OSAT Oriental Science and Technology Holding Group
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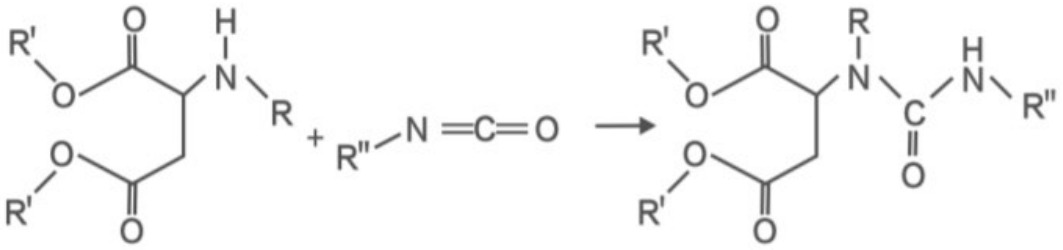
Polyaspartic Acid Polyurea

Polyaspartic acid ester polyurea material is a new type of aliphatic, slow-reacting, high-performance coating material in the polyurea industry and is known as the third generation of polyurea.

In the fields of wind power and hydropower anti-corrosion, flooring, exterior walls, civil waterproofing, foam landscaping, furniture, automobiles, etc., our application has surpassed Bayer.



Polyaspartic Polyurea Resin

Polyaspartic polyurea resin OS1520 CAS No.: 136210-32-7

OS1520 is an aminofunctional co-reactant for polyisocyanates, it is the same model as NH1520 and could be used for the formulation of high-solids, two-component polyurethane topcoats and solvent-free coating materials.

OS1520 can also react with -NCO functional HDI trimmer from which a longer gelling time and excellent yellow resistance can be achieved.

Longer gelling time can also be obtained when mixing with OS1420 to achieve a pure aspartic polyurea coating with high build and fast dry two pack coating system.

OS1520 is also compatible with other hydroxyl-functional resin such as acrylic, alkyd resin. It is widely applied on formulating variety of protective coatings.

Standard

Item	Specifications
Appearance	Slight yellow transparent liquid
Molecular Weight	582
Solid Content	96%±2%
Amine value(mg KOH/g)	189-193
Moisture content%	≤0.05
Viscosity mpa.s/25°C	900~1300
Relative density(25°C)	1.06±0.02
Flash Point(/°C)	97

Applications

widely used in the field of automotive paints	can significantly improve the fullness, gloss, hardness and accelerate the drying of the paint film
widely used in the field of high-end industrial paints and wood paints	especially for occasions requiring high hardness and high wear resistance
coating topcoats	in heavy and light corrosion protection fields such as steel structures and oil pipelines
high-concentration general color pastes in the field of automotive repair paints	Since the resin has 100% solid content, low viscosity, good wettability, and wide compatibility, it can be widely used to grind high-concentration color pastes, especially suitable for grinding high-concentration general color pastes in the field of automotive repair paints. (The white paste ground with this resin can reach 100% solid content, and the titanium dioxide content can reach about 70%; it is very suitable for grinding high-pigment carbon black, and the blackness is better than that of ordinary acrylic acid).
fan blade coatings field	such as fan blade gel coats, putties, and topcoats
wood color polishes	be used to prepare high-end solid wood color polishes

Features

(1) High solid and low viscosity, can be made into high solid and low viscosity environmentally friendly coatings (construction solid content can reach 100%);
(2) The coating film has excellent fullness, leveling performance and gloss;
(3) The paint film also has very excellent weather resistance, water resistance, solvent resistance, acid and alkali resistance, salt spray resistance and other properties;
(4) High hardness (up to 2H); outstanding wear resistance [wear loss ≤20mg (500r/750g)];
(5) Excellent adhesion to plastics such as ABS, PC, PVC and various metals;
(6) This product has excellent compatibility with most hydroxyl acrylic resins, CAB, etc.

Polyaspartic polyurea resin OS1420 CAS No.: 136210-30-5

OS1420 is an Aminofunctional co-reactant for polyisocyanates, it is the same model as NH1420 and could be used for the formulation of high-solids,two-component polyurethane topcoats and solvent-free coating materials.

OS1420 could serve as chain extender or R component in polyurea coating. It could also react with bNCO functional HDI trimmer from which longer gelling time and excellent yellow resistance can be achieved.
Longer gelling time can also be obtained when reacting with MDI pre-polymer. Hybrid of polyurea and polyurethane can be achieved when OS1420 is blended with hydroxyl-functional resin such as acrylic, alkyd resin.

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OS1420 offers higher solid content and faster drying time than ordinary polyurethane. It is widely applied on formulating variety of protective coatings.

Standard

Item	Specifications
Molecular Weight	554
Appearance	Colorless transparent liquid
Solid Content	97%±2%
Amine value(mg KOH/g)	199-203
Amine Equivalent（g/mol）	277
Viscosity mpa.s/25°C	900-1300
Relative density(25°C)	1.06±0.02
Flash Point(°C)	97

Applications

(1) Applied to various high-end paints, such as automotive paint, wood paint, etc., to improve the fullness, gloss, hardness and accelerate the drying of the paint film;
(2) Can be used as protective topcoat in heavy and light corrosion protection fields such as steel structures and oil pipelines;
(3) Used in foam landscape, concrete waterproofing materials and other fields;
(4) Wind turbine blade coating field, such as wind turbine blade gel coat, putty, and topcoat.

Features

(1) High solid and low viscosity, can be made into high solid and low viscosity environmentally friendly coatings (construction solid content can reach 100%);
(2) High reactivity, react with HDI trimer, can be surface dried in 15 minutes, and improve production efficiency;
(3) The coating film has excellent fullness, leveling performance and gloss;
(4) The paint film also has very excellent weather resistance, low temperature flexibility, water resistance, solvent resistance, acid and alkali resistance, salt spray resistance and other properties;
(5) High hardness (up to 2H); outstanding wear resistance (wear loss ø20mg (500r/750g));
(6) Excellent adhesion to plastics such as ABS, PC, PVC and various metals;
(7) This product has excellent compatibility with most hydroxyl acrylic resins, CAB, etc.;
(8) It can react with elastic curing agent to make elastic materials with excellent mechanical properties (elongation 400%, tensile strength 25MPa), and can also react with Feiyang's self-produced rigid curing agent, HDI trimer (or dimer), etc. to make rigid coatings (hardness 2H);
(9) It is used in the R component of SPUA (spray polyurea elastomer) as a chain extender and main resin.

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Polyaspartic polyurea resin O3220 CAS No.: 168253-59-6

OS3220 is a reactive partner for polyisocyanates, is a solvent free amine-functional resin. OS3220 is the same model as NH1220, and could be used for the formulation of tough but flexible, lightfast and highly reactive two-component polyurethane spray coatings.

OS3220 can be applied in SPUA (spraying elastomeric polyurea) R component as chain extender and main resin, OS3220 can be used to formulate anti-corrosion coatings for the protection of steel structures, oil pipelines, bubble landscapes, and concrete waterproofing materials.

Standard

Item	Specifications
Appearance	Slight yellow transparent liquid
Molecular Weight	460
Solid content %	97%±2%
Amine value(mg KOH/g)	240-248
Moisture content%	≤0.05
Viscosity mpa.s/25℃	60~100
Relative density(25℃)	1.05±0.02
Flash Point(/℃)	97

Applications

(1) Applied in fast-acting adhesives, adhesives and other fields;
(2) Can be used for protective coatings in heavy corrosion protection fields such as steel structures and oil pipelines;
(3) Used in road marking paints, concrete plugging materials and other fields;
(4) Used in the R component of SPUA (spray polyurea elastomer) as a chain extender and main resin.

Features

(1) High solid and low viscosity, can be made into high solid and low viscosity environmentally friendly coatings (construction solid content can reach 100%);
(2) High reactivity, can be dried after 5 minutes of reaction with HDI trimer, improving production efficiency;
(3) The coating film has excellent flexibility, leveling performance and gloss;
(4) The paint film also has very excellent weather resistance, water resistance, solvent resistance, acid and alkali resistance, salt spray resistance and other properties;
(5) Particularly outstanding wear resistance [wear loss ≤20mg (500r/1000g)];
(6) Excellent adhesion to plastics such as ABS, PC, PVC and various metals.

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Polyaspartic polyurea resin OS2850 CAS No.：152637-10-0

OS2850 is an Aminofunctional co-reactant for polyisocyanates, it's the same model as NH2850 XP, could be used for the formulation of high-solids, two-component polyurethane topcoats and solvent-free coating materials.

OS2850 could serve as chain extender or R component in polyurea coating. It could also react with –NCO functional HDI trimmer from which longer gelling time and excellent yellow resistance can be achieved. Longer gelling time can also be obtained when reacting with MDI pre-polymer. Hybrid of polyurea and polyurethane can be achieved when OS2850 is blended with hydroxyl-functional resin such as acrylic, alkyd resin. OS2850 offers higher solid content and faster drying time than ordinary polyurethane. It is widely applied on formulating variety of protective coatings.

Standard

Item	Specifications
Appearance	Slight yellow transparent liquid
Molecular Weight	580
Solid Content	97%±2%
Amine value(mg KOH/g)	195
Amine Equivalent（g/mol）	290
Hydroxyl value Equivalent	5.8-5.9
Viscosity mpa.s/25°C	50~150
Relative density(25°C)	1.05±0.02
Flash Point(/°C)	97

Applications

(1) Used to make flexible blade coatings and high-solid anti-corrosion coatings;
(2) Used to make high-elongation and high-elasticity waterproof coatings;
(3) Used to make solvent-free potting materials, adhesives, etc.;
(4) Used to make solvent-free floor coatings with good resilience.

Features

(1) It has a lower viscosity and can be used as an active diluent for asparagine polyurea coatings;
(2) It can be made into high-solid, low-viscosity environmentally friendly coatings (construction solid content can reach 100%);
(3) It has moderate reactivity and can be mixed with F420, F524, etc. to extend the construction time of hand-brushed polyurea;
(4) The coating film has excellent resilience, leveling performance, gloss and feel;
(5) The paint film also has very excellent low-temperature flexibility, water resistance, solvent resistance, acid and alkali resistance and other properties;
(6) It can react with our company's elastic curing agent to make an elastic material with excellent mechanical properties, and the elongation can reach 400%.

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Polyaspartic polyurea resin OS2872

OS2872 is an Aminofunctional co-reactant for polyisocyanates, it's the same model as NH2872 XP and could be used for the formulation of high-solids, two-component polyurethane topcoats and solvent-free coating materials

Standard

Items	Specifications
Appearance	Slight yellow transparent liquid
Solid content/%	97±2
NH equivalent（g/mol）	290
Hydroxyl value Equivalent/%	5.8~5.9
Viscosity（mpa.s/25℃）	400±100
Relative density(25°C)	1.06±0.02

Applications

(1) Used to make high-solid anti-corrosion coatings;
(2) Used to make high-elongation and high-elasticity waterproof coatings;
(3) Used to make solvent-free potting materials, adhesives, etc.;
(4) Used to make solvent-free floor coatings with good resilience

Features

(1) It has moderate viscosity and is more suitable for coating formula adjustment;
(2) It can be made into high-solid, low-viscosity environmentally friendly coatings (construction solid content can reach 100%);
(3) It has moderate reactivity and can extend the construction time of hand-brushed polyurea;
(4) The coating film has excellent hardness, leveling performance, gloss and feel;
(5) The paint film also has very excellent low-temperature flexibility, water resistance, solvent resistance, acid and alkali resistance and other properties;
(6) It can react with our company's elastic curing agent to make elastic materials with excellent mechanical properties, and the elongation can reach 400%.

Polyaspartic Polyurea Resin OS221

OS221 is an Aminofunctional co-reactant for polyisocyanates, is specifically designed to cure with standard HDI Trimer Isocyanates for industrial flooring applications.

OS221 preferred hardeners of choice are standard and low viscosity HDI trimer isocyanates for a range of industrial applications. Clear and pigmented topcoats and filled selfleveling systems based on OS221 support high aesthetics, UV stability and rapid

property development for fast return to service.

OS221 is free of solvents, alkyl phenol derivatives and benzyl alcohol.

Standard

Item	Specifications
Appearance	Slight yellow transparent liquid
Color（Fe-Co）	≤2
Solid content %	98%±2%
Amine value	140-150
Equivalent weight（g/mol）	380
Viscosity mpa.s/25℃	400~600
Relative density(25℃)	1.04
Flash Point(/℃)	97

Applications

(1) Applicable to various high-end floor coatings, can be used as color paint and varnish;
(2) Can be used as protective topcoat in heavy and light corrosion protection fields such as steel structures and oil pipelines.

Features

(1) High solid and low viscosity, can be made into high solid and low viscosity environmentally friendly coatings (Zero VOC, construction solid content can reach 100%);
(2) High reactivity, react with HDI trimer, can be surface dried in 15 minutes, and improve production efficiency;
(3) The coating film has excellent fullness, leveling performance and gloss,
(4) The paint film also has very excellent weather resistance, low temperature flexibility, water resistance, solvent resistance and other properties;
(5) High hardness (up to 2H); outstanding wear resistance (wear loss ø20mg (1000r/1000g));
(6) Excellent adhesion to plastics such as ABS, PC, PVC and various metals;
(7) This product has excellent compatibility with most hydroxyl acrylic resins;
(8) It can react with elastic curing agent to make elastic material with excellent mechanical properties (elongation 400%, tensile strength 25MPa), and can also react with HDI trimer (or dimer) to make rigid coating film (hardness 2H)

Polyaspartic Polyurea Resin OS321

OS321 is an Aminofunctional co-reactant for polyisocyanates, is specifically designed to cure with standard HDI Trimer Isocyanates for industrial flooring applications. OS321 is designed for applications where FEISPARTIC F221 does not offer sufficiently long working and open times.

OS321 preferred hardeners of choice are standard and low viscosity HDI trimer

isocyanates for a range of industrial applications. Clear and pigmented topcoats and filled self-leveling systems based on OS321 support high aesthetics, UV stability and rapid property development for fast return to service.

OS321 is free of solvents, alkyl phenol derivatives and benzyl alcohol.

Standard

Item	Specifications
Appearance	Slight yellow transparent liquid
Color（Fe-Co）	≤2
Solid content %	97%±2%
Amine value	140-150
Equivalent weight（g/mol）	380
Viscosity mpa.s/25℃	300~500
Relative density(25℃)	1.02
Flash Point(/℃)	97

Applications

(1) Applied to floor coatings and wear-resistant coatings;
(2) Applied to protective topcoats in heavy and light corrosion protection fields such as steel structures and oil pipelines.
(3) Applied to foam landscapes, concrete waterproofing materials and other fields.

Features

(1) High solid and low viscosity, can be made into high solid and low viscosity environmentally friendly coatings (Zero VOC emission);
(2) Moderate reactivity, long construction time;
(3) The coating film has excellent fullness, leveling performance and gloss;
(4) The paint film also has very excellent weather resistance and low temperature flexibility;
(5) High hardness (up to D75); outstanding wear resistance (wear loss ø20mg (1000r/1000g));
(6) This product has excellent compatibility with most hydroxyl acrylic resins, CAB, etc.;
(7) It reacts with elastic curing agent to make elastic materials with excellent mechanical properties (elongation 400%, tensile strength 25MPa), and can also react with HDI trimer (or dimer) to make rigid coating film.

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Polyaspartic Polyurea Resin OS525

Item	Specifications
Molecular Weight	680
Appearance	Slight yellow transparent liquid
Solid Content	97%±2%
Amine Equivalent（g/mol）	340
Hydroxyl value Equivalent	5
Viscosity mpa.s/25°C	500-1000
Relative density(25°C)	1.06
Flash Point(°C)	97

Applications

(1) Applicable to various high-end floor coatings, can be used as color paint and varnish;
(2) Can be used as protective topcoat in heavy and light corrosion protection fields such as steel structures and oil pipelines.

Features

(1) High solid and low viscosity, can be made into high solid and low viscosity environmentally friendly coatings (construction solid content can reach 100%);
(2) Moderate reactivity, providing a suitable operation period for coating construction;
(3) The coating film has excellent fullness, leveling performance and gloss;
(4) The paint film also has very excellent weather resistance, low temperature flexibility, water resistance, solvent resistance and other properties;
(5) High hardness (up to 2H); outstanding wear resistance (wear loss ø25mg (1000r/1000g));
(6) Excellent adhesion to plastics such as ABS, PC, PVC and various metals;
(7) This product has excellent compatibility with most hydroxyl acrylic resins.

Polyaspartic Polyurea Resin OS330

OS330 is high solid and low viscosity resin, viscosity is as low as 200mPa.s, it can be made into high solid low viscosity environmental protection coatings.

OS330 has moderate reactivity, can prolong polyurea hand brush construction time.
The film that made of OS330 has excellent elastic resilience, flow, gloss and touch.

OS330 can react with our flexible curing agent to make excellent mechanical properties elastic material, the elongation can reach 400%.

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Standard

Item	Specifications
Molecular Weight	1000
Appearance	Slight yellow transparent liquid
Solid Content	97%±2%
Amine value(mg KOH/g)	166-169
Amine Equivalent（g/mol）	333
Hydroxyl value Equivalent	5.0-5.1
Viscosity mpa.s/25℃	200-500
Relative density(25℃)	1.06
Flash Point(/℃)	97

Applications

(1) Used to make solvent-free floor coatings with good resilience;
(2) Can be used to make high-elongation and high-elasticity waterproof coatings;
(3) Used to make solvent-free potting materials, adhesives, etc.;

Features

(1) High solid and low viscosity, with a viscosity as low as 200mPa.s, it can be made into high solid and low viscosity environmentally friendly coatings;
(2) Moderate reactivity, which can extend the construction time of hand-brush polyurea;
(3) The coating film has excellent resilience, leveling performance, gloss and feel;
(4) It can react with our company's elastic curing agent to make elastic materials with excellent mechanical properties, and the elongation can reach 400%.

Liquid polyeater resin OS1190

OS1190 elastic resin is a saturated polyester resin with a high glass transition temperature and high solid content, which remains liquid below zero degrees Celsius.

The material produced by reacting with isocyanate containing NCO groups has excellent elasticity and mechanical strength, and superb UV resistance.
It also has excellent acid resistance, alkali resistance, salt spray resistance and other properties.

Applications

(1) Coatings: can be used to prepare highly elastic, highly weather-resistant and highly abrasion-resistant coatings;
(2) Inks: used to make flexible inks;
(3) used in the manufacture of adhesives, leather, etc.;
(4) used to synthesize UV resins: can be used to make flexible UV light-curing resins;
(5) improve the flexibility of PU coatings and PU adhesives.

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Standard

Item	Specification
Molecular weight	1000-1200
Appearance	Transparent Liquid
Solid content（%）	90±2
Gloss（Fe-Co）	≤1
OH Value（to solid content）	2.83-3.23
Viscosity mpa.s/25℃	1000-2000
Acid value (mgHOH/ml)	≤3
Functionality	2
Solvent	Xylene

High weather resistance elastic hardener

We have developed curing agents with various properties. For example, high elasticity and high weather resistance prepolymers polymerized from liquid polyester and aliphatic isocyanate, high elasticity and high weather resistance prepolymer curing agents with extremely low viscosity, etc.

According to different needs and application solutions, we provide targeted solutions. Support targeted R&D, customized production, etc.