




HUBEI GREENHOME



 Hubei Greenhome Materials Technology, INC.

Joining Hands in the Integrity of the World

Even as a single ray of candle light
we are willing to
cluster together our hearts to a cozy lantern
keeping you accompany
reading, pondering and walking in the dark
While, we are eager to
cooperate with thousands of you
to converge to be a bright morning sun
which warms all people
and urges us to move forward





Contents

P 01 Company Philosophy

P 02 Company Profile

P 04 Toluene Chloridized Products

Benzyl Chloride
Benzyl Alcohol
Benzaldehyde
Benzyl Benzoate

P 09 Epoxy Reactive Diluent Series

P 11 Epoxy Curing Agents

Epoxy Flooring Curing Agents--Primers
Epoxy Flooring Curing Agents--Middle Coating
Epoxy Flooring Curing Agents--Top Coating

P 15 Epoxy Materials Series

Stone Adhesive
The Grout Series
Decorative Adhesive
Special Epoxy Resin



Corporate Philosophy

Honesty, dependable work, solidarity, endeavor, having no qualms to life, family and society are the foundations to set up our company.

Advanced technology, scientific management and endlessly pursuing teams full of lofty ideals can makes the enterprises win broader market space and create wealth for the whole society as well, which is a road to our fortune development.

Green means hope and symbolizes life and vigor. It indicates civilization and progress.

The earth is our green home where we were born and brought up. Our ideal is to construct the green home well and beautify it all our lives.

Company Profile

2.1 Establishment

Hubei Greenhome Materials Technology, INC. was established in July 2004, now with registered capital of RMB ¥67m.

2.2 Address

Factory Address:

No.1 Xianhe Ave., Xiantao National Hi-Tech Zone ,New Materials Industrial Park,
Xiantao City 433000, Hubei, China

Sales Office Address:

① 12/F, Xinglong Building, 1007 Jiefang Ave., Wuhan, Hubei, China, 430030

② Room 506, Tianjiao International Building, Baofeng Road, Jiefang Avenue,
Wuhan, Hubei, China 430030



2.3 Main Business

We are specialized in research, development, production, sales and service of Benzyl Chloride, Benzyl Alcohol, Benzaldehyde, Benzyl Benzoate, Epoxy Reactive Diluent Series, Epoxy Curing Agents, Flooring coating, Stone adhesive, The Grout Series, Decorative adhesives, Electronic potting materials and Special epoxy resin etc.

Production capacity details are as below:

- ★ Benzyl Chloride: 120,000 tons / year
- ★ Benzyl Alcohol: 80,000 tons / year
- ★ Benzaldehyde: 40,000 tons / year
- ★ Benzyl Benzoate: 10,000 tons / year
- ★ Epoxy Reactive Diluent Series: 80,000 tons / year
- ★ Epoxy Curing Agents: 100,000 tons / year
- ★ The Grout Series: 50,000 tons / year

2.4 Human Resources

At present, the total number of employees is 700.193 employees have bachelor or above degree, accounting for 28%, including 55 masters, accounting for 8% of the total number. People-oriented principle is the driving force and the headspring of its ultimate pursue.

2.5 Quality and Environmental Management System

- ★ ISO9001:2015 Quality Management certified
- ★ ISO14001:2015 Environmental Management certified
- ★ OHSAS18001:2007 Health and Safety Management certified
- ★ REACH registration for Benzyl Alcohol , Benzyl Benzoate, LS-AGE and LS-622
- ★ "To do the Best" is our pursuit for quality and service.

2.6 Environmental Condition

The production concept of "clean production, green chemical, resource efficiency and recycling industry chain" has been firmly set up from the beginning. Now we have effectively managed "the three wastes" : "no waste water" through water recycling system, no odor in the plant and solid waste being recycled.



2.7 R&D

- ★ As a national high-tech enterprise, with more than 90 technicians, 60 of which are professional at R&D, we have strong capabilities of R&D, innovation, and extensive technical exchanges and cooperation with domestic and foreign Universities and Institutions.
- ★ We own a high level of professional R&D building, "Hubei Enterprise Technology Center", and jointly build "Hubei Green Fine Chemical Technology R&D Center" with "Wuhan Institute of Technology".

2.8 Marketing

- ★ We have obtained the qualification of Foreign Trade Import and Export Business. As the leading supplier in its sector, we sell products to more than 60 countries and regions in 5 Continents from our marketing center, located in Wuhan, Hubei province, consisting of over 80 sales personnel. Meanwhile, we also import some chemicals for self-use or re-sale.
- ★ A group of diligent, professional and pioneering Greenhome people provide first-class quality and service based on win-win strategy and professional knowledge.

2.9 Outlook

Hubei Greenhome is an entrepreneurial company. Over the past decade, with the help and support from all walks of life, we have developed rapidly and healthily. We have become one of the world's best suppliers in many subdivisions such as benzyl benzoate, benzyl alcohol, epoxy reactive diluents and epoxy curing agents.

We will be committed to the development of fine chemical and new materials, etc. To become a world-class new materials supplier by sparing every effort.



3. Toluene Chloridized Products

3.1 Benzyl Chloride

3.1.1 Product Profile

Benzyl chloride is colorless transparent liquid with unpleasant irritating odor.

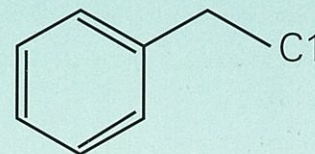
Molecular formula: C_7H_7Cl

Molecular weight: 126.58

CAS No.: 100-44-7

Structural formula:

Boiling point: 179.4°C Freezing point: -43°C insoluble in water; soluble in a variety of organic solvents like benzene, ethyl alcohol, ethyl ether and chloroform. It is flammable near heat, open flame or oxidant. It will emit toxic corrosive gas in high temperature. It is mainly applied to a variety of fields ranging from the syntheses of pharmaceuticals, agricultural chemicals, and dye-stuffs to perfumes.



3.1.2 Quality Standard

| Items of Analysis | Specification |
|--------------------------|---------------|
| Color (Hazen) | ≤ 20 |
| Purity (%) | ≥ 99.5 |
| Benzylidene Chloride (%) | ≤ 0.25 |
| Moisture (%) | ≤ 0.03 |
| Toluene(%) | ≤ 0.01 |
| Chlorotoluene(%) | ≤ 0.25 |

3.1.3 Packing, Storage and Transportation

Packing: 200KG/ plastic drum

Storage: Stored in a cool, well-ventilated warehouse, kept away from ignition sources, heat and flame, avoided exposing to direct sunshine and stored away from oxidant and alkali.

Transportation: Be careful when handing, protect against any damage of the package and container. It is not suitable for transport in rainy days. Please pay attention to personal safety when handing. Transport in the regular route and do not stay in residential area or congested areas for long time.

3. Toluene Chloridized Products

3.2 Benzyl Alcohol

3.2.1 Product Profile

Benzyl alcohol is a kind of colorless transparent liquid; sending out slight fragrance, because its smell and flavor of bitter almond if being put long time and oxidized to benzaldehyde and benzoic acid.

Structural formula:

Molecular formula: C_7H_8O

Molecular weight: 108.14

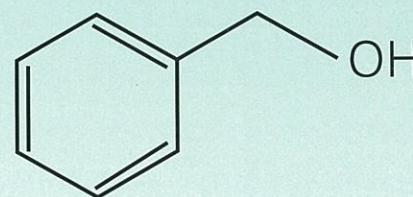
CAS No.: 100-51-6

EC No.:202-859-9

Reach Registration No.:01-2119492630-38-0004

Boiling point: 205.4°C ,Freezing point: -15.3°C . It is soluble in water with ratio of 1:30 and miscible with alcohol, ether and chloroform.Widely used in Epoxy paint,

Medicine synthetic, Photographic developing agent, ball-point pen oil, Perfume fixative and perfume of soap and daily cosmetics.



3.2.2 Quality Standard

| Items of Analysis | BP2000 | Perfumery Grade |
|--|------------------------------|------------------------------|
| Appearance | Colorless transparent liquid | Colorless transparent liquid |
| Color (Hazen) | ≤ 10 | ≤ 10 |
| Fragrance | — | light scent of flower |
| Purity (GC) (%) | ≥ 99.98 | ≥ 99.98 |
| Benzaldehyde (ppm) | ≤ 200 | ≤ 100 |
| Specific Gravity (20°C , kg/ m ³) | 1.043-1.048 | 1.043-1.048 |
| Chloride (%) | ≤ 0.005 | ≤ 0.005 |
| Acidity ml (0.1mol/INaOH/10ml) | ≤ 1.0 | ≤ 1.0 |
| Clarity of Solution (1+30) | clear | clear |
| Moisture (%) | ≤ 0.1 | ≤ 0.1 |
| Refractive Index (η D20) | 1.538-1.541 | 1.538-1.541 |

3.2.3 Market Position

Production Capacity: 80,000 tons per year

Sales Achievement: Sales volume has been quickly increasing since we entered industry of benzyl alcohol in 2008. Highest market share made us become one of the best suppliers in the world.

3.2.4 Packing, Storage and Transportation

Packing: 210kg/Iron drum,1050kg/ IBC Totes,ISO Tank and Flexi-bag.

Storage: Placed in sealed container and kept in a cool and dry place.

Transportation: Avoid strong vibration, insolation, high temperature, smoke or fire.

3.3 Benzaldehyde

3.3.1 Product Profile

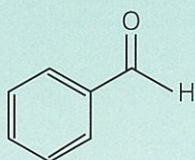
Pure grade is colorless transparent liquid and industrial grade is from colorless to light yellowish.

Structural formula:

Molecular formula: C_7H_6O

Molecular weight: 106.12

CAS No.:100-52-7



The boiling point: 179 °C Freezing point: -26 °C , is poorly soluble in water; soluble in a variety of organic solvents like benzene, ethyl alcohol, ethyl ether and chloroform. Benzaldehyde is flammable when near heat, open flame or oxidant. Chemical reactions will take place when it contacts with strong oxidizer, strong acids, air and so on. It is widely applied to the fields such as syntheses of pharmaceuticals, perfumes and so on.

3.3.2 Quality Standard

| Items of Analysis | Specification | |
|---|---------------|-------------|
| | Top-Grade | Top-Grade |
| Color (Hazen) | ≤ 50 | ≤ 50 |
| Purity (%) | ≥ 99.5 | ≥ 99.0 |
| Acidity (As Benzoic Acid) (%) | ≤ 0.5 | ≤ 1.0 |
| Specific Gravity (20°C , kg/ m ³) | 1.044—1.049 | 1.044—1.049 |

3.3.3 Packing, Storage and Transportation

Packing: 200kg/ plastic drum with nitrogen blanketing.

Storage: Stored in a cool, well-ventilated warehouse, kept away from ignition sources, heat and flame, and avoided exposing to direct sunshine. It is better to be packed in sealed PVC drums under nitrogen gas at a pitch and stored separately from oxidant.

Transportation: Protect against any damage of the package and container during handling.

3. Toluene Chloridized Products

3.4 Benzyl Benzoate

3.4.1 Product Profile

Benzyl benzoate is a colorless or light yellowish oil transparent liquid.

Structural formula:

Molecular formula: $C_{14}H_{12}O_2$

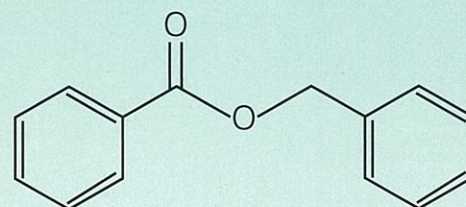
Molecular weight: 212

CAS No.:120-51-4

EC No.:204-402-9

Reach Registration No.:01-2119976371-33-0001

Freezing point: $\geq 17^{\circ}C$,Benzyl benzoate is insoluble in water but soluble in organic solvents.In standard conditions,it is mainly used in the area of textile auxiliary, fragrance and flavor, pharmacy, plasticizer and so on.



3.4.2 Quality Standard

| Items of Analysis | BP2010 | Perfumery Grade |
|---|-----------------------------------|----------------------------------|
| Appearance | Yellowish transparent oily liquid | Colorless transparent oil liquid |
| Fragrance | — | Light scent of flower |
| Purity (GC)(%) | ≥ 99.0 | ≥ 99.90 |
| Acidity (ml,0.1N NaOH 2.0g) | ≤ 0.2 | ≤ 0.2 |
| Specific Gravity (20°C , kg/ m ³) | 1.118-1.122 | 1.118-1.122 |
| Refractive Index (η_{D20}) | 1.568-1.570 | 1.568-1.570 |
| Freezing Point (°C) | ≥ 17.0 | ≥ 17.0 |
| Moisture (%) | ≤ 0.5 | ≤ 0.5 |
| Sulphate Ash (%) | ≤ 0.1 | ≤ 0.1 |
| Minim Chlorinity (Copper Wire Mesh) | — | negative reaction |

3.4.3 Market Position

Production Capacity: 10,000 tons per year,the biggest manufacturer of Benzyl Benzoate all over the world.

Sales Achievement: Sales volume is increasing year by year since we entered industry in 2005, and sold 6,500 tons in 2015, accounting for 40% of the global market share,ranking No.1 in the world.

3.4.4 Packing

Packing: 25kg/plastic drum, 225kg/plastic drum,1000kg/IBC Tote,1100kg/IBC Tote.



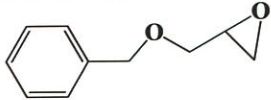
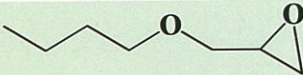
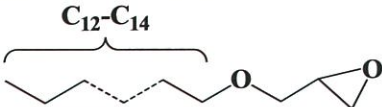
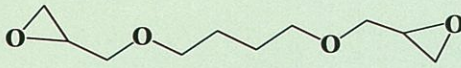
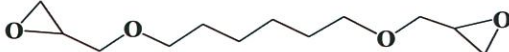
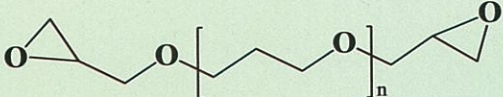
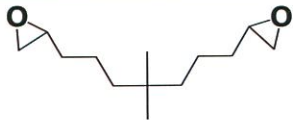
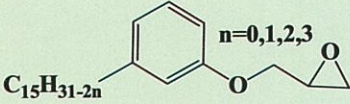
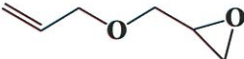
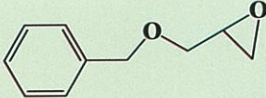
▲ Office Area



▲ Reception Room

4. Epoxy Reactive Diluent Series

4.1 Product Profile

| Trade Name | Chemical Name | Structural Formula | CAS No. |
|------------|---------------------------------------|--|------------|
| LS-692 | Benzyl Glycidyl Ether |  | 89616-40-0 |
| LS-501 | N-Butyl Glycidyl Ether |  | 2426-8-6 |
| LS-AGE | Alkyl (C12-C14) Glycidyl Ether |  | 68609-97-2 |
| LS-622 | 1,4-Butanediol Diglycidyl Ether |  | 2425-79-8 |
| LS-632 | 1,6-Hexanediol Diglycidyl Ether |  | 16096-31-4 |
| LS-207 | Polypropylene Glycol Diglycidyl Ether |  | 26142-30-3 |
| LS-678 | Polypropylene Glycol Diglycidyl Ether |  | 17557-23-2 |
| LS-513 | Cardanol Glycidyl Ether |  | - |
| LS-680 | Allyl Glycidyl Ether |  | 106-92-3 |
| LS-690 | Phenyl Glycidyl Ether |  | 122-60-1 |

4.2 Application

Widely used in electronics, electrical appliances, electromechanical, machinery industry to reduce epoxy resin viscosity and improve process-ability, suitable for potting, casting, laminating, dipping and other application. Used in insulating materials, bonding materials, solvent-free coating and adhesives.

4.3 Quality Standard

| Trade Name | Color (APHA) | Purity (%) | Viscosity (25°C ,mPa.S) | Epoxy Value (eg/100g) | Hydrolyzable Chlorine (ppm) | Organic Chlorine (eg/100g) | Moisture (%) |
|------------|----------------|------------|-------------------------|-----------------------|-----------------------------|----------------------------|--------------|
| LS-692 | ≤ 30 | / | 5-8 | ≥ 0.43 | / | ≤ 0.02 | ≤ 0.1 |
| LS-501A | ≤ 20 | / | ≤ 3 | ≥ 0.50 | / | ≤ 0.02 | / |
| LS-501B | ≤ 20 | / | ≤ 2 | ≥ 0.55 | / | ≤ 0.01 | / |
| LS-501C | ≤ 10 | / | ≤ 2 | ≥ 0.65 | / | ≤ 0.01 | ≤ 0.2 |
| LS-AGE | ≤ 30 | / | 6~12 | 0.30~0.37 | / | ≤ 0.02 | ≤ 0.1 |
| LS-622 | ≤ 30 | / | 15~20 | ≥ 0.74 | ≤ 1000 | / | ≤ 0.1 |
| LS-632 | ≤ 40 | / | 15~25 | 0.65~0.72 | ≤ 1000 | / | ≤ 0.1 |
| LS-680P | ≤ 30 | ≥ 99.0 | ≤ 2 | / | ≤ 200 | / | ≤ 0.1 |
| LS-680B | ≤ 100 | / | ≤ 7 | ≥ 0.35 | ≤ 1000 | / | ≤ 0.1 |
| LS-690 | ≤ 100 | / | 5-10 | ≥ 0.55 | ≤ 1000 | / | ≤ 0.1 |
| LS-207 | ≤ 60 | / | 30~70 | 0.30~0.34 | ≤ 1000 | / | ≤ 0.1 |
| LS-678 | ≤ 60 | / | 10~20 | 0.65~0.72 | ≤ 1000 | / | ≤ 0.1 |
| LS-513 | ≤ 9 Gardner | / | 30-50 | 0.18-0.23 | ≤ 5000 | / | / |

4.4 Production and Sales Scale

Production Capacity: 80,000tons per year

Sales Scale: At present, there are 10 kinds of our epoxy reactive diluents. In the future, we will continue to intensify the research and development more kinds to become one of the best suppliers of all kinds of epoxy industry with excellent quality.

4.5 Packing

Packing: 25kg/ plastic drum,200kg/ plastic drum or 200kg iron drum.

5. Epoxy Curing Agents

5.1 Epoxy Flooring Curing Agents --Primers

5.1.1 Product Profile

Type: Modified aromatic amine agents, belongs to low toxicity amine epoxy curing agent, odorless and environmental friendly.

Properties: Excellent performance of resistance to yellowing and corrosion, low viscosity and good leveling property, good mechanical property for curing products and high post curing hardness.

Different formula is made for different season in different region.

5.1.2 Application

Widely used as primers in solvent-free self-leveling epoxy flooring and solvent-free thin coating.

5.1.3 Quality Standard

| Trade Name | Viscosity (25°C mPa.s) | Amine Value (mgKOH/g) | Solid Content (wt%) | A.H. E.W | PHR (EEW=190) | Shore Hardness | Operation Time (25°C /100g) | TFT (25°C /h) |
|------------|------------------------|-----------------------|---------------------|----------|---------------|----------------|-----------------------------|---------------|
| LS-D102A | 500-1200 | 260-290 | 100% | 92 | 50 | 84 | 20-25min | 3-4 |
| LS-D102B | 500-1200 | 260-290 | 100% | 92 | 50 | 84 | 15-20min | 2-3 |
| LS-D102C | 800-1600 | 260-290 | 100% | 92 | 50 | 84 | 10-15min | 1.5-2 |

5.1.4 Operation Instruction

LS-D102A is suggested to be used at the temperature above 25°C, if the temperature is lower than 25°C, it can be mixed with epoxy resin 128 and xylene at ratio 1:2:1 and be polished after 10hr' s curing, the polishing time can be adjusted per different thickness of middle coating.

LS-D102B is suggested to be used between 12-25°C, if the temperature is between 18-20°C, it can be mixed with, epoxy resin 128 and xylene at ratio 1:2:1 and be polished after 10hr' s curing, the polishing time can be adjusted per different thickness of middle coating.

LS-D102C is suggested to be used between 5-12°C, if the temperature is less than 10 °C, it can be mixed with, epoxy resin 128 and xylene at ratio 1:2:1 and be polished after 12hr' s curing, the polishing time can be adjusted per different thickness of middle coating.

5.1.5 Packing and Storage

Packing: 200kg/iron drum or 25kg/plastic drum.

Storage: Stored in cool, dry, well ventilated area. Storage duration is 12 months with sealed condition. Avoid direct contact with water, strong acid and alkali.

5.2 Epoxy Flooring Curing Agents--Middle Coating

5.2.1 Product Profile

Type: Modified aromatic amine agents,belongs to low toxicity amine epoxy curing agent, odorless and environmental friendly.

Properties: Excellent performance of resistance to yellowing and corrosion, low viscosity and good leveling property, good mechanical property for curing products and high post curing hardness.

Different formula is made for different season in different region.

5.2.2 Application

Widely used as middle coating agents in solvent-free self-leveling epoxy flooring and solvent-free thin coating.

5.2.3 Quality Standard

| Items of Analysis | LS-D201 (for Domestic market) | LS-D201 (for Overseas Market) |
|-----------------------------|-------------------------------|-------------------------------|
| Color | ≤ 12 | ≤ 12 |
| Viscosity (25°C mPa.s) | 400-700 | 400-700 |
| Amine Value (mgKOH/g) | 260-300 | 260-300 |
| Solid Content (wt%) | 100% | 100% |
| A.H.E.W | 95 | 95 |
| PHR (EEW=190) | 50 | 50 |
| Shore Hardness | 84 | 84 |
| Operation Time (100g/25°C) | 15-25min | 15-25min |
| TFT (25°C /h) | 4-6 | 4-6 |

5.2.4 Operation Instruction

LS-D201 is divided into two grades:domestic grade and overseas grade, suggested to be used in light colored epoxy floor middle coating.

LS-D201 Domestic grade is suggested to be used in China mainland.Under the temperature 25°C ,it can be mixed with, epoxy resin 128 and xylene at ratio 1:2:1 and be polished after10hr' s curing, the polishing time can be adjusted per different thickness of middle coating.

LS-D201 Overseas grade is suggested to be used in foreign countries, Other is same as domestic grade.

5.2.5 Packing and Storage

Packing: 200kg/iron drum or 25kg/plastic drum

Storage: Stored in a closed container, keep it in a dry and well-ventilated place. The shelf life is one year at room temperature.

5. Epoxy Curing Agents

5.3 Epoxy Flooring Curing Agents--Top Coating

5.3.1 Product Profile

Type: Modified Polyetheramine Curing Agents ,belongs to low toxicity amine epoxy curing agent, odorless and environmental friendly.

Properties: Excellent performance of resistance to water, chemical,yellowing and corrosion, low viscosity and good leveling property, strong adhesion and good toughness.

Different formula is made for different season in different region.

5.3.2 Application

Widely used as top coating agents in solvent-free self-leveling epoxy flooring and solvent-free thin coating.

5.3.3 Quality Standard

| Trade Name | Color | Viscosity (25°C mPa.s) | Amine Value (mgKOH/g) | Solid Content (WT%) | A.H. E.W | PHR (EEW =190) | Shore Hardness | Operation Time min (100G/25°C) | TFT (25°C /h) |
|------------|-------|------------------------|-----------------------|---------------------|----------|----------------|----------------|----------------------------------|---------------|
| LS-D301 | ≤ 2 | 150-250 | 270-300 | 100% | 93 | 50 | 85 | 40-60min | 6-8 |
| LS-D302 | ≤ 2 | 150-300 | 270-300 | 100% | 93 | 50 | 85 | 40-60min | 6-8 |
| LS-D303 | ≤ 2 | 250-350 | 270-300 | 100% | 93 | 50 | 85 | 40-60min | 6-8 |
| LS-D304 | ≤ 2 | 100-200 | 320-350 | 100% | 93 | 50 | 85 | 50-70min | 6-8 |
| LS-D305 | ≤ 2 | 100-200 | 200-300 | 100% | 95 | 50 | 85 | 30-50min | 6-8 |
| LS-D308 | < 1 | 250-450 | 250-280 | 100% | 113 | 60 | 82 | 40-60min | 6-8 |
| LS-D309 | ≤ 2 | 500-600 | 280-300 | 100% | 103 | 55 | 85 | 20-40min | 6-8 |

5.3.4 Operation Instruction

LS-D301 is suggested to be used in self-leveling epoxy flooring where low viscosity is required, commonly used for the whole year.

LS-D302 is suggested to be used in self-leveling epoxy flooring and epoxy thin coating commonly used for the whole year.

LS-D303 is suggested to be used in epoxy flooring which requires anti-yellowish curing agent.

LS-D304,high cost-effective curing agent, is used for epoxy colored-sand flooring

LS-D308 is used for epoxy colored-sand flooring which requires anti-yellowish curing agent.

LS-D305 is typically used as green epoxy top coating, and also used in light-colored epoxy middle coating.

LS-D309 is fast curing agent for epoxy flooring.

5.3.5 Packing and Storage

Packing: 200kg/iron drum or 25kg/plastic drum

Storage: Stored in a closed container, keep it in a dry and well-ventilated place. The shelf life is one year at room temperature.

6.1 Stone Adhesive

6.1.1 Stone Surface Adhesive

6.1.1.1 Product Profile

The anti-yellowish transparent stone surface adhesive is specialized for antiyellowish epoxy products. It is colorless and transparency with proper viscosity, excellent performance of resistance to chemical, yellowing and age good flexibility, fast hardness and high impact resistance.

6.1.1.2 Quality Standard

| Items of Analysis | | LS-S2102 | LS-S2104 | LS-S2105 |
|---------------------------------|------------|-----------------------|-----------|-----------|
| Apperance | Adhesive A | Colorless transparent | | |
| Apperance | Adhesive B | Colorless transparent | | |
| Viscosity (25°C ,mPa.s) | Adhesive A | 700-1000 | 1000-1300 | 1000-1300 |
| Viscosity (25°C ,mPa.s) | Adhesive B | 50-150 | 20-50 | 20-50 |
| Amine Value (mgKOH/g) | Adhesive B | 320-360 | 510-550 | 570-610 |
| PHR (A:B) | | 2:1 | 4:1 | 5:1 |
| Operation Time(25°C ,min) | | 15-20 | 15-20 | 15-20 |
| Shore Hardness (25°C ,48h) | | ≥ 80 | ≥ 82 | ≥ 82 |
| Shear Strength(steel-steel,MPa) | | ≥ 16 | ≥ 17 | ≥ 17 |

*Customized service is workable

6.1.1.3 Application

Used for repairing the surface of artificial epoxy stone and natural stone, including microcracks , fish-eyes, chicken claws, ant paths and uneven surfaces . Not suitable for acidic stone.

6.1.1.4 Operation Instruction

Firstly, mixing adhesive A and B proportionally and evenly, scraping them with a scraper, and then apply evenly on the marble surface. For small cracks, the glue should be scraped back and forth for several times to make the glue fully penetrate.

After curing for 48 hours at normal temperature, you can move on to next process.

LS-S2102 is the cheapest among these 3 kinds.

LS-S2104, most cost effective one, has the best performance indicators in most extensive usage and obtain the highest market share.

LS-S2105 is mainly used by specific customers.

6.1.1.5 Packing and Storage

Packing: 200kg/ iron drum or 25kg/ plastic drum

Storage: Stored in sealed closed container and kept in a cool and dry place. Avoid contacting with water and strong acid and soda directly.

6. Epoxy Materials Series

6.1.2 Stone Composite Adhesive

6.1.2.1 Product profile

Type: Modified amine epoxy adhesives. It features with proper viscosity, easy handling, fast curing with white adhesive, small contraction ratio and good performance of resistance to yellowing, age and chemical.

6.1.2.2 Quality Standard

| Items of Analysis | | LS-S2201 |
|---------------------------------|------------|-----------------------------|
| Apperance | Adhesive A | Gray-white viscous liquid |
| Apperance | Adhesive B | Light yellow viscous liquid |
| Viscosity (25°C ,mPa.s) | Adhesive A | 30000-50000 |
| Viscosity (25°C ,mPa.s) | Adhesive B | 30000-50000 |
| Amine Value (mgKOH/g) | Adhesive B | 150-200 |
| PHR(A:B) | | 2:1 |
| Operating Time(100G/25°C) | | 30-40 |
| Shore Hardness (25°C ,48h) | | ≥ 85 |
| Shear Strength(steel-steel,MPa) | | ≥ 16 |

*Customized service is workable.

6.1.2.3 Application

Used for adhering of materials including light color marble, granite, ceramic ect.

6.1.2.4 Operation Instruction

Firstly, mixing adhesive A and B proportionally and evenly, scraping them with a scraper, and then apply evenly on the surface of the board. Both single-side scraping and double-sided scraping can be applied according to the specific material. After making sure there is no lack of glue, please pay attention to maintain the thickness at 0.2-0.3mm when scrape the glue. The recommended dosage is 400-600g/m². Press the two slabs together and with repeat dislocation and pressure to eliminate air and make the adhesive fully filled. Align the two slabs lengthways and the press them with uniform pressure, move on to the next step after 48 hours' curing under the room temperature.

6.1.2.5 Packing and Storage

Packing: 25kg/ plastic drum

Storage: Stored in sealed and closed container and kept in a cool and dry place. Avoid contacting with water and strong acid and soda directly.

6.1.3 Stone Adhesive

6.1.3.1 Product profile

Type:Modified amine epoxy stone adhesive.

It features with good performance of resistance to age,yellowing, water and. The glue is full transparent with good toughness, fast hardness rising, good impact resistance, strong bonding strength and good adhesion. It can be fully cured under low temperature or moisture environment.

6.1.3. 2 Quality Standard

| Items of Analysis | | LS-S2501 |
|------------------------------------|------------|--|
| Appearance | Adhesive A | High thixotropic colorless liquid |
| | Adhesive B | High thixotropic colorless or light yellowish liquid |
| Amine Value (mgKOH/g) | Adhesive B | 200-280 |
| PHR (A:B) | | 1:1 |
| Operation Time (25°C ,min) | | 15-30 |
| Shore Hardness (25°C ,48h) | | ≥ 82 |
| Shear Strength (steel-steel,MPa) | | ≥ 16 |

* Customized service is workable

6.1.3.3 Application

Used for fast adhering, repairing and fixing granite, marble and various artificial stones.

6.1.3.4 Operation Instruction

Mix adhesive A and B proportionally and evenly, scraping them with a scraper, and then apply evenly on the surface where needs to repaired and fixed, move on to next process after 48 hours' curing at room temperature.

6.1.3.5 Packing and Storage

Packing: 200kg/ iron drum or 25kg/ plastic drum

Storage: Stored in sealed and closed container and kept in a cool and dry place. Avoid contacting with water, strong acid or soda directly.

6. Epoxy Materials Series

6.2 The Grout Series

6.2.1 Product Profile

Type: Modified amine epoxy adhesive.

It has the advantages of good gloss and color which makes the cured film appearance—soft and transparent. Being resistant to moisture, whitening and water stain, makes the cured product features with color stability, suitable hardness, good gloss, strong adhesion, excellent flexibility.

6.2.2 Quality Standard

| Items of Analysis | LS-M3101 | LS-M3102 | LS-M3103 | LS-M3105 |
|---------------------------------|--------------------------------|-----------|-----------|-----------|
| Appearance of Part A and Part B | Creamy white transparent paste | | | |
| Thixotropy after mixing A and B | Thixotropic | | | |
| Amine Value of Part B(mgKOH/g) | 190–220 | 190–220 | 190–220 | 190–220 |
| PHR(A:B) | 1:0.8–0.9 | 1:0.8–0.9 | 1:0.8–0.9 | 1:0.8–0.9 |
| Operating Time(40g25°C , min) | 15–20 | 20–30 | 30–40 | 25–35 |
| TFT(25°C ,h) | 2–2.5 | 2.5–3 | 3–3.5 | 2.5–3 |
| Torn Edges Time(25°C , h) | 3–4 | 4–5 | 5–6 | 4.5–5.5 |
| Shore Hardness(25°C ,72h) | 70–75 | 70–75 | 70–75 | 70–75 |

6.2.3. Application

Mainly used as decorative tile grouts on ceramic tile in the kitchen, bathroom or hall.

6.2.4 Operation Instruction

LS-M3101, relatively higher cost, is mainly used in winter. Between 10–20°C , the edge can be torn in 5–7 hours. If operating in the morning, the edge can be shoveled and easily cleaned in the same day afternoon. Between 0–10 °C , one overnight is a must before scraping the edge and cleaning.

LS-M3102 and LS-M3103, very cost-effective, are mainly used in summer. By using LS-M3102, the edge can be torn 6 hours later after operation at 25 °C . That means if operating in the morning, the edge can be shoveled and easily cleaned in the same day afternoon. The curing speed of LS-M3103 is slower than that of LS-M3102. The edge can be torn 8 hours later after operation at 25 °C , one overnight is a must before scraping the edge and cleaning.

LS-M3105 is a porcelain white grout with excellent yellowing resistance, mainly used for light color products.

6.2.5 Packing and Storage

Packing: 200kg/ iron drum or 25kg/ plastic drum.

Storage: Kept in a cool and dry place. Avoid contact with water, strong acid or soda.

6.3 Decorative Adhesive

6.3.1 Product Profile

It is an epoxy decorative adhesive with performance of high transparency, high gloss, good hardness, excellent anti-yellowish, high adhesion, long shelf life, low viscosity, good leveling, good anti-foam, low moisture absorption and excellent albino resistance. It can be applied under most operating situations no matter how bad it is.

6.3.2 Quality Standard

| Items of Analysis | | LS-P6201 |
|---------------------------|------------|------------------------------|
| Appearance | Adhesive A | Transparent Colorless Liquid |
| Appearance | Adhesive B | Transparent Colorless Liquid |
| Viscosity (25°C ,mPa. s) | Adhesive A | 1000 ~ 1500 |
| Viscosity(25°C ,mPa. s) | Adhesive B | 50 ~ 100 |
| PHR(A:B) | | 2:1 |
| Curing Condition | | 90-100°C curing time 1-1.5h |
| OperationTime (25°C ,min) | | 60 |
| Shore Hardness(25°C ,48h) | | 80 ~ 90 |

6.3.3 Application

Widely used in the surface coating and glue dropping of various imitation diamond, metal signage, badges, buttons, handicraft products etc.

6.3.4 Operation Instruction

Mix A and B proportionally, fill it in the grinding tool, scrape off the excess glue then move on to next process after curing for fixed period under given temperature.

6.3.5 Packing and Storage

Packing: 200kg/ iron drum or 25kg/ plastic drum

Storage: Stored in sealed and closed container and kept in a cool and dry place. Avoid contacting with water , strong acid or soda directly.

6. Epoxy Materials Series

6.4 Special Epoxy Resin

6.4.1 Product Profile

Type: modified epoxy resin with performance of excellent flexibility .

The active epoxy group it contains can enhance its reactivity with curing agent to make the end product with performance of good elasticity and high ductility as well as excellent chemical resistance, electrical insulating performance and mechanical strength.

Traditional formula is subject to problems of end-product cracking, reduction of internal strength, electrical performance and chemical resistance after adding some plasticizers in cured products, these problems could be solved by combining the end of the polymer-grafted with flexible soft segment.

6.4.2 Application

It is widely used in electronic, electrical, coating and adhesive industries, such as soft epoxy electronic potting sealant, transformer castable, crystal glue, elastic flooring coating, civil construction adhesive and elastic sealant.

6.4.3 Quality Standard

| Items of Analysis | LS-835 | LS-832 | LS-828 |
|---------------------------|-----------------------------|-----------|-----------|
| Appearance | Light yellowish transparent | | |
| Viscosity (25°C, mPa.s) | 1500-6000 | 1500-6000 | 1500-6000 |
| EEW (g/eq) | 700-800 | 650-750 | 500-650 |

6.4.3 Operation Instruction

Better flexibility can be achieved by using it together with polyether amine curing agent.

In two-component elastic glue system, the recommended use level is 20%-80%.

For example, in soft crystal glue:

| LS-828 | 128 | Polyether Amine D230 | 770 | Diluent |
|--------|-----|----------------------|-----|---------|
| 30g | 40 | 22g | 8g | 20g |

In one-component glue system, the recommended use level is 30%-70%.

For example, in potting glue:

| LS-828 | E44 | Y-190 | Diluent | Addictive | Dicyandiamide | Accelerator |
|--------|-----|-------|---------|-----------|---------------|-------------|
| 45g | 50 | 10g | 5g | 27g | ±1.5g | 0.3g |





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