Safety data sheet
according to 1907/2006/EC, Article 31

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SECTION 1: Identification of the substance/mixture and of the company/undertaking

· **1.1 Product identifier**

· **Trade name: AR-P 5350**

· **Article number:** AR-P 5350
· **1.2 Relevant identified uses of the substance or mixture and uses advised against**
No further relevant information available.
· **Application of the substance / the mixture**
Intermediate product for the electronics industry. For industrial and commercial use only.

· **1.3 Details of the supplier of the safety data sheet**
· **Manufacturer/Supplier:**
Allresist GmbH
Am Biotop 14
15344 Strausberg
GERMANY

E-Mail: info@allresist.de
Tel.: +49 3341 35 93 0

· **Further information obtainable from:** Sales
· **1.4 Emergency telephone number:**
Poison center of the Charité Berlin:
+4930 30686700
E-Mail: giftnotruf@charite.de

SECTION 2: Hazards identification

· **2.1 Classification of the substance or mixture**
· **Classification according to Regulation (EC) No 1272/2008**


flame

Flam. Liq. 3 H226 Flammable liquid and vapour.

STOT SE 3 H336 May cause drowsiness or dizziness.

· **2.2 Label elements**
· **Labelling according to Regulation (EC) No 1272/2008**
The product is classified and labelled according to the CLP regulation.

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· **Hazard pictograms**

GHS02 GHS07

· **Signal word** Warning

· **Hazard-determining components of labelling:**
2-methoxy-1-methylethyl acetate
· **Hazard statements**
H226 Flammable liquid and vapour.
H336 May cause drowsiness or dizziness.
· **Precautionary statements**

P101	If medical advice is needed, have product container or label at hand.
P102	Keep out of reach of children.
P103	Read carefully and follow all instructions.
P210	Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P241	Use explosion-proof [electrical/ventilating/lighting] equipment.
P280	Wear protective gloves/protective clothing/eye protection/face protection/hearing protection.
P303+P361+P353	IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water [or shower].
P304+P340	IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P405	Store locked up.
P501	Dispose of contents/container in accordance with local/regional/national/international regulations.

· **2.3 Other hazards**
· **Results of PBT and vPvB assessment**
· **PBT:** Not applicable.
· **vPvB:** Not applicable.

SECTION 3: Composition/information on ingredients

· **3.2 Mixtures**
· **Description:** Mixture of substances listed below with nonhazardous additions.

· **Dangerous components:**

CAS: 108-65-6 EINECS: 203-603-9	2-methoxy-1-methylethyl acetate Flam. Liq. 3, H226; STOT SE 3, H336	50-100%
CAS: 68510-93-0 EINECS: 270-931-7	Naphthochinondiazid Flam. Sol. 1, H228; Self-react. C, H242; Skin Irrit. 2, H315; Eye Irrit. 2, H319; Aquatic Chronic 3, H412	≥2.5-<10%
CAS: 108-46-3 EINECS: 203-585-2	resorcinol Aquatic Acute 1, H400; Acute Tox. 4, H302; Skin Irrit. 2, H315; Eye Irrit. 2, H319	≥0.25-<2.5%
CAS: 1319-77-3 EINECS: 215-293-2	cresol (mix) Acute Tox. 3, H301; Acute Tox. 3, H311; Skin Corr. 1B, H314; Eye Dam. 1, H318	<1%

· **Additional information:** For the wording of the listed hazard phrases refer to section 16.

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SECTION 4: First aid measures

· **4.1 Description of first aid measures**
· **General information:** Immediately remove any clothing soiled by the product.
· **After skin contact:** Immediately rinse with water.
· **After eye contact:** Rinse opened eye for several minutes under running water.
· **After swallowing:** If symptoms persist consult doctor.
· **4.2 Most important symptoms and effects, both acute and delayed** No further relevant information available.
· **4.3 Indication of any immediate medical attention and special treatment needed**
No further relevant information available.

SECTION 5: Firefighting measures

· **5.1 Extinguishing media**
· **Suitable extinguishing agents:**
CO2, powder or water spray. Fight larger fires with water spray or alcohol resistant foam.
· **5.2 Special hazards arising from the substance or mixture** No further relevant information available.
· **5.3 Advice for firefighters**
· **Protective equipment:** No special measures required.

SECTION 6: Accidental release measures

· **6.1 Personal precautions, protective equipment and emergency procedures**
Wear protective equipment. Keep unprotected persons away.
· **6.2 Environmental precautions:**
Dilute with plenty of water.
Do not allow to enter sewers/ surface or ground water.
· **6.3 Methods and material for containment and cleaning up:**
Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).
Dispose contaminated material as waste according to item 13.
Ensure adequate ventilation.
· **6.4 Reference to other sections**
See Section 7 for information on safe handling.
See Section 8 for information on personal protection equipment.
See Section 13 for disposal information.

SECTION 7: Handling and storage

· **7.1 Precautions for safe handling**
Ensure good ventilation/exhaustion at the workplace.
Prevent formation of aerosols.
· **Information about fire - and explosion protection:**
Keep ignition sources away - Do not smoke.
Protect against electrostatic charges.

· **7.2 Conditions for safe storage, including any incompatibilities**
· **Storage:**
· **Requirements to be met by storerooms and receptacles:** No special requirements.
· **Information about storage in one common storage facility:** Not required.
· **Further information about storage conditions:** Keep container tightly sealed.
· **Recommended storage temperature:** 10-18°C
· **Storage class (TRGS):** 3

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· ***7.3 Specific end use(s)*** *No further relevant information available.*

SECTION 8: Exposure controls/personal protection

· ***8.1 Control parameters***

· ***Ingredients with limit values that require monitoring at the workplace:***

108-65-6 2-methoxy-1-methylethyl acetate

WEL	Short-term value: 548 mg/m³, 100 ppm Long-term value: 274 mg/m³, 50 ppm Sk

108-46-3 resorcinol

WEL	Short-term value: 92 mg/m³, 20 ppm Long-term value: 46 mg/m³, 10 ppm Sk

· ***DNELs***

108-65-6 2-methoxy-1-methylethyl acetate

Oral	DNEL Long-term - oral, systemic effects	1.67 mg/kg_bw/day (rat)
Dermal	DNEL Long-term – dermal, systemic effects	153.5 mg/kg_bw/day (rat)
Inhalative	DNEL long-term - inhalation local effects	33 mg/m³ (rat)
	DNEL Long-term – inhalation, systemic effects	275 mg/m³/day (rat)
	DNEL Acute - inhalation, local effects	2,420 mg/m³ (rat)

108-46-3 resorcinol

Dermal	DNEL Long-term – dermal, systemic effects	40 mg/kg_bw/day (Worker)
Inhalative	DNEL long-term - inhalation local effects	132.8 mg/m³ (general public)
	DNEL Long-term – inhalation, systemic effects	5.6 mg/m³/day (Worker)

· ***PNECs***

108-65-6 2-methoxy-1-methylethyl acetate

PNEC short term, fresh water	0.635 mg/l (Aquatic organisms)
PNEC short term, sea water	0.0635 mg/l (Aquatic organisms)
PNEC short term, sewage plant	100 mg/l (Aquatic organisms)
PNEC short term fresh water sediment	3.29 mg/kg (Aquatic organisms)
PNEC short term soil	0.29 mg/kg (Aquatic organisms)
PNEC short term sea water sediment	0.329 mg/kg (Aquatic organisms)
PNEC short term, intermittent releases	6.35 mg/l (Aquatic organisms)

108-46-3 resorcinol

PNEC short term, fresh water	0.017 mg/l (Aquatic organisms)
PNEC short term, sea water	0.002 mg/l (Aquatic organisms)
PNEC short term, sewage plant	0.79 mg/l (Aquatic organisms)
PNEC short term fresh water sediment	0.08 mg/kg (Aquatic organisms)
PNEC short term soil	10 mg/kg (teresstric organismens)
PNEC short term sea water sediment	0.008 mg/kg (Aquatic organisms)

· ***Additional information:*** *The lists valid during the making were used as basis.*

· ***8.2 Exposure controls***

· ***Appropriate engineering controls*** *No further data; see item 7.*

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· **Individual protection measures, such as personal protective equipment**
· **General protective and hygienic measures:**
Immediately remove all soiled and contaminated clothing
Wash hands before breaks and at the end of work.
· **Respiratory protection:**
In case of brief exposure or low pollution use respiratory filter device. In case of intensive or longer exposure use self-contained respiratory protective device.
· **Hand protection**

Protective gloves

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.
Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.
Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation
· **Material of gloves**
The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.
· **Penetration time of glove material**
The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.
· **Eye/face protection**

Tightly sealed goggles

SECTION 9: Physical and chemical properties

· **9.1 Information on basic physical and chemical properties**
· **General Information**

· **Physical state**	Fluid
· **Colour:**	Brown
· **Odour:**	Ester-like
· **Odour threshold:**	Not determined.
· **Melting point/freezing point:**	Undetermined.
· **Boiling point or initial boiling point and boiling range**	145 °C
· **Flammability**	Not applicable.
· **Lower and upper explosion limit**	
· **Lower:**	1.5 Vol %
· **Upper:**	10.8 Vol %
· **Flash point:**	44 °C (108-65-6 2-methoxy-1-methylethyl acetate)
· **Auto-ignition temperature:**	Product is not selfigniting.
· **Decomposition temperature:**	Not determined.
· **pH**	Mixture is non-soluble (in water).
· **Viscosity:**	
· **Kinematic viscosity**	Not determined.
· **Dynamic:**	Not determined.

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· **Solubility**	
· **water:**	Fully miscible.
· **Partition coefficient n-octanol/water (log value)**	Not determined.
· **Vapour pressure at 20 °C:**	3.1 hPa
· **Density and/or relative density**	
· **Density:**	Not determined.
· **Relative density**	Not determined.
· **Vapour density**	Not determined.

· **9.2 Other information**	
· **Appearance:**	
· **Form:**	Fluid
· **Important information on protection of health and environment, and on safety.**	
· **Ignition temperature:**	315 °C
· **Explosive properties:**	Product is not explosive. However, formation of explosive air/vapour mixtures are possible.
· **Solvent content:**	
· **Organic solvents:**	71.9 %
· **VOC (EC)**	71.95 %
· **Change in condition**	
· **Evaporation rate**	Not determined.

· **Information with regard to physical hazard classes**	
· **Explosives**	Void
· **Flammable gases**	Void
· **Aerosols**	Void
· **Oxidising gases**	Void
· **Gases under pressure**	Void
· **Flammable liquids**	Flammable liquid and vapour.
· **Flammable solids**	Void
· **Self-reactive substances and mixtures**	Void
· **Pyrophoric liquids**	Void
· **Pyrophoric solids**	Void
· **Self-heating substances and mixtures**	Void
· **Substances and mixtures, which emit flammable gases in contact with water**	Void
· **Oxidising liquids**	Void
· **Oxidising solids**	Void
· **Organic peroxides**	Void
· **Corrosive to metals**	Void
· **Desensitised explosives**	Void

SECTION 10: Stability and reactivity

· **10.1 Reactivity** No further relevant information available.
· **10.2 Chemical stability**
· **Thermal decomposition / conditions to be avoided:** No decomposition if used according to specifications.
· **10.3 Possibility of hazardous reactions** No dangerous reactions known.
· **10.4 Conditions to avoid** No further relevant information available.
· **10.5 Incompatible materials:** No further relevant information available.
· **10.6 Hazardous decomposition products:** No dangerous decomposition products known.

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SECTION 11: Toxicological information

· ***11.1 Information on hazard classes as defined in Regulation (EC) No 1272/2008***
· ***Acute toxicity***

· ***LD/LC50 values relevant for classification:***		
ATE (Acute Toxicity Estimates)		
Oral	*LD50*	*>610,924 mg/kg*
Dermal	*LD50*	*>840,336 mg/kg*

108-65-6 2-methoxy-1-methylethyl acetate		
Oral	*LD50*	*8,532 mg/kg (rat)*
68510-93-0 Naphthochinondiazid		
Oral	*LD50*	*>5,000 mg/kg (rat)*
108-46-3 resorcinol		
Oral	*LD50*	*510 mg/kg (rat)*
Dermal	*LD50*	*2,830 mg/kg (rabbit)*
1319-77-3 cresol (mix)		
Oral	*LD50*	*1,454 mg/kg (rat)*
Dermal	*LD50*	*2,000 mg/kg (rabbit)*
Inhalative	*LD50*	*1.21 mg/kg (rat)*

· ***STOT-single exposure*** *May cause drowsiness or dizziness.*
· ***11.2 Information on other hazards***

· ***Endocrine disrupting properties***		
108-46-3	*resorcinol*	*List II*

SECTION 12: Ecological information

· ***12.1 Toxicity***

· ***Aquatic toxicity:***		
108-65-6 2-methoxy-1-methylethyl acetate		
Inhalative	*LC50 (4h)*	*35.7 mg/l (rat)*
	LC50 (96h) mg/ltr.	*>100 mg/ltr (Fish)*
		100-180 mg/ltr (Oncorhynchus mykiss)
		134 mg/ltr (rainbow trout)
	EC50 (48h)	*408 mg/l (daphnia)*
	ErC50 (96h)	*>1,000 mg/ltr (algae)*
	NOEC	*100 mg/ml (daphnia)*
108-46-3 resorcinol		
	LC50 (96h) mg/ltr.	*26.8 mg/ltr (Fish)*
	ErC (72h)	*>97 mg/l (algae)*
1319-77-3 cresol (mix)		
	LC50 (96) ppm	*19 ppm (Fish)*

· ***12.2 Persistence and degradability***		
108-65-6	*2-methoxy-1-methylethyl acetate*	*90 %*
108-46-3	*resorcinol*	*66,7 %*

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· **Method**		
108-65-6	2-methoxy-1-methylethyl acetate	83

· **12.3 Bioaccumulative potential** No further relevant information available.
· **12.4 Mobility in soil** No further relevant information available.
· **12.5 Results of PBT and vPvB assessment**
· **PBT:** Not applicable.
· **vPvB:** Not applicable.
· **12.6 Endocrine disrupting properties** For information on endocrine disrupting properties see section 11.
· **12.7 Other adverse effects** No further relevant information available.
· **Additional ecological information:**
· **General notes:**
Water hazard class 1 (German Regulation) (Self-assessment): slightly hazardous for water
Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.

SECTION 13: Disposal considerations

· **13.1 Waste treatment methods**
· **Recommendation**
Must not be disposed together with household garbage. Do not allow product to reach sewage system.

· **Uncleaned packaging:**
· **Recommendation:** Disposal must be made according to official regulations.
· **Recommended cleansing agents:** Water, if necessary together with cleansing agents.

SECTION 14: Transport information

· **14.1 UN number or ID number**	
· **ADR, IMDG, IATA**	UN1993
· **14.2 UN proper shipping name**	
· **ADR**	1993 FLAMMABLE LIQUID, N.O.S. (2-methoxy-1-methylethyl acetate)
· **IMDG, IATA**	FLAMMABLE LIQUID, N.O.S. (2-methoxy-1-methylethyl acetate)
· **14.3 Transport hazard class(es)**	
· **ADR, IMDG, IATA**	
· **Class**	3 Flammable liquids.
· **Label**	3
· **14.4 Packing group**	
· **ADR, IMDG, IATA**	III
· **14.5 Environmental hazards:**	Not applicable.
· **14.6 Special precautions for user**	Warning: Flammable liquids.
· **Hazard identification number (Kemler code):**	30
· **EMS Number:**	F-E,S-E

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· **Stowage Category**	A
· **14.7 Maritime transport in bulk according to IMO instruments**	Not applicable.
· **Transport/Additional information:**	
· **ADR**	
· **Limited quantities (LQ)**	5L
· **Excepted quantities (EQ)**	Code: E1 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 1000 ml
· **Transport category**	3
· **Tunnel restriction code**	D/E
· **IMDG**	
· **Limited quantities (LQ)**	5L
· **Excepted quantities (EQ)**	Code: E1 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 1000 ml
· **UN "Model Regulation":**	UN 1993 FLAMMABLE LIQUID, N.O.S. (2-METHOXY-1-METHYLETHYL ACETATE), 3, III

SECTION 15: Regulatory information

· **15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture: (Substances not listed)**

None of the ingredients is listed.

· **Directive 2012/18/EU**
· **Named dangerous substances - ANNEX I** None of the ingredients is listed.
· **Seveso category** P5c FLAMMABLE LIQUIDS
· **Qualifying quantity (tonnes) for the application of lower-tier requirements** 5,000 t
· **Qualifying quantity (tonnes) for the application of upper-tier requirements** 50,000 t

· **National regulations:**
· **VOC (EU)** 719.5 g/l
· **15.2 Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

SECTION 16: Other information

· **Disclaimer**
This safety data sheet contains only safety relevant information. The information is based on the state of our knowledge at the time of revision, however, it does not constitute a guarantee of product properties, product information or product specifications and does not establish a contractual legal relationship. This document is only valid in its unchanged form. In the event of changes by third parties, the exhibitor accepts no responsibility for form and content or for any damages or claims arising from such changes. The information is not transferable to other products. If the product named in this safety data sheet is mixed, blended or processed with other materials or is subjected to processing, the information in this safety data sheet cannot be transferred to the new material produced in this way, unless expressly stated otherwise. The data sheet does not release the user from the obligation to ensure that he acts in accordance with all regulations in connection with his activity.
· **Relevant phrases**
H226 Flammable liquid and vapour.
H228 Flammable solid.
H242 Heating may cause a fire.

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H301 Toxic if swallowed.
H302 Harmful if swallowed.
H311 Toxic in contact with skin.
H314 Causes severe skin burns and eye damage.
H315 Causes skin irritation.
H318 Causes serious eye damage.
H319 Causes serious eye irritation.
H336 May cause drowsiness or dizziness.
H400 Very toxic to aquatic life.
H412 Harmful to aquatic life with long lasting effects.

· ***Department issuing SDS:*** *Quality Management department*
· ***Contact:*** *MSDS authorized Person*
· ***Abbreviations and acronyms:***
ADR: Accord relatif au transport international des marchandises dangereuses par route (European Agreement Concerning the International Carriage of Dangerous Goods by Road)
IMDG: International Maritime Code for Dangerous Goods
IATA: International Air Transport Association
GHS: Globally Harmonised System of Classification and Labelling of Chemicals
EINECS: European Inventory of Existing Commercial Chemical Substances
ELINCS: European List of Notified Chemical Substances
CAS: Chemical Abstracts Service (division of the American Chemical Society)
VOC: Volatile Organic Compounds (USA, EU)
DNEL: Derived No-Effect Level (REACH)
PNEC: Predicted No-Effect Concentration (REACH)
LC50: Lethal concentration, 50 percent
LD50: Lethal dose, 50 percent
PBT: Persistent, Bioaccumulative and Toxic
vPvB: very Persistent and very Bioaccumulative
Flam. Liq. 3: Flammable liquids – Category 3
Flam. Sol. 1: Flammable solids – Category 1
Self-react. C: Self-reactive substances and mixtures – Type C/D
Acute Tox. 3: Acute toxicity – Category 3
Acute Tox. 4: Acute toxicity – Category 4
Skin Corr. 1B: Skin corrosion/irritation – Category 1B
Skin Irrit. 2: Skin corrosion/irritation – Category 2
Eye Dam. 1: Serious eye damage/eye irritation – Category 1
Eye Irrit. 2: Serious eye damage/eye irritation – Category 2
STOT SE 3: Specific target organ toxicity (single exposure) – Category 3
Aquatic Acute 1: Hazardous to the aquatic environment - acute aquatic hazard – Category 1
Aquatic Chronic 3: Hazardous to the aquatic environment - long-term aquatic hazard – Category 3