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SAFETY DATA SHEET
HEATLOK HFO PRO B

According to Regulation (EC) No 1907/2006, Annex II, as amended. Commission Regulation (EU) No 2015/830 of 28 May 2015.

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

1.1. Product identifier

Product name HEATLOK HFO PRO B

Product number HEATLOK HFO PRO - RESIN

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

Identified uses Component of a Polyurethane System.

Uses advised against No specific uses advised against are identified.

1.3. Details of the supplier of the safety data sheet

Supplier Huntsman Building Solutions (HBS)
Station Road, Roydon, King's Lynn, Norfolk, PE32 1AW, United Kingdom
Telephone: +44 (0)1485 500668
Email: info@demilecuk.com

E-mail address of person responsible for the SDS sds-records@ifs-group.com

1.4. Emergency telephone number

Emergency telephone +44 (0)7795 093 276, +44 (0)7592 112 443

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification (EC 1272/2008)

Physical hazards Not Classified

Health hazards Acute Tox. 4 - H302 Skin Irrit. 2 - H315 Eye Dam. 1 - H318 Skin Sens. 1 - H317 Repr. 1B - H360FD STOT RE 1 - H372

Environmental hazards Aquatic Chronic 3 - H412

2.2. Label elements

Hazard pictograms

Signal word Danger

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HEATLOK HFO PRO B

According to Regulation (EC) No 1907/2006, Annex II, as amended. Commission Regulation (EU) No 2015/830 of 28 May 2015.

Hazard statements	H302 Harmful if swallowed. H315 Causes skin irritation. H318 Causes serious eye damage. H317 May cause an allergic skin reaction. H360FD May damage fertility. May damage the unborn child. H372 Causes damage to organs through prolonged or repeated exposure. H412 Harmful to aquatic life with long lasting effects.
Precautionary statements	P201 Obtain special instructions before use. P260 Do not breathe vapour/ spray. P273 Avoid release to the environment. P280 Wear protective gloves/ protective clothing/ eye protection/ face protection. P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. P308+P313 IF exposed or concerned: Get medical advice/ attention. P310 Immediately call a POISON CENTER/ doctor.
Contains	2,6-bis[[bis(2-hydroxyethyl)amino]methyl]-4-nonylphenol, 2,2'-Oxydiethanol, Tris(2-chloro-1-methylethyl) phosphate, Triethyl phosphate, Halogenated polyetherpolyol B 350, Ethane-1,2-diol, Cyclohexyldimethylamine, 1,2-Dimethylimidazole, Dibutylbis(dodecylthio)stannane
Supplementary precautionary statements	P202 Do not handle until all safety precautions have been read and understood. P261 Avoid breathing vapour/ spray. P264 Wash contaminated skin thoroughly after handling. P270 Do not eat, drink or smoke when using this product. P272 Contaminated work clothing should not be allowed out of the workplace. P301+P312 IF SWALLOWED: Call a POISON CENTRE/doctor if you feel unwell. P302+P352 IF ON SKIN: Wash with plenty of water. P314 Get medical advice/ attention if you feel unwell. P321 Specific treatment (see medical advice on this label). P330 Rinse mouth. P332+P313 If skin irritation occurs: Get medical advice/ attention. P333+P313 If skin irritation or rash occurs: Get medical advice/ attention. P362+P364 Take off contaminated clothing and wash it before reuse. P405 Store locked up. P501 Dispose of contents/ container in accordance with national regulations.

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

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HEATLOK HFO PRO B

According to Regulation (EC) No 1907/2006, Annex II, as amended. Commission Regulation (EU) No 2015/830 of 28 May 2015.

2,6-bis[[bis(2-hydroxyethyl)amino]methyl]-4-nonylphenol **10-30%**

CAS number: 20073-51-2 EC number: 243-500-6 REACH registration number: 01-2120814845-50-XXXX

M factor (Acute) = 1

Classification

Acute Tox. 4 - H302
Skin Irrit. 2 - H315
Eye Dam. 1 - H318
Skin Sens. 1 - H317
Repr. 2 - H361
STOT RE 1 - H372
Aquatic Acute 1 - H400
Aquatic Chronic 2 - H411

(1E)-1-Chloro-3,3,3-trifluoroprop-1-ene **10-30%**

CAS number: 102687-65-0 EC number: 700-486-0 REACH registration number: 01-2119855084-38-XXXX

Classification

Press. Gas (Liq.) - H280
Aquatic Chronic 3 - H412

2,2'-Oxydiethanol **1-5%**

CAS number: 111-46-6 EC number: 203-872-2 REACH registration number: 01-2119457857-21-XXXX

Classification

Acute Tox. 4 - H302

Tris(2-chloro-1-methylethyl) phosphate **1-5%**

CAS number: 1244733-77-4 EC number: 807-935-0 REACH registration number: 01-2119486772-26-XXXX

Classification

Acute Tox. 4 - H302

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HEATLOK HFO PRO B

According to Regulation (EC) No 1907/2006, Annex II, as amended. Commission Regulation (EU) No 2015/830 of 28 May 2015.

Triethyl phosphate			**1-5%**
CAS number: 78-40-0	EC number: 201-114-5	REACH registration number: 01-2119492852-28-XXXX	
Classification Acute Tox. 4 - H302 Eye Irrit. 2 - H319			
Halogenated polyetherpolyol B 350			**1-5%**
CAS number: 68441-62-3	EC number: 614-503-3	REACH registration number: 01-2119533103-55-XXXX	
Classification Acute Tox. 4 - H302 Eye Irrit. 2 - H319			
Ethane-1,2-diol			**1-5%**
CAS number: 107-21-1	EC number: 203-473-3	REACH registration number: 01-2119456816-28-XXXX	
Classification Acute Tox. 4 - H302 STOT RE 2 - H373			
Cyclohexyldimethylamine			**<1%**
CAS number: 98-94-2	REACH registration number: 01-2119533030-60-XXXX		
Classification Flam. Liq. 3 - H226 Acute Tox. 3 - H301 Acute Tox. 3 - H311 Acute Tox. 3 - H331 Skin Corr. 1B - H314 Eye Dam. 1 - H318 Aquatic Chronic 2 - H411			

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HEATLOK HFO PRO B

According to Regulation (EC) No 1907/2006, Annex II, as amended. Commission Regulation (EU) No 2015/830 of 28 May 2015.

1,2-Dimethylimidazole		**<1%**
CAS number: 1739-84-0	EC number: 217-101-2	REACH registration number: 01-2119977103-39-XXXX

Classification
Acute Tox. 4 - H302
Skin Irrit. 2 - H315
Eye Dam. 1 - H318
Skin Sens. 1B - H317

Dibutylbis(dodecylthio)stannane		**<1%**
CAS number: 1185-81-5	EC number: 214-688-7	REACH registration number: 01-2119841260-50-XXXX
M factor (Acute) = 1	M factor (Chronic) = 1	

Classification
Acute Tox. 4 - H312
Skin Irrit. 2 - H315
Skin Sens. 1 - H317
Muta. 2 - H341
Repr. 1B - H360FD
STOT RE 1 - H372
Aquatic Acute 1 - H400
Aquatic Chronic 1 - H410

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 Get medical attention if any discomfort continues. 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. Loosen tight clothing such as collar, tie or belt. Get medical attention if symptoms are severe or persist.

Ingestion Rinse mouth thoroughly with water. Give a few small glasses of water or milk to drink. Stop if the affected person feels sick as vomiting may be dangerous. Never give anything by mouth to an unconscious person. Place unconscious person on their side in the recovery position and ensure breathing can take place. Keep affected person under observation. Get medical attention if symptoms are severe or persist.

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HEATLOK HFO PRO B

According to Regulation (EC) No 1907/2006, Annex II, as amended. Commission Regulation (EU) No 2015/830 of 28 May 2015.

Skin contact	It is important to remove the substance from the skin immediately. In the event of any sensitisation symptoms developing, ensure further exposure is avoided. Remove contamination with soap and water or recognised skin cleansing agent. Get medical attention if symptoms are severe or persist after washing.
Eye contact	Rinse immediately with plenty of water. Do not rub eye. Remove any contact lenses and open eyelids wide apart. Continue to rinse for at least 15 minutes and get medical attention.
Protection of first aiders	First aid personnel should wear appropriate protective equipment during any rescue.

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

General information	The severity of the symptoms described will vary dependent on the concentration and the length of exposure.
Inhalation	A single exposure may cause the following adverse effects: Temporary irritation.
Ingestion	May cause sensitisation or allergic reactions in sensitive individuals. May cause discomfort if swallowed. Stomach pain. Nausea, vomiting.
Skin contact	May cause skin sensitisation or allergic reactions in sensitive individuals. Redness. Irritating to skin.
Eye contact	Causes serious eye damage. Symptoms following overexposure may include the following: Pain. Profuse watering of the eyes. Redness.

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

Notes for the doctor	Treat symptomatically. May cause sensitisation or allergic reactions in sensitive individuals.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media	The product is not flammable. Extinguish with alcohol-resistant foam, carbon dioxide, dry powder or water fog. Use fire-extinguishing media suitable for the surrounding fire.
Unsuitable extinguishing media	Do not use water jet as an extinguisher, as this will spread the fire.

5.2. Special hazards arising from the substance or mixture

Specific hazards	Containers can burst violently or explode when heated, due to excessive pressure build-up. This product is toxic.
Hazardous combustion products	Thermal decomposition or combustion products may include the following substances: Toxic gases or vapours.

5.3. Advice for firefighters

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According to Regulation (EC) No 1907/2006, Annex II, as amended. Commission Regulation (EU) No 2015/830 of 28 May 2015.

Protective actions during firefighting	Avoid breathing fire gases or vapours. Evacuate area. Keep upwind to avoid inhalation of gases, vapours, fumes and smoke. Ventilate closed spaces before entering them. Cool containers exposed to heat with water spray and remove them from the fire area if it can be done without risk. Cool containers exposed to flames with water until well after the fire is out. If a leak or spill has not ignited, use water spray to disperse vapours and protect men stopping the leak. Avoid discharge to the aquatic environment. Control run-off water by containing and keeping it out of sewers and watercourses. If risk of water pollution occurs, notify appropriate authorities.
Special protective equipment for firefighters	Wear positive-pressure self-contained breathing apparatus (SCBA) and appropriate protective clothing. Firefighter's clothing conforming to European standard EN469 (including helmets, protective boots and gloves) will provide a basic level of protection for chemical incidents.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Personal precautions	Wear protective clothing as described in Section 8 of this safety data sheet. No action shall be taken without appropriate training or involving any personal risk. Do not touch or walk into spilled material. Avoid contact with skin and eyes.

6.2. Environmental precautions

Environmental precautions	Avoid discharge into drains or watercourses or onto the ground. Avoid discharge to the aquatic environment.

6.3. Methods and material for containment and cleaning up

Methods for cleaning up	Wear protective clothing as described in Section 8 of this safety data sheet. Clear up spills immediately and dispose of waste safely. Provide adequate ventilation. Small Spillages: Collect spillage. Large Spillages: Absorb spillage with non-combustible, absorbent material. The contaminated absorbent may pose the same hazard as the spilled material. Collect and place in suitable waste disposal containers and seal securely. Label the containers containing waste and contaminated materials and remove from the area as soon as possible. Flush contaminated area with plenty of water. Wash thoroughly after dealing with a spillage. Dangerous for the environment. Do not empty into drains. For waste disposal, see Section 13.

6.4. Reference to other sections

Reference to other sections	For personal protection, see Section 8. See Section 11 for additional information on health hazards. See Section 12 for additional information on ecological hazards. For waste disposal, see Section 13.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

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According to Regulation (EC) No 1907/2006, Annex II, as amended. Commission Regulation (EU) No 2015/830 of 28 May 2015.

Usage precautions	Read and follow manufacturer's recommendations. Wear protective clothing as described in Section 8 of this safety data sheet. Keep away from food, drink and animal feeding stuffs. Handle all packages and containers carefully to minimise spills. Keep container tightly sealed when not in use. Avoid the formation of mists. May damage fertility. May damage the unborn child. Pregnant or breastfeeding women should not work with this product if there is any risk of exposure. Avoid discharge to the aquatic environment. Do not handle until all safety precautions have been read and understood. Do not handle broken packages without protective equipment. Do not reuse empty containers.
Advice on general occupational hygiene	Wash promptly if skin becomes contaminated. Take off contaminated clothing. Wash contaminated clothing before reuse.

7.2. Conditions for safe storage, including any incompatibilities

Storage precautions	Store away from incompatible materials (see Section 10). Keep only in the original container. Keep container tightly closed, in a cool, well ventilated place. Keep containers upright. Protect containers from damage.
Storage class	Miscellaneous hazardous material 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

2,2'-Oxydiethanol

Long-term exposure limit (8-hour TWA): WEL 23 ppm 101 mg/m³

Halogenated polyetherpolyol B 350

Long-term exposure limit (8-hour TWA): WEL 0.32 ppm 6.0 mg/m³

Ethane-1,2-diol

Long-term exposure limit (8-hour TWA): WEL 20 ppm 52 mg/m³ vapour
Short-term exposure limit (15-minute): WEL 40 ppm 104 mg/m³ vapour
Sk
Long-term exposure limit (8-hour TWA): WEL 10 mg/m³ particulate
Sk

Dibutylbis(dodecylthio)stannane

Long-term exposure limit (8-hour TWA): WEL 0.1 mg/m³
Short-term exposure limit (15-minute): WEL 0.2 mg/m³
as Sn
Sk

WEL = Workplace Exposure Limit.
Sk = Can be absorbed through the skin.

2,6-bis[[bis(2-hydroxyethyl)amino]methyl]-4-nonylphenol (CAS: 20073-51-2)

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HEATLOK HFO PRO B

According to Regulation (EC) No 1907/2006, Annex II, as amended. Commission Regulation (EU) No 2015/830 of 28 May 2015.

DNEL

Workers - Inhalation; Long term systemic effects: 4.11 mg/m³
Workers - Dermal; Long term systemic effects: 1.17 mg/kg bw/day
General population - Inhalation; Long term systemic effects: 725 µg/m³
General population - Dermal; Long term systemic effects: 417 µg/kg bw/day
General population - Oral; Long term systemic effects: 417 µg/kg bw/day

PNEC

Fresh water; 480 ng/l
Intermittent release; 480 ng/l
marine water; 48 ng/l
STP; 900 µg/l

(1E)-1-Chloro-3,3,3-trifluoroprop-1-ene (CAS: 102687-65-0)

DNEL

Workers - Inhalation; Long term systemic effects: 1,779 mg/m³
General population - Inhalation; Long term systemic effects: 379 mg/m³
General population - Oral; Long term systemic effects: 109 mg/kg bw/day

PNEC

Fresh water; 38 µg/l
Intermittent release; 380 µg/l
marine water; 3.8 µg/l
Sediment (Freshwater); 691 µg/kg dwt
Sediment (Marinewater); 69.1 µg/kg dwt
Soil; 126 µg/kg dwt

2,2'-Oxydiethanol (CAS: 111-46-6)

DNEL

Workers - Inhalation; Long term local effects: 60 mg/m³
Workers - Dermal; Long term systemic effects: 43 mg/kg bw/day
General population - Inhalation; Long term systemic effects: 12 mg/m³
General population - Inhalation; Long term local effects: 12 mg/m³
General population - Dermal; Long term systemic effects: 21 mg/kg bw/day

PNEC

Fresh water; 10 mg/l
Intermittent release; 10 mg/l
marine water; 1 mg/l
STP; 199.5 mg/l
Sediment (Freshwater); 20.9 mg/kg dwt
Sediment (Marinewater); 2.09 mg/kg dwt
Soil; 1.53 mg/kg dwt

Tris(2-chloro-1-methylethyl) phosphate (CAS: 1244733-77-4)

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HEATLOK HFO PRO B

According to Regulation (EC) No 1907/2006, Annex II, as amended. Commission Regulation (EU) No 2015/830 of 28 May 2015.

DNEL

Workers - Inhalation; Long term systemic effects: 5.82 mg/m³
Workers - Inhalation; Short term systemic effects: 5.82 mg/m³
Workers - Dermal; Long term systemic effects: 2.08 mg/kg bw/day
Workers - Dermal; Short term systemic effects: 2.08 mg/kg bw/day
General population - Inhalation; Long term systemic effects: 1.46 mg/m³
General population - Inhalation; Short term systemic effects: 1.46 mg/m³
General population - Dermal; Long term systemic effects: 1.04 mg/kg bw/day
General population - Dermal; Short term systemic effects: 1.04 mg/kg bw/day
General population - Oral; Long term systemic effects: 520 µg/kg bw/day
General population - Oral; Short term systemic effects: 520 µg/kg bw/day

PNEC

Fresh water; 420 - 640 µg/l
Intermittent release; 510 µg/l
marine water; 64 - 420 µg/l
STP; 7.84 mg/l
Sediment (Freshwater); 2.92 - 2.96 mg/kg dwt
Sediment (Marinewater); 290 - 2960 µg/kg dwt
Soil; 1.33 - 1.7 mg/kg dwt

Triethyl phosphate (CAS: 78-40-0)

DNEL

Consumer - Oral; Short term systemic effects: 10 mg/kg bw/day
Consumer - Oral; Long term systemic effects: 1.25 mg/kg bw/day
Consumer - Dermal; Short term systemic effects: 10.0 mg/kg bw/day
Consumer - Dermal; Long term systemic effects: 1.25 mg/kg bw/day
Consumer - Inhalation; Short term systemic effects: 17.36 mg/m³
Consumer - Inhalation; Long term systemic effects: 2.17 mg/m³
Workers - Dermal; Short term systemic effects: 26.6 mg/kg bw/day
Workers - Dermal; Long term systemic effects: 3.33 mg/kg bw/day
Workers - Inhalation; Short term systemic effects: 93.6 mg/m³
Workers - Inhalation; Long term systemic effects: 11.7 mg/m³

PNEC

Soil; 0.596 mg/kg dwt
STP; 298.5 mg/l
marine water; 0.0632 mg/l
Sediment (Freshwater); 4.83 mg/kg dwt
Fresh water; 0.632 mg/l

2,2'-Oxydiethanol, propoxylated (CAS: 9051-51-8)

DNEL

Workers - Inhalation; Long term systemic effects: 98 mg/m³
Workers - Dermal; Long term systemic effects: 13.9 mg/kg bw/day
General population - Inhalation; Long term systemic effects: 29 mg/m³
General population - Dermal; Long term systemic effects: 8.3 mg/kg bw/day
General population - Oral; Long term systemic effects: 8.3 mg/kg bw/day

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HEATLOK HFO PRO B

According to Regulation (EC) No 1907/2006, Annex II, as amended. Commission Regulation (EU) No 2015/830 of 28 May 2015.

PNEC	Fresh water; 200 µg/l Intermittent release; 1 mg/l marine water; 20 µg/l STP; 100 mg/l Sediment (Freshwater); 520 µg/kg dwt Sediment (Marinewater); 52 µg/kg dwt Soil; 66.5 µg/kg dwt

Sucrose, propoxylated (CAS: 9049-71-2)

DNEL	Consumer - Oral; Long term systemic effects: 8.3 mg/kg Consumer - Inhalation; Long term systemic effects: 29 mg/m³ Workers - Dermal; Long term systemic effects: 13.9 mg/kg Workers - Inhalation; Long term systemic effects: 98 mg/m³ Consumer - Dermal; Long term systemic effects: 8.3 mg/kg
PNEC	Fresh water; 0.2 mg/l marine water; 0.02 mg/l Intermittent release; 1 mg/l Sediment (Freshwater); 0.543 mg/kg Sediment (Marinewater); 0.0543 mg/kg Soil; 0.0745 mg/kg STP; 1,000 mg/l

Halogenated polyetherpolyol B 350 (CAS: 68441-62-3)

DNEL	Workers - Dermal; Long term systemic effects: 0.87 mg/kg Workers - Inhalation; Long term systemic effects: 6.0 mg/m³ General population - Oral; Long term systemic effects: 0.435 mg/kg bw/day General population - Inhalation; Long term systemic effects: 1.5 mg/m³
PNEC	Fresh water; 0.52 mg/l marine water; 0.052 mg/l Sediment (Freshwater); 2.6 mg/kg Sediment (Marinewater); 0.26 mg/kg Soil; 0.215 mg/kg STP; 1 mg/l Intermittent release; 5.2 mg/l

Ethane-1,2-diol (CAS: 107-21-1)

DNEL	Workers - Inhalation; Long term local effects: 35 mg/m³ Workers - Dermal; Long term systemic effects: 106 mg/kg bw/day General population - Inhalation; Long term local effects: 7 mg/m³ General population - Dermal; Long term systemic effects: 53 mg/kg bw/day

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HEATLOK HFO PRO B

According to Regulation (EC) No 1907/2006, Annex II, as amended. Commission Regulation (EU) No 2015/830 of 28 May 2015.

PNEC	Fresh water; 10 mg/l Intermittent release; 10 mg/l marine water; 1 mg/l STP; 199.5 mg/l Sediment (Freshwater); 37 mg/kg dwt Sediment (Marinewater); 3.7 mg/kg dwt Soil; 1.53 mg/kg dwt

1,1,3,3-Tetramethylguanidine (CAS: 80-70-6)

DNEL	Workers - Inhalation; Long term systemic effects: 1.2 mg/m³ Workers - Dermal; Long term systemic effects: 330 µg/kg bw/day General population - Inhalation; Long term systemic effects: 300 µg/m³ General population - Dermal; Long term systemic effects: 170 µg/kg bw/day General population - Oral; Long term systemic effects: 170 µg/kg bw/day
PNEC	Fresh water; 100 µg/l Intermittent release; 1 mg/l marine water; 10 µg/l STP; 1.7 mg/l Sediment (Freshwater); 640 µg/kg dwt Sediment (Marinewater); 64 µg/kg dwt Soil; 69.1 µg/kg dwt

1,2-Dimethylimidazole (CAS: 1739-84-0)

DNEL	Workers - Inhalation; Long term systemic effects: 4.4 mg/m³ Workers - Dermal; Long term systemic effects: 2.5 mg/kg bw/day Workers - Dermal; Long term local effects: 135 µg/cm²
PNEC	Fresh water; 58.1 µg/l Intermittent release; 581 µg/l marine water; 5.81 µg/l STP; 300 µg/l Sediment (Freshwater); 4.8 mg/kg dwt Sediment (Marinewater); 480 µg/kg dwt Soil; 924 µg/kg dwt

Succinic acid (CAS: 110-15-6)

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HEATLOK HFO PRO B

According to Regulation (EC) No 1907/2006, Annex II, as amended. Commission Regulation (EU) No 2015/830 of 28 May 2015.

DNEL

Workers - Inhalation; Long term systemic effects: 10 mg/m³
Workers - Inhalation; Short term systemic effects: 10 mg/m³
Workers - Inhalation; Long term local effects: 10 mg/m³
Workers - Inhalation; Short term local effects: 10 mg/m³
Workers - Dermal; Long term systemic effects: 71 mg/kg bw/day
Workers - Dermal; Short term systemic effects: 67 mg/kg bw/day
General population - Inhalation; Long term systemic effects: 10 mg/m³
General population - Inhalation; Short term systemic effects: 10 mg/m³
General population - Inhalation; Long term local effects: 10 mg/m³
General population - Inhalation; Short term local effects: 10 mg/m³
General population - Dermal; Long term systemic effects: 43 mg/kg bw/day
General population - Dermal; Short term systemic effects: 67 mg/kg bw/day
General population - Oral; Long term systemic effects: 43 mg/kg bw/day
General population - Oral; Short term systemic effects: 67 mg/kg bw/day

PNEC

Fresh water; 100 µg/l
Intermittent release; 1 mg/l
marine water; 10 µg/l
STP; 3 mg/l
Sediment (Freshwater); 79 µg/kg dwt
Sediment (Marinewater); 7.9 µg/kg dwt
Soil; 17.7 µg/kg dwt

Glutaric acid (CAS: 110-94-1)

DNEL

Workers - Inhalation; Long term systemic effects: 11.52 mg/m³
Workers - Inhalation; Short term systemic effects: 69.12 mg/m³
Workers - Dermal; Long term systemic effects: 3.27 mg/kg bw/day
Workers - Dermal; Short term systemic effects: 19.6 mg/kg bw/day
General population - Inhalation; Long term systemic effects: 2.84 mg/m³
General population - Inhalation; Short term systemic effects: 17.04 mg/m³
General population - Dermal; Long term systemic effects: 1.63 mg/kg bw/day
General population - Dermal; Short term systemic effects: 9.8 mg/kg bw/day
General population - Oral; Long term systemic effects: 1.63 mg/kg bw/day
General population - Oral; Short term systemic effects: 9.8 mg/kg bw/day

PNEC

Fresh water; 120 µg/l
Intermittent release; 1.2 mg/l
marine water; 12 µg/l
Sediment (Freshwater); 97 µg/kg dwt
Sediment (Marinewater); 9.7 µg/kg dwt
Soil; 2.2 µg/kg dwt

1-methylimidazole (CAS: 616-47-7)

DNEL

Workers - Inhalation; Long term systemic effects: 7.9 mg/m³
Workers - Dermal; Long term systemic effects: 2.25 mg/kg bw/day

HUNTSMAN

BUILDING SOLUTIONS

HEATLOK HFO PRO B

According to Regulation (EC) No 1907/2006, Annex II, as amended. Commission Regulation (EU) No 2015/830 of 28 May 2015.

PNEC	Fresh water; 100 µg/l Intermittent release; 1 mg/l marine water; 10 µg/l STP; 589.6 mg/l Sediment (Freshwater); 4.43 mg/kg dwt Sediment (Marinewater); 443 µg/kg dwt Soil; 825 µg/kg dwt

8.2. Exposure controls

Protective equipment

Appropriate engineering controls	Provide adequate general and local exhaust ventilation. Ensure the ventilation system is regularly maintained and tested. Good general ventilation should be adequate to control worker exposure to airborne contaminants. Observe any occupational exposure limits for the product or ingredients.
Eye/face protection	Wear tight-fitting, chemical splash goggles or face shield. If inhalation hazards exist, a full-face respirator may be required instead.
Hand protection	Wear protective gloves. 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. 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.
Other skin and body protection	Wear appropriate clothing to prevent any possibility of skin contact.
Hygiene measures	Wash after use and before eating, smoking and using the toilet. Do not eat, drink or smoke when using this product.
Respiratory protection	Ensure all respiratory protective equipment is suitable for its intended use and is ‘CE’-marked. Check that the respirator fits tightly and the filter is changed regularly. Gas and combination filter cartridges should comply with European Standard EN14387. Full face mask respirators with replaceable filter cartridges should comply with European Standard EN136. Half mask and quarter mask respirators with replaceable filter cartridges should comply with European Standard EN140.
Environmental exposure controls	Keep container tightly sealed when not in use. 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.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

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HEATLOK HFO PRO B

According to Regulation (EC) No 1907/2006, Annex II, as amended. Commission Regulation (EU) No 2015/830 of 28 May 2015.

Appearance	Liquid.
Colour	Blue.
Odour	Characteristic.
Odour threshold	No information available.
pH	No information available.
Melting point	<0°C
Initial boiling point and range	No information available.
Flash point	65°C
Evaporation rate	No information available.
Evaporation factor	No information available.
Flammability (solid, gas)	No information available.
Upper/lower flammability or explosive limits	No information available.
Other flammability	No information available.
Vapour pressure	No information available.
Vapour density	No information available.
Relative density	~ 1.2 @ 25°C
Bulk density	No information available.
Solubility(ies)	Slightly soluble in water.
Partition coefficient	No information available.
Auto-ignition temperature	No information available.
Decomposition Temperature	No information available.
Viscosity	~350 mPa s @ 25°C
Explosive properties	No information available.
Explosive under the influence of a flame	Not considered to be explosive.
Oxidising properties	Not known.
Comments	Information given is applicable to the product as supplied.

9.2. Other information

Other information	None.

SECTION 10: Stability and reactivity

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HEATLOK HFO PRO B

According to Regulation (EC) No 1907/2006, Annex II, as amended. Commission Regulation (EU) No 2015/830 of 28 May 2015.

10.1. Reactivity

Reactivity See the other subsections of this section for further details.

10.2. Chemical stability

Stability Stable at normal ambient temperatures and when used as recommended. Stable under the prescribed storage conditions.

10.3. Possibility of hazardous reactions

Possibility of hazardous reactions No potentially hazardous reactions known.

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 Does not decompose when used and stored as recommended. Thermal decomposition or combustion products may include the following substances: Toxic gases or vapours.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity - oral

Summary Harmful if swallowed.

ATE oral (mg/kg) 1,948.13

Acute toxicity - dermal

Summary Based on available data the classification criteria are not met.

ATE dermal (mg/kg) 54,285.71

Acute toxicity - inhalation

Summary Based on available data the classification criteria are not met.

ATE inhalation (vapours mg/l) 428.57

Skin corrosion/irritation

Summary Causes skin irritation.

Serious eye damage/irritation

Summary Causes serious eye damage.

Respiratory sensitisation

Summary Based on available data the classification criteria are not met.

Skin sensitisation

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HEATLOK HFO PRO B

According to Regulation (EC) No 1907/2006, Annex II, as amended. Commission Regulation (EU) No 2015/830 of 28 May 2015.

Summary	May cause an allergic skin reaction.

Germ cell mutagenicity

Summary	Based on available data the classification criteria are not met.

Carcinogenicity

Summary	Based on available data the classification criteria are not met.
IARC carcinogenicity	None of the ingredients are listed or exempt.

Reproductive toxicity

Summary	May damage fertility. May damage the unborn child.

Specific target organ toxicity - single exposure

Summary	Based on available data the classification criteria are not met.

Specific target organ toxicity - repeated exposure

Summary	Causes damage to organs through prolonged or repeated exposure.

Aspiration hazard

Summary	Based on available data the classification criteria are not met.

General information	Avoid contact during pregnancy/while nursing. May damage fertility. The severity of the symptoms described will vary dependent on the concentration and the length of exposure.
Inhalation	A single exposure may cause the following adverse effects: Temporary irritation.
Ingestion	May cause sensitisation or allergic reactions in sensitive individuals. May cause discomfort if swallowed. Stomach pain. Nausea, vomiting.
Skin contact	May cause skin sensitisation or allergic reactions in sensitive individuals. Redness. Irritating to skin.
Eye contact	Causes serious eye damage. Symptoms following overexposure may include the following: Pain. Profuse watering of the eyes. Redness.
Route of exposure	Ingestion Inhalation Skin and/or eye contact
Target organs	No specific target organs known.
Medical considerations	Skin disorders and allergies.

SECTION 12: Ecological information

12.1. Toxicity

Acute aquatic toxicity

Summary	Based on available data the classification criteria are not met.

Chronic aquatic toxicity

Summary	Harmful to aquatic life with long lasting effects.

12.2. Persistence and degradability

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HEATLOK HFO PRO B

According to Regulation (EC) No 1907/2006, Annex II, as amended. Commission Regulation (EU) No 2015/830 of 28 May 2015.

Persistence and degradability The degradability of the product is not known.

12.3. Bioaccumulative potential

Bioaccumulative potential No data available on bioaccumulation.

Partition coefficient No information available.

12.4. Mobility in soil

Mobility No data available.

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

13.1. Waste treatment methods

General information The generation of waste should be minimised or avoided wherever possible. Reuse or recycle products wherever possible. This material and its container must be disposed of in a safe way. When handling waste, the safety precautions applying to handling of the product should be considered. Care should be taken when handling emptied containers that have not been thoroughly cleaned or rinsed out. Empty containers or liners may retain some product residues and hence be potentially hazardous.

Disposal methods Do not empty into drains. Dispose of surplus products and those that cannot be recycled via a licensed waste disposal contractor. Waste, residues, empty containers, discarded work clothes and contaminated cleaning materials should be collected in designated containers, labelled with their contents. Incineration or landfill should only be considered when recycling is not feasible.

SECTION 14: Transport information

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

14.1. UN number

Not applicable.

14.2. UN proper shipping name

Not applicable.

14.3. Transport hazard class(es)

No transport warning sign required.

14.4. Packing group

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According to Regulation (EC) No 1907/2006, Annex II, as amended. Commission Regulation (EU) No 2015/830 of 28 May 2015.

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	Health and Safety at Work etc. Act 1974 (as amended). The Carriage of Dangerous Goods and Use of Transportable Pressure Equipment Regulations 2009 (SI 2009 No. 1348) (as amended) ["CDG 2009"]. EH40/2005 Workplace exposure limits.
EU legislation	Regulation (EC) No 1907/2006 of the European Parliament and of the Council of 18 December 2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH) (as amended). Commission Regulation (EU) No 2015/830 of 28 May 2015. 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).
REACH - Candidate List of Substances of Very High Concern for Authorisation (Article 59).	This product does not contain substances of very high concern (Regulation (EC) No 1907/2006 (REACH), Article 57).
REACH - List of substances subject to authorisation (Annex XIV)	Not applicable.
REACH - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, preparations and articles (Annex XVII)	Not applicable.

15.2. Chemical safety assessment

No chemical safety assessment has been carried out.

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HEATLOK HFO PRO B

According to Regulation (EC) No 1907/2006, Annex II, as amended. Commission Regulation (EU) No 2015/830 of 28 May 2015.

Inventories

EU - EINECS/ELINCS

None of the ingredients are listed or exempt.

SECTION 16: Other information

Abbreviations and acronyms used in the safety data sheet

ADR: European Agreement concerning the International Carriage of Dangerous Goods by Road.
ADN: European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways.
RID: European Agreement concerning the International Carriage of Dangerous Goods by Rail.
IATA: International Air Transport Association.
ICAO: Technical Instructions for the Safe Transport of Dangerous Goods by Air.
IMDG: International Maritime Dangerous Goods.
CAS: Chemical Abstracts Service.
ATE: Acute Toxicity Estimate.
LC_{50}: Lethal Concentration to 50 % of a test population.
LD_{50}: Lethal Dose to 50% of a test population (Median Lethal Dose).
EC_{50}: 50% of maximal Effective Concentration.
PBT: Persistent, Bioaccumulative and Toxic substance.
vPvB: Very Persistent and Very Bioaccumulative.

Classification abbreviations and acronyms

Acute Tox. = Acute toxicity
Eye Dam. = Serious eye damage
Repr. = Reproductive toxicity
Skin Irrit. = Skin irritation
Skin Sens. = Skin sensitisation
STOT RE = Specific target organ toxicity-repeated exposure
Aquatic Chronic = Hazardous to the aquatic environment (chronic)

Classification procedures according to Regulation (EC) 1272/2008

Acute Tox. 4 - H302: Eye Dam. 1 - H318: STOT RE 1 - H372: Skin Irrit. 2 - H315: Skin Sens. 1 - H317: Repr. 1B - H360FD: : Calculation method. Aquatic Chronic 3 - H412: : Calculation method.

Training advice

Only trained personnel should use this material.

Revision date

18/05/2021

Revision

11

Supersedes date

18/12/2020

SDS number

876

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BUILDING SOLUTIONS

HEATLOK HFO PRO B

According to Regulation (EC) No 1907/2006, Annex II, as amended. Commission Regulation (EU) No 2015/830 of 28 May 2015.

Hazard statements in full

H226 Flammable liquid and vapour.
H280 Contains gas under pressure; may explode if heated.
H301 Toxic if swallowed.
H302 Harmful if swallowed.
H311 Toxic in contact with skin.
H312 Harmful 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.
H341 Suspected of causing genetic defects.
H360FD May damage fertility. May damage the unborn child.
H361 Suspected of damaging fertility or the unborn child.
H372 Causes damage to organs through prolonged or repeated exposure.
H372 Causes damage to organs (Thymus) through prolonged or repeated exposure.
H372 Causes damage to organs (Gastro-intestinal tract) through prolonged or repeated exposure.
H373 May cause damage to organs (Kidneys) through prolonged or repeated exposure if swallowed.
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.