients are compliant with the requirements of the European Directive on RoHS (Restriction of Hazardous Substances).

E-mail address:  
EHSSinfo@ipscorp.com

Training necessary:  
Yes, training in practices and procedures contained in product literature.

Date Revised:  
JUL 2011

Supersedes:  
MAR 2011

8/4/2011 10:33 AM