

# ABS/SAN



荣盛石化  
RONGSHENG PETROCHEMICAL



丙烯腈 - 丁二烯 - 苯乙烯共聚物、丙烯腈 - 苯乙烯共聚物

## 产品简介 Introduction

ABS 树脂是丙烯腈、丁二烯、苯乙烯三种单体的三元共聚物，兼有三种单体共同性能的米白色热塑性树脂，因此 ABS 具有刚性好、冲击强度高、耐热、耐低温、耐化学药品性，机械强度和电气性能优良的特性。ABS 树脂易于加工，加工尺寸稳定和表面光泽度好；同时易于涂装、着色，还可以进行喷涂、电镀、焊接和粘接等二次加工。

ABS resin is a terpolymer of three monomers of acrylonitrile, butadiene and styrene, and has the common properties of the three components. Therefore, ABS has good rigidity, high impact strength, good heat resistance, good resistance for low temperature, good chemical resistance, excellent mechanical strength and electrical properties. It is easy for processing, as it has good processing dimensional stability and surface gloss. It is also easy to paint and color, and can also be sprayed, secondary processing such as electroplating, welding and bonding.

ABS 树脂的最大应用领域是家用电器、办公设备、交通运输、生活用品、玩具和建材。此外也被应用于包装、家具、体育和娱乐用品、机械和仪表工业中。

The largest application areas of ABS resin are household appliances, office equipment, transportation, daily necessities, toys and building materials. It is also used in packaging, furniture, sports and entertainment, machinery and instrumentation industries.

## 装置情况 Plant

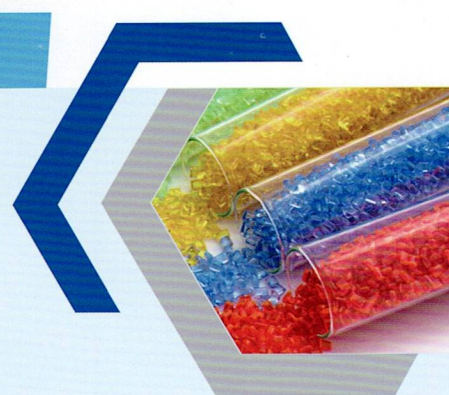
浙石化采用乳液法技术建设 ABS 装置及其相应配套设施，产品以高档通用料为主。项目总规划产能 160 万吨/年，分两期建设，一期装置设计产能 40 万吨/年。

Zhejiang Petrochemical adopts the emulsion method technology to build the ABS plant and its corresponding supporting facilities, and the products are mainly high-grade general materials. The total planned production capacity of the project is 1.6 million tons/year, which will be constructed in two phases, and the designed capacity of the first phase is 400,000 tons/year.





## 产品分类 Product Categories



### ABS

| 规格<br>Specification | 通用级<br>General Grade                                             |                                                                  |                                         | 板材级<br>Sheet Grade                                     | 阻燃级<br>Flame Retardant Grade                      |
|---------------------|------------------------------------------------------------------|------------------------------------------------------------------|-----------------------------------------|--------------------------------------------------------|---------------------------------------------------|
| 产品<br>Production    | ZA0210                                                           | ZA0211                                                           | ZA0300                                  | ZA1300                                                 | ZA323A                                            |
| 特性<br>Features      | 高刚性、高光泽<br>High stiffness, high gloss                            | 椭圆形、高刚性<br>Elliptical partiel, high stiffness                    | 高冲击强度<br>High impact resistance         | 高冲击强度、挤出级<br>High impact resistance, extrusion molding | 阻燃性<br>Flame retardance                           |
| 主要用途<br>Application | 家电、电子电器产品<br>Home appliances, electronic and electrical products | 家电、电子电器产品<br>Home appliances, electronic and electrical products | 安全帽、鞋跟、箱包等<br>Helmet, heels, bags, etc. | 管材、冰箱部件等<br>Pipes, refrigerator parts, etc.            | 控制盒、蓄电池、插座等<br>Control box, battery, socket, etc. |

### SAN

| 规格<br>Specification | 通用级<br>General Grade                           |                                         |                                                |                                                      |
|---------------------|------------------------------------------------|-----------------------------------------|------------------------------------------------|------------------------------------------------------|
| 产品<br>Production    | ZS0250                                         | ZS025B                                  | ZS0251                                         | ZS0350                                               |
| 特性<br>Features      | 一般用途, 本色<br>Injection grade, natural color     | 一般用途, 蓝色<br>Injection grade, light blue | 椭圆形, 本色<br>Elliptical partiel, natural color   | 高刚性、高耐化性<br>High stiffness, high chemical resistance |
| 主要用途<br>Application | 日用品、化妆品等<br>Daily necessities, cosmetics, etc. | 文具、化妆品等<br>Stationery, cosmetics, etc.  | 日用品、化妆品等<br>Daily necessities, cosmetics, etc. | 打火机、家电部件等<br>Lighters, home appliance parts, etc.    |



| 物性类别<br>Physical property category | 测试方法<br>Test method | 测试条件<br>Test conditions | 单位<br>unit        | 通用级 ABS<br>General Grade              |                                               |                                 | 板材级 ABS<br>Sheet Grade                                     | 阻燃级 ABS<br>Flame Retardant Grade | 通用级 SAN<br>General Grade                   |                                         |                                              |                                                       |
|------------------------------------|---------------------|-------------------------|-------------------|---------------------------------------|-----------------------------------------------|---------------------------------|------------------------------------------------------------|----------------------------------|--------------------------------------------|-----------------------------------------|----------------------------------------------|-------------------------------------------------------|
|                                    |                     |                         |                   | ZA0210                                | ZA0211                                        | ZA0300                          | ZA1300                                                     | ZA323A                           | ZS0250                                     | ZS025B                                  | ZS0251                                       | ZS0350                                                |
| 拉伸强度<br>Tensile Strength           | GB/T1040.2          | 50 mm/min               | MPa               | 47                                    | 46                                            | 42                              | 40                                                         | 38                               | 60                                         | 60                                      | 60                                           | 70                                                    |
| 弯曲强度<br>Flexural Strength          | GB/T9341            | 2mm/min                 | MPa               | 76                                    | 77                                            | 63                              | 61                                                         | 58                               | 106                                        | 106                                     | 106                                          | 124                                                   |
| 弯曲模量<br>Flexural Strength          | GB/T9341            | 2mm/min                 | MPa               | 2700                                  | 2600                                          | 2000                            | 1800                                                       | 2000                             | 3000                                       | 3000                                    | 3000                                         | 3000                                                  |
| Izod 冲击强度<br>Izod Impact           | GB/T1043.1          | 4mm, 23°C               | KJ/m <sup>2</sup> | 20                                    | 20                                            | 35                              | 35                                                         | 20                               | -                                          | -                                       | -                                            | -                                                     |
| 微卡软化点<br>Vicat Softening Point     | GB/T1633B50         | 4mm                     | °C                | 97                                    | 97                                            | 97                              | 97                                                         | 96                               | 104                                        | 104                                     | 104                                          | 108                                                   |
| 燃烧性<br>Flammability                | UL94                | -                       | -                 | HB                                    | HB                                            | HB                              | HB                                                         | V-0                              | HB                                         | HB                                      | HB                                           | HB                                                    |
| 熔融指数<br>Melt Flow Rate             | GB/T3682.1          | 220°C, 10kg             | g/10min           | 20-24                                 | 20-24                                         | 5-8                             | 7-10                                                       | 38-48                            | 28-36                                      | 28-36                                   | 28-36                                        | 8-12                                                  |
| 比重<br>Specific Gravity             | D792                | -                       | g/cm <sup>3</sup> | 1.04                                  | 1.04                                          | 1.03                            | 1.04                                                       | 1.19                             | 1.06                                       | 1.06                                    | 1.06                                         | 1.06                                                  |
| 成型收缩率<br>Molding Shrinkage         | D955                |                         | %                 | 0.4 ~ 0.7                             | 0.4 ~ 0.7                                     | 0.4 ~ 0.7                       |                                                            | 0.3 ~ 0.6                        |                                            |                                         |                                              |                                                       |
| 产品特性<br>Features                   |                     |                         |                   | 高刚性、高光泽<br>High stiffness, high gloss | 椭圆形、高刚性<br>Elliptical partiel, high stiffness | 高冲击强度<br>High impact resistance | 高冲击强度、<br>板材级<br>High impact resistance, extrusion molding | 阻燃性<br>Flame retardance          | 一般用途, 本色<br>Injection grade, natural color | 一般用途, 蓝色<br>Injection grade, light blue | 椭圆形, 本色<br>Elliptical partiel, natural color | 高刚性、高耐化性<br>High sttiffness, high chemical resistance |

注：以上数据是在特定条件下测出的代表值并非保证值，保证值为我司备案企业标准。

The above data are representative values measured under specific conditions, not guaranteed values. The guaranteed values are the standards of our company for record.





| 注塑工艺参考<br>Parameters For Reference |                      | 单位<br>Unit | 通用级 ABS<br>General Grade |         |         | 板材级 ABS<br>Sheet grade | 阻燃级 ABS<br>Flame Retardant<br>Grade | 通用级 SAN<br>General Grade |         |         |         |
|------------------------------------|----------------------|------------|--------------------------|---------|---------|------------------------|-------------------------------------|--------------------------|---------|---------|---------|
|                                    |                      |            | ZA0210                   | ZA0211  | ZA0300  | ZA1300                 | ZA323A                              | ZS0250                   | ZS025B  | ZS0251  | ZS0350  |
| 干燥温度<br>Drying Temperature         |                      | ℃          | 80                       | 80      | 80      | 70-80                  | 70-80                               | 80                       | 80      | 80      | 80      |
| 干燥时间<br>Drying Time                |                      | hrs        | 2-4                      | 2-4     | 2-4     | 2-4                    | 2-4                                 | 2-4                      | 2-4     | 2-4     | 2-4     |
| 最低水分含量<br>Minimum Moisture Content |                      | %          | 0.01                     | 0.01    | 0.01    | 0.01                   | 0.01                                | 0.01                     | 0.01    | 0.01    | 0.01    |
| 熔融温度<br>Melting Temperature        |                      | ℃          | 210-240                  | 210-240 | 210-240 | 200-230                | 200-230                             | 210-230                  | 210-230 | 210-230 | 210-230 |
| 料筒温度<br>Barrel Temperature         | 后段<br>Back Section   | ℃          | 180-200                  | 180-200 | 180-200 | -                      | 170-190                             | 200-220                  | 200-220 | 200-220 | 190-210 |
|                                    | 中段<br>Middle Section | ℃          | 190-210                  | 190-210 | 190-220 | -                      | 180-200                             | 210-230                  | 210-230 | 210-230 | 210-230 |
|                                    | 前段<br>Front Section  | ℃          | 200-210                  | 200-210 | 200-220 | -                      | 190-200                             | 210-230                  | 210-230 | 210-230 | 210-230 |
| 射嘴温度<br>Nozzle Temperature         |                      | ℃          | 200-220                  | 200-220 | 200-230 | -                      | 200-230                             | 210-230                  | 210-230 | 210-230 | 210-230 |
| 模具温度<br>Mold Temperature           |                      | ℃          | 40-70                    | 40-70   | 40-70   | -                      | 40-60                               | 50-70                    | 50-70   | 50-70   | 50-70   |
| 背压<br>Back Pressure                |                      | bar        | 10-30                    | 10-30   | 10-30   | -                      | 5-10                                | 5-15                     | 5-15    | 5-15    | 5-15    |
| 螺杆转速<br>Screw Speed                |                      | rpm        | 30-60                    | 30-60   | 30-60   | -                      | 30-60                               | 30-60                    | 30-60   | 30-60   | 30-60   |

说明: instruction:

(1)上述提到的背压和螺杆转速只是作为一般指导方针;

The back pressure and screw speed mentioned above are only general guidelines;

(2)在特定情况下,如低速注塑尺寸成型、薄壁成型和气体辅助成型,这些数据可能不适用或需要调整后使用;

In certain cases, such as low-speed injection molding, thin-wall molding and gas-assisted molding, these data may not be applicable or need to be adjusted for use;

(3)为了防止在关机之前物料在模头内降解,或物料流出挤出机,建议初始设置温度稍低些。

In order to prevent the material from degrading in the die before shutdown, or the material flowing out of the extrusion stage, it is recommended that the initial setting temperature be slightly lower.

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