

TECHNICAL DATA SHEET

DESCRIPTION:

RECOIL is the perfect solution for a diverse range of coating projects. This advanced two-component hybrid VOC compliant primer/basecoat offers unparalleled adhesion on almost any surface and provides superior performance even in extreme temperatures. It's 95% solids composition ensures long lasting protection for your project!

PRIMARY APPLICATIONS:

- Aircraft hangar floors Automotive shops
- Bathrooms and locker rooms
- Bridge decks and pillars
- Car washes or wash bays
- Industrial shop floors
- Maintenance facilities
- Offshore platforms
- Primer/ Basecoat for use on concrete, wood, and block
- Sidewalks and walkways
- Wall coatings over sheetrock, wood and concrete
- Wastewater treatment applications

ADVANTAGES:

- Displays moderate cure times with excellent adhesion
- Easy to mix 2:1 ratio
- Emits virtually no odors and can be applied indoors
- Excellent adhesive properties, allowing application on other firm and hard coating, as well as a good bond to the substrate
- Long open times allow for self-leveling capabilities and increased hiding power as well as broadcasts of decorative aggregate
- Long pot life (35 to 45 min)
- VOC compliant in all 50 states and Canada

TECHNICAL DATA

PACKAGING	3 and 15 gal. (11.4 and 56.8 liters)
COLOR	PART A: Upon request PART B: Light Yellow MIX: Upon request
RECOMMENDED THICKNESS	RECOIL - 8 MILS (200 FP/GAL)
SHELF LIFE	12 months in original unopened factory sealed containers. Keep away from extreme cold, heat or moisture. Keep out of direct sunlight and away from fire hazards.
MIX RATIO, BY VOLUME	A:B = 2:1
MIX RATIO, BY WEIGHT	A:B = 100:59

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PROPERTIES

@ 77°F (25°C) AND 55% R.H.

- * Times are approximate and will be affected by changing ambient conditions, especially changes in temperature and relative humidity.
- * The indicated mileage is calculated for flat surfaces. A porous or imperfect surface will require more material in order to cover the same mileage.
- * Mechanical properties : Surface Preparation ICRI 310.2R Concrete Surface Profile (CSP 2 and above) Depending on System to be Installed and Condition of Concrete.
- * If moisture or relative humidity exceeds the limits consult BallistiX representative

VOC (Volatile Organic Compounds), (VOC Calculated Per ASTM D3960)	< 50 g/l
STANDARD VISCOSITY WHITE BASE, Mixed Polyol and Isocyanate	400 – 600 cps
MIX DENSITY WHITE BASE, Mixed Polyol and Isocyanate	9.4 lbs./gal
POT LIFE, 100 Grams Mass, Pot Life is Reduced by Increases in Mass and Temperature	20 - 25 Minutes
DRY TO TOUCH, TACK FREE TIME	2 – 3 Hours
CURE INFORMATION, RELATIVE HUMIDITY 55% If the relative humidity is higher the cure time will be quicker. If the relative humidity is lower the cure time will be slower.	Dry Time 2 Hours Mar Free 5 Hours Recoat Max 12 Hours Foot Traffic 10 Hours
SHELF LIFE (shipped and stored) at 400°F to 1000°F (4.40°C to 380°C)	1 Year
TENSILE STRENGTH, ASTM D412	3,000 psi
TENSILE ELONGATION, ASTM D412	100%
TEAR RESISTANCE, ASTM D1004	200 psi
ADHESION, ASTM C1583, CONCRETE FAILURE	>400 psi
HARDNESS (SHORE D), ASTM D2240	50 – 55
MOISTURE VAPOR EMISSION RATE, ASTM F1869	3 lbs.
MOISTURE RELATIVE HUMIDITY, ASTM F2170	80% RH

Note: Although testing is critical, it is not a guarantee against future problems. This is especially true if there is no vapor barrier or it is not functioning properly and/or concrete is contaminated from oils, chemical spills, densifiers, excessive salts or other bond breakers.

SURFACE PREPARATION:

OLD CONCRETE: For optimum results on old concrete surfaces, cleaning with specialized methods such as BLASTRAC sand blasting or diamond grinding is essential to remove any contaminants. Oils and fats must be thoroughly removed before proceeding. For maximum adhesion strength of the product applied, a primer should always be used in conjunction – acid etching followed by rinsing may also help open up the pores for better absorption if deemed necessary after testing chloride levels, moisture content and pH values of the substrate beforehand. Application should not proceed until all surface areas are completely dry.

NEW CONCRETE: To achieve maximum performance, new concrete should be allowed to cure for at least 30 days in order to reach a minimum compression resistance of 25 MPa (3625 lb/inch²) and traction resistance of 1.5 MPa (218 lb/in²). To prep the surface prior to coating application, BLASTRAC sand blasting or diamond grinding with grits coarser than 30 is recommended; alternatively acid etching may also suffice but requires an extra step involving thorough rinsing afterwards. A primer coat can further ensure proper adhesion while minimizing out-gassing effects.

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NEW CONCRETE: To achieve maximum performance, new concrete should be allowed to cure for at least 30 days in order to reach a minimum compression resistance of 25 MPa (3625 lb/inch²) and traction resistance of 1.5 MPa (218 lb/in²). To prep the surface prior to coating application, BLASTRAC sand blasting or diamond grinding with grits coarser than 30 is recommended; alternatively acid etching may also suffice but requires an extra step involving thorough rinsing afterwards. A primer coat can further ensure proper adhesion while minimizing out-gassing effects.

MIXING:

Ensure your materials are pre-conditioned to a temperature of 50°F (10°C) or higher before you begin working with them. Be sure to mix each component separately and then pour Component B into Component A in the designated ratio of 2A:1B by volume. Utilize a low speed drill, set at between 300 and 450 revolutions per minute (rpm), for one full minute mixing both components together while scraping bottom and sides of container repeatedly – this will ensure an even blend throughout. Work smart; only prepare enough mixture that can be used within its pot life parameters!

APPLICATION:

Apply mixed product on the prepared surface tightly (thin film) using a rubber squeegee to obtain a uniform coating. Avoid creating puddles.

OVERLAPS:

Subsequent overlaps must be applied when primer is still wet or tacky. If primer has dried reprime. Porous substrates may require multiple priming.

RESTRICTIONS:

- Minimum/Maximum temperature of substrate: 10°C / 30°C (50°F / 86°F).
- Maximum relative humidity during application and curing: 85%.
- Substrate temperature must be 3°C (5.5°F) above dew point measured.
- Humidity content of substrate must be < 4 % when coating is applied.
- Do not apply on porous surfaces where a transfer of humidity may occur during application.
- Protect from humidity, condensation and contact with water during the 24 hour initial curing period.

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HEALTH & SAFETY:

In case of skin contact, wash with water and soap. In case of eye contact, immediately rinse with water for at least 15 minutes. Consult with a doctor. For respiratory problems, transport victim to fresh air. Remove contaminated clothes and clean before reuse. For more information, consult the material safety data sheet. Components A and B contain toxic ingredients. Prolonged contact of this product with the skin is susceptible to provoke an irritation. Avoid eye contact. Contact with may cause serious burns. Avoid breathing vapors release from this product. This product is a strong sensitizer. Wear safety glasses and chemical resistant gloves. A breathing apparatus filtering organic vapors approved by the NIOSH/MSHA is recommended. Predict suitable ventilation.

Consult the material safety data sheet for further information.

NOTICE:

All statements, recommendations and technical information contained in this document are accurate to the best knowledge of BallistiX. The data relates only to the specific material designated herein. It may not be valid if used in combination with any other materials. It is the users' responsibility to verify suitability of this information for their own particular use, and to test this product before use. BallistiX assumes no legal responsibility for use upon these data. BallistiX assumes no legal responsibility for any direct, indirect, consequential, economic, or any other damage except to replace the product or refund the purchase price as set out in the purchase agreement.

SAFETY DATA SHEET PART A

SECTION 1 – IDENTIFICATION

Product identifier	RECOIL A
Other means of identification	None
Recommended use and restrictions on use	Construction product / Refer to technical information
Initial supplier identifier	Meghan's Supply & Design // BallistiX 11720 Main St Suite 120, Fredericksburg, VA 22408, United States +1540-940-6698
Emergency telephone number/restriction on use	USA – INFOTRAC 24 hour number 1800-535-5053

SECTION 2 – HAZARD IDENTIFICATION

Classification of hazardous product (name of the category or subcategory of the hazard class)	Carcinogenicity –Category 2 Eye Irritation –Category 2A Flammable Liquids –Category 4 Reproductive Toxicity –Category 2 Skin Irritation –Category 3 Specific Target Organ Toxicity –Repeated Exposure –Category 2
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Information elements
(symbols, signal words, hazard statements and precautionary statements of the category/subcategory)



H227 –Combustible Liquid
H351 –Suspected of causing cancer.
H319 –Causes serious eye irritation
H361 –Suspected of damaging fertility or the unborn child
H316 –Causes mild skin irritation
H373 –May cause damage to organs through prolonged or repeated exposure

P202 –Do not handle until all safety precautions have been read and understood. P280 –Wear protective gloves/protective clothing/eye protection/face protection. P264 –Wash thoroughly after handling. P210 –Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. P260 –Do not breathe dust/fume/gas/mist/vapors/spray. P308 +P313 –If exposed or concerned: Get medical advice/attention. P305 +P351 +P338 –IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. P337 +P313 –If eye irritation persists: Get medical advice/attention. P370 +P378 –In case of fire: Use dry chemical, carbon dioxide, foam to extinguish. For detailed information, see Section-5 (Fire Fighting Measures) P332 +P313 –If skin irritation occurs: Get medical advice/attention. P314 –Get Medical advice/attention if you feel unwell. P405 –Store locked up. P403 –Store in a well-ventilated place. P501 –Dispose of contents/ container to an approved waste disposal plant.

Other Hazards Known	None
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SAFETY DATA SHEET PART A

SECTION 3 – COMPOSITION/INFORMATION ON INGREDIENTS

Chemical name (common name/synonyms)	CAS NUMBER or other	Concentration (%)
TITANIUM DIOXIDE	13463-67-7	8 - 14
XYLENE	1330-20-7	4 - 7
ETHYLBENZENE	100-41-4	1 - 17
CARBON BLACK	1333-86-4	0.2 - 0.4
BENZENE	71-43-2	Trace

All ingredients are listed according to OSHA (29 CFR).

* Statement – This safety data sheet provides concentration range(s) instead of the actual concentration(s) considered trade secret(s).

SECTION 4 – FIRST AID MEASURES

Inhalation	IF INHALED: Remove person to fresh air and keep comfortable for breathing. Immediately call a doctor.
Ingestion	IF SWALLOWED: Rinse mouth. Do NOT induce vomiting. NEVER give anything by mouth if victim is rapidly losing consciousness, or is unconscious or convulsing. Rinse mouth thoroughly with water. Have victim drink two glasses of water. If vomiting occurs naturally, have victim lean forward to reduce risk of aspiration. Call a doctor if you feel unwell.
Skin contact	IF ON SKIN: wash with plenty of water (15–20 minutes). IF SKIN irritation or rash occurs: Get medical attention. Take off contaminated clothing and wash it before reuse.
Eye contact	IF IN EYES, Rinse cautiously with water for several minutes (15–20). Remove contact lenses, if present and easy to do. Continue rinsing.
Most important symptoms and effects (acute and delayed)	Causes severe skin, respiratory or digestive tract burns and eye damage.
Indication of immediate medical attention/special treatment	In all cases, call a doctor. Do not forget this document.

SECTION 5 – FIREFIGHTING MEASURES

Specific hazards of the hazardous product (hazardous combustion products)	Carbon oxides and other irritant/toxic gases and fumes.
Suitable and unsuitable extinguishing media	In case of fire: Use carbon dioxide, chemical powder agent and appropriate foam to extinguish surrounding products.
Special protective equipment and precautions for fire-fighters	During a fire, irritating/toxic smoke and fumes may be generated. Do not enter fire area without proper protection. Firefighters should wear proper protective equipment and self-contained breathing apparatus with full face-piece. Shield personnel to protect from venting, rupturing or bursting cans. Move containers from fire area if it can be done without risk. Water spray may be useful in cooling equipment and cans exposed to heat and flame.

SECTION 6 – ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures	Absorb spillage to prevent material damage. Restrict access to area until completion of clean-up. Ensure clean-up is conducted by trained personnel only. All persons dealing with clean-up should wear the appropriate protective equipment (See Section 8).
Methods and materials for containment and cleaning up	Ventilate area of release. Stop the leak if it can be done safely. Contain and absorb any spilled liquid concentrate with inert absorbent material, then place material into a container for later disposal (see Section 13). Contaminated absorbent material may pose the same hazards as the spilled product. Notify the appropriate authorities as required.

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SECTION 7 – HANDLING AND STORAGE

Precautions for safe handling	<p>Wear protective gloves/ protective clothing/ eye protection/ face protection.</p> <p>Before handling, it is very important that engineering controls are operating, and that protective equipment requirements and personal hygiene measures are being followed. People working with this chemical should be properly trained regarding its hazards and its safe use. Inspect containers for leaks before handling. Label containers appropriately. Ensure proper ventilation. Avoid breathing dust/fume/gas/mist/vapors/spray. Avoid contact with eyes, skin and clothing. Keep away from heat, sparks and flame. Avoid generating high concentrations of dusts, vapors or mists. Keep away from incompatible materials (Section 10). Keep containers closed when not in use. Empty containers are always dangerous. Refer also to Section 8.</p>
Conditions for safe storage, including any incompatibilities	<p>Store in a well-ventilated place. Keep container tightly closed. Keep cool. Store locked up. Store away from incompatible materials (Section 10). Inspect all incoming containers to make sure they are properly labelled and not damaged. Storage area should be clearly identified, clear of obstruction and accessible only to trained personnel. Inspect periodically for damage or leaks.</p>

SECTION 8 – EXPOSURE CONTROLS/PERSONAL PROTECTION

Control Parameters (biological limit values or exposure limit values and source of those values)	Exposure limits: None known
Appropriate engineering controls	Use under well-ventilated conditions. Local exhaust ventilation system is recommended to maintain concentrations of contaminants below exposure limits. Make emergency eyewash stations, safety/quick-drench showers, and washing facilities available in work area.
Individual protection measures/personal protective equipment	Respiratory protection is required if the concentrations are higher than the exposure limits. Use a NIOSH approved respirator if the exposure limits are unknown. Chemically protective gloves (impervious), and other protective clothing to prevent prolonged or repeated skin contact, must be worn during all handling operations. Wear protective chemical splash goggles to prevent mists from entering the eyes. Wash hands/nails/face thoroughly after handling. Do not eat, drink or smoke when using this product. Practice good personal hygiene after using this material. Remove and wash contaminated work clothing before re-use.

SECTION 9 – PHYSICAL AND CHEMICAL PROPERTIES

Appearance / color	Liquid	vapor pressure	Not available
odor	Characteristic	vapor density	Heavier than air
odor threshold	Not available	Specific gravity	1.05
pH	Not available	Solubility	Not available
Melting point / Freezing point	Not available	Partition coefficient of n-octanol/water	Not available
Initial boiling point/ranges	140 °C	Auto-ignition temperature	Not available
Flash point	61 °C	Decomposition temperature	Not available
Evaporation rate	Slower than ether	Viscosity	1500-1700cps
Flammability (solid, gas)	Not available	VOC	0.54 lb/gal
Upper/Lower flammability or explosive limits	Not available	Density	8.76 lb/gal

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SECTION 10 – STABILITY AND REACTIVITY

Reactivity	Does not react under the recommended storage and handling conditions prescribed.
Chemical Stability	Stable under the recommended storage and handling conditions prescribed.
Possibility of hazardous reactions	None known
Conditions to avoid (static discharge, shock or vibration)	Heat, high temperature, open flame, and moisture. Avoid contact with incompatible materials.
Incompatible materials	This product will react with any material containing isocyanate. Some reactions can be violent.
Hazardous decomposition products	Combustion products: organic vapors and thermal decomposition fragments.

SECTION 11 – TOXICOLOGICAL INFORMATION

Skin Corrosion/Irritation Causes mild skin irritation **Serious Eye Damage/Irritation** Causes serious eye irritation **Respiratory/Skin Sensitization** Inhalation : Severe overexposure may induce respiratory sensitization with asthma like symptoms. These symptoms may be immediate or delayed up to several hours after exposure. Chronic exposures may result in permanent decreases in lung function. Skin sensitization may develop after repeated and/or prolonged contact. No data available. **Carcinogenicity** Suspected of causing cancer. **Germ Cell Mutagenicity** No data available. **Reproductive Toxicity** Suspected of damaging fertility or the unborn child **Specific Target Organ Toxicity – Single Exposure** No data available. **Specific Target Organ Toxicity – Repeated Exposure** May cause damage to organs through prolonged or repeated exposure. **Aspiration Hazard** No data available. **Acute Toxicity** If ingested : In humans, irritation or chemical burns of the mouth, pharynx, esophagus and stomach can develop following ingestion, and injury may be severe and cause death. Repeated and prolonged exposure at low levels may result in adverse skin and eye effects, liver and kidney disorders. No data available. **Likely Routes of Exposure** Inhalation, Ingestion, Skin contact, Eye contact **Chronic Exposure** 0000100–41–4ETHYLBENZENE CARCINOGENIC EFFECTS: Ethyl Benzene has been listed by IARC as Group 2B, Possibly Carcinogenic to Humans. TERATOGENIC EFFECTS: Ethyl Benzene has been Classified as POSSIBLE for humans. 0001330–20–7XYLENE High exposure to Xylenes in some animal studies have been reported to cause health effects on the developing embryo/fetus. Xylene in high concentrations has caused embryotoxic effects in laboratory animals. 0001333–86–4CARBONBLACK CARCINOGENIC EFFECTS: In 1996, the IARC reevaluated Carbon Black as a Group 2B carcinogen. This evaluation is given to carbon black for which there is inadequate human evidence, but sufficient animal evidence. Prolonged inhalation of Carbon black can result in lung disease. Symptoms include coughing, shortness of breath, wheezing and reduced pulmonary function. **Potential Health Effects – Miscellaneous** 0000100–41–4ETHYLBENZENE Is an IARC, NTP or OSHA carcinogen. Increased susceptibility to the effects of this material may be observed in people with preexisting disease of any of the following: central nervous system, kidneys, liver, lungs. Recurrent overexposure may result in liver and kidney injury. Studies in laboratory animals have shown reproductive, embryo-toxic and developmental effects. **WARNING:** This chemical is known to the State of California to cause cancer. 0001330–20–7XYLENE Increased susceptibility to the effects of this material may be observed in people with preexisting disease of any of the following: bone marrow, cardiovascular system, central nervous system, kidneys, liver, lungs. Recurrent overexposure may result in liver and kidney injury. High exposures may produce irregular heart beats. Canada classifies Xylene as a developmental toxin as high exposures to xylenes in some animal studies have been reported to cause health effects on the developing fetus/embryo. These effects were often at levels toxic to the adult animal. The significance of these effects to humans is not known. Repeated or prolonged skin contact may cause any of the following: irritation, dryness, cracking of the skin. 0001333–86–4CARBON BLACK Is an IARC, NTP or OSHA carcinogen. Has shown carcinogenic activity in laboratory animals at high doses. Significance to man is unknown. The following medical conditions may be aggravated by exposure: asthma, respiratory disease. **WARNING:** This chemical is known to the State of California to cause cancer. 0013463–67–7TITANIUM DIOXIDE Is an IARC, NTP or OSHA carcinogen. In a lifetime inhalation test, lung cancers were found in some rats exposed to 250 mg/m³ respirable titanium dust. Analysis of the titanium dioxide concentrations in the rat's lungs showed that the lung clearance mechanism was overwhelmed and that the results at the massive 250 mg/m³ level are not relevant to the workplace. Results of a DuPont epidemiology study showed that employees who had been exposed to Titanium Dioxide were at no greater risk of developing lung cancer than were employees who had not been exposed to Titanium dioxide. No pulmonary fibrosis was found in any of the employees and no association was observed between Titanium dioxide exposure and chronic respiratory disease or x-ray abnormalities. Based on the results of this study DuPont concludes that titanium dioxide will not cause lung cancer or chronic respiratory disease in humans at concentrations experienced in the workplace. 0001333–86–4CARBON BLACK LC50 (rat): 6750 mg/m³ (4–hour exposure); cited as 27000 mg/m³ (27 mg/L) (1–hour exposure) (3) 0001330–20–7XYLENE LC50 (rat): 6350 ppm (4–hour exposure) (unspecified isomers and ethylbenzene) (1) LC50 (rat): 6700 ppm (4–hour exposure) (65% m-xylene, 7.6% o-xylene, 7.8% p-xylene, 19.3% ethylbenzene) (2) ethylbenzene) (1) LC50 (rat): 6700 ppm (4–hour exposure) (65% m-xylene, 7.6% o-xylene, 7.8% p-xylene, 19.3% ethylbenzene) (2) LD50 (oral, rat): 5400 mg/kg (52% m-, 19% o-, 24% p-) (1) LD50 (oral, female mouse): 5251 mg/kg (60.2% m-, 9.1% o-, 14.6% p-, 17.0% ethylbenzene) (4) LD50 (oral, male mouse): 5627 mg/kg (60.2% m-, 9.1% o-, 14.6% p-, 17.0% ethylbenzene) (4) LD50 (dermal, rabbit): 12180 mg/kg (m-xylene); greater than 1700 mg/kg (mixed xylenes –undefined composition) (3) LD50 (oral, female mouse): 5251 mg/kg (60.2% m-, 9.1% o-, 14.6% p-, 17.0% ethylbenzene) (4) LD50 (oral, male mouse): 5627 mg/kg (60.2% m-, 9.1% o-, 14.6% p-, 17.0% ethylbenzene) (4) LD50 (dermal, rabbit): 12180 mg/kg (m-xylene); greater than 1700 mg/kg (mixed xylenes –undefined composition) (3) 0000071–43–2 BENZENE LC50 (rat): 13,700 ppm (4 hour exposure) (26); 9,980 ppm (7 hour exposure) (13,200 ppm –equivalent 4 hour exposure) (18) LD50 (oral, rat): 93

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SECTION 12 – ECOLOGICAL INFORMATION

Ecotoxicity (aquatic and terrestrial information)	No data available for this product
Persistence and degradability	No data available
Bioaccumulative potential	No data available.
Mobility in soil	No data available.
Other adverse effects	No data available.

SECTION 13 – DISPOSAL CONSIDERATIONS

Information on safe handling for disposal/methods of disposal/contaminated packaging
Dispose of contents/container into safe container in accordance with local, regional or national regulations.

SECTION 14 – TRANSPORT INFORMATION

UN number; Proper shipping name; Class(es); Packing group (PG) of the TDG Regulations:
NOT REGULATED

UN Number; Proper shipping name; Class(es); Packing group (PG) of the IMDG (maritime):
NOT REGULATED

UN Number; Proper shipping name; Class(es); Packing group (PG) of the IATA (air):
NOT REGULATED

Special Precautions (transport/conveyance):None known

Environmental hazards (IMDG or other): None known

Bulk transport (usually more than 450L in capacity): Possible

SECTION 15 – REGULATORY INFORMATION

Safety/health regulations specifics	Refer to Section 2 for the appropriate classification. This product has been classified in accordance with the hazard criteria of the Hazardous Products Regulations (HPR).
Environmental regulations specifics	Refer to Section 3 for ingredient(s) of the DSL
Safety/health/environmental outside regulations specifics	United States OSHA information: This product is regulated according to OSHA (29 CFR).
Bioaccumulative potential	United States EPA (Environmental Protection Agency) information: 40 CFR Refer to the ingredients listed in Section 3 & Sections 12; 13 & 14. United States TCSA information: Refer to the ingredients listed in Section 3.
National Fire Protection Association (NFPA)	HEALTH: 1 FLAMMABILITY: 1 INSTABILITY: 0 SPECIAL HAZARDS: Refer to Section 2 & 3. HAZARD SCALE: 0 =Minimal 1 =Slight 2 =Moderate 3 =Serious 4 =Severe

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SECTION 16 – OTHER INFORMATION

Date of the latest revision of the safety data sheet April 8, 2020 version 5.1

Corrections SDS Template modifications

References Safety Data Sheets from manufacturer/supplier

Abbreviations	ACGIH	American Conference of Governmental Industrial Hygienists
	ATE	Acute toxicity estimate
	CAS	Chemical Abstract Service
	DSL	Domestic Substance List
	IARC	International Agency for Research on Cancer
	IATA	International Air Transport Association
	IMDG	International Maritime Dangerous Goods Code
	LC	Lethal concentration
	LD	Lethal Dosage
	NIOSH	National Institute for Occupational Safety and Health
	NTP	National Toxicology Program (U.S.A.)
	OSHA	Occupational Safety and Health Administration (U.S.A.)
	PEL	Permissible Exposure Limit
	STEL	Short-term Exposure Limit
	TDG	Transport of dangerous goods
	TLV	Threshold Limit Value
TSCA	Toxic Substances Control Act	
TWA	Time Weighted Average	
WHMIS	Workplace Hazardous Materials Information System	


To the best of our knowledge, the information contained herein is accurate. However, neither the above named supplier nor any of its subsidiaries assumes any liability whatsoever for the accuracy or completeness of the information contained herein. Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.

SAFETY DATA SHEET PART B

SECTION 1 – IDENTIFICATION

Product identifier	RECOIL B
Other means of identification	None
Recommended use and restrictions on use	Construction product / Refer to technical information
Initial supplier identifier	Meghan's Supply & Design // BallistiX 11720 Main St Suite 120, Fredericksburg, VA 22408, United States +1540-940-6698
Emergency telephone number/restriction on use	USA - INFOTRAC 24 hour number 1800-535-5053

SECTION 2 – HAZARD IDENTIFICATION

Classification of hazardous product (name of the category or subcategory of the hazard class)	Acute toxicity Oral –Category 4 Carcinogenicity –Category 2 Eye Irritation –Category 2 Flammable Liquids –Category 4 Reproductive Toxicity –Category 2 Respiratory Sensitizer (Solid/Liquid) –Category 1 Skin Irritation –Category 2 Skin Sensitizer –Category 1 Specific Target Organ Toxicity –Repeated Exposure –Category 2 Specific Target Organ Toxicity –Single Exposure (Respiratory Tract Irritation) –Category 3
Information elements (symbols, signal words, hazard statements and precautionary statements of the category/subcategory)	 <p>! DANGER</p> <p>H227 –Combustible Liquid H302 –Harmful if swallowed H351 –Suspected of causing cancer. H319 –Causes serious eye irritation H361 –Suspected of damaging fertility or the unborn child H334 –May cause allergy or asthma symptoms or breathing difficulties if inhaled H315 –Causes skin irritation H317 –May cause an allergic skin reaction H373 –May cause damage to organs through prolonged or repeated exposure. H335 –May cause respiratory irritation</p> <p>P264 –Wash thoroughly after handling. P270 –Do not eat, drink or smoke when using this product. P201 –Obtain special instructions before use. P202 –Do not handle until all safety precautions have been read and understood. P280 –Wear protective gloves/protective clothing/eye protection/face protection. P210 –Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. P284 –[In case of inadequate ventilation] wear respiratory protection. P272 –Contaminated work clothing should not be allowed out of the workplace. P260 –Do not breathe dust/fume/gas/mist/vapors/spray. P271 –Use only outdoors or in a well-ventilated area. P233 –Keep container tightly closed. P301 +P312 –IF SWALLOWED: Call a POISON CENTER/doctor if you feel unwell. P330 –Rinse mouth. P308 +P313 –IF exposed or concerned: Get medical advice/attention. P305 +P351 +P338 –IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. P337 +P313 –If eye irritation persists: Get medical advice/attention. P370 +P378 –In case of fire: Use dry chemical, carbon dioxide, foam to extinguish. For detailed information, see Section-5 P304 +P340 –IF INHALED: Remove person to fresh air and keep comfortable for breathing. P342 +P311 –If experiencing respiratory symptoms: Call a POISON CENTER/doctor. P302 +P352 –IF ON SKIN: Wash with plenty of water. P321 –Specific treatment (see section 4 on this SDS). P362 +P364 –Take off contaminated clothing. And wash it before reuse. P333 +P313 –If skin irritation or a rash occurs: Get medical advice/attention. P314 –Get Medical advice/attention if you feel unwell. P405 –Store locked up. P403 –Store in a well-ventilated place. P403 +P405 –Store in a well-ventilated place. Store locked up. P501 –Dispose of contents/ container to an approved waste disposal plant.</p>
Other Hazards Known	None

SAFETY DATA SHEET PART B

SECTION 3 - COMPOSITION/INFORMATION ON INGREDIENTS

Chemical name (common name/synonyms)	CAS NUMBER or other	Concentration (%)
4,4'-METHYLENEDIPHENYL DIISOCYANATE	101-68-8	56 - 100
XYLENE	1330-20-7	3 - 6
MDI (MONOMER)	26447-40-5	15 - 3
ETHYLBENZENE	100-41-4	0.9 - 1.4
BENZENE	71-43-2	Trace

All ingredients are listed according to OSHA (29 CFR).

* Statement - This safety data sheet provides concentration range(s) instead of the actual concentration(s) considered trade secret(s).

SECTION 4 - FIRST AID MEASURES

Inhalation	IF INHALED: Remove person to fresh air and keep comfortable for breathing. Immediately call a doctor.
Ingestion	IF SWALLOWED: Rinse mouth. Do NOT induce vomiting. NEVER give anything by mouth if victim is rapidly losing consciousness, or is unconscious or convulsing. Rinse mouth thoroughly with water. Have victim drink two glasses of water. If vomiting occurs naturally, have victim lean forward to reduce risk of aspiration. Call a doctor if you feel unwell.
Skin contact	IF ON SKIN: wash with plenty of water (15-20 minutes). IF SKIN irritation or rash occurs: Get medical attention. Take off contaminated clothing and wash it before reuse.
Eye contact	IF IN EYES, Rinse cautiously with water for several minutes (15-20). Remove contact lenses, if present and easy to do. Continue rinsing.
Most important symptoms and effects (acute and delayed)	Causes severe skin, respiratory or digestive tract burns and eye damage.
Indication of immediate medical attention / special treatment	In all cases, call a doctor. Do not forget this document.

SECTION 5 - FIREFIGHTING MEASURES

Specific hazards of the hazardous product (hazardous combustion products)	Carbon oxides and other irritant/toxic gases and fumes.
Suitable and unsuitable extinguishing media	In case of fire: Use carbon dioxide, chemical powder agent and appropriate foam to extinguish surrounding products.
Special protective equipment and precautions for fire-fighters	During a fire, irritating/toxic smoke and fumes may be generated. Do not enter fire area without proper protection. Firefighters should wear proper protective equipment and self-contained breathing apparatus with full facepiece. Shield personnel to protect from venting, rupturing or bursting cans. Move containers from fire area if it can be done without risk. Water spray may be useful in cooling equipment and cans exposed to heat and flame.

SECTION 6 - ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures	Absorb spillage to prevent material damage. Restrict access to area until completion of clean-up. Ensure clean-up is conducted by trained personnel only. All persons dealing with clean-up should wear the appropriate protective equipment (See Section 8).
Methods and materials for containment and cleaning up	Ventilate area of release. Stop the leak if it can be done safely. Contain and absorb any spilled liquid concentrate with inert absorbent material, then place material into a container for later disposal (see Section 13). Contaminated absorbent material may pose the same hazards as the spilled product. Notify the appropriate authorities as required.

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SECTION 7 – HANDLING AND STORAGE

Precautions for safe handling	Wear protective gloves/ protective clothing/ eye protection/ face protection. Before handling, it is very important that engineering controls are operating, and that protective equipment requirements and personal hygiene measures are being followed. People working with this chemical should be properly trained regarding its hazards and its safe use. Inspect containers for leaks before handling. Label containers appropriately. Ensure proper ventilation. Avoid breathing dust/fume/gas/mist/vapors/spray. Avoid contact with eyes, skin and clothing. Keep away from heat, sparks and flame. Avoid generating high concentrations of dusts, vapors or mists. Keep away from incompatible materials (Section 10). Keep containers closed when not in use. Empty containers are always dangerous. Refer also to Section 8.
Conditions for safe storage, including any incompatibilities	Store in a well-ventilated place. Keep container tightly closed. Keep cool. Store locked up. Store away from incompatible materials (Section 10). Inspect all incoming containers to make sure they are properly labelled and not damaged. Storage area should be clearly identified, clear of obstruction and accessible only to trained personnel. Inspect periodically for damage or leaks.

SECTION 8 – EXPOSURE CONTROLS/PERSONAL PROTECTION

Control Parameters (biological limit values or exposure limit values and source of those values)	Exposure limits: None known
Appropriate engineering controls	Use under well-ventilated conditions. Local exhaust ventilation system is recommended to maintain concentrations of contaminants below exposure limits. Make emergency eyewash stations, safety/quick-drench showers, and washing facilities available in work area.
Individual protection measures/personal protective equipment	Respiratory protection is required if the concentrations are higher than the exposure limits. Use a NIOSH approved respirators if the exposure limits are unknown. Chemically protective gloves (impervious), and other protective clothing to prevent prolonged or repeated skin contact, must be worn during all handling operations. Wear protective chemical splash goggles to prevent mists from entering the eyes. Wash hands/nails/face thoroughly after handling. Do not eat, drink or smoke when using this product. Practice good personal hygiene after using this material. Remove and wash contaminated work clothing before re-use.

SECTION 9 – PHYSICAL AND CHEMICAL PROPERTIES

Appearance / color	Liquid	vapor pressure	Not available
odor	Characteristic	vapor density	Heavier than air
odor threshold	Not available	Relative density	9.91 lb/gal
pH	Not available	Solubility	Not available
Melting point / Freezing point	Not available	Partition coefficient of n-octanol/water	Not available
Initial boiling point	140 °C	Auto-ignition temperature	Not available
Flash point	61 °C	Decomposition temperature	Not available
Evaporation rate	Slower than ether	Viscosity	1500–1700cps
Flammability (solid, gas)	Not available	VOC	0.54 lb/gal
Upper/Lower flammability or explosive limits	Not available	Gravity	1.19

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SECTION 10 - STABILITY AND REACTIVITY

Reactivity	Does not react under the recommended storage and handling conditions prescribed.
Chemical Stability	Stable under the recommended storage and handling conditions prescribed.
Possibility of hazardous reactions	None known
Conditions to avoid (static discharge, shock or vibration)	Heat, high temperature, open flame, sparks, and moisture. Contact with incompatible materials in a closed system will cause liberation of carbon dioxide and buildup of pressure.
Incompatible materials	Oxidizing materials; etc.
Hazardous decomposition products	None known

SECTION 11 - TOXICOLOGICAL INFORMATION

Skin Corrosion/Irritation Isocyanates react with skin protein and moisture and can cause irritation. Prolonged contact can cause reddening, swelling, rash, scaling, blistering, and, in some cases, skin sensitization. Individuals who have developed a skin sensitization can develop these symptoms as a result of contact with very small amounts of liquid material or as a result of exposure to vapor. Causes skin irritation **Serious Eye Damage/Irritation** Liquid, aerosols or vapors are severely irritating and can cause pain, tearing, reddening and swelling. Prolonged vapor contact may cause conjunctivitis. Any level of contact should not be left untreated. Causes serious eye irritation **Respiratory/Skin Sensitization** May cause allergy or asthma symptoms or breathing difficulties if inhaled. May cause an allergic skin reaction **Carcinogenicity** Suspected of causing cancer. **Germ Cell Mutagenicity** No data available. **Reproductive Toxicity** Suspected of damaging fertility or the unborn child **Specific Target Organ Toxicity - Single Exposure** May cause respiratory irritation **Specific Target Organ Toxicity - Repeated Exposure** May cause damage to organs through prolonged or repeated exposure. **Aspiration Hazard** No data available. **Acute Toxicity** Harmful if swallowed **Likely Routes of Exposure** Inhalation, Ingestion, Skin contact, Eye contact **Chronic Exposure 0000100-41-4 ETHYLBENZENE CARCINOGENIC EFFECTS:** Ethyl Benzene has been listed by IARC as Group 2B, Possibly Carcinogenic to Humans. **TERATOGENIC EFFECTS:** Ethyl Benzene has been Classified as POSSIBLE for humans. **0001330-20-7XYLENE** High exposure to Xylenes in some animal studies have been reported to cause health effects on the developing embryo/fetus. Xylene in high concentrations has caused embryotoxic effects in laboratory animals. **0001330-20-7XYLENE** LC50 (rat): 6350 ppm (4-hour exposure) (unspecified isomers and ethylbenzene) (1) LC50 (rat): 6700 ppm (4-hour exposure) (65% m-xylene, 7.6% o-xylene, 7.8% p-xylene, 19.3% ethylbenzene) (2) ethylbenzene (1) LC50 (rat): 6700 ppm (4-hour exposure) (65% m-xylene, 7.6% o-xylene, 7.8% p-xylene, 19.3% ethylbenzene) (2) LD50 (oral, rat): 5400 mg/kg (52% m-, 19% o-, 24% p-) (1) LD50 (oral, female mouse): 5251 mg/kg (60.2% m-, 9.1% o-, 14.6% p-, 17.0% ethylbenzene) (4) LD50 (oral, male mouse): 5627 mg/kg (60.2% m-, 9.1% o-, 14.6% p-, 17.0% ethylbenzene) (4) LD50 (dermal, rabbit): 12180 mg/kg (m-xylene); greater than 1700 mg/kg (mixed xylenes -undefined composition) (3) LD50 (oral, female mouse): 5251 mg/kg (60.2% m-, 9.1% o-, 14.6% p-, 17.0% ethylbenzene) (4) LD50 (oral, male mouse): 5627 mg/kg (60.2% m-, 9.1% o-, 14.6% p-, 17.0% ethylbenzene) (4) LD50 (dermal, rabbit): 12180 mg/kg (m-xylene); greater than 1700 mg/kg (mixed xylenes -undefined composition) (3) **0000071-43-2BENZENE** LC50 (rat): 13,700 ppm (4 hour exposure) (26); 9,980 ppm (7 hour exposure) (13,200 ppm -equivalent 4 hour exposure) (18) LD50 (oral, rat): 930 mg/kg (19); 5,600 mg/kg (2); 11.4 ml/kg (10,032 mg/kg) (21) LD50 (oral, mouse): 4,700 mg/kg (11; unconfirmed) LD50 (skin, rabbit and guinea pig): Greater than 9,400 mg/kg (20) **0000100-41-4ETHYLBENZENE** LC50 (inhalation, rat): 4000 ppm; 4-hour exposure (3) LD50 (oral, rat): 3.5 g/kg (1,3,5,10) LD50 (oral, rat): 4.72 g/kg (3,5,7,8) LD50 (dermal, rabbit): 17.8 g/kg (11) **0000101-68-84,4'-METHYLENEDIPHENYL DIISOCYANATE** LC50 (rat): 369-490 mg/m³ (aerosol) (4-hour exposure) (1) LC50 (rat): 178 mg/m³ (17.4 ppm) (duration of exposure not reported) (2) LD50 (oral, rat): greater than 10,000 mg/kg (1,2) LD50 (dermal, rabbit): greater than 10,000 mg/kg (1) LD50 (oral, mouse): 2,200 mg/kg (3)

SECTION 12 - ECOLOGICAL INFORMATION

Ecotoxicity (aquatic and terrestrial information)	No data available for this product
Persistence and degradability	No data available
Bioaccumulative potential	No data available.
Mobility in soil	No data available.
Other adverse effects	No data available.

SECTION 13 - DISPOSAL CONSIDERATIONS

Information on safe handling for disposal/methods of disposal/contaminated packaging

Dispose of contents/container into safe container in accordance with local, regional or national regulations.

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SECTION 14 – TRANSPORT INFORMATION

UN number; Proper shipping name; Class(es); Packing group (PG) of the TDG Regulations:
NOT REGULATED

UN Number; Proper shipping name; Class(es); Packing group (PG) of the IMDG (maritime):
NOT REGULATED

UN Number; Proper shipping name; Class(es); Packing group (PG) of the IATA (air):
NOT REGULATED

Special Precautions (transport/conveyance):None known

Environmental hazards (IMDG or other): None known

Bulk transport (usually more than 450L in capacity): Possible

SECTION 15 – REGULATORY INFORMATION

Safety/health regulations specifics	Refer to Section 2 for the appropriate classification. This product has been classified in accordance with the hazard criteria of the Hazardous Products Regulations (HPR).
Environmental regulations specifics	Refer to Section 3 for ingredient(s) of the DSL
Safety/health/environmental outside regulations specifics Bioaccumulative potential	United States OSHA information: This product is regulated according to OSHA (29 CFR). United States EPA (Environmental Protection Agency) information: 40 CFR Refer to the ingredients listed in Section 3 & Sections 12; 13 & 14. United States TCSA information: Refer to the ingredients listed in Section 3.
National Fire Protection Association (NFPA)	HEALTH: 1 FLAMMABILITY: 1 INSTABILITY: 0 SPECIAL HAZARDS: Refer to Section 2 & 3. HAZARD SCALE: 0 =Minimal 1 =Slight 2 =Moderate 3 =Serious 4 =Severe

SECTION 16 – OTHER INFORMATION

Date of the latest revision of the safety data sheet	June 21, 2022 version 2
Corrections	SDS Template modifications
References	Safety Data Sheets from manufacturer/supplier
Abbreviations	<p>ACGIH American Conference of Governmental Industrial Hygienists</p> <p>ATE Acute toxicity estimate</p> <p>CAS Chemical Abstract Service</p> <p>DSL Domestic Substance List</p> <p>IARC International Agency for Research on Cancer</p> <p>IATA International Air Transport Association</p> <p>IMDG International Maritime Dangerous Goods Code</p> <p>LC Lethal concentration</p> <p>LD Lethal Dosage</p> <p>NIOSH National Institute for Occupational Safety and Health</p> <p>NTP National Toxicology Program (U.S.A.)</p> <p>OSHA Occupational Safety and Health Administration (U.S.A.)</p> <p>PEL Permissible Exposure Limit</p> <p>STEL Short-term Exposure Limit</p> <p>TDG Transport of dangerous goods</p> <p>TLV Threshold Limit Value</p> <p>TSCA Toxic Substances Control Act</p> <p>TWA Time Weighted Average</p> <p>WHMIS Workplace Hazardous Materials Information System</p>

To the best of our knowledge, the information contained herein is accurate. However, neither the above named supplier nor any of its subsidiaries assumes any liability whatsoever for the accuracy or completeness of the information contained herein. Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.