SAFETY DATA SHEET
HR2 Air Freshener

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

1.1. Product identifier

Product name HR2 Air Freshener

Internal identification C900

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

Identified uses Air reodourant.

Uses advised against Use only for intended applications.

1.3. Details of the supplier of the safety data sheet

Supplier

ARROW SOLUTIONS
RAWDON ROAD
MOIRA
SWADLINCOTE
DERBYSHIRE
DE12 6DA
TEL: +44 (0)1283 221044
FAX: +44 (0)1283 225731
sales@arrowchem.com

1.4. Emergency telephone number

Emergency telephone +44 (0) 777 8505 330 (24 hrs). +44 (0) 1865 407333 (24 hrs). MEDICAL AND ENVIRONMENTAL EMERGENCIES ONLY.

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification (EC 1272/2008)

Physical hazards Not Classified

Health hazards Eye Dam. 1 - H318

Environmental hazards Aquatic Chronic 3 - H412

2.2. Label elements

Pictogram

Signal word Danger

Hazard statements H318 Causes serious eye damage.
H412 Harmful to aquatic life with long lasting effects.
EUH208 Contains d-LIMONENE, 4-TERTIARY-BUTYLCYCLOHEXYL ACETATE, TERPINOLENE, PIN-2(3)-ENE;2,6,6-TRIMETHYLBICYCLO[3.1.1]HEPT-2-ENE, METHYL-2H or METHYL-4 (3:1) Mixture of EC NO 220-239-6. May produce an allergic reaction.

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Precautionary statements	P273 Avoid release to the environment. P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. P310 Immediately call a POISON CENTER/ doctor. P501 Dispose of contents/ container in accordance with national regulations. P280 Wear protective gloves, eye and face protection.
Contains	ISOTRIDECANOL ETHOXYLATE (EO 3 - 5)
Detergent labelling	5 - < 15% non-ionic surfactants, 5 - < 15% perfumes, < 5% anionic surfactants, Contains d-LIMONENE, 4-TERTIARY-BUTYLCYCLOHEXYL ACETATE, TERPINOLENE, COUMARIN, CITRAL, CITRONELLAL, METHYL-2H or METHYL-4 (3:1) Mixture of EC NO 220-239-6

2.3. Other hazards

This product does not contain any substances classified as PBT or vPvB.

SECTION 3: Composition/information on ingredients

3.2. Mixtures

ISOTRIDECANOL ETHOXYLATE (EO 3 - 5) **5-10%**

CAS number: 24938-91-8

Classification	Classification (67/548/EEC or 1999/45/EC)
Eye Dam. 1 - H318	Xi;R41.

TERPINEOL **1-5%**

CAS number: 8000-41-7	EC number: 232-268-1	REACH registration number: 01-2119553062-49-xxxx

Classification	Classification (67/548/EEC or 1999/45/EC)
Skin Irrit. 2 - H315 Eye Irrit. 2 - H319	Xi;R36/38.

d-LIMONENE **<1%**

CAS number: 5989-27-5	EC number: 227-813-5
M factor (Acute) = 1	M factor (Chronic) = 1

Classification	Classification (67/548/EEC or 1999/45/EC)
Flam. Liq. 3 - H226 Skin Irrit. 2 - H315 Skin Sens. 1 - H317 Asp. Tox. 1 - H304 Aquatic Acute 1 - H400 Aquatic Chronic 1 - H410	R10 R43 Xi;R38 N;R50/53

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Ethyl alcohol **<1%**

CAS number: 64-17-5 EC number: 200-578-6 REACH registration number: 01-2119457610-43-xxxx

Classification	Classification (67/548/EEC or 1999/45/EC)
Flam. Liq. 2 - H225 Eye Irrit. 2 - H319	F;R11

4-TERTIARY-BUTYLCYCLOHEXYL ACETATE **<1%**

CAS number: 32210-23-4 EC number: 250-954-9

Classification	Classification (67/548/EEC or 1999/45/EC)
Skin Sens. 1 - H317 Aquatic Chronic 2 - H411	N;R51/53.

TERPINOLENE **<1%**

CAS number: 586-62-9 EC number: 209-578-0

M factor (Chronic) = 1

Classification	Classification (67/548/EEC or 1999/45/EC)
Flam. Liq. 3 - H226 Skin Sens. 1 - H317 Asp. Tox. 1 - H304 Aquatic Chronic 1 - H410	Xn;R65. N;R51/53.

PIN-2(3)-ENE;2,6,6-TRIMETHYLBICYCLO[3.1.1]HEPT-2-ENE **<1%**

CAS number: 80-56-8

M factor (Chronic) = 1

Classification	Classification (67/548/EEC or 1999/45/EC)
Flam. Liq. 3 - H226 Skin Irrit. 2 - H315 Skin Sens. 1 - H317 Asp. Tox. 1 - H304 Aquatic Chronic 1 - H410	Xn;R65. Xi;R38. R10,R43.

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METHYL-2H or METHYL-4 (3:1) Mixture of EC NO 220-239-6	**<1%**
CAS number: 55965-84-9	
M factor (Acute) = 10	M factor (Chronic) = 10

Classification	Classification (67/548/EEC or 1999/45/EC)
Acute Tox. 3 - H301 Acute Tox. 3 - H311 Acute Tox. 3 - H331 Skin Corr. 1B - H314 Eye Dam. 1 - H318 Skin Sens. 1 - H317 Aquatic Acute 1 - H400 Aquatic Chronic 1 - H410	T;R23/24/25 C;R34 R43 N;R50/53

The Full Text for all R-Phrases and Hazard Statements are Displayed in Section 16.

SECTION 4: First aid measures

4.1. Description of first aid measures

General information Show this Safety Data Sheet to the medical personnel.

Inhalation Move affected person to fresh air and keep warm and at rest in a position comfortable for breathing.

Ingestion Rinse mouth thoroughly with water. Do not induce vomiting. Get medical attention.

Skin contact Rinse with water. Get medical attention if irritation persists after washing.

Eye contact Rinse immediately with plenty of water. Remove any contact lenses and open eyelids wide apart. Continue to rinse for at least 15 minutes. Get medical attention immediately.

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

Inhalation Coughing, chest tightness, feeling of chest pressure.

Ingestion May cause discomfort if swallowed.

Skin contact Prolonged contact may cause dryness of the skin. May cause skin sensitisation or allergic reactions in sensitive individuals.

Eye contact Causes serious eye damage.

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

Notes for the doctor Treat symptomatically.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media Use fire-extinguishing media suitable for the surrounding fire.

5.2. Special hazards arising from the substance or mixture

Hazardous combustion products Thermal decomposition or combustion products may include the following substances: Carbon dioxide (CO2). Carbon monoxide (CO).

5.3. Advice for firefighters

Protective actions during firefighting No specific firefighting precautions known.

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SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Personal precautions Wear suitable protective equipment, including gloves, goggles/face shield, respirator, boots, clothing or apron, as appropriate. Take care as floors and other surfaces may become slippery. Do not touch or walk into spilled material. Avoid contact with skin, eyes and clothing. Provide adequate ventilation. Avoid contact with contaminated tools and objects. Wash thoroughly after dealing with a spillage.

6.2. Environmental precautions

Environmental precautions Do not discharge into drains or watercourses or onto the ground. Harmful to aquatic life with long lasting effects.

6.3. Methods and material for containment and cleaning up

Methods for cleaning up Wear suitable protective equipment, including gloves, goggles/face shield, respirator, boots, clothing or apron, as appropriate. Caution. Avoid the spillage or runoff entering drains, sewers or watercourses. Provide adequate ventilation. Absorb spillage with inert, damp, non-combustible material. Collect and place in suitable waste disposal containers and seal securely. Containers with collected spillage must be properly labelled with correct contents and hazard symbol. Flush contaminated area with plenty of water.

6.4. Reference to other sections

Reference to other sections Wear protective clothing as described in Section 8 of this safety data sheet.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Usage precautions Wear protective gloves, eye and face protection. Avoid contact with skin, eyes and clothing. Provide adequate ventilation. Avoid breathing spray. Avoid release to the environment. Do not reuse empty containers. Do not use in paint spraying equipment. Do not empty into drains. Do not eat, drink or smoke when using this product. Wash skin thoroughly after handling.

7.2. Conditions for safe storage, including any incompatibilities

Storage precautions Store at temperatures between 4°C and 40°C.

Storage class Corrosive storage. Corrosive storage.

7.3. Specific end use(s)

Specific end use(s) The identified uses for this product are detailed in Section 1.2.

SECTION 8: Exposure Controls/personal protection

8.1. Control parameters

Occupational exposure limits

Ethyl alcohol

Long-term exposure limit (8-hour TWA): WEL 1000 ppm 1920 mg/m³
WEL = Workplace Exposure Limit

DOCUSATE SODIUM (CAS: 577-11-7)

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DNEL

Workers - Dermal; Long term systemic effects: 31.3 mg/kg/day
Workers - Dermal; Long term systemic effects: 31.3 mg/kg/day
Workers - Inhalation; Long term systemic effects: 44.1 mg/m³
Workers - Inhalation; Long term systemic effects: 44.1 mg/m³
Consumer - Dermal; Long term systemic effects: 18.8 mg/kg/day
Consumer - Dermal; Long term systemic effects: 18.8 mg/kg/day
Consumer - Inhalation; Long term systemic effects: 13 mg/m³
Consumer - Inhalation; Long term systemic effects: 13 mg/m³
Consumer - Oral; Long term systemic effects: 18.8 mg/kg/day
Consumer - Oral; Long term systemic effects: 18.8 mg/kg/day

Ethyl alcohol (CAS: 64-17-5)

Ingredient comments

WEL = Workplace Exposure Limits

DNEL

Workers - Inhalation; Short term : 1900 mg/m³
Workers - Dermal; Long term systemic effects: 343 mg/kg/day
Workers - Inhalation; Long term : 950 mg/m³
Consumer - Inhalation; Short term : 950 mg/m³
Consumer - Dermal; Long term systemic effects: 206 mg/kg/day
Consumer - Inhalation; Long term : 114 mg/m³
Consumer - Oral; Long term systemic effects: 87 mg/kg/day

PNEC

- Fresh water; 0.96 mg/l
- Marine water; 0.79 mg/l
- Soil; 0.63 mg/kg
- STP; 580 mg/l
- Sediment (Freshwater); 3.6 mg/kg

8.2. Exposure controls

Protective equipment

Appropriate engineering controls

Provide adequate ventilation.

Eye/face protection

Eyewear complying with an approved standard should be worn if a risk assessment indicates eye contact is possible. Unless the assessment indicates a higher degree of protection is required, the following protection should be worn: Chemical splash goggles. Personal protective equipment for eye and face protection should comply with European Standard EN166.

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Hand protection It is recommended that chemical-resistant, impervious gloves are worn. The most suitable glove should be chosen in consultation with the glove supplier/manufacturer, who can provide information about the breakthrough time of the glove material. To protect hands from chemicals, gloves should comply with European Standard EN374. The selected gloves should have a breakthrough time of at least 3 hours. The breakthrough time for any glove material may be different for different glove manufacturers. Considering the data specified by the glove manufacturer, check during use that the gloves are retaining their protective properties and change them as soon as any deterioration is detected. Frequent changes are recommended. Protective gloves should have a minimum thickness of 0.15 mm. Gloves made from the following material may provide suitable chemical protection: Neoprene. Nitrile rubber. Rubber (natural, latex). The choice of protective gloves depends upon the chemicals being handled, and the conditions of work and use. Repeated exposure to chemicals will degrade the ability of the glove to provide resistance to chemicals. Specific work environments and material handling practices may vary, therefore safety procedures should be developed for each intended application.

Hygiene measures Wash hands thoroughly after handling. Wash contaminated clothing before reuse.

SECTION 9: Physical and Chemical Properties

9.1. Information on basic physical and chemical properties

Appearance Liquid.

Colour White/off-white.

Odour Pleasant, agreeable.

pH pH (concentrated solution): 7.0

Relative density 0.995 @ 25°C

Solubility(ies) Completely soluble in water.

9.2. Other information

Other information Not determined.

SECTION 10: Stability and reactivity

10.1. Reactivity

Reactivity There are no known reactivity hazards associated with this product.

10.2. Chemical stability

Stability Stable at normal ambient temperatures and when used as recommended.

10.3. Possibility of hazardous reactions

Possibility of hazardous reactions Not determined.

10.4. Conditions to avoid

Conditions to avoid There are no known conditions that are likely to result in a hazardous situation.

10.5. Incompatible materials

Materials to avoid No specific material or group of materials is likely to react with the product to produce a hazardous situation.

10.6. Hazardous decomposition products

Hazardous decomposition products Thermal decomposition or combustion products may include the following substances: Carbon monoxide (CO). Carbon dioxide (CO2).

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SECTION 11: Toxicological information

11.1. Information on toxicological effects

Inhalation	Coughing, chest tightness, feeling of chest pressure.
Ingestion	May cause discomfort.
Skin contact	Prolonged contact may cause dryness of the skin. May cause skin sensitisation or allergic reactions in sensitive individuals.
Eye contact	Causes serious eye damage.

Toxicological information on ingredients.

TERPINOLENE

Acute toxicity - oral

Acute toxicity oral (LD_{50} mg/kg)	4,390.0
Species	Rat
ATE oral (mg/kg)	4,390.0

Acute toxicity - dermal

Acute toxicity dermal (LD_{50} mg/kg)	4,300.0
Species	Rabbit
ATE dermal (mg/kg)	4,300.0

COUMARIN

Acute toxicity - oral

ATE oral (mg/kg)	500.0

CITRAL

Acute toxicity - oral

Acute toxicity oral (LD_{50} mg/kg)	4,960.0
Species	Rat
ATE oral (mg/kg)	4,960.0

Acute toxicity - dermal

Acute toxicity dermal (LD_{50} mg/kg)	2,250.0
Species	Rabbit
ATE dermal (mg/kg)	2,250.0

Acute toxicity - inhalation

Acute toxicity inhalation (LC_{50} vapours mg/l)	680.0
Species	Rat

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ATE inhalation (vapours mg/l)	680.0

CITRONELLAL

Acute toxicity - oral	
Acute toxicity oral (LD_{50} mg/kg)	2,872.0
Species	Rat
ATE oral (mg/kg)	2,872.0
Acute toxicity - dermal	
Acute toxicity dermal (LD_{50} mg/kg)	2,500.0
Species	Rat
ATE dermal (mg/kg)	2,500.0

METHYL-2H or METHYL-4 (3:1) Mixture of EC NO 220-239-6

Acute toxicity - oral	
Acute toxicity oral (LD_{50} mg/kg)	53.0
Species	Rat
Notes (oral LD_{50})	Estimated value.
ATE oral (mg/kg)	53.0
Acute toxicity - dermal	
ATE dermal (mg/kg)	300.0
Acute toxicity - inhalation	
ATE inhalation (vapours mg/l)	3.0
Skin sensitisation	
Skin sensitisation	Guinea pig maximization test (GPMT) - Guinea pig: Sensitising.

SECTION 12: Ecological Information

Ecotoxicity Harmful to aquatic life with long lasting effects.

12.1. Toxicity

Acute aquatic toxicity

Acute toxicity - fish Not determined.

Ecological information on ingredients.

ISOTRIDECANOL ETHOXYLATE (EO 3 - 5)

Acute aquatic toxicity	
Acute toxicity - fish	LC_{50}, 96 hours: 1 - 10 mg/l mg/l, Fish

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Acute toxicity - aquatic invertebrates	EC_{50}, 48 hours: 1 -10 mg/l mg/l, Daphnia magna

d-LIMONENE

Acute aquatic toxicity

LE(C)$_{50}$	0.1 < L(E)C50 ≤ 1
M factor (Acute)	1

Chronic aquatic toxicity

M factor (Chronic)	1

TERPINOLENE

Chronic aquatic toxicity

M factor (Chronic)	1

PIN-2(3)-ENE;2,6,6-TRIMETHYLBICYCLO[3.1.1]HEPT-2-ENE

Chronic aquatic toxicity

M factor (Chronic)	1

METHYL-2H or METHYL-4 (3:1) Mixture of EC NO 220-239-6

Acute aquatic toxicity

LE(C)$_{50}$	0.01 < L(E)C50 ≤ 0.1
M factor (Acute)	10
Acute toxicity - fish	Estimated value. LC_{50}, 96 hours: 13 mg/l, Fish

Chronic aquatic toxicity

NOEC	0.001 < NOEC ≤ 0.01
Degradability	Non-rapidly degradable
M factor (Chronic)	10

12.2. Persistence and degradability

Persistence and degradability The product is expected to be biodegradable.

12.3. Bioaccumulative potential

Bioaccumulative potential The product does not contain any substances expected to be bioaccumulating.

12.4. Mobility in soil

Mobility The product is soluble in water.

12.5. Results of PBT and vPvB assessment

Results of PBT and vPvB assessment This product does not contain any substances classified as PBT or vPvB.

12.6. Other adverse effects

Other adverse effects None known.

SECTION 13: Disposal considerations

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13.1. Waste treatment methods

Disposal methods Disposal of this product, process solutions, residues and by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any local authority requirements.

SECTION 14: Transport information

General The product is not covered by international regulations on the transport of dangerous goods (IMDG, IATA, ADR/RID).

Special Provisions note

14.1. UN number

Not applicable.

14.2. UN proper shipping name

Not applicable.

14.3. Transport hazard class(es)

Transport labels
No transport warning sign required.

14.4. Packing group

Not applicable.

14.5. Environmental hazards

Environmentally hazardous substance/marine pollutant
No.

14.6. Special precautions for user

Not applicable.

14.7. Transport in bulk according to Annex II of MARPOL and the IBC Code

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code Not applicable.

SECTION 15: Regulatory information

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

National regulations Control of Substances Hazardous to Health Regulations 2002 (as amended).

EU legislation Regulation (EC) No 648/2004 of the European Parliament and of the Council of 31 March 2004 on detergents (as amended).
Regulation (EC) No 1272/2008 of the European Parliament and of the Council of 16 December 2008 on classification, labelling and packaging of substances and mixtures (as amended).
Commission Regulation (EU) No 453/2010 of 20 May 2010.
Commission Regulation (EU) No 2015/830 of 28 May 2015.

Guidance Workplace Exposure Limits EH40.

15.2. Chemical safety assessment

SECTION 16: Other information

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Abbreviations and acronyms used in the safety data sheet	ATE: Acute Toxicity Estimate. ADR: European Agreement concerning the International Carriage of Dangerous Goods by Road. CAS: Chemical Abstracts Service. DNEL: Derived No Effect Level. IATA: International Air Transport Association. IMDG: International Maritime Dangerous Goods. PBT: Persistent, Bioaccumulative and Toxic substance. PNEC: Predicted No Effect Concentration. vPvB: Very Persistent and Very Bioaccumulative. NOEC: No Observed Effect Concentration.
Revision comments	NOTE: Lines within the margin indicate significant changes from the previous revision.
Revision date	06/09/2017
Revision	4.1
Supersedes date	03/01/2017
SDS number	27312
Risk phrases in full	R10 Flammable. R11 Highly flammable. R23/24/25 Toxic by inhalation, in contact with skin and if swallowed. R34 Causes burns. R36/38 Irritating to eyes and skin. R38 Irritating to skin. R41 Risk of serious damage to eyes. R43 May cause sensitisation by skin contact. R50/53 Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment. R51/53 Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment. R65 Harmful: may cause lung damage if swallowed.
Hazard statements in full	H225 Highly flammable liquid and vapour. H226 Flammable liquid and vapour. H301 Toxic if swallowed. H304 May be fatal if swallowed and enters airways. H311 Toxic in contact with skin. H314 Causes severe skin burns and eye damage. H315 Causes skin irritation. H317 May cause an allergic skin reaction. H318 Causes serious eye damage. H319 Causes serious eye irritation. H331 Toxic if inhaled. H400 Very toxic to aquatic life. H410 Very toxic to aquatic life with long lasting effects. H411 Toxic to aquatic life with long lasting effects. H412 Harmful to aquatic life with long lasting effects. EUH208 Contains d-LIMONENE, 4-TERTIARY-BUTYLCYCLOHEXYL ACETATE, TERPINOLENE, PIN-2(3)-ENE;2,6,6-TRIMETHYLBICYCLO[3.1.1]HEPT-2-ENE, METHYL-2H or METHYL-4 (3:1) Mixture of EC NO 220-239-6. May produce an allergic reaction.

This information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process. Such information is, to the best of the company's knowledge and belief, accurate and reliable as of the date indicated. However, no warranty, guarantee or representation is made to its accuracy, reliability or completeness. It is the user's responsibility to satisfy himself as to the suitability of such information for his own particular use.