

# SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006 (REACH) and Regulation (EU) No. 2015/830



## Positive E-Beam Resist SX AR-P 8531.01/1

Material number SX AR-P 8531.01/1

Revision date: 24/3/2017  
Version: 6

Language: en-GB,IE

Date of print: 30/1/2018  
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### SECTION 1: Identification of the substance/mixture and of the company/undertaking

#### 1.1 Product identifier

Trade name: Positive E-Beam Resist SX AR-P 8531.01/1  
REACH registration No.: 01-2119968918-13-xxxx

CAS-Number: 100-66-3  
EC-number: 202-876-1

#### 1.2 Relevant identified uses of the substance or mixture and uses advised against

General use: Intermediate for electronic industry

#### 1.3 Details of the supplier of the safety data sheet

Company name: Allresist  
Gesellschaft für chemische Produkte zur Mikrostrukturierung mbH  
Street/POB-No.: Am Biotop 14  
Postal Code, city: 15344 Strausberg  
Germany  
WWW: www.allresist.de  
E-mail: info@allresist.de  
Telephone: +49 (0)33 41-35 93-0  
Telefax: +49 (0)33 41-35 93-29  
Dept. responsible for information:  
Frau Feldt, Email: doerte.feldt@allresist.de

#### 1.4 Emergency telephone number

Telephone: +49 (0)33 41-35 93-0  
Only available during office hours.

### SECTION 2: Hazards identification

#### 2.1 Classification of the substance or mixture

Classification according to EC regulation 1272/2008 (CLP)

Flam. Liq. 3; H226 Flammable liquid and vapour.

#### 2.2 Label elements

##### Labelling (CLP)



Signal word: **Warning**

Hazard statements: H226 Flammable liquid and vapour.

Precautionary statements: P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.

P280 Wear protective gloves/protective clothing/eye protection/face protection.

P303+P361+P353  
IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water or shower.

P403+P235 Store in a well-ventilated place. Keep cool.

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### Special labelling

Text for labelling: Contains Anisole.

### 2.3 Other hazards

Potentially explosive mixtures may form if adequate ventilation is not provided.  
Inhaling can lead to irritations of the respiratory tract and mucous membrane.  
Higher doses may lead to a narcotic effect.

Results of PBT and vPvB assessment:

This substance does not meet the PBT/vPvB criteria of REACH, Annex XIII.

## SECTION 3: Composition / information on ingredients

### 3.1 Substances

Chemical characterisation: C7 H8 O = C6H5-OCH3, Anisole

CAS-Number: 100-66-3

EC-number: 202-876-1

RTECS-Number: BZ8050000

## SECTION 4: First aid measures

### 4.1 Description of first aid measures

General information: IF exposed or concerned: Get medical advice/attention.  
If medical advice is needed, have product container or label at hand. First aider: Pay attention to self-protection!

In case of inhalation: Provide fresh air. Seek medical attention.

Following skin contact: Remove residues with water. Change contaminated clothing. If skin irritation or rash occurs: Get medical attention.

After eye contact: Immediately flush eyes with plenty of flowing water for 10 to 15 minutes holding eyelids apart. Remove contact lenses, if present and easy to do. Continue rinsing.  
Subsequently consult an ophthalmologist.

After swallowing: Caution if victim vomits: Risk of aspiration! Immediately get medical attention.

### 4.2 Most important symptoms and effects, both acute and delayed

Inhaling can lead to irritations of the respiratory tract and mucous membrane.  
Higher doses may lead to a narcotic effect.  
Cough, shortage of breath, nausea, vomiting, agitation, spasms, headache, tremors

### 4.3 Indication of any immediate medical attention and special treatment needed

Treat symptomatically.

## SECTION 5: Firefighting measures

### 5.1 Extinguishing media

Suitable extinguishing media:

Foam, extinguishing powder, carbon dioxide.

### 5.2 Special hazards arising from the substance or mixture

Flammable liquid and vapour.  
With air, vapours form potentially explosive mixtures, which are heavier than air.  
Vapours may proceed on the ground over great distances and cause fire and backflashes.  
In case of fire may be liberated: Carbon monoxide and carbon dioxide.

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### 5.3 Advice for firefighters

Special protective equipment for firefighters:

Wear self-contained positive pressure breathing apparatus and full firefighting protective clothing.

Additional information: Hazchem-Code: 3Y

Heating will lead to pressure increase: Danger of bursting and explosion. Keep containers cool with water spray.

In case of major fire and large quantities: Evacuate area. Fight fire remotely due to the risk of explosion.

Do not allow fire water to penetrate into surface or ground water.

Fire residuals and contaminated extinguishing water must be disposed of in accordance with the regulations of the local authorities.

## SECTION 6: Accidental release measures

### 6.1 Personal precautions, protective equipment and emergency procedures

Avoid contact with the substance. Do not breathe vapour/aerosol.

Ensure adequate ventilation, especially in confined areas.

Eliminate all ignition sources if safe to do so. If possible, eliminate leakage.

Wear appropriate protective equipment. Keep unprotected people away.

Cordon off downwind area at risk and warn inhabitants.

### 6.2 Environmental precautions

Do not allow to enter into ground-water, surface water or drains. Danger of explosion!

In case of release, notify competent authorities.

### 6.3 Methods and material for containment and cleaning up

Isolate leaked material using non-flammable absorption agent (e.g. sand, earth, vermiculit, diatomaceous earth) and collect it for disposal in appropriate containers in accordance with the local regulations (see section 13).

Beware of reignition. Thoroughly clean surrounding area.

In case of greater quantities: Collect mechanically (use only explosion-proof equipment when pumping out).

Additional information: Use explosion-proof equipment and non-sparking tools/utensils.

### 6.4 Reference to other sections

Refer additionally to section 8 and 13.

## SECTION 7: Handling and storage

### 7.1 Precautions for safe handling

Advices on safe handling: Provide adequate ventilation, and local exhaust as needed. Do not breathe vapour/aerosol. Do not get in eyes, on skin, or on clothing. Wear appropriate protective equipment.

Do not eat, drink or smoke when using this product. Wash hands thoroughly after handling. Take off immediately all contaminated clothing and wash it before reuse.

Guarantee sufficient ventilation during and after use, in order to prevent vapour accumulation.

When handling large quantities, supply emergency spray.

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Precautions against fire and explosion:

Keep away from sources of ignition - No smoking.  
Take precautionary measures against static discharge.  
Use only explosion-protected equipment/instruments. Do not weld.  
In partially filled containers explosive mixtures may form.

### 7.2 Conditions for safe storage, including any incompatibilities

Requirements for storerooms and containers:

Keep container tightly closed and in a well-ventilated place.  
Keep container dry. Keep only in the original container.  
Protect from heat and direct sunlight.  
Storage temperature 10 - 22 °C.

Hints on joint storage: Do not store together with strong oxidizing agents, strong acids, alkalis or formaldehyde.

### 7.3 Specific end use(s)

No information available.

## SECTION 8: Exposure controls/personal protection

### 8.1 Control parameters

Additional information: Contains no substances with occupational exposure limit values.

DNEL/DMEL: Systemic effects:  
DNEL long-term, workers, inhalative: 20 mg/m<sup>3</sup>

PNEC: PNEC water (freshwater): 0.027 mg/L  
PNEC water (marine water): 0.0027 mg/L  
PNEC water (intermittent release): 0.27 mg/L  
PNEC water (freshwater sediment): 0.745 mg/kg  
PNEC water (marine sediment): 0.0745 mg/kg  
PNEC soil: 0.133 mg/kg  
PNEC sewage treatment plant: 30 mg/L

### 8.2 Exposure controls

Provide for good ventilation or exhaust system or work with completely self-contained equipment. Explosion protection required.

### Personal protection equipment

#### Occupational exposure controls

Respiratory protection: When aerosols and vapours form: Use appropriate respiratory protection.  
Use filter type A (= against vapours of organic substances) according to EN 14387.

Hand protection: Protective gloves according to EN 374.  
Glove material:  
During full contact: Fluororubber (Viton) - Layer thickness: 0.70 mm.  
Breakthrough time: >480 min.  
During splash contact: Nitrile rubber - Layer thickness: 0.40 mm.  
Breakthrough time: >30 min.  
Observe glove manufacturer's instructions concerning penetrability and breakthrough time.

Eye protection: Tightly sealed goggles according to EN 166.

Body protection: Flame-resistant antistatic protective clothing

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General protection and hygiene measures:

Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.  
Do not breathe vapour/aerosol. Do not get in eyes, on skin, or on clothing.  
Contaminated work clothing should not be allowed out of the workplace.  
When using do not eat or drink.  
Wash hands thoroughly after handling.  
When handling large quantities, supply emergency spray.

### Environmental exposure controls

Do not allow to enter into ground-water, surface water or drains. Danger of explosion!

## SECTION 9: Physical and chemical properties

### 9.1 Information on basic physical and chemical properties

|  |   |
|--|---|
| Appearance:                              | Physical state at 20 °C and 101.3 kPa: liquid<br>Colour: colourless   |
| Odour:                                   | aromatic  |
| Odour threshold:                         | No data available   |
| pH value:                                | at 20 °C: not applicable  |
| Melting point/freezing point:            | -37 °C  |
| Initial boiling point and boiling range: | 154 °C (1013 hPa)   |
| Flash point/flash point range:           | 45.5 °C (993 hPa, c.c.)   |
| Evaporation rate:                        | No data available   |
| Flammability:                            | Flammable liquid and vapour.  |
| Explosion limits:                        | LEL (Lower Explosion Limit): 0.34 Vol-%<br>UEL (Upper Explosive Limit): 6.30 Vol-%  |
| Vapour pressure:                         | at 20 °C: 3.2 hPa   |
| Vapour density:                          | 3.7   |
| Density:                                 | at 20 °C: 0.994 g/mL  |
| Water solubility:                        | at 20 °C: 1.71 g/L (OECD 105)   |
| Partition coefficient: n-octanol/water:  | 2.62 log P(o/w) (OECD 117)<br>Based on the n-octanol/water partition coefficient significant accumulation in organisms is not expected. |
| Auto-ignition temperature:               | No data available   |
| Decomposition temperature:               | > 490 °C  |
| Viscosity, dynamic:                      | at 25 °C: 0.99 mPa*s  |
| Explosive properties:                    | Product is not explosive. Vapours can form explosive mixtures with air.   |
| Oxidizing characteristics:               | none  |

### 9.2 Other information

|                         |                          |
|-------------------------|--------------------------|
| Ignition temperature:   | 475 °C                   |
| Refraction index:       | at 20 °C: 1.518          |
| Additional information: | Molar mass: 108.13 g/mol |

## SECTION 10: Stability and reactivity

### 10.1 Reactivity

Flammable liquid and vapour. Vapours can form explosive mixtures with air.

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### 10.2 Chemical stability

Stable under recommended storage conditions.

### 10.3 Possibility of hazardous reactions

Peroxide may form when product is exposed to light and air.

Heating will lead to pressure increase: Danger of bursting and explosion.

Violent reaction with strong oxidizing agents, strong acids, alkalis, formaldehyde.

### 10.4 Conditions to avoid

Keep away from heat sources, sparks and open flames.

Protect against direct sunlight.

### 10.5 Incompatible materials

Strong oxidizing agents, strong acids, alkalis, formaldehyde

### 10.6 Hazardous decomposition products

Peroxides

Thermal decomposition: > 490 °C

## SECTION 11: Toxicological information

### 11.1 Information on toxicological effects

Acute toxicity: LD50 Rat, oral: 3700 mg/kg (RTECS)  
LC50 Rat, inhalative (vapours): > 6.51 mg/L/4h (OECD 403)

Toxicological effects: Acute toxicity (oral): Based on available data, the classification criteria are not met.  
Acute toxicity (dermal): Based on available data, the classification criteria are not met.  
Acute toxicity (inhalative): Based on available data, the classification criteria are not met.  
Skin corrosion/irritation: Based on available data, the classification criteria are not met.  
Specific symptoms in animal studies (Rabbit): mild irritant (OECD404)  
Serious eye damage/irritation: Based on available data, the classification criteria are not met.  
Specific symptoms in animal studies (Rabbit): Does not cause irritation. (OECD 405)  
Sensitisation to the respiratory tract: Lack of data.  
Skin sensitisation: Based on available data, the classification criteria are not met.  
Specific symptoms in animal studies (guinea pig): not sensitising (OECD 406)  
Germ cell mutagenicity/Genotoxicity: Based on available data, the classification criteria are not met.  
Ames test Escherichia coli/Salmonella typhimurium: negative (OECD 471)  
Gene-mutations mammalian cells, Mouse: negative (OECD 476)  
Chromosomal aberrations mammalian cells, hamster: negative (OECD 473)  
Carcinogenicity: Lack of data.  
Reproductive toxicity: Lack of data.  
Effects on or via lactation: Lack of data.  
Specific target organ toxicity (single exposure): Lack of data.  
Specific target organ toxicity (repeated exposure): Lack of data.  
Aspiration hazard: Lack of data.

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## SECTION 12: Ecological information

### 12.1 Toxicity

Aquatic toxicity: Daphnia toxicity:  
EC50 Daphnia magna (Big water flea): 27 mg/L/48h (OECD 202)  
Fish toxicity:  
LC50 Leuciscus idus: >1000 mg/L/96h  
Algae toxicity:  
ErC50 Selenastrum capricornutum: 47 mg/l/72h (OECD 201)

### 12.2 Persistence and degradability

Further details: Biodegradability: approx. 68 % (OECD 301 D).  
Easily bio-degradable  
Oxygen demand: ThOD: 2,52 mg/g  
Effects in sewage plants: NOEC activated sludge: 300 mg/L/3h (OECD 209)

### 12.3 Bioaccumulative potential

Partition coefficient: n-octanol/water:  
2.62 log P(o/w) (OECD 117)  
Based on the n-octanol/water partition coefficient significant accumulation in organisms is not expected.

### 12.4 Mobility in soil

Henry constant: 446 Pa\*m<sup>3</sup>/mol

### 12.5 Results of PBT and vPvB assessment

This substance does not meet the PBT/vPvB criteria of REACH, Annex XIII.

### 12.6 Other adverse effects

General information: Do not allow to enter into ground-water, surface water or drains.

## SECTION 13: Disposal considerations

### 13.1 Waste treatment methods

#### Product

Waste key number: 07 01 04\* = Organic solvents, halogen-free  
\* = Evidence for disposal must be provided.  
Recommendation: Incinerate as hazardous waste according to applicable local, state, and federal regulations.

#### Contaminated packaging

Recommendation: Dispose of waste according to applicable legislation. Handle empty containers with care.  
Incineration may cause explosion.  
Handle contaminated packages in the same way as the substance itself.  
Non-contaminated packages may be recycled.

## SECTION 14: Transport information

### 14.1 UN number

ADR/RID, IMDG, IATA-DGR:  
UN 2222

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### 14.2 UN proper shipping name

ADR/RID, IMDG, IATA-DGR:

UN 2222, ANISOLE

### 14.3 Transport hazard class(es)

ADR/RID: Class 3, Code: F1

IMDG: Class 3, Subrisk -

IATA-DGR: Class 3



### 14.4 Packing group

ADR/RID, IMDG, IATA-DGR:

III

### 14.5 Environmental hazards

Marine pollutant: no

### 14.6 Special precautions for user

#### Land transport (ADR/RID)

Warning board: ADR/RID: Kemmler-number 30, UN number UN 2222  
Hazard label: 3  
Limited quantities: 5 L  
EQ: E1  
Contaminated packaging - Instructions: P001 IBC03 LP01 R001  
Special provisions for packing together: MP19  
Portable tanks - Instructions: T2  
Portable tanks - Special provisions: TP1  
Tank coding: LGBF  
Tunnel restriction code: D/E

#### Sea transport (IMDG)

EmS: F-E, S-D  
Special provisions: -  
Limited quantities: 5 L  
Excepted quantities: E1  
Contaminated packaging - Instructions: P001, LP01  
Contaminated packaging - Provisions: -  
IBC - Instructions: IBC03  
IBC - Provisions: -  
Tank instructions - IMO: -  
Tank instructions - UN: T2  
Tank instructions - Provisions: TP1  
Stowage and handling: Category A.  
Properties and observations: Colourless to yellow liquid. Flashpoint: 41°C c.c. Explosive limits: 0,3% to 6,3%. Immiscible with water. Irritating to skin, eyes and mucous membranes.  
Segregation group: none

#### Air transport (IATA)

Hazard label: Flamm. liquid  
Excepted Quantity Code: E1  
Passenger and Cargo Aircraft: Ltd.Qty.: Pack.Instr. Y344 - Max. Net Qty/Pkg. 10 L  
Passenger and Cargo Aircraft: Pack.Instr. 355 - Max. Net Qty/Pkg. 60 L  
Cargo Aircraft only: Pack.Instr. 366 - Max. Net Qty/Pkg. 220 L  
Emergency Response Guide-Code (ERG): 3L

### 14.7 Transport in bulk according to Annex II of Marpol and the IBC Code

No data available



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### SECTION 15: Regulatory information

#### 15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture

##### National regulations - Great Britain

Hazchem-Code: 3Y  
No data available

##### National regulations - EC member states

Volatile organic compounds (VOC):  
100 % by weight = 994 g/L

##### Labelling of packaging with <= 125mL content



Signal word: **Warning**  
Hazard statements: not applicable  
Precautionary statements: P280 Wear protective gloves/protective clothing/eye protection/face protection.

#### 15.2 Chemical Safety Assessment

No data available

### SECTION 16: Other information

#### Further information

Reason of change: Changes in section 1: REACH registration No.  
Changes in section 2: Labelling, Text for labelling  
General revision  
Date of first version: 19/8/2010

#### Department issuing data sheet

Contact person: see section 1: Dept. responsible for information

For abbreviations and acronyms, see: ECHA Guidance on information requirements and chemical safety assessment, chapter R.20 (Table of terms and abbreviations).

The information in this data sheet has been established to our best knowledge and was up-to-date at time of revision. It does not represent a guarantee for the properties of the product described in terms of the legal warranty regulations.