

C1520 POLYASPARTIC RESIN

1. Identification

Product Name: C1520 POLYASPARTIC RESIN

Material Number: C1520

Chemical Family: Aspartic Ester / Polyaspartic Resin

Use: Raw material for coatings, inks, adhesives, sealants, elastomers, waterproofing, anti-corrosion coatings, flooring coatings, blade coatings, and automotive repair materials in industrial applications

Restrictions on use: Do-It-Yourself Applications

2. Hazards Identification

GHS Classification

Skin sensitisation: Category 1

GHS Label Elements

Hazard pictograms:

Signal word:

Warning

Hazard statements:

May cause an allergic skin reaction.

Precautionary statements:

Prevention:

Wear protective gloves.

Avoid breathing dust, mist, gas, vapors or spray.

Contaminated work clothing must not be allowed out of the workplace.

Response:

IF ON SKIN: Wash with plenty of soap and water.

If skin irritation or rash occurs: Get medical attention.

Take off contaminated clothing and wash it before reuse.

Disposal:

Dispose of contents and container in accordance with existing federal, state, and local environmental control laws.

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TRANSPORTATION EMERGENCY

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NON-TRANSPORTATION

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3. Composition/Information on Ingredients

Hazardous Components

Concentration Components CAS-No.

80 - 100% Aspartic Ester 136210-32-7

3 - 7% Aliphatic Carboxylic Ester 623-91-6

The specific chemical identity and/or exact percentage of component(s) have been withheld as a trade secret.

4. First Aid Measures

Most Important Symptom(s)/Effect(s)

Acute: May cause allergic skin reaction with symptoms of reddening, itching, swelling, and rash., May cause skin irritation with symptoms of reddening, itching, and swelling., May cause eye irritation with symptoms of reddening, tearing, stinging, and swelling., May cause respiratory tract irritation with symptoms of coughing, sore throat and runny nose.

Eye Contact

In case of contact, flush eyes with plenty of lukewarm water. Use fingers to ensure that eyelids are separated and that the eye is being irrigated. Get medical attention if irritation develops.

Skin Contact

In case of skin contact, wash affected areas with soap and water. Immediately remove contaminated clothing and shoes. Wash clothing before reuse. Thoroughly clean shoes before reuse. Get medical attention if irritation develops.

Inhalation

If inhaled, remove to fresh air. If breathing is difficult, give oxygen. If not breathing, give artificial respiration. Get medical attention if irritation develops.

Ingestion

If ingested, do not induce vomiting unless directed to do so by medical personnel. Give two glasses of water for dilution. Call a physician immediately. Never give anything by mouth to an unconscious person.

5. Firefighting Measures

Suitable Extinguishing Media: All extinguishing media are suitable.

Unsuitable Extinguishing Media No Data Available

Fire Fighting Procedure

Firefighters should be equipped with self-contained breathing apparatus to protect against potentially toxic and irritating fumes. Use cold water spray to cool fire-exposed containers to minimize the risk of rupture.

Hazardous Decomposition Products

By Fire and Thermal Decomposition: Carbon oxides, Nitrogen oxides (NO_x), Amines, other aliphatic fragments which have not been determined, Ammonia gas may be liberated at high temperatures.

Unusual Fire/Explosion Hazards

Toxic and irritating gases/fumes may be given off during burning or thermal decomposition.

6. Accidental Release Measures

Spill and Leak Procedures

Evacuate and keep unnecessary people out of spill area. Cleanup personnel must use appropriate personal protective equipment. Cover spill with inert material (e. g., dry sand or earth) and collect for proper disposal. Prevent from entering open drains and waterways. Ventilate area to remove vapors or dust.

7. Handling and Storage

Handling/Storage Precautions

Avoid contact with skin or clothing. Avoid contact with eyes. Use only with adequate ventilation/personal protection. Wash thoroughly after handling. Keep container closed when not in use. Do not breathe vapours or spray mist. Store in a cool, dry, well-ventilated place away from ignition sources, heat, moisture, and foreign materials. Material is hygroscopic and may absorb small amounts of atmospheric moisture. Do not reseal container if contamination is suspected.

Storage Temperature

Minimum: 0 °C (32 °F)

Maximum: 40 °C (104 °F)

Storage Conditions

Store separate from food products.

Employee education and training in the safe use and handling of this product are required under the OSHA Hazard Communication Standard 29 CFR 1910.1200.

Substances to Avoid

Oxidizing agents, Acids, Isocyanates

8. Exposure Controls/Personal Protection

The recommendations in this section should not be a substitute for a personal protective equipment (PPE) assessment performed by the employer as required by 29 CFR 1910 Subpart I.

Exposure Limits

Any component which is listed in section 3 and is not listed in this section does not have a known ACGIH TLV, OSHA PEL or supplier recommended occupational exposure limit.

Industrial Hygiene/Ventilation Measures

General dilution and local exhaust ventilation as necessary to control airborne vapors, aerosols (e.g., dusts, mists) and thermal decomposition products. Heating may result in generation of airborne vapors and/or aerosols.

Respiratory Protection

If vapors form, respiratory protection is recommended. The use of a positive pressure supplied air respirator is recommended if the airborne concentration is unknown or if spraying is performed in a confined space or area with limited ventilation. In spray applications, an organic vapor/particulate respirator or air supplied unit is necessary.

Hand Protection

Ensure gloves remain in good condition during use and replace if any deterioration is observed. Permeation resistant gloves, Viton gloves, 4H laminate gloves, Butyl rubber gloves, Nitrile rubber gloves.

Eye Protection

Chemical safety goggles or safety glasses with side-shields, Chemical safety goggles in combination with a full face shield if a splash hazard exists.

Skin Protection

Avoid all skin contact. Depending on the conditions of use, cover as much of the exposed skin area as possible with appropriate clothing to prevent skin contact. Where spray mist/vapor is anticipated, permeation resistant clothing is recommended.

Additional Protective Measures

Employees should wash their hands and face before eating, drinking, or using tobacco products. Educate and train employees in the safe use and handling of this product. Emergency showers and eye wash stations should be available.

9. Physical and Chemical Properties

Physical state: liquid

Color: Colorless to light yellow

Odor: slight inherent odour

Amine Value: 189 - 193

Color Value (APHA): max. 250

NH Equivalent: 291 g/mol

Equivalent OH Content: 5.84%

Solid Content: 96 ± 2%

Odor Threshold: No Data Available

pH: not established

Freezing Point: No Data Available

Setting Point: No Data Available

Melting Point: No Data Available

Boiling Point: > 200 °C (392 °F) @ 1,013 hPa

Flash Point: 94 °C (C1520 TDS); Approximately > 94 °C (> 201.2 °F) (DIN EN 22719, reference data)

Evaporation Rate: No Data Available

Lower explosion limit: No Data Available

Upper Explosion Limit: No Data Available

Vapor Pressure: No Data Available

Vapor Density: No Data Available

Relative Density: 1.06 @ 25 °C (C1520 TDS)

Density: ca. 1.06 g/cm³ @ 20 °C (68 °F) (DIN 51757, reference data)

Relative Vapor Density: No Data Available

Specific Gravity: No Data Available
Solubility in Water: insoluble
Partition Coefficient: n-octanol/water:
No Data Available
Auto-ignition Temperature: ca. 335 °C (635 °F) @ 1,013 hPa (DIN 51794)
Decomposition Temperature: No Data Available
Unblocking Temperature: No Data Available
Softening point: No Data Available
Dynamic Viscosity: 900 - 2,000 mPa.s @ 25 °C (C1520 TDS)
Reference Dynamic Viscosity: ca. 1,000 mPa.s @ 25 °C (77 °F) (DIN 53019)
Kinematic Viscosity: No Data Available
Bulk Density: No Data Available
Molecular Weight: No Data Available
Pour point: No Data Available
Self Ignition: not applicable
Particle characteristics: No Data Available

10. Stability and Reactivity

Hazardous Reactions
Hazardous polymerisation does not occur.

Stability
Stable

Materials to Avoid
Oxidizing agents, Acids, Isocyanates

Conditions to Avoid
Avoid extreme heat.

Hazardous Decomposition Products
By Fire and Thermal Decomposition: Carbon oxides, Nitrogen oxides (NOx), Amines, other aliphatic fragments which have not been determined, Ammonia gas may be liberated at high temperatures .

11. Toxicological Information

Likely Routes of Exposure: Skin Contact
Eye Contact
Inhalation
Ingestion

Health Effects and Symptoms

Acute: May cause allergic skin reaction with symptoms of reddening, itching, swelling, and rash., May cause skin irritation with symptoms of reddening, itching, and swelling., May cause eye irritation with symptoms of reddening, tearing, stinging, and swelling., May cause respiratory tract irritation with symptoms of coughing, sore throat and runny nose.

Chronic: Not expected to cause adverse chronic health effects.

Toxicity Data for: C1520 POLYASPARTIC RESIN

Acute Oral Toxicity
Acute toxicity estimate: > 5,000 mg/kg (Calculation method)

Toxicity Data for: Aspartic Ester

Acute Oral Toxicity
LD50: > 2,000 mg/kg (rat) (Directive 67/548/EEC, Annex V, B.1.)

Acute Inhalation Toxicity
LC50: > 4.224 mg/l, 4 h, aerosol (rat, male/female) (OECD Test Guideline 403)

Acute Dermal Toxicity
LD50: > 2,000 mg/kg (rat, male/female) (Directive 67/548/EEC, Annex V, B.3.)

Skin Irritation
rabbit, OECD Test Guideline 404, slight irritant

Eye Irritation
rabbit, OECD Test Guideline 405, Non-irritating

Rat,
Effect on the respiratory tract: slight irritant

Sensitization
Skin sensitisation according to Magnusson/Kligmann (maximizing test):: In the guinea -pig the product has a sensitising effect. (OECD Test Guideline 406)

Maximisation Test: sensitizer (Guinea pig, OECD Test Guideline 406)

Repeated Dose Toxicity
29 days, oral: NOAEL: 1,000 mg/kg, (Rat, Male/Female, daily)

Mutagenicity
Genetic Toxicity in Vitro:
Chromosome aberration test in vitro: negative
Salmonella/microsome test (Ames test): No indication of mutagenic effects.

Genetic Toxicity in Vivo:
Micronucleus test: negative (Mouse, Male/Female, intraperitoneal)
negative

Toxicity to Reproduction/Fertility
Two generation study, oral, daily, (Rat, Male/Female) NOAEL (parental): 1,000 mg/kg, NOAEL (F1): 1,000 mg/kg, NOAEL (F2): 1,000 mg/kg,

Developmental Toxicity/Teratogenicity
rat, female, Oral, NOAEL (teratogenicity): 1,000 mg/kg, NOAEL (maternal): 1,000 mg/kg,

Toxicity Data for: Aliphatic Carboxylic Ester

Acute Oral Toxicity
LD50: 1,367 mg/kg (rat, female) (OECD Test Guideline 401)

Skin Irritation
reconstructed human epidermis (RhE), irritating
Studies at the product.

Eye Irritation
In vitro test system, Non-irritating

Sensitization
positive (In vitro test system, OECD Test Guideline 442E)
positive (In vitro test system, OECD Test Guideline 442D)
positive (In vitro test system, OECD Test Guideline 442C)

Repeated Dose Toxicity
6 weeks, Oral: NOAEL: < 11 mg/kg, (rat, male/female)

Mutagenicity
Genetic Toxicity in Vitro:
Ames: negative (Salmonella typhimurium, Metabolic Activation: with/without)
Chromosome aberration test: positive (Chinese hamster cells, Metabolic Activation: with/without)

Toxicity to Reproduction/Fertility
Fertility Screening, Oral, (rat, male/female) NOAEL (parental): 11 mg/kg,

Carcinogenicity:
No carcinogenic substances as defined by IARC, NTP and/or OSHA

12. Ecological Information

Ecological Data for: C1520 POLYASPARTIC RESIN
No data available for this product.

Ecological Data for Aspartic Ester

Biodegradation

13 %, Exposure time: 28 d, i.e. not readily degradable

6 %, Exposure time: 28 d, i.e. not inherently degradable

Bioaccumulation

value calculated 8,228 BCF

The substance hydrolyzes rapidly in water. An accumulation in aquatic organisms is not to be expected.

Acute and Prolonged Toxicity to Fish

LC50: 66 mg/l (Danio rerio (zebra fish), 96 h)

Acute Toxicity to Aquatic Invertebrates

NOEC (Reproduction): 0.013 mg/l (Daphnia magna (Water flea), 21 d)

NOEC (mortality): ≥ 0.12 mg/l (Daphnia magna (Water flea), 21 d)

Toxicity to Aquatic Plants

EC50: 113 mg/l, (Green algae (Scenedesmus subspicatus), 72 h)

Toxicity to Terrestrial Plants

NOEC: ≥ 100 mg/kg, End Point: seedling emergence (Avena sativa (oats))

NOEC: ≥ 100 mg/kg, End Point: seedling emergence (Allium cepa (onion))

NOEC: ≥ 100 mg/kg, End Point: seedling emergence (Brassica napus (rape))

Toxicity to Microorganisms

EC50: 3,110 mg/l, (activated sludge, 3 h)

Additional Ecotoxicological Remarks

Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

Ecological Data for Aliphatic Carboxylic Ester

Biodegradation

92 - 95 %, i.e. readily biodegradable

Acute and Prolonged Toxicity to Fish

LC50: 38 mg/l (Fathead minnow (Pimephales promelas), 96 h)

13. Disposal Considerations

Waste Disposal Method

Waste disposal should be in accordance with existing federal, state and local environmental control laws.

Empty Container Precautions

Recondition or dispose of empty container in accordance with governmental regulations. Do not reuse empty container without proper cleaning. Empty containers retain product residue (dust, liquid, vapor and/or gases) and can be dangerous. Do not heat or cut container with electric or gas torch.

14. Transportation Information

Land transport (DOT)

Non-Regulated

Sea transport (IMDG)

Non-Regulated

Air transport (ICAO/IATA)

Non-Regulated

15. Regulatory Information

United States Federal Regulations

US. Toxic Substances Control Act: Listed on the Active Portion of the TSCA Inventory.

SNUR Components

No substances are subject to Section 5 Significant New Use Rule (SNUR) requirements.

Section 6 Risk Management Components:

No substances are subject to Section 6 Risk Management rule requirement.

Section 12b Components:

No substances are subject to TSCA 12(b) export notification requirements.

Section 4 Test Order/Rule Components:

No substances are subject to Section 4 Final Test Orders or Rules.

Consent Order:

No substances are subject to Section 5 Consent Order requirements.

US. EPA CERCLA Hazardous Substances (40 CFR 302.4) Components:

None

SARA Section 311/312 Hazard Categories:

Refer to hazard classification information in Section 2.

US. EPA Emergency Planning and Community Right-To-Know Act (EPCRA) SARA Title III

Section 302 Extremely Hazardous Substance (40 CFR 355, Appendix A) Components:

None

US. EPA Emergency Planning and Community Right-To-Know Act (EPCRA) SARA Title III

Section 313 Toxic Chemicals (40 CFR 372.65) - Supplier Notification Required Components:

None

US. EPA Resource Conservation and Recovery Act (RCRA) Composite List of Hazardous Wastes and Appendix VIII Hazardous Constituents (40 CFR 261):

Under RCRA, it is the responsibility of the person who generates a solid waste, as defined in 40 CFR 261.2, to determine if that waste is a hazardous waste.

State Right-To-Know Information

The following chemicals are specifically listed by individual states; other product specific health and safety data in other sections of the SDS may also be applicable for state requirements. For details on your regulatory requirements you should contact the appropriate agency in your state.

Massachusetts, New Jersey or Pennsylvania Right to Know Substance Lists:

Concentration Components CAS-No.

60 - 100% Aspartic Ester 136210-32-7

3 - 7% Aliphatic Carboxylic Ester 623-91-6

California Proposition 65 List:

None.

CFATS (Chemical Facility Anti-Terrorism Standards) Chemicals

To the best of our knowledge, this product does not contain Appendix A Chemicals of Interest (COI), at or above the Screening Threshold Quantity (STQ), as defined by the Department of Homeland Security Chemical Facility Anti-terrorism Standard (CFATS, 6 CFR Part 27).

Based on information provided by our suppliers, this product is considered "DRC Conflict Free" as defined by the SEC Conflict Minerals Final Rule (Release No. 34-67716; File No. S7-40-10; Date: 2012-08-22).

16. Other Information

The method of hazard communication for Junaimei (Shandong) New Materials Co., Ltd. is comprised of product labels and safety

The handling of two component systems containing reactive aspartic esters in combination with isocyanate hardeners requires appropriate protective measures referred to in this SDS. These systems are therefore recommended only for use in industrial or trade (commercial) applications. They are not suitable for use in Do-It-Yourself applications.

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confirming compliance with applicable local regulations.