

SAFETY DATA SHEET
Exxene S-Series Hardcoats

Revision Date: 12/31/2018

SECTION 1 – PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME: Exxene S-Series Hardcoats: S-24-20, S-24-25(NFPA), S-25, S-28-1(UV), S-28-46, S-28-C, S-500
PRODUCT USE: Thermal-cure, abrasion and chemical resistant coating for plastic surfaces.
MANUFACTURER: Exxene Corporation, 5939 Holly Road, Corpus Christi, TX 78412, 1-361-991-8391
EMERGENCY: Call (01) 361-991-8391

SECTION 2 – HAZARDS IDENTIFICATION

GHS CLASSIFICATION

| Health | Environmental | Physical |
|---|--|---------------------------------|
| Acute toxicity, inhalation Skin corrosion/irritation Serious eye damage/eye irritation Specific target organ toxicity, single exposure | Acute toxicity: Not applicable Chronic toxicity: Not applicable | Flammable liquids Category 3 |
| Category 4 Category 2 Category 2A Category 3 | | |

GHS LABEL:

Signal Word: DANGER

WHMIS CLASSIFICATION: Class B, Division 2
Class D, Division 2, Subdivision A
Class D, Division 2, Subdivision B



| Hazard Statements | Precautionary Statements |
|--|--|
| <p>H225 Highly Flammable liquid and vapour. H332 Harmful if inhaled. H315 Causes skin irritation. H319 Causes serious eye irritation. H335 May cause respiratory irritation. H336 May cause drowsiness or dizziness. H370 Causes damage to organs. Liver, kidneys, central nervous system, optic nerve. (Dermal, oral)</p> | <p>P210 Keep away from heat/sparks/open flames/hot surfaces. — No smoking. P241 Use explosion-proof electrical, ventilating, mixing, handling, and lighting equipment. P243 Take precautionary measures against static discharge. P261 Avoid breathing dust/fume/gas/mist/vapours/spray. P280 Wear protective gloves/protective clothing/eye protection/face protection.</p> <p>P370 + P378 In case of fire: Use dry chemical or carbon dioxide for extinction. P301 + P310 IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician. P303 + P361 + P353 IF ON SKIN (or hair): Remove/Take off Immediately all contaminated clothing. Rinse SKIN with water/shower. P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. P304 + P340 IF INHALED: Remove victim to fresh air and Keep at rest in a position comfortable for breathing. P312 Call a POISON CENTER or doctor/physician if you feel unwell.</p> <p>P403 + P233 Store in a well-ventilated place. Keep container tightly closed.</p> <p>P501 Dispose of contents/container according to local and national material disposal regulations.</p> |

SECTION 3 – COMPOSITION/INFORMATION ON INGREDIENTS

| Components | CAS# | Concentration, % |
|--|----------|------------------|
| Isobutanol | 78-83-1 | 18 – 30 |
| Methanol | 67-56-1 | 0 – 32 |
| 4-hydroxy-4-methyl-2-pentanone (diacetone alcohol) | 123-42-2 | 0 – 25 |
| Isopropyl Alcohol | 67-63-0 | 0 – 20 |
| 1-Methoxy-2-propanol (Glycol Ether PM) | 107-98-2 | 0 – 20 |
| Ethanol | 64-17-5 | 0 – 15 |

SECTION 4 – FIRST AID MEASURES

Contact with eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Seek medical attention. Take SDS.
Skin contact: Remove contaminated clothing and shoes. Wash with plenty of soap and water. Seek medical attention. Take this SDS.
Inhalation: Remove the victim to fresh air. Monitor respiratory function. If there is breathing difficulty, provide oxygen. If necessary, give artificial respiration. Seek medical attention. Take this SDS.
Ingestion: Rinse mouth with water. Give nothing to drink. Do not induce vomiting. Immediately consult a doctor/medical service. Call Poison Information Centre. Ingestion of large quantities: immediately to hospital. Take the container/vomit to the doctor/hospital. Take this SDS. Doctor: administration of chemical antidote. Doctor: gastric lavage.

SECTION 5 – FIREFIGHTING MEASURES

| | |
|--|---|
| Suitable Extinguishing Media: | Water spray, alcohol resistant foam, dry chemical or carbon dioxide |
| Unsuitable Extinguishing Media: | Solid water jet ineffective as extinguishing medium. |
| Exposure Hazards: | DIRECT FIRE HAZARD. Highly flammable. Gas/vapour flammable with air within explosion limits. INDIRECT FIRE HAZARD. May be ignited by sparks. DIRECT EXPLOSION HAZARD. Gas/vapour explosive with air within explosion limits. INDIRECT EXPLOSION HAZARD. may be ignited by sparks. Reactions with explosion hazards: see "Reactivity Hazard". On heating: release of toxic/corrosive/combustible gases/vapours (formaldehyde). Upon combustion: CO and CO2 are formed. Violent to explosive reaction with (some) metal powders and with (strong) oxidizers. Violent exothermic reaction with (some) acids and with (some) halogens compounds |
| Combustion Products: | Hazardous decomposition products formed under fire conditions include formaldehyde and carbon oxides. |
| Advice for firefighters: | Use self-contained breathing apparatus (SCBA) operated in positive pressure mode and complete protective clothing. Cool tanks/drums with water spray/remove them into safety. Do not move the load if exposed to heat. Take account of toxic fire-fighting water. Use water moderately and if possible collect or contain it. |

SECTION 6 – ACCIDENTAL RELEASE MEASURES

| | |
|-------------------------------------|--|
| Personal precautions: | Use personal protective equipment. Avoid breathing vapors, mists or gas. Ensure adequate ventilation. Remove all sources of ignition. Evacuate personnel to safe areas. Beware of vapors accumulating to form explosive concentrations. Vapors can accumulate in low area. |
| Environmental precautions: | Prevent further leakage or spillage if safe to do so. Do not let product enter drains. |
| Methods for cleaning spills: | Discard any product, waste, container or wrapper available in an appropriate manner as not to harm the environment, according to federal regulations, state and local. |

SECTION 7 – HANDLING AND STORAGE

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|------------------|---|
| Handling: | Avoid contact with skin and eyes. Avoid inhalation with vapor or mist. Use proper personal protective equipment as indicated in Section 8. Use explosion proof equipment. Keep away from ignition sources. Take measures to prevent buildup of electrostatic charge. |
| Storage: | Store at room temperature. Keep out of direct sunlight. Store in a dry area. Keep container in a well-ventilated place. Fireproof storeroom. Keep locked up. Provide for a tub to collect spills. Provide the tank with earthing/grounding. Unauthorized persons are not admitted. Meet all legal requirements. |

SECTION 8 – PRECAUTIONS TO CONTROL EXPOSURE / PERSONAL PROTECTION

EXPOSURE LIMITS:

Expressed in ppm

| Component | ACGIH TLV | ACGIH STEL | OSHA PEL | OSHA STEL |
|-------------------|-----------|------------|----------|-----------|
| Isobutanol | 50 | 50 | 100 | 100 |
| Methanol | na | 200 | 200 | 200 |
| Diacetone Alcohol | 50 | 50 | 100 | 100 |

| | |
|------------------------------|--|
| Engineering Controls: | Provide mechanical ventilation or direct exhaust to the external media. It is recommended safety shower and eye bath available near work site. |
| Monitoring: | Maintain breathing zone airborne concentration below exposure limits. |

PERSONAL PROTECTIVE EQUIPMENT (PPE):

| | |
|--------------------------------|---|
| Eye Protection: | Avoid contact with eyes; wear splash-proof chemical goggles, face shield, safety glasses (spectacles) as may be appropriate for exposure. |
| Respiratory Protection: | Prevent inhalation of the solvent. Use in a well-ventilated location. Ensure airflow and air changes. 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 approached, use respiratory protection equipment. |

SECTION 9 – PHYSICAL AND CHEMICAL PROPERTIES

| | | | |
|----------------------------|------------------|--|-----------------------|
| Appearance: | colorless liquid | Odor: | alcohol |
| pH: | na | Odor Threshold: | not listed |
| Melting: | 4 °C | Boiling Range: | 65 °C to 175 °C |
| Flash Point: | 11 °C TCC | Evaporation Rate: | 6.3 (ether = 1) |
| Specific Gravity: | 0.920 @20°C) | Flammability Limits: | LEL: 5.5 %; UEL: 36% |
| Vapor Density: | 1.1 (Air = 1) | Solubility: | Soluble in alcohols. |
| Viscosity: | < 30 cP @ 25 °C | Vapor Pressure: | 128 hPa @ 20°C (68°F) |
| Auto-ignition Temp: | 415 °C | Decomposition Temperature: | not listed |
| VOC Content: | 6.10 lb/gal | Flammability (GHS Hazard category): | 3 |

SECTION 10 – STABILITY AND REACTIVITY

| | | | | |
|--|---|---------------------|-------------|---|
| Stability: | Stable under normal conditions of storage and handling. Polymerization will not occur. | HMIS | NFPA | |
| Hazardous decomposition products: | When heated produces acrid and toxic smoke and fumes composed of carbon oxides. | Health | 2 | 1 |
| Conditions to avoid: | Ignition sources, flame/heat, high temperatures and contact with incompatible materials. | Flammability | 3 | 3 |
| Incompatible materials: | Strong oxidizers. Strong bases. Strong acids. Peroxides. Acid anhydrides. Acid chlorides. | Reactivity | 0 | 0 |
| | | Personal Protection | H | |

SECTION 11 – TOXICOLOGICAL INFORMATION

Likely routes of Exposure: Inhalation, Skin, Ingestion.

Acute symptoms and effects: Toxic if swallowed. Toxic in contact with skin. Toxic if inhaled.
Inhalation: Slight irritation. EXPOSURE TO HIGH CONCENTRATIONS: Coughing. Symptoms similar to those listed under ingestion.
Eye contact: Redness of the eye tissue. Lacrimation.
Skin contact: Symptoms similar to those listed under ingestion.
Ingestion: Nausea. Vomiting. AFTER ABSORPTION OF HIGH QUANTITIES: FOLLOWING SYMPTOMS MAY APPEAR LATER: Change in the haemogramme/blood composition. Headache. Feeling of weakness. Abdominal pain. Muscular pain. Central nervous system depression. Dizziness. Mental confusion. Drunkenness. Coordination disorders. Disturbed motor response. Disturbances of consciousness. Visual disturbances. Blindness. Respiratory difficulties. Cramps/uncontrolled muscular contractions.

Chronic symptoms and effects: Red skin. Dry skin. Skin rash/inflammation. Headache. Disturbed tactile sensibility. Visual disturbances. Sleeplessness. Gastrointestinal complaints. Cardiac and blood circulation effects.

| Reproductive Effects | Teratogenicity | Mutagenicity | Embryo toxicity | Sensitization to Product | Synergistic Products |
|----------------------|----------------|--------------|-----------------|--------------------------|----------------------|
| None | None | None | No information | None expected. | No information |

Toxicity: LD₅₀ (oral, rats): 1187-2769 mg/kg LC₅₀ (inhalation, rats, 4h): 19.2 mg/L

SECTION 12 – ECOLOGICAL INFORMATION

Ecotoxicity: Not classified as hazardous to aquatic organisms.
Mobility: High mobility in soil.
Degradability: Expected low persistence and high degradability.
Bioaccumulation: Expected low bioaccumulative potential in aquatic organisms.

SECTION 13 – WASTE DISPOSAL CONSIDERATIONS

Follow local and national regulations. Consult disposal experts and your regulatory agency.

SECTION 14 – TRANSPORT INFORMATION

Proper Shipping Name: Coating Solution
Hazard Class: 3
Secondary Risk: 6.1 Poison (IMDG)
UN/NA Number: 1139
Packing Group: III
Label Required: Class 3 Flammable Liquid
Marine Pollutant: No

SECTION 15 – REGULATORY INFORMATION

CERCLA (Superfund) reportable quantity: 5000 lbs

Superfund Amendments and Reauthorization Act of 1986 (SARA)

Hazard categories Immediate Hazard – Yes Delayed Hazard – No Fire Hazard – Yes Pressure Hazard – No Reactivity Hazard – No

Section 302 extremely hazardous substance Not listed **Section 311 hazardous chemical** Isobutyl Alcohol, Methanol, Diacetone Alcohol

State regulations

Isobutanol and Diacetone Alcohol can be found on the following right to know lists: California, New Jersey, Pennsylvania, and Massachusetts.
Methanol can be found on the following right to know lists: California, New Jersey, Florida, Pennsylvania, Minnesota, and Massachusetts.

Ingredient Listings USA TSCA, Europe EINECS, Canada DSL, Australia, Korea ECL/TCCL, Japan MITI (ENCS)

SECTION 16 – OTHER INFORMATION

E-mail address: info@Exxene.com
Intended Use: Thermal-cure, abrasion and chemical resistant coating for plastic surfaces.

Disclaimer: This product is intended for use by skilled individuals at their own risk. The information contained herein is based on data considered accurate based on current state of knowledge and experience. However, no warranty is expressed or implied regarding the accuracy of this data or the results to be obtained from the use thereof. This information does not represent any guarantee of the properties of the product, and Exxene Corporation and its Affiliates shall not be held liable for any damage resulting from handling or contact with the product.