



SAFETY DATA SHEET Z85 PERFO

According to Appendix D, OSHA Hazard Communication Standard 29 CFR §1910.1200.

1. Identification

Product identifier

Product name Z85 PERFO

Product number PF010075

Recommended use of the chemical and restrictions on use

Application Fuel.

Uses advised against Use only for intended applications.

Details of the supplier of the safety data sheet

Supplier Haltermann Carless US Inc.
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Contact Person FDS@h-c-s-group.com

Manufacturer Haltermann Carless France S.A.S
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Emergency telephone number

Emergency telephone 24/7 Worldwide Emergency Telephone: CHEMTREC on +1-703-527-3887 / +1-800-424-9300.

National emergency telephone number 24/7 Worldwide Emergency Telephone Number for Hazardous Materials Incident, Spill, Leak, Fire, Exposure or Accident: CHEMTREC on +1 703-741-5970 / +1-800-424-9300.

2. Hazard(s) identification

Classification of the substance or mixture

Physical hazards Flam. Liq. 2 - H225

Health hazards Eye Irrit. 2A - H319 Muta. 2 - H341 Carc. 1B - H350

Environmental hazards Not Classified

Label elements

Z85 PERFO

Hazard symbols



Signal word

Danger

Hazard statements

H225 Highly flammable liquid and vapor.
 H319 Causes serious eye irritation.
 H341 Suspected of causing genetic defects.
 H350 May cause cancer.

Precautionary statements

P210 Keep away from heat, sparks, open flames and hot surfaces. No smoking.
 P243 Take precautionary measures against static discharge.
 P273 Avoid release to the environment.
 P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.
 P370+P378 In case of fire: Use alcohol resistant foam, carbon dioxide or dry powder to extinguish.
 P501 Dispose of contents/ container in accordance with national regulations.

Contains

Isoprene Stabilised, Proprietary

Other hazards

Hazards not otherwise classified (HNOC)

Risk of explosion if heated under confinement.

3. Composition/information on ingredients

Mixtures

Ethanol CAS number: 64-17-5	>60-<90%
Classification Flam. Liq. 2 - H225 Eye Irrit. 2A - H319	
Isoprene Stabilised CAS number: 78-79-5	>5-<20%
Classification Flam. Liq. 1 - H224 Muta. 2 - H341 Carc. 1B - H350 Aquatic Chronic 3 - H412	
Proprietary CAS number: Proprietary	>5-<20%
Classification Flam. Liq. 2 - H225 Eye Irrit. 2A - H319 Carc. 2 - H351 STOT SE 3 - H335	

Z85 PERFO

The full text for all hazard statements is displayed in Section 16.

4. First-aid measures

Description of first aid measures

General information	Remove affected person from source of contamination. Place unconscious person on their side in the recovery position and ensure breathing can take place.
Inhalation	Remove affected person from source of contamination. Move affected person to fresh air and keep warm and at rest in a position comfortable for breathing. Get medical attention if any discomfort continues.
Ingestion	Do not induce vomiting. Never give anything by mouth to an unconscious person. Get medical attention immediately.
Skin Contact	Remove contaminated clothing immediately and wash skin with soap and water. Get medical attention if any discomfort continues.
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 if any discomfort continues.

Most important symptoms and effects, both acute and delayed

Inhalation	Vapors in high concentrations are anesthetic. Symptoms following overexposure may include the following: Headache. Fatigue. Dizziness. Central nervous system depression.
Ingestion	Aspiration hazard if swallowed. Entry into the lungs following ingestion or vomiting may cause chemical pneumonitis.
Skin contact	Skin irritation. Prolonged contact may cause redness, irritation and dry skin.
Eye contact	No specific symptoms known.

Indication of immediate medical attention and special treatment needed

Notes for the doctor	Treat symptomatically.
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5. Fire-fighting measures

Extinguishing media

Suitable extinguishing media	Extinguish with alcohol-resistant foam, carbon dioxide, dry powder or water fog.
Unsuitable extinguishing media	Do not use water jet as an extinguisher, as this will spread the fire.

Special hazards arising from the substance or mixture

Specific hazards	Vapors are heavier than air and may spread near ground and travel a considerable distance to a source of ignition and flash back. Vapors may form explosive mixtures with air. Containers can burst violently or explode when heated, due to excessive pressure build-up.
Hazardous combustion products	Thermal decomposition or combustion products may include the following substances: Oxides of carbon.
<u>Advice for firefighters</u>	
Protective actions during firefighting	Avoid breathing fire gases or vapors. Use water to keep fire exposed containers cool and disperse vapors. Control run-off water by containing and keeping it out of sewers and watercourses.
Special protective equipment for firefighters	Wear positive-pressure self-contained breathing apparatus (SCBA) and appropriate protective clothing.

6. Accidental release measures

Z85 PERFO

Personal precautions, protective equipment and emergency procedures

Personal precautions Wear protective clothing as described in Section 8 of this safety data sheet. Use suitable respiratory protection if ventilation is inadequate. No smoking, sparks, flames or other sources of ignition near spillage. Avoid inhalation of vapors and contact with skin and eyes. Provide adequate ventilation. Take precautionary measures against static discharges.

Environmental precautions

Environmental precautions Do not discharge into drains or watercourses or onto the ground. Avoid the spillage or runoff entering drains, sewers or watercourses.

Methods and material for containment and cleaning up

Methods for cleaning up Stop leak if safe to do so. Eliminate all sources of ignition. No smoking, sparks, flames or other sources of ignition near spillage. Provide adequate ventilation. Wear suitable protective equipment, including gloves, goggles/face shield, respirator, boots, clothing or apron, as appropriate. Absorb in vermiculite, dry sand or earth and place into containers. Collect and place in suitable waste disposal containers and seal securely.

Reference to other sections For personal protection, see Section 8. For waste disposal, see Section 13.

7. Handling and storage

Precautions for safe handling

Usage precautions Do not use in confined spaces without adequate ventilation and/or respirator. Eliminate all sources of ignition. Keep away from heat, sparks and open flame. Avoid spilling. Avoid inhalation of vapors/spray and contact with skin and eyes. Static electricity and formation of sparks must be prevented. Storage tanks and other containers must be grounded.

Conditions for safe storage, including any incompatibilities

Storage precautions Store in tightly-closed, original container in a dry, cool and well-ventilated place. Keep away from heat, sparks and open flame. Store in a demarcated bunded area to prevent release to drains and/or watercourses. Risk of explosion if heated under confinement.

Storage class Flammable liquid storage.

Specific end uses(s)

Specific end use(s) The identified uses for this product are detailed in Section 1.

8. Exposure controls/Personal protection

Control parameters

Occupational exposure limits

Ethanol

Short-term exposure limit (15-minute): ACGIH 1000 ppm

A3

Long-term exposure limit (8-hour TWA): OSHA 1000 ppm 1900 mg/m³

Proprietary

Long-term exposure limit (8-hour TWA): ACGIH 20 ppm

A3, Sk

Long-term exposure limit (8-hour TWA): OSHA 100 ppm 360 mg/m³

Sk

ACGIH = American Conference of Governmental Industrial Hygienists.

A3 = Confirmed Animal Carcinogen with Unknown Relevance to Humans.

OSHA = Occupational Safety and Health Administration.

Sk = Danger of cutaneous absorption.

Exposure controls

Z85 PERFO

Protective equipment



Appropriate engineering controls

Provide adequate general and local exhaust ventilation. This product must not be handled in a confined space without adequate ventilation.

Eye/face protection

The following protection should be worn: Chemical splash goggles. Personal protective equipment for eye and face protection should comply with OSHA 1910.133.

Hand protection

The most suitable glove should be chosen in consultation with the glove supplier/manufacture, who can provide information about the breakthrough time of the glove material. To protect hands from chemicals, gloves should comply with OSHA 1910.138 and be demonstrated to be impervious to the chemical and resist degradation.

Other skin and body protection

Wear suitable protective clothing as protection against splashing or contamination.

Hygiene measures

Wash at the end of each work shift and before eating, smoking and using the toilet. Wash promptly with soap and water if skin becomes contaminated. Do not smoke in work area. When using do not eat, drink or smoke.

Respiratory protection

If ventilation is inadequate, suitable respiratory protection must be worn. Half mask and quarter mask respirators with replaceable filter cartridges should comply with OSHA 1910.134. Wear a respirator fitted with the following cartridge: Gas filter, type AX.

Environmental exposure controls

Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels. Store in a demarcated bunded area to prevent release to drains and/or watercourses.

9. Physical and chemical properties

Information on basic physical and chemical properties

Appearance	Liquid.
Color	Colorless. to Pale pink.
Odor	Characteristic.
Odor threshold	Not available.
pH	Not available.
Melting point	Not available.
Initial boiling point and range	38.3 - 100°C (ASTM D86)
Flash point	<-30°C Not specified. (Abel, IP170)
Evaporation rate	Not available.
Evaporation factor	Not available.
Flammability (solid, gas)	Not applicable.
Upper/lower flammability or explosive limits	Not available.
Vapor pressure	37.8 kPa @ 50.0°C (ASTM D5191)
Relative density	0.804

Z85 PERFO

Solubility(ies)	Not available.
Partition coefficient	Not available.
Auto-ignition temperature	Not available.
Decomposition Temperature	Not available.
Viscosity	Kinematic viscosity ≤ 20.5 mm ² /s.
Other information	None.

10. Stability and reactivity

Reactivity	The following materials may react with the product: Strong oxidizing agents.
Stability	Stable at normal ambient temperatures and when used as recommended. Avoid the following conditions: Heat, sparks, flames.
Possibility of hazardous reactions	Will not polymerize. Risk of explosion if heated under confinement.
Conditions to avoid	Avoid heat, flames and other sources of ignition.
Materials to avoid	Strong oxidizing agents.
Hazardous decomposition products	Heating may generate the following products: Oxides of carbon.

11. Toxicological information

Information on toxicological effects

Toxicological effects Information given is based on data of the components and of similar products.

Serious eye damage/irritation

Serious eye damage/irritation Causes eye irritation.

Germ cell mutagenicity

Genotoxicity - in vitro Known or suspected mutagen.

Carcinogenicity

Carcinogenicity Contains a substance which may be potentially carcinogenic.

Toxicological information on ingredients.

Ethanol

Acute toxicity - oral

Notes (oral LD₅₀) LD₅₀ 10470 mg/kg, Oral, Rat (OECD 401)
Based on available data the classification criteria are not met.

Acute toxicity - dermal

Notes (dermal LD₅₀) Based on available data the classification criteria are not met. Read-across data.
LD₅₀ 17100 mg/kg, bw, Dermal, Rabbit

Acute toxicity - inhalation

Notes (inhalation LC₅₀) Based on available data the classification criteria are not met.
LC₅₀ 117-125 mg/l, Inhalation, Rat (OECD 403)

Z85 PERFO

Skin corrosion/irritation

Skin corrosion/irritation Not irritating.

Animal data Erythema/eschar score: No erythema (0).

Serious eye damage/irritation

Serious eye damage/irritation Causes serious eye irritation.

Skin sensitization

Skin sensitization Guinea pig maximization test (GPMT) - Guinea pig: Not sensitizing. (OECD 406)

Germ cell mutagenicity

Genotoxicity - in vitro Gene mutation:: Negative. (Method equivalent or similar to OECD 471)

Genotoxicity - in vivo Chromosome aberration: Negative. (OECD 478)

Carcinogenicity

Carcinogenicity NOAEL >3000 mg/kg, Oral, Rat Conclusive data but not sufficient for classification.

IARC carcinogenicity IARC Group 1 Carcinogenic to humans.

Reproductive toxicity

Reproductive toxicity - fertility Based on available data the classification criteria are not met. (OECD 416)

Reproductive toxicity - development This substance has no evidence of toxicity to reproduction.

Specific target organ toxicity - repeated exposure

STOT - repeated exposure NOAEL 1730 mg/kg, Oral, Rat

Target organs Gastro-intestinal tract Liver

Skin Contact No specific health hazards known. Not a skin sensitizer.

Eye contact Irritating to eyes.

Route of exposure Inhalation Ingestion.

Isoprene Stabilised

Toxicological effects The toxicity of this substance has been assessed during REACH registration.

Acute toxicity - oral

Notes (oral LD₅₀) LD₅₀ 2125 mg/kg, bw, Oral, Rat

Acute toxicity - dermal

Notes (dermal LD₅₀) LD₅₀ >2000 mg/kg, Dermal, Rat (OECD 402)

Acute toxicity - inhalation

Notes (inhalation LC₅₀) LC₅₀ 214000 mg/m³, Air, Inhalation, Mouse

Skin corrosion/irritation

Animal data Slightly irritating.

Serious eye damage/irritation

Z85 PERFO

Serious eye damage/irritation	May cause eye irritation.
<u>Skin sensitization</u>	
Skin sensitization	Read-across data. Guinea pig maximization test (GPMT) - Guinea pig: Not sensitizing. (OECD 406)
<u>Germ cell mutagenicity</u>	
Genotoxicity - in vitro	Known or suspected mutagen.
Genotoxicity - in vivo	Known or suspected mutagen.
<u>Carcinogenicity</u>	
Carcinogenicity	Suspected carcinogen based on limited evidence.
IARC carcinogenicity	IARC Group 2B Possibly carcinogenic to humans.
NTP carcinogenicity	Reasonably anticipated to be a human carcinogen.
<u>Reproductive toxicity</u>	
Reproductive toxicity - fertility	No evidence of reproductive toxicity in animal studies.
Reproductive toxicity - development	No evidence of reproductive toxicity in animal studies.
<u>Specific target organ toxicity - repeated exposure</u>	
STOT - repeated exposure	Not classified as a specific target organ toxicant after repeated exposure.

Proprietary

<u>Acute toxicity - oral</u>	
Notes (oral LD₅₀)	Based on available data the classification criteria are not met.
<u>Acute toxicity - dermal</u>	
Notes (dermal LD₅₀)	Based on available data the classification criteria are not met.
<u>Acute toxicity - inhalation</u>	
Notes (inhalation LC₅₀)	Based on available data the classification criteria are not met.
<u>Skin corrosion/irritation</u>	
Skin corrosion/irritation	Based on available data the classification criteria are not met.
<u>Serious eye damage/irritation</u>	
Serious eye damage/irritation	Causes serious eye irritation.
<u>Respiratory sensitization</u>	
Respiratory sensitization	Based on available data the classification criteria are not met.
<u>Germ cell mutagenicity</u>	
Genotoxicity - in vitro	Based on available data the classification criteria are not met.
<u>Carcinogenicity</u>	
Carcinogenicity	May cause cancer.
IARC carcinogenicity	IARC Group 2B Possibly carcinogenic to humans.

Z85 PERFO

NTP carcinogenicity	Reasonably anticipated to be a human carcinogen.
<u>Reproductive toxicity</u>	
Reproductive toxicity - fertility	Based on available data the classification criteria are not met.
<u>Specific target organ toxicity - single exposure</u>	
STOT - single exposure	May cause respiratory system irritation.
<u>Specific target organ toxicity - repeated exposure</u>	
STOT - repeated exposure	Based on available data the classification criteria are not met.
<u>Aspiration hazard</u>	
Aspiration hazard	Based on available data the classification criteria are not met.

12. Ecological information

Ecotoxicity The product components are not classified as environmentally hazardous.

Ecological information on ingredients.

Ethanol

Ecotoxicity The product is not expected to be hazardous to the environment.

Isoprene Stabilised

Ecotoxicity Dangerous for the environment if discharged into watercourses.

Proprietary

Ecotoxicity Not regarded as dangerous for the environment.

Ecological information on ingredients.

Ethanol

Acute aquatic toxicity

Acute toxicity - fish	LC ₅₀ , 24 hours: 11200 mg/l, Freshwater fish
Acute toxicity - aquatic invertebrates	EC ₅₀ , 48 hours: 5012 mg/l, Freshwater invertebrates EC ₅₀ , 24 hours: 857 mg/l, Marinewater invertebrates
Acute toxicity - aquatic plants	EC ₅₀ , 72 hours: 275 mg/l, Freshwater plants EC ₅₀ , 96 hours: 14100 mg/l, Marinewater algae
Acute toxicity - microorganisms	EC ₅₀ , 4 hours: 5800 mg/l, Pseudomonas putida
Acute toxicity - terrestrial	LC ₅₀ , 48 hours: 0.1 - 1 mg/cm ² , Eisenia Fetida (Earthworm)
<u>Chronic aquatic toxicity</u>	
Chronic toxicity - fish early life stage	NOEC, >4 days: 250 mg/l, Freshwater fish
Chronic toxicity - aquatic invertebrates	NOEC, 10 days: 9.6 mg/l, Freshwater invertebrates NOEC, 10 days: 79 mg/l, Marinewater invertebrates

Isoprene Stabilised

Z85 PERFO

Acute aquatic toxicity

Acute toxicity - fish LC₅₀, 96 hours: 7.43 mg/l, Oncorhynchus mykiss (Rainbow trout)

Acute toxicity - aquatic invertebrates EC₅₀, 48 hours: 5.77 mg/l, Daphnia magna

Acute toxicity - aquatic plants EbC50, 72 hours: >35.2 mg/l, Pseudokirchneriella subcapitata

Chronic aquatic toxicity

Chronic toxicity - fish early life stage Calculation method., 30 days: 1.76 mg/l, Fish

Proprietary

Acute aquatic toxicity

Acute toxicity - fish LC₅₀, 96 hours: >6700 mg/l, Menidia peninsulae (Tidewater silverside)

Chronic aquatic toxicity

Chronic toxicity - aquatic invertebrates NOEC, : 1000 mg/l, Daphnia magna

Persistence and degradability

Ecological information on ingredients.

Ethanol

Persistence and degradability The product is readily biodegradable.

Phototransformation Air - Half-life 100%: 38 hours

Biodegradation Water - Degradation (%) 60: > 5 days
The substance is readily biodegradable.

Isoprene Stabilised

Persistence and degradability Inherently biodegradable.

Biodegradation Inherently biodegradable.

Proprietary

Persistence and degradability Not determined.

Bioaccumulative potential

Partition coefficient Not available.

Ecological information on ingredients.

Ethanol

Bio-Accumulative Potential Low bioaccumulation potential

Partition coefficient log Kow: -0.35

Z85 PERFO**Isoprene Stabilised**

Partition coefficient log Kow: 2.42

Proprietary

Bio-Accumulative Potential Not determined.

Partition coefficient log Pow: -0.42

Mobility in soil**Ecological information on ingredients.****Ethanol**

Mobility The product is soluble in water.

Adsorption/desorption coefficient Soil - Koc: 1 @ °C Read-across data. Calculation method. Expected to have a low potential for adsorption.

Henry's law constant No data available.

Isoprene Stabilised

Henry's law constant 7782 Pa m³/mol @ 25°C

Other adverse effects**Ecological information on ingredients.****Ethanol**

Other adverse effects Not available.

Proprietary

Other adverse effects Avoid release to the environment.

13. Disposal considerations**Waste treatment methods**

General information Waste is classified as hazardous waste. The generation of waste should be minimized or avoided wherever possible. External recovery, treatment, recycling and disposal of waste should comply with all applicable local and/or national regulations.

Disposal methods Dispose of waste to licensed waste disposal site in accordance with the requirements of the local Waste Disposal Authority. Dispose of waste via a licensed waste disposal contractor.

Waste class Waste is classified as hazardous waste.

14. Transport information**UN Number**

UN No. (TDG) 1993

UN No. (IMDG) 1993

UN No. (ICAO) 1993

UN No. (DOT) UN1993

UN proper shipping name

Z85 PERFO

Proper shipping name (TDG) FLAMMABLE LIQUID, N.O.S. (Contains Isoprene and Ethanol)

Proper shipping name (IMDG) FLAMMABLE LIQUID, N.O.S. (Contains Isoprene and Ethanol)

Proper shipping name (ICAO) FLAMMABLE LIQUID, N.O.S. (Contains Isoprene and Ethanol)

Proper shipping name (DOT) FLAMMABLE LIQUIDS, N.O.S. (CONTAINS Ethanol, Isoprene Stabilized)

Transport hazard class(es)

DOT hazard class 3

DOT hazard label 3

TDG class 3

TDG label(s) 3

IMDG Class 3

ICAO class/division 3

Transport labels**DOT transport labels****Packing group**

TDG Packing Group II

IMDG packing group II

ICAO packing group II

DOT packing group II

Environmental hazards

Environmentally Hazardous Substance

No.

Special precautions for user

EmS F-E, S-E

DOT reportable quantity RQ: Isoprene (666.6667 lbs), RQ: 1,4-Dioxane (1000 lbs)

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

15. Regulatory information**US Federal Regulations**

CERCLA/Superfund, Hazardous Substances/Reportable Quantities (EPA)

Isoprene Stabilised

Final CERCLA RQ: 100(45.4) pounds (Kilograms)

Z85 PERFO

SARA 313 Emission Reporting

Isoprene Stabilised

0.1 %

CAA Accidental Release Prevention

Isoprene Stabilised

Threshold Quantity: 10000 lbs

US State Regulations

California Proposition 65 Carcinogens and Reproductive Toxins

Isoprene Stabilised

Carcinogen.

California Air Toxics "Hot Spots" (A-I)

Isoprene Stabilised

Present.

Massachusetts "Right To Know" List

Ethanol

Present.

Isoprene Stabilised

Present.

Rhode Island "Right To Know" List

Ethanol

Present.

Isoprene Stabilised

Present.

Minnesota "Right To Know" List

Ethanol

Present.

Isoprene Stabilised

Present.

New Jersey "Right To Know" List

Ethanol

Present.

Isoprene Stabilised

Present.

Pennsylvania "Right To Know" List

Ethanol

Present.

Isoprene Stabilised

Present.

Z85 PERFO**Inventories****EU - EINECS/ELINCS***Ethanol*

Yes

*Isoprene Stabilised***US - TSCA***Ethanol*

Present.

*Isoprene Stabilised***Japan - ENCS***Ethanol*

Yes

*Isoprene Stabilised***Korea - KECI***Ethanol***16. Other information**

Revision comments	Update: Section 1.4
Issued by	HCS Group Technical Team
Revision date	5/12/2022
Revision	2
Supersedes date	4/3/2020
SDS No.	22624
Hazard statements in full	H224 Extremely flammable liquid and vapor. H225 Highly flammable liquid and vapor. H319 Causes serious eye irritation. H335 May cause respiratory irritation. H341 Suspected of causing genetic defects. H350 May cause cancer. H351 Suspected of causing cancer. H412 Harmful to aquatic life with long lasting effects.