

Groundvex Sport Binder — Aliphatic

SECTION 1 — IDENTIFICATION

Product Name	Groundvex Sport Binder — Aliphatic	Address	4500 Park Granada, Calabasas, CA 91302
Product ID	GSB-ALIPHATIC	Information Phone	805-457-9019
Supplier	Synergy Building Technologies	24-Hr Emergency Phone	805-457-9019

Recommended Use: Binder for rubber and aggregate surfacing systems. For further information, refer to the product Technical Data Sheet.

Supplier identity and 24-hour emergency contact fields must be completed by the distributing company before this Safety Data Sheet is issued.

SECTION 2 — HAZARDS IDENTIFICATION

Classification

- Acute Toxicity, Inhalation — Category 1
- Eye Irritation — Category 2
- Respiratory Sensitizer (Solid/Liquid) — Category 1
- Skin Irritation — Category 2
- Skin Sensitizer — Category 1
- Specific Target Organ Toxicity, Single Exposure (Respiratory Tract Irritation) — Category 3

**DANGER**

Hazard Statements

- H330 – Fatal if inhaled.
- H319 – Causes serious eye irritation.
- H334 – May cause allergy or asthma symptoms or breathing difficulties if inhaled.
- H315 – Causes skin irritation.
- H317 – May cause an allergic skin reaction.
- H335 – May cause respiratory irritation.

Precautionary Statements — General

- P101 – If medical advice is needed, have product container or label at hand.
- P102 – Keep out of reach of children.
- P103 – Read label before use.

Precautionary Statements — Prevention

- P260 – Do not breathe dust / fume / gas / mist / vapors / spray.
- P271 – Use only outdoors or in a well-ventilated area.
- P284 – [In case of inadequate ventilation] wear respiratory protection.
- P264 – Wash thoroughly after handling.
- P280 – Wear protective gloves / clothing / eye protection / face protection.
- P272 – Contaminated work clothing should not be allowed out of the workplace.
- P233 – Keep container tightly closed.

Precautionary Statements — Response

- P304 + P340 – IF INHALED: remove person to fresh air and keep comfortable for breathing.
- P310 – Immediately call a POISON CENTER or doctor.
- P320 – Specific treatment is urgent (see Section 4).
- P305 + P351 + P338 – IF IN EYES: rinse cautiously with water for several minutes; remove contact lenses if easy; continue rinsing.
- P337 + P313 – If eye irritation persists: get medical advice/attention.
- 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).
- P362 + P364 – Take off contaminated clothing and wash it before reuse.
- P333 + P313 – If skin irritation or a rash occurs: get medical advice/attention.
- P312 – Call a POISON CENTER/doctor if you feel unwell.

Precautionary Statements — Storage

- P403 + P233 – Store in a well-ventilated place; keep container tightly closed.
- P405 – Store locked up.
- P403 + P405 – Store in a well-ventilated place; store locked up.

Precautionary Statements — Disposal

- P501 – Dispose of contents/container to an approved waste disposal plant.

SECTION 3 — COMPOSITION / INFORMATION ON INGREDIENTS

CAS NUMBER	CHEMICAL NAME	% BY WEIGHT
0053170-03-9	Polyurethane Prepolymer	53% - 98%
0005124-30-1	Dicyclohexylmethane-4,4'-diisocyanate (H12MDI)	13% - 24%

Specific chemical identity and/or exact percentage (concentration) of the composition has been withheld to protect confidentiality.

SECTION 4 — FIRST-AID MEASURES

Inhalation

Remove source of exposure or move person to fresh air and keep comfortable for breathing. If experiencing respiratory symptoms: call a POISON CENTER/doctor. If breathing is difficult, trained personnel should administer emergency oxygen if advised to do so by the POISON CENTER/doctor. If exposed / feel unwell / concerned: call a POISON CENTER/doctor. Eliminate all ignition sources if safe to do so.

Skin Contact
Take off contaminated clothing, shoes and leather goods (e.g. watchbands, belts). Gently blot or brush away excess product. Wash with plenty of lukewarm, gently flowing water for 15–20 minutes. If skin irritation or rash occurs: get medical advice/attention. Wash contaminated clothing before re-use or discard. If exposed or concerned: get medical advice/attention.

Eye Contact
Avoid direct contact; wear chemical protective gloves if necessary. Rinse eyes cautiously with lukewarm, gently flowing water for several minutes while holding the eyelids open. Remove contact lenses if present and easy to do. Continue rinsing for 15–20 minutes. Take care not to rinse contaminated water into the unaffected eye or onto the face. If eye irritation persists: get medical advice/attention.

Ingestion
Rinse mouth. Do NOT induce vomiting. Immediately call a POISON CENTER/doctor. If vomiting occurs naturally, lie on your side in the recovery position. If exposed or concerned: get medical advice/attention.

SECTION 5 — FIRE-FIGHTING MEASURES

Suitable Extinguishing Media
Dry chemical, foam, or carbon dioxide is recommended. Water spray is recommended to cool or protect exposed materials or structures. Carbon dioxide can displace oxygen — use caution in confined spaces. Simultaneous use of foam and water on the same surface is to be avoided, as water destroys the foam. Sand or earth may be used for small fires only.

Unsuitable Extinguishing Media
If water is used, use very large quantities of cold water. The reaction between water and hot isocyanate may be vigorous.

Specific Hazards in Case of Fire
Vapors may accumulate and travel to ignition sources distant from the handling site; flash fire can occur. Excessive pressure or temperature may cause explosive rupture of containers. Water contamination will produce carbon dioxide — do not reseal contaminated containers, as pressure buildup may rupture them.

Fire-fighting Procedures
Isolate the immediate hazard area and keep unauthorized personnel out. Stop the spill/release if it can be done safely. Move undamaged containers from the immediate hazard area if safe. Water spray may help minimize or disperse vapors and protect personnel; water may be ineffective on the fire but can cool containers exposed to heat or flame. Exercise caution with water or foam, as frothing may occur, especially if sprayed into containers of hot, burning liquid. Dispose of fire debris and contaminated extinguishing water in accordance with official regulations.

Special Protective Actions
Wear NIOSH-approved self-contained breathing apparatus in positive pressure mode with full face piece. Boots, gloves (neoprene), goggles, and full protective clothing are also required. Care should always be exercised in dust/mist areas.

SECTION 6 — ACCIDENTAL RELEASE MEASURES

Emergency Procedure
ELIMINATE all ignition sources (no smoking, flares, sparks or flames in the immediate area). Do not touch or walk through spilled material. Isolate the hazard area and keep unnecessary people away. Remove all possible sources of ignition in the surrounding area. Notify authorities if any exposure to the general public or the environment occurs or is likely to occur. If spilled material is cleaned up using a regulated solvent, the resulting waste mixture may be regulated.

Recommended Equipment
Appropriate dust or face mask to eliminate breathing foam dust particulates.

Personal Precautions
Avoid breathing vapors. Avoid contact with skin, eyes or clothing. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing.

Environmental Precautions
Stop the spill/release if it can be done safely. Prevent spilled material from entering sewers, storm drains, other unauthorized drainage systems and natural waterways by using sand, earth, or other appropriate barriers.

Methods and Materials for Containment and Cleaning Up
Cover the container, but do not seal it, and remove it from the work area. Prepare a decontamination solution of 2.0% liquid detergent and 3–8% concentrated ammonium hydroxide in water (5–10% sodium carbonate may be substituted for the ammonium hydroxide). Treat the spill area with the decontamination solution, using about 10 parts of solution for each part of spill, and allow it to react for at least 15 minutes; carbon dioxide will be evolved, leaving insoluble polyureas. Slowly stir isocyanate waste into the decontamination solution and let stand for 48 hours, allowing the evolved carbon dioxide to vent away. Residues from spill cleanup may continue to be regulated under RCRA and require storage and disposal as hazardous waste. Dispose of in compliance with all relevant local, state, and federal laws and regulations.

SECTION 7 — HANDLING AND STORAGE

General
Wash hands after use. Do not get in eyes, on skin, or on clothing. Do not breathe vapors or mists. Use good personal hygiene practices. Eating, drinking and smoking in work areas is prohibited. Remove contaminated clothing and protective equipment before entering eating areas.

Ventilation Requirements
Use only with adequate ventilation to control air contaminants to their exposure limits. The use of local ventilation is recommended to control emissions near the source.

Storage Room Requirements
Keep container(s) tightly closed and properly labeled. Store in cool, dry, well-ventilated areas away from heat, direct sunlight, strong oxidizers and any incompatibilities. Store in approved containers and protect against physical damage. Indoor storage should meet OSHA standards and appropriate fire codes. Containers that have been opened must be carefully resealed to prevent leakage. Empty containers retain residue and may be dangerous. Use non-sparking ventilation systems, approved explosion-proof equipment and intrinsically safe electrical systems where this product is used and stored. Ground and bond containers and receiving equipment; avoid static electricity by grounding. Do not cut, drill, grind, weld, or perform similar operations on or near containers. Do not pressurize containers to empty them.

SECTION 8 — EXPOSURE CONTROLS / PERSONAL PROTECTION

Occupational Exposure Limits

COMPONENT	EXPOSURE LIMITS
Dicyclohexylmethane-4,4'-diisocyanate (H12MDI) · CAS 5124-30-1	ACGIH TLV: 0.005 ppm (TWA) • NIOSH: 0.005 mg/m³ (TWA) • OSHA PEL: not established

Eye Protection
Wear eye protection with side shields or goggles. Wear indirect-vent, impact and splash-resistant goggles when working with liquids. If protection is needed for the entire face, use in combination with a face shield.

Skin Protection
Gloves made from PVC, neoprene, or nitrile rubber may provide suitable chemical protection; suitability depends on frequency and duration of contact, glove material, thickness and dexterity — seek advice from glove suppliers and replace contaminated gloves. An apron and over-boots of neoprene or nitrile rubber are recommended to avoid skin sensitization. Depending on conditions of use, additional protection such as an apron, arm covers, or full body suit may be required. Wash contaminated clothing before re-wearing.

Respiratory Protection
If airborne concentrations exceed or are expected to exceed the TLV, use an MSHA/NIOSH-approved positive-pressure supplied-air respirator with a full face piece or an air-supplied hood. For emergencies, use a positive-pressure self-contained breathing apparatus. Air-purifying (cartridge-type) respirators are NOT approved for protection against isocyanates.

Appropriate Engineering Controls
Provide exhaust ventilation or other engineering controls to keep airborne vapor concentrations below their respective threshold limit values.

SECTION 9 — PHYSICAL AND CHEMICAL PROPERTIES

VOC (Part A & B combined)	N.A.	Appearance	Clear Liquid
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Odor Threshold	N.A.	Freezing / Melting Point	N.A.
Odor Description	Mild Chemical	Low Boiling Point	155 °C
pH	N.A.	High Boiling Point	N.A.
Water Solubility	Reacts with water	Auto-Ignition Temp	N.A.
Flammability	N/A	Decomposition Point	N.A.
Flash Point	200 °C	Evaporation Rate	Slower than ether
Viscosity	N.A.	Density	8.58 lb/gal
Lower/Upper Explosion Level	N.A.	Specific Gravity	1.03
Vapor Pressure	N.A.	VOC (Regulatory)	0.00 lb/gal
Vapor Density	Heavier than air		

SECTION 10 — STABILITY AND REACTIVITY

Stability

Material is stable at standard temperature and pressure.

Conditions to Avoid

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.

Hazardous Reactions / Polymerization

Will not occur under normal conditions, but under high temperatures in the presence of alkalis, tertiary amines, and metal compounds, polymerization will accelerate. Possible evolution of carbon dioxide gas may rupture closed containers.

Incompatible Materials

This product will react with any material containing active hydrogens, such as water, alcohol, ammonia, amines, alkalis and acids. The reaction with water is slow under 50°C but is accelerated at higher temperature and in the presence of alkalis, tertiary amines, and metal compounds; some reactions can be violent. Material can react with strong oxidizing agents.

Hazardous Decomposition Products

Carbon dioxide, carbon monoxide, nitrogen oxides, trace amounts of hydrogen cyanide, and unidentified organic compounds may be formed during combustion.

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. Sensitized individuals can develop symptoms from contact with very small amounts of liquid or from 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. 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

No data available.

Germ Cell Mutagenicity

No data available.

Reproductive Toxicity

No data available.

STOT – Single Exposure

May cause respiratory irritation.

STOT – Repeated Exposure

No data available.

Aspiration Hazard

No data available.

Acute Toxicity

Fatal if inhaled.

Acute Toxicity Estimates

Dicyclohexylmethane-4,4'-diisocyanate (CAS 5124-30-1):

LC50 (rat): 295–307 mg/m³ (27.5–28.5 ppm) (aerosol, 4-hour exposure)

LD50 (oral, rat): 9,900 mg/kg; > 11,000 mg/kg • LD50 (dermal, rabbit): > 10,000 mg/kg

SECTION 12 — ECOLOGICAL INFORMATION

Toxicity

No data available.

Other Adverse Effects

No data available.

SECTION 13 — DISPOSAL CONSIDERATIONS

Waste Disposal

Under RCRA, it is the responsibility of the user of the product to determine, at the time of disposal, whether the product meets RCRA criteria for hazardous waste. Waste management should be in full compliance with federal, state, and local laws. Empty containers retain product residue which may exhibit the hazards of the material; therefore do not pressurize, cut, glaze, weld, or use for any other purpose. Return drums to reclamation centers for proper cleaning and reuse.

SECTION 14 — TRANSPORT INFORMATION

U.S. DOT Information

Not regulated.

IMDG Information

Not regulated.

IATA Information

Not regulated.

SECTION 15 — REGULATORY INFORMATION			
CAS	CHEMICAL NAME	% BY WT.	REGULATION LIST
0053170-03-9	Polyurethane Prepolymer	13% - 24%	DSL, CERCLA, HAPS, SARA312, VOC, TSCA, RCRA
0005124-30-1	Dicyclohexylmethane-4,4'-diisocyanate	13% - 24%	

SECTION 16 — OTHER INFORMATION

There are points of difference between OSHA GHS and UN GHS. In most categories they can be used interchangeably, except for the Skin Corrosion/Irritation and Specific Target Organ Toxicity (Single and Repeated Exposure) categories; in these cases the UN GHS classification is stated.

Glossary
 ACGIH – American Conference of Governmental Industrial Hygienists; CAS – Chemical Abstracts Service; CERCLA – Comprehensive Environmental Response, Compensation, and Liability Act; DSL/NDSL – Domestic / Non-Domestic Substances List; GHS – Globally Harmonized System; HAPS – Hazardous Air Pollutants; LC – Lethal Concentration; LD – Lethal Dose; NIOSH – National Institute for Occupational Safety and Health; OSHA – Occupational Safety and Health Administration; PEL – Permissible Exposure Limit; RCRA – Resource Conservation and Recovery Act; SARA – Superfund Amendments and Reauthorization Act; SCBA – Self-Contained Breathing Apparatus; STEL – Short-Term Exposure Limit; TLV – Threshold Limit Value; TSCA – Toxic Substances Control Act; TWA – Time-Weighted Average; VOC – Volatile Organic Compound.

Disclaimer
 To the best of the supplier's knowledge, the information contained herein is accurate. However, the supplier assumes no 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, there is no guarantee that these are the only hazards that exist. This information pertains to the product as currently formulated and is based on the information available at this time. Addition of reducers or other additives may substantially alter the composition and hazards of the product. Since conditions of use are outside the supplier's control, no warranties, express or implied, are made and no liability is assumed in connection with any use of this information.