Safety Data Sheet

acc. to 29 CFR 1910.1200 App D

A/C Pro Super Seal R-1234yf Rubber & Metal Stop Leak

Version number: 6.0
Replaces version of: 2024-12-06 (5)

Revision: 2025-04-04

SECTION 1: Identification

1.1 Product identifier

Trade name	**A/C Pro Super Seal R-1234yf Rubber & Metal Stop Leak**
Alternative number(s)	048168458196, E7182901

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

Relevant identified uses	General use

1.3 Details of the supplier of the safety data sheet

Energizer Manufacturing, Inc.
25225 Detroit Rd.
Westlake OH 44145
United States

Telephone: 800-383-7323; 314-985-2000 (USA / CANADA)
e-mail: Autocare.regulatory@energizer.com
Website: https://data.energizer.com

Energizer Trading Ltd.
Sword House, Totteridge Road, High Wycombe, HP13 6DG, UK

Telephone: +44(0)8000353376
e-mail: ConsumerServiceEU@energizer.com

1.4 Emergency telephone number

Emergency information service	FOR EMERGENCY in USA & Canada CALL +1 800 255-3924 / For International CALL +1 813 248 0585 This number is only available during the following office hours: Mon-Fri 09:00 AM - 05:00 PM

SECTION 2: Hazard(s) identification

2.1 Classification of the substance or mixture

Classification acc. to OSHA "Hazard Communication Standard" (29 CFR 1910.1200)

Section	Hazard class	Category	Hazard class and category	Hazard statement
A.1I	acute toxicity (inhal.)	4	Acute Tox. 4	H332
B.6	flammable liquid	2	Flam. Liq. 2	H225

For full text of abbreviations: see SECTION 16.

The most important adverse physicochemical, human health and environmental effects

The product is combustible and can be ignited by potential ignition sources.

2.2 Label elements

Labelling acc. to OSHA "Hazard Communication Standard" (29 CFR 1910.1200)

- Signal word danger

- Pictograms

GHS02, GHS07

- Hazard statements

H225	Highly flammable liquid and vapor.
H332	Harmful if inhaled.

- Precautionary statements

P210	Keep away from heat/sparks/open flames/hot surfaces. No smoking.
P233	Keep container tightly closed.
P240	Ground/bond container and receiving equipment.
P241	Use explosion-proof electrical/ventilating/lighting equipment.
P242	Use only non-sparking tools.
P243	Take precautionary measures against static discharge.
P261	Avoid breathing dust/fume/gas/mist/vapors/spray.
P271	Use only outdoors or in a well-ventilated area.
P280	Wear protective gloves/eye protection/face protection.
P303+P361+P353	If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.
P304+P340	If inhaled: Remove person to fresh air and keep comfortable for breathing.
P312	Call a poison center/doctor if you feel unwell.
P370+P378	In case of fire: Use sand, carbon dioxide or powder extinguisher to extinguish.
P403+P235	Store in a well-ventilated place. Keep cool.
P501	Dispose of contents/container in accordance with national regulations.

- Hazardous ingredients for labelling Vinylsilane derivative, Ethanediamine derivative

2.3 Other hazards

Hazards not otherwise classified

May be harmful in contact with skin (GHS category 5: acutely toxic - dermal).
Toxic to aquatic life with long lasting effects (GHS category 2: aquatic toxicity - acute and/or chronic).

Results of PBT and vPvB assessment

Does not contain a PBT-/vPvB-substance at a concentration of ≥ 0.1%.

Endocrine disrupting properties

Does not contain an endocrine disruptor (ED) in a concentration of ≥ 0.1%.

A/C Pro Super Seal R-1234yf Rubber & Metal Stop Leak

SECTION 3: Composition/information on ingredients

3.1 Substances

Not relevant (mixture)

3.2 Mixtures

Description of the mixture

Name of substance	Identifier	Wt%	Classification acc. to GHS	Pictograms
Vinylsilane derivative	CAS No trade secret	10 – < 25	Acute Tox. 4 / H332 Flam. Liq. 3 / H226	
Ethanediamine derivative	CAS No trade secret	10 – < 25	Acute Tox. 4 / H332	
Methoxysilane derivative	CAS No trade secret	5 – < 10	Flam. Liq. 2 / H225	
Dimethyl adipate	CAS No Trade secret 627-93-0	1 – < 5	Acute Tox. 4 / H312	

Remarks

For full text of abbreviations: see SECTION 16

SECTION 4: First-aid measures

4.1 Description of first-aid measures

General notes

Do not leave affected person unattended. Remove victim out of the danger area. Keep affected person warm, still and covered. Take off immediately all contaminated clothing. In all cases of doubt, or when symptoms persist, seek medical advice. In case of unconsciousness place person in the recovery position. Never give anything by mouth.

Following inhalation

If breathing is irregular or stopped, immediately seek medical assistance and start first aid actions. Provide fresh air.

Following skin contact

Wash with plenty of soap and water.

Following eye contact

Remove contact lenses, if present and easy to do. Continue rinsing. Irrigate copiously with clean, fresh water for at least 10 minutes, holding the eyelids apart.

Following ingestion

Rinse mouth with water (only if the person is conscious). Do NOT induce vomiting.

4.2 Most important symptoms and effects, both acute and delayed

Symptoms and effects are not known to date.

4.3 Indication of any immediate medical attention and special treatment needed

none

SECTION 5: Fire-fighting measures

5.1 Extinguishing media

Suitable extinguishing media

Water spray, BC-powder, Carbon dioxide (CO2)

Unsuitable extinguishing media

Water jet

5.2 Special hazards arising from the substance or mixture

In case of insufficient ventilation and/or in use, may form flammable/explosive vapor-air mixture. Solvent vapors are heavier than air and may spread along floors. Places which are not ventilated, e.g. unventilated below ground level areas such as trenches, conduits and shafts, are particularly prone to the presence of flammable substances or mixtures.

Hazardous combustion products

Nitrogen oxides (NOx), Carbon monoxide (CO), Carbon dioxide (CO2)

5.3 Advice for firefighters

In case of fire and/or explosion do not breathe fumes. Coordinate firefighting measures to the fire surroundings. Do not allow firefighting water to enter drains or water courses. Collect contaminated firefighting water separately. Fight fire with normal precautions from a reasonable distance.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

For non-emergency personnel

Remove persons to safety.

For emergency responders

Wear breathing apparatus if exposed to vapors/dust/aerosols/gases.

6.2 Environmental precautions

Keep away from drains, surface and ground water. Retain contaminated washing water and dispose of it. If substance has entered a water course or sewer, inform the responsible authority.

6.3 Methods and material for containment and cleaning up

Advice on how to contain a spill

Covering of drains

Advice on how to clean up a spill

Wipe up with absorbent material (e.g. cloth, fleece). Collect spillage: sawdust, kieselgur (diatomite), sand, universal binder

Appropriate containment techniques

Use of adsorbent materials.

Other information relating to spills and releases

Place in appropriate containers for disposal. Ventilate affected area.

6.4 Reference to other sections

Hazardous combustion products: see section 5. Personal protective equipment: see section 8. Incompatible materials: see section 10. Disposal considerations: see section 13.

SECTION 7: Handling and storage

7.1 Precautions for safe handling

Recommendations

- Measures to prevent fire as well as aerosol and dust generation

Use local and general ventilation. Avoidance of ignition sources. Keep away from sources of ignition - No smoking. Take precautionary measures against static discharge. Use only in well-ventilated areas. Due to danger of explosion, prevent leakage of vapours into cellars, flues and ditches. Ground/bond container and receiving equipment. Use explosion-proof electrical/ventilating/lighting/equipment. Use only non-sparking tools.

- Specific notes/details

Places which are not ventilated, e.g. unventilated below ground level areas such as trenches, conduits and shafts, are particularly prone to the presence of flammable substances or mixtures. Vapors are heavier than air, spread along floors and form explosive mixtures with air. Vapors may form explosive mixtures with air.

Advice on general occupational hygiene

Wash hands after use. Do not eat, drink and smoke in work areas. Remove contaminated clothing and protective equipment before entering eating areas. Never keep food or drink in the vicinity of chemicals. Never place chemicals in containers that are normally used for food or drink. Keep away from food, drink and animal feedingstuffs.

7.2 Conditions for safe storage, including any incompatibilities

Managing of associated risks

- Explosive atmospheres

Keep container tightly closed and in a well-ventilated place. Use local and general ventilation. Keep cool. Protect from sunlight.

- Flammability hazards

Keep away from sources of ignition - No smoking. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Take precautionary measures against static discharge. Protect from sunlight.

- Ventilation requirements

Keep any substance that emits harmful vapors or gases in a place that allows these to be permanently extracted. Use local and general ventilation. Ground/bond container and receiving equipment.

- Packaging compatibilities

Only packagings which are approved (e.g. acc. to the Dangerous Goods Regulations) may be used.

7.3 Specific end use(s)

See section 16 for a general overview.

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

Occupational exposure limit values (Workplace Exposure Limits)
this information is not available

Relevant DNELs of components

Name of substance	CAS No	End-point	Threshold level	Protection goal, route of exposure	Used in	Exposure time
Dimethyl adipate	Trade secret 627-93-0	DNEL	8.3 mg/m³	human, inhalatory	worker (industry)	acute - systemic effects
Dimethyl adipate	Trade secret 627-93-0	DNEL	8.3 mg/m³	human, inhalatory	worker (industry)	chronic - local effects

Relevant PNECs of components

Name of substance	CAS No	End-point	Threshold level	Organism	Environmental compartment	Exposure time
Dimethyl adipate	Trade secret 627-93-0	PNEC	0.18 $^{mg}/_{l}$	aquatic organisms	water	intermittent release
Dimethyl adipate	Trade secret 627-93-0	PNEC	0.018 $^{mg}/_{l}$	aquatic organisms	freshwater	short-term (single instance)
Dimethyl adipate	Trade secret 627-93-0	PNEC	0.002 $^{mg}/_{l}$	aquatic organisms	marine water	short-term (single instance)
Dimethyl adipate	Trade secret 627-93-0	PNEC	10 $^{mg}/_{l}$	aquatic organisms	sewage treatment plant (STP)	short-term (single instance)
Dimethyl adipate	Trade secret 627-93-0	PNEC	0.16 $^{mg}/_{kg}$	aquatic organisms	freshwater sediment	short-term (single instance)
Dimethyl adipate	Trade secret 627-93-0	PNEC	0.016 $^{mg}/_{kg}$	aquatic organisms	marine sediment	short-term (single instance)
Dimethyl adipate	Trade secret 627-93-0	PNEC	0.09 $^{mg}/_{kg}$	terrestrial organisms	soil	short-term (single instance)

8.2 Exposure controls

Appropriate engineering controls

General ventilation.

Individual protection measures (personal protective equipment)

Eye/face protection

Wear eye/face protection.

Skin protection

- Hand protection

Wear suitable gloves. Chemical protection gloves are suitable, which are tested according to EN 374. Check leak-tightness/impermeability prior to use. In the case of wanting to use the gloves again, clean them before taking off and air them well. For special purposes, it is recommended to check the resistance to chemicals of the protective gloves mentioned above together with the supplier of these gloves.

- Other protection measures

Take recovery periods for skin regeneration. Preventive skin protection (barrier creams/ointments) is recommended. Wash hands thoroughly after handling.

Respiratory protection

In case of inadequate ventilation wear respiratory protection.

Environmental exposure controls

Use appropriate container to avoid environmental contamination. Keep away from drains, surface and ground water.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Appearance

Physical state	liquid
Color	not determined
Particle	not relevant (liquid)
Odor	characteristic

Other safety parameters

pH (value)	not determined
Melting point/freezing point	not determined
Initial boiling point and boiling range	102 °C at 1,013 hPa
Flash point	7.7 °C at 101.3 kPa
Evaporation rate	Not determined
Flammability (solid, gas)	not relevant, (fluid)

Explosive limits

- Lower explosion limit (LEL)	1.42 vol%
- Upper explosion limit (UEL)	22.7 vol%
Vapor pressure	2,990 Pa at 20 °C
Density	not determined
Vapor density	this information is not available
Relative density	Information on this property is not available
Solubility(ies)	not determined

Partition coefficient

- n-octanol/water (log KOW)	this information is not available
Auto-ignition temperature	224 °C
Viscosity	not determined
Explosive properties	none
Oxidizing properties	none

9.2 Other information

Temperature class (USA, acc. to NEC 500)	T2D (maximum permissible surface temperature on the equipment: 215°C)

SECTION 10: Stability and reactivity

10.1 Reactivity

Concerning incompatibility: see below "Conditions to avoid" and "Incompatible materials". The mixture contains reactive substance(s). Risk of ignition.

If heated:

Risk of ignition

10.2 Chemical stability

See below "Conditions to avoid".

10.3 Possibility of hazardous reactions

No known hazardous reactions.

10.4 Conditions to avoid

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

Hints to prevent fire or explosion

Use explosion-proof electrical/ventilating/lighting/equipment. Use only non-sparking tools. Take precautionary measures against static discharge.

10.5 Incompatible materials

Oxidizers

10.6 Hazardous decomposition products

Reasonably anticipated hazardous decomposition products produced as a result of use, storage, spill and heating are not known. Hazardous combustion products: see section 5.

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Test data are not available for the complete mixture.

Classification procedure

The method for classification of the mixture is based on ingredients of the mixture (additivity formula).

Classification acc. to OSHA "Hazard Communication Standard" (29 CFR 1910.1200)

Acute toxicity

Harmful if inhaled.
GHS of the United Nations, annex 4: May be harmful in contact with skin.

- Acute toxicity estimate (ATE)
Inhalation: gas 11,353 $^{ppmV}/_{4h}$
Inhalation: vapor 11 $^{mg}/_{l}$/4h

Acute toxicity estimate (ATE) of components

Name of substance	CAS No	Exposure route	ATE
Vinylsilane derivative	trade secret	dermal	3,259 $^{mg}/_{kg}$
Vinylsilane derivative	trade secret	inhalation: gas	2,773 $^{ppmV}/_{4h}$
Vinylsilane derivative	trade secret	inhalation: vapor	11 $^{mg}/_{l}$/4h
Ethanediamine derivative	trade secret	oral	2,295 $^{mg}/_{kg}$
Ethanediamine derivative	trade secret	dermal	>2,000 $^{mg}/_{kg}$
Ethanediamine derivative	trade secret	inhalation: vapor	11 $^{mg}/_{l}$/4h
Ethanediamine derivative	trade secret	inhalation: dust/mist	>1.49 $^{mg}/_{l}$/4h
Dimethyl adipate	Trade secret 627-93-0	dermal	>1,000 $^{mg}/_{kg}$
Dimethyl adipate	Trade secret 627-93-0	inhalation: dust/mist	>11 $^{mg}/_{l}$/4h

Skin corrosion/irritation

Shall not be classified as corrosive/irritant to skin.

Serious eye damage/eye irritation

Shall not be classified as seriously damaging to the eye or eye irritant.

Respiratory or skin sensitization

Shall not be classified as a respiratory or skin sensitizer.

Germ cell mutagenicity

Shall not be classified as germ cell mutagenic.

Carcinogenicity

Shall not be classified as carcinogenic.

Reproductive toxicity

Shall not be classified as a reproductive toxicant.

Specific target organ toxicity - single exposure

Shall not be classified as a specific target organ toxicant (single exposure).

Specific target organ toxicity - repeated exposure

Shall not be classified as a specific target organ toxicant (repeated exposure).

Aspiration hazard

Shall not be classified as presenting an aspiration hazard.

SECTION 12: Ecological information

12.1 Toxicity

Toxic to aquatic life with long lasting effects.

Aquatic toxicity (acute) of components of the mixture

Name of substance	CAS No	Endpoint	Value	Species	Exposure time
Vinylsilane derivative	trade secret	LC50	191 $^{mg}/_{l}$	fish	96 h
Vinylsilane derivative	trade secret	EC50	168.7 $^{mg}/_{l}$	aquatic invertebrates	48 h
Vinylsilane derivative	trade secret	NOEC	100 $^{mg}/_{l}$	fish	96 h
Ethanediamine derivative	trade secret	LC50	597 $^{mg}/_{l}$	fish	96 h
Ethanediamine derivative	trade secret	EC50	81 $^{mg}/_{l}$	aquatic invertebrates	48 h
Ethanediamine derivative	trade secret	ErC50	8.8 $^{mg}/_{l}$	algae	72 h
Ethanediamine derivative	trade secret	NOEC	344 $^{mg}/_{l}$	fish	96 h
Methoxysilane derivative	trade secret	LC50	>110 $^{mg}/_{l}$	fish	96 h
Methoxysilane derivative	trade secret	EC50	>122 $^{mg}/_{l}$	aquatic invertebrates	48 h
Methoxysilane derivative	trade secret	NOEC	≥110 $^{mg}/_{l}$	fish	96 h
Dimethyl adipate	Trade secret 627-93-0	EC50	72 $^{mg}/_{l}$	aquatic invertebrates	48 h
Dimethyl adipate	Trade secret 627-93-0	NOEC	12.5 $^{mg}/_{l}$	algae	72 h

Aquatic toxicity (chronic) of components of the mixture

Name of substance	CAS No	Endpoint	Value	Species	Exposure time
Vinylsilane derivative	trade secret	EC50	119 $^{mg}/_{l}$	aquatic invertebrates	21 d
Vinylsilane derivative	trade secret	NOEC	28.1 $^{mg}/_{l}$	aquatic invertebrates	21 d
Vinylsilane derivative	trade secret	LOEC	52.4 $^{mg}/_{l}$	aquatic invertebrates	21 d
Ethanediamine derivative	trade secret	EC50	67 $^{mg}/_{l}$	microorganisms	16 h

Aquatic toxicity (chronic) of components of the mixture

Name of substance	CAS No	Endpoint	Value	Species	Exposure time
Methoxysilane derivative	trade secret	NOEC	≥100 $^{mg}/_{l}$	aquatic invertebrates	21 d

12.2 Persistence and degradability
Data are not available.

12.3 Bioaccumulative potential
Data are not available.

12.4 Mobility in soil
Data are not available.

12.5 Results of PBT and vPvB assessment
Does not contain a PBT-/vPvB-substance at a concentration of ≥ 0.1%.

12.6 Endocrine disrupting properties
Does not contain an endocrine disruptor (ED) in a concentration of ≥ 0.1%.

12.7 Other adverse effects
Data are not available.

SECTION 13: Disposal considerations

13.1 Waste treatment methods

Waste treatment-relevant information

Solvent reclamation/regeneration.

Sewage disposal-relevant information

Do not empty into drains. Avoid release to the environment. Refer to special instructions/safety data sheets.

Waste treatment of containers/packages

Only packagings which are approved (e.g. acc. to DOT) may be used. Completely emptied packages can be recycled. Handle contaminated packages in the same way as the substance itself.

Remarks

Please consider the relevant national or regional provisions. Waste shall be separated into the categories that can be handled separately by the local or national waste management facilities.

SECTION 14: Transport information

14.1 UN number

DOT	UN 1993
IMDG-Code	UN 1993
ICAO-TI	UN 1993

14.2 UN proper shipping name

DOT	Flammable liquid, n.o.s.
IMDG-Code	FLAMMABLE LIQUID, N.O.S.
ICAO-TI	Flammable liquid, n.o.s.
Technical name (hazardous ingredients)	Methoxysilane derivative, methanol

14.3 Transport hazard class(es)

DOT	3
IMDG-Code	3
ICAO-TI	3

14.4 Packing group

DOT	II
IMDG-Code	II
ICAO-TI	II

14.5 Environmental hazards hazardous to the aquatic environment

14.5.1 Additional information	DOT-SP 10232
Environmentally hazardous substance (aquatic environment)	Benzene derivatives

14.6 Special precautions for user

There is no additional information.

14.7 Transport in bulk according to IMO instruments

The cargo is not intended to be carried in bulk.

Information for each of the UN Model Regulations

Transport of dangerous goods by road or rail (49 CFR US DOT) - Additional information

Particulars in the shipper's declaration	UN1993, Flammable liquid, n.o.s., (contains: Methoxysilane derivative, methanol), 3, II, environmentally hazardous
Reportable quantity (RQ)	10,545,791 lbs (4,787,789 kg) (methanol)
Danger label(s)	3, fish and tree

Environmental hazards	yes (hazardous to the aquatic environment)
Special provisions (SP)	IB2, T7, TP1, TP8, TP28, DOT-SP 10232
ERG No	128

International Maritime Dangerous Goods Code (IMDG) - Additional information

Particulars in the shipper's declaration	UN1993, FLAMMABLE LIQUID, N.O.S., (contains: Methoxysilane derivative, methanol, Benzene derivatives), 3, II, 7.7°C c.c., MARINE POLLUTANT
Marine pollutant	yes (hazardous to the aquatic environment) (Benzene derivatives)
Danger label(s)	3, fish and tree

Special provisions (SP)	274
Excepted quantities (EQ)	E2
Limited quantities (LQ)	1 L
EmS	F-E, S-E
Stowage category	B

International Civil Aviation Organization (ICAO-IATA/DGR) - Additional information

Particulars in the shipper's declaration	UN1993, Flammable liquid, n.o.s., (contains: Methoxysilane derivative, methanol), 3, II
Environmental hazards	yes (hazardous to the aquatic environment)
Danger label(s)	3

Special provisions (SP)	A3
Excepted quantities (EQ)	E2
Limited quantities (LQ)	1 L

SECTION 15: Regulatory information

15.1 Safety, health and environmental regulations specific for the product in question

National regulations (United States)

Toxic Substance Control Act (TSCA) all ingredients are listed or exempt from listing

Superfund Amendment and Reauthorization Act (SARA TITLE III)

- The List of Extremely Hazardous Substances and Their Threshold Planning Quantities (EPCRA Section 302, 304)

none of the ingredients are listed

Clean Air Act

none of the ingredients are listed

California Environmental Protection Agency (Cal/EPA): Proposition 65 - Safe Drinking Water and Toxic Enforcement Act of 1987

Proposition 65 List of chemicals

Name acc. to inventory	CAS No	Remarks	Type of the toxicity
methanol	67-56-1		developmental

Drug precursors, Chemicals designated within the Controlled Substances Act, 21 U.S.C. § 802, paragraphs 34 (list I) and 35 (list II)

none of the ingredients are listed

Industry or sector specific available guidance(s)

NPCA-HMIS® III

Hazardous Materials Identification System. American Coatings Association.

Category	Rating	Description
Chronic	/	none
Health	1	irritation or minor reversible injury possible
Flammability	3	material that can be ignited under almost all ambient temperature conditions
Physical hazard	0	material that is normally stable, even under fire conditions, and will not react with water, polymerize, decompose, condense, or self-react. Non-explosive
Personal protection	-	

NFPA® 704

National Fire Protection Association: Standard System for the Identification of the Hazards of Materials for Emergency Response (United States).

Category	Degree of hazard	Description
Flammability	3	material that can be ignited under almost all ambient temperature conditions
Health	0	material that, under emergency conditions, would offer no hazard beyond that of ordinary combustible material
Instability	0	material that is normally stable, even under fire conditions
Special hazard		

National inventories

Country	Inventory	Status
AU	AIIC	all ingredients are listed
CA	DSL	all ingredients are listed
CN	IECSC	all ingredients are listed

Country	Inventory	Status
EU	ECSI	not all ingredients are listed
EU	REACH Reg.	not all ingredients are listed
JP	CSCL-ENCS	not all ingredients are listed
JP	ISHA-ENCS	not all ingredients are listed
KR	KECI	all ingredients are listed
MX	INSQ	not all ingredients are listed
NZ	NZIoC	all ingredients are listed
PH	PICCS	all ingredients are listed
TR	CICR	not all ingredients are listed
TW	TCSI	all ingredients are listed
US	TSCA	all ingredients are listed (ACTIVE)

Legend

AIIC	Australian Inventory of Industrial Chemicals
CICR	Chemical Inventory and Control Regulation
CSCL-ENCS	List of Existing and New Chemical Substances (CSCL-ENCS)
DSL	Domestic Substances List (DSL)
ECSI	EC Substance Inventory (EINECS, ELINCS, NLP)
IECSC	Inventory of Existing Chemical Substances Produced or Imported in China
INSQ	National Inventory of Chemical Substances
ISHA-ENCS	Inventory of Existing and New Chemical Substances (ISHA-ENCS)
KECI	Korea Existing Chemicals Inventory
NZIoC	New Zealand Inventory of Chemicals
PICCS	Philippine Inventory of Chemicals and Chemical Substances (PICCS)
REACH Reg.	REACH registered substances
TCSI	Taiwan Chemical Substance Inventory
TSCA	Toxic Substance Control Act

15.2 Chemical Safety Assessment

Chemical safety assessments for substances in this mixture were not carried out.

SECTION 16: Other information, including date of preparation or last revision

Indication of changes (revised safety data sheet)

Section	Former entry (text/value)	Actual entry (text/value)	Safety-relevant
2.1		Classification acc. to OSHA "Hazard Communication Standard" (29 CFR 1910.1200): change in the listing (table)	yes
2.1	The most important adverse physicochemical, hu-	The most important adverse physicochemical, hu-	yes

A/C Pro Super Seal R-1234yf Rubber & Metal Stop Leak

Version number: 6.0
Replaces version of: 2024-12-06 (5)
Revision: 2025-04-04

Section	Former entry (text/value)	Actual entry (text/value)	Safety-relevant
	man health and environmental effects: Contains gas under pressure; may explode if heated.	man health and environmental effects: The product is combustible and can be ignited by potential ignition sources.	
2.2		- Pictograms: change in the listing (table)	yes
2.2		- Hazard statements: change in the listing (table)	yes
2.2		- Precautionary statements: change in the listing (table)	yes
4.1	Following skin contact: Thaw frosted parts with lukewarm water. Do not rub affected area.	Following skin contact: Wash with plenty of soap and water.	yes
5.1	Suitable extinguishing media: Water spray, BC-powder	Suitable extinguishing media: Water spray, BC-powder, Carbon dioxide (CO2)	yes
5.2	Special hazards arising from the substance or mixture: Contact with the product can cause burns and/or frostbite. Contains gas under pressure; may explode if heated.	Special hazards arising from the substance or mixture: In case of insufficient ventilation and/or in use, may form flammable/explosive vapor-air mixture. Solvent vapors are heavier than air and may spread along floors. Places which are not ventilated, e.g. unventilated below ground level areas such as trenches, conduits and shafts, are particularly prone to the presence of flammable substances or mixtures.	yes
6.3		Advice on how to clean up a spill: Wipe up with absorbent material (e.g. cloth, fleece). Collect spillage: sawdust, kieselgur (diatomite), sand, universal binder	yes
6.3		Appropriate containment techniques: Use of adsorbent materials.	yes
7.1	- Measures to prevent fire as well as aerosol and dust generation: Use local and general ventilation. Use only in well-ventilated areas.	- Measures to prevent fire as well as aerosol and dust generation: Use local and general ventilation. Avoidance of ignition sources. Keep away from sources of ignition - No smoking. Take precautionary measures against static discharge. Use only in well-ventilated areas. Due to danger of explosion, prevent leakage of vapours into cellars, flues and ditches. Ground/bond container and receiving equipment. Use explosion-proof electrical/ventilating/lighting/equipment. Use only non-sparking tools.	yes
7.1		Specific notes/details: Places which are not ventilated, e.g. unventilated below ground level areas such as trenches, conduits and shafts, are particularly prone to the presence of flammable substances or mixtures. Vapors are heavier than air, spread along floors and form explosive mixtures with air. Vapors may form explosive mixtures with air.	yes

A/C Pro Super Seal R-1234yf Rubber & Metal Stop Leak

Section	Former entry (text/value)	Actual entry (text/value)	Safety-relevant
7.2		- Explosive atmospheres: Keep container tightly closed and in a well-ventilated place. Use local and general ventilation. Keep cool. Protect from sunlight.	yes
7.2	- Ventilation requirements: Keep any substance that emits harmful vapors or gases in a place that allows these to be permanently extracted.	- Ventilation requirements: Keep any substance that emits harmful vapors or gases in a place that allows these to be permanently extracted. Use local and general ventilation. Ground/bond container and receiving equipment.	yes
8.2	Hand protection: Wear protective gloves.	Hand protection: Wear suitable gloves. Chemical protection gloves are suitable, which are tested according to EN 374. Check leak-tightness/impermeability prior to use. In the case of wanting to use the gloves again, clean them before taking off and air them well. For special purposes, it is recommended to check the resistance to chemicals of the protective gloves mentioned above together with the supplier of these gloves.	yes
9.1	Physical state: gaseous (liquefied)	Physical state: liquid	yes
9.1	Particle: not relevant (gaseous)	Particle: not relevant (liquid)	yes
9.1	pH (value): not applicable (gaseous)	pH (value): not determined	yes
9.1	Flammability (solid, gas): flammable gas in accordance with GHS criteria	Flammability (solid, gas): not relevant, (fluid)	yes
9.1	Vapor density: not determined	Vapor density: this information is not available	yes
9.1	Viscosity: not relevant (gaseous)	Viscosity: not determined	yes
10.1	Reactivity: Concerning incompatibility: see below "Conditions to avoid" and "Incompatible materials". The mixture contains reactive substance(s). Gas under pressure. Risk of ignition.	Reactivity: Concerning incompatibility: see below "Conditions to avoid" and "Incompatible materials". The mixture contains reactive substance(s). Risk of ignition.	yes
10.1	If heated: Danger of explosion, Gas under pressure, Danger of bursting container	If heated: Risk of ignition	yes
10.4		Hints to prevent fire or explosion: Use explosion-proof electrical/ventilating/lighting/equipment. Use only non-sparking tools. Take precautionary measures against static discharge.	yes
12.5	Results of PBT and vPvB assessment: According to the results of its assessment, this substance is not a PBT or a vPvB. Does not con-	Results of PBT and vPvB assessment: Does not contain a PBT-/vPvB-substance at a concentration of ≥ 0.1%.	yes

A/C Pro Super Seal R-1234yf Rubber & Metal Stop Leak

Section	Former entry (text/value)	Actual entry (text/value)	Safety-relevant
	tain a PBT-/vPvB-substance at a concentration of ≥ 0.1%.		
13.1		Waste treatment-relevant information: Solvent reclamation/regeneration.	yes
14.1	DOT: UN 3161	DOT: UN 1993	yes
14.1	IMDG-Code: UN 3161	IMDG-Code: UN 1993	yes
14.1	ICAO-TI: UN 3161	ICAO-TI: UN 1993	yes
14.2	DOT: Liquefied gas, flammable, n.o.s.	DOT: Flammable liquid, n.o.s.	yes
14.2	IMDG-Code: LIQUEFIED GAS, FLAMMABLE, N.O.S.	IMDG-Code: FLAMMABLE LIQUID, N.O.S.	yes
14.2	ICAO-TI: Liquefied gas, flammable, n.o.s.	ICAO-TI: Flammable liquid, n.o.s.	yes
14.2	Technical name (hazardous ingredients): Vinylsilane derivative, Methoxysilane derivative	Technical name (hazardous ingredients): Methoxysilane derivative, methanol	yes
14.3	DOT: 2.1	DOT: 3	yes
14.3	IMDG-Code: 2.1	IMDG-Code: 3	yes
14.3	ICAO-TI: 2.1	ICAO-TI: 3	yes
14.4	Packing group: not assigned	Packing group	yes
14.4		DOT: II	yes
14.4		IMDG-Code: II	yes
14.4		ICAO-TI: II	yes
14.5.1		Additional information: DOT-SP 10232	yes
14.7	Particulars in the shipper's declaration: UN3161, Liquefied gas, flammable, n.o.s., (contains: Vinylsilane derivative, Methoxysilane derivative), 2.1, environmentally hazardous	Particulars in the shipper's declaration: UN1993, Flammable liquid, n.o.s., (contains: Methoxysilane derivative, methanol), 3, II, environmentally hazardous	yes
14.7	Danger label(s): 2.1, fish and tree	Danger label(s): 3, fish and tree	yes
14.7		Danger label(s):	yes

A/C Pro Super Seal R-1234yf Rubber & Metal Stop Leak

Version number: 6.0
Replaces version of: 2024-12-06 (5)
Revision: 2025-04-04

Section	Former entry (text/value)	Actual entry (text/value)	Safety-relevant
		change in the listing (table)	
14.7	Special provisions (SP): T50	Special provisions (SP): IB2, T7, TP1, TP8, TP28, DOT-SP 10232	yes
14.7	ERG No: 115	ERG No: 128	yes
14.7	Particulars in the shipper's declaration: UN3161, LIQUEFIED GAS, FLAMMABLE, N.O.S., (contains: Vinylsilane derivative, Methoxysilane derivative, Benzene derivatives), 2.1, 7.7°C c.c., MARINE POLLUTANT	Particulars in the shipper's declaration: UN1993, FLAMMABLE LIQUID, N.O.S., (contains: Methoxysilane derivative, methanol, Benzene derivatives), 3, II, 7.7°C c.c., MARINE POLLUTANT	yes
14.7	Danger label(s): 2.1, fish and tree	Danger label(s): 3, fish and tree	yes
14.7		Danger label(s): change in the listing (table)	yes
14.7	Excepted quantities (EQ): E0	Excepted quantities (EQ): E2	yes
14.7	Limited quantities (LQ): 0	Limited quantities (LQ): 1 L	yes
14.7	EmS: F-D, S-U	EmS: F-E, S-E	yes
14.7	Stowage category: D	Stowage category: B	yes
14.7	Particulars in the shipper's declaration: UN3161, Liquefied gas, flammable, n.o.s., (contains: Vinylsilane derivative, Methoxysilane derivative), 2.1	Particulars in the shipper's declaration: UN1993, Flammable liquid, n.o.s., (contains: Methoxysilane derivative, methanol), 3, II	yes
14.7	Danger label(s): 2.1	Danger label(s): 3	yes
14.7		Danger label(s): change in the listing (table)	yes
14.7	Special provisions (SP): A1	Special provisions (SP): A3	yes
14.7	Excepted quantities (EQ): E0	Excepted quantities (EQ): E2	yes
14.7		Limited quantities (LQ): 1 L	yes
15.1		NPCA-HMIS® III: change in the listing (table)	yes
15.1		NFPA® 704: change in the listing (table)	yes
15.1		National inventories: change in the listing (table)	yes

Key literature references and sources for data

OSHA Hazard Communication Standard (HCS), 29 CFR 1910.1200.

Transport of dangerous goods by road or rail (49 CFR US DOT). International Maritime Dangerous Goods Code (IMDG). Dangerous Goods Regulations (DGR) for the air transport (IATA).

Classification procedure

Physical and chemical properties: The classification is based on tested mixture.
Health hazards, Environmental hazards: The method for classification of the mixture is based on ingredients of the mixture (additivity formula).

Disclaimer

This information is based upon the present state of our knowledge. This SDS has been compiled and is solely intended for this product.