

IRON325AT is a high purity, fine, magnetic iron powder with free-flow particles. It forms a smooth paste when mixed with resins, waxes or binders. Applications include magnetic paint, magnetic ink, magnetic paste, cosmetics, magnetic rubber articles, magnetic plastic articles.

CAS No.: 7439-89-6

EC No.: 231-096-4

INCI Name: IRON POWDER (Alternative names: Eisenpulver, Ironpowder)

INCI Statement: Iron powder is the element consisting of powdered metallic iron.

## TYPICAL PHYSICAL PROPERTIES

Apparent Density 2.8 to 3.2 g/cm<sup>3</sup>

## TYPICAL SCREEN ANALYSIS

| SIEVE ANALYSIS (ASTM E-11) | Test Results | Specification |       |
|----------------------------|--------------|---------------|-------|
|                            |              | Min           | Max   |
| +100 Micron                | 0.0 %        |               | 0.0%  |
| 75-100 Micron              | 0.0 %        |               | 2.0%  |
| 63-75 Micron               | 0.0 %        |               | 3.0%  |
| 45-63 Micron               | 2.6 %        |               | 18.0% |
| 38-45 Micron               | 25.5 %       |               | bal % |
| -38 Micron                 | 71.9 %       |               | bal % |
| -45 Mesh                   | 97.4 %       | 80.0 %        |       |

## TYPICAL CHEMICAL ANALYSIS

|              |         |
|--------------|---------|
| Iron content | 99+ %   |
| Carbon       | 0.00 %  |
| Oxygen       | 0.05 %  |
| Sulfur       | 0.006 % |
| Phosphorus   | 0.001 % |
| Arsenic      | 0.00 %  |
| Lead         | 0.00 %  |
| Ag           | 0.00 %  |
| Cd           | 0.00 %  |
| Ba           | 0.00 %  |

All values indicate the elemental form or in alloy form. Ionic forms are all zero including the iron.

## PACKAGING AND SHELF LIFE

IRON325AT is available in 55-lb (25 kg) plastic pails. Standard pallet quantity contains 30 pails on a pallet totaling 1650 lbs. (750 kg). The recommended shelf life of IRON325AT in sealed plastic pails is 6 years while stored in low light, dry, room temperature storage.

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## BIOLOGICAL PROPERTIES

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IRON325AT is not a bio-active source of iron and is not suitable for iron fortification/ nutrient/ supplements, feed additives or treatment of Iron deficiency (anemia). This product has not been tested on human or animals; however, laboratory testing indicates that it does not contain any ionic or bioactive form of iron. When used in cosmetic products, IRON325AT does not permeate an intact skin in ionic form or particle form.

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## TYPICAL APPLICATIONS

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Narrow particle distribution and dense free flow particles make IRON325AT an excellent choice for manufacturers who need a reliable high quality magnetic iron powder. This product easily blends with varieties of aqueous fluids, as well as oils, alcohols, resins and polymers. Adding sufficient amounts of IRON325AT to plastics and rubber products make them attractable to magnets and detectable by metal detectors. This product conforms to FDA 177.2600A-H

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## USE RESTRICTIONS

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IRON325AT is offered only for research and manufacturing use. Prohibited applications include manufacturing fire-works, Tannerite (explosive target), loose fill in toys and household goods. This product may not be used as food or feed additive, it does not contain absorbable nutrient iron and it contains dense particles that may cause tooth damage.

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## DISCLAIMERS

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All information, recommendations and suggestions in this document are based on sources believed to be reliable; however, it is the user's responsibility to determine safety, toxicity and suitability of this product in their own application.

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