

according to Regulation (EC) No 1907/2006

IsoFoam A

Revision date: 17.01.2022

Product code: isoplus-001

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

1.1. Product identifier

IsoFoam A

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

Use of the substance/mixture

polyurethane component

Uses advised against

The product is only to be used for the intended application.

1.3. Details of the supplier of the safety data sheet

Company name:	Isoplus Fernwärmetechnik GmbH
Street:	Schachtstraße 28/42
Place:	D-99706 Sondershausen
Telephone:	+49 (3632) 6516101
e-mail:	sondershausen@isoplus.group
e-mail (Contact person):	kundenservice.deutschland@isoplus.group
1.4. Emergency telephone	national emergency number: +353 1 8092566

number:

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Regulation (EC) No. 1272/2008

Hazard categories: Flammable liquid: Flam. Liq. 2 Serious eye damage/eye irritation: Eye Irrit. 2 Hazard Statements: Highly flammable liquid and vapour. Causes serious eye irritation.

Danger

2.2. Label elements

Regulation (EC) No. 1272/2008

Signal word:

Pictograms:



Hazard statements

H225	
H319	

Highly flammable liquid and vapour. Causes serious eye irritation.

Precautionary statements

P210	Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P280	Wear protective gloves/protective clothing and eye/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.
P337+P313	If eye irritation persists: Get medical advice/attention.
P403+P235	Store in a well-ventilated place. Keep cool.
P501	Inhalt und Behälter der Problemabfallentsorgung zuführen



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2.3. Other hazards

The components in this mixture do not meet the criteria for classification as PBT or vPvB.

SECTION 3: Composition/information on ingredients

3.2. Mixtures

Hazardous components

CAS No	Chemical name				
	EC No	Index No	REACH No		
	GHS Classification	•			
67800-94-6	Benzenediamine, ar-methyl-, polym	ner with 2-methyloxirane and oxirane		10-14 %	
	614-144-2		01-2119462836-28		
	Acute Tox. 4, Eye Irrit. 2; H302 H3	Acute Tox. 4, Eye Irrit. 2; H302 H319			
287-92-3	cyclopentane				
	206-016-6	601-030-00-2	01-2119463053-47		
	Flam. Liq. 2, STOT SE 3, Asp. Tox	304 H412			
98-94-2	Cyclohexyldimethylamine			0,1-0,2 %	
	202-715-5		01-2119533030-60		
	Flam. Liq. 3, Acute Tox. 3, Acute T Chronic 2; H226 H331 H311 H301	ye Dam. 1, Aquatic			

Full text of H and EUH statements: see section 16.

Specific Conc. Limits, M-factors and ATE

CAS No	EC No	Chemical name	Quantity		
	Specific Conc. Limits, M-factors and ATE				
67800-94-6	614-144-2	614-144-2 Benzenediamine, ar-methyl-, polymer with 2-methyloxirane and oxirane			
	oral: ATE = 500 mg/kg				
98-94-2	202-715-5	Cyclohexyldimethylamine	0,1-0,2 %		
inhalation: ATE = 3 mg/l (vapours); inhalation: ATE = 0,5 mg/l (dusts or mists); dermal: ATE = 300 mg/kg; oral: LD50 = 272 mg/kg					

SECTION 4: First aid measures

4.1. Description of first aid measures

General information

Remove contaminated clothing.

After inhalation

Keep patient calm, remove to fresh air, seek medical attention.

After contact with skin

Wash thoroughly with soap and water.

After contact with eyes

Remove contact lenses. In case of contact with eyes, rinse immediately with plenty of flowing water for 10 to 15 minutes holding eyelids apart. Call a physician immediately.

After ingestion

Immediately rinse mouth and then drink 200-300 ml of water, seek medical attention.

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

Causes serious eye irritation.

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

Treat symptomatically.



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SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media

Co-ordinate fire-fighting measures to the fire surroundings.

alcohol resistant foam. Carbon dioxide (CO2). Water spray jet. Extinguishing powder.

Unsuitable extinguishing media

High power water jet.

5.2. Special hazards arising from the substance or mixture

In case of fire may be liberated: Carbon monoxide. Carbon dioxide. Nitrogen oxides (NOx).

5.3. Advice for firefighters

In case of fire: Wear self-contained breathing apparatus.

Additional information

Dispose of fire debris and contaminated extinguishing water in accordance with official regulations.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

General advice

Provide adequate ventilation. Do not breathe dust/fume/gas/mist/vapours/spray. Avoid contact with skin, eyes and clothes. Use personal protection equipment.

6.2. Environmental precautions

Do not allow to enter into surface water or drains. Do not allow to enter into soil/subsoil.

6.3. Methods and material for containment and cleaning up

For containment

For large amounts: Pump off product.

For residues: Absorb with liquid-binding material (e.g. sand, diatomaceous earth, acid- or universal binding agents).

Treat the recovered material as prescribed in the section on waste disposal.

For cleaning up

Clean contaminated articles and floor according to the environmental legislation.

Other information

Special danger of slipping by leaking/spilling product.

6.4. Reference to other sections

Personal protection equipment: see section 8 Handling and storage: see section 7 For waste disposal see section 13.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Advice on safe handling

Consider general workplace hygiene.

Always close containers tightly after the removal of product. Provide adequate ventilation. Avoid contact with skin and eyes.

Advice on protection against fire and explosion

Keep away from sources of ignition - No smoking. Take action to prevent static discharges. Have fire-extinguishers in readiness.

Advice on general occupational hygiene

Remove contaminated, saturated clothing immediately. Wash hands and face before breaks and after work



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and take a shower if necessary. When using do not eat, drink, smoke, sniff.

Further information on handling

Wash hands before breaks and after work. When using do not eat, drink, smoke, sniff.

7.2. Conditions for safe storage, including any incompatibilities

Requirements for storage rooms and vessels

Keep container tightly closed in a cool, well-ventilated place. Suitable materials for containers: Carbon steel (Iron), HDPE, LDPE, tinned carbon steel (Tinplate), Refined

Suitable materials for containers: Carbon steel (Iron), HDPE, LDPE, tinned carbon steel (Tinplate), Refine steel 1.4301 (V2) Unsuitable materials for containers: paper and cardboard

Hints on joint storage

Keep away from food, drink and animal feedingstuffs.

Do not expose product to direct sunlight or extreme heat.

Further information on storage conditions

Protect from sunlight and heat sources. Avoid ignition sources. Store separately from oxidizing agents.

7.3. Specific end use(s)

polyurethane component

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Occupational exposure limits

CAS No	Substance	ppm	mg/m³	fib/cm³	Category	Origin
287-92-3	Cyclopentane	600	1720		TWA (8 h)	

DNEL/DMEL values

CAS No	Substance			
DNEL type		Exposure route	Effect	Value
67800-94-6	Benzenediamine, ar-methyl-, polymer with 2-methyloxirane	and oxirane		
Worker DNEL,	long-term	dermal	systemic	7 mg/kg bw/day
Worker DNEL,	long-term	inhalation	systemic	3,9 mg/m³
Consumer DN	EL, long-term	dermal	systemic	4,2 mg/kg bw/day
Consumer DN	EL, long-term	inhalation	systemic	1,2 mg/m ³
Consumer DN	EL, long-term	oral	systemic	0,33 mg/kg bw/day
287-92-3	cyclopentane			
Consumer DN	EL, long-term	inhalation	systemic	643 mg/m³
Worker DNEL,	long-term	inhalation	local	3000 mg/m³
Consumer DN	EL, long-term	oral	systemic	214 mg/kg bw/day
Consumer DN	EL, long-term	dermal	systemic	214 mg/kg bw/day
Worker DNEL,	long-term	dermal	systemic	432 mg/kg bw/day
98-94-2	Cyclohexyldimethylamine			
Worker DNEL,	long-term	inhalation	systemic	0,53 mg/m³
Worker DNEL, long-term inhalation local 8,3 mg/m ³				
Worker DNEL,	long-term	dermal	systemic	0,6 mg/kg bw/day



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PNEC values

CAS No	Substance	
Environment	Value	
67800-94-6	Benzenediamine, ar-methyl-, polymer with 2-methyloxirane and oxirane	
Freshwater		0,02 mg/l
Marine wate	ſ	0,002 mg/l
Freshwater s	sediment	0,02 mg/kg
Micro-organi	sms in sewage treatment plants (STP)	100 mg/l
Soil		0,00588 mg/kg
98-94-2	Cyclohexyldimethylamine	
Freshwater		0,0035 mg/l
Marine wate	r	0,00035 mg/l
Freshwater sediment 0,0369		0,0369 mg/kg
Marine sediment		0,00369 mg/kg
Micro-organisms in sewage treatment plants (STP)		20,6 mg/l
Soil 0,0053 mg		

Additional advice on limit values

Currently there are no further exposure limits available.

8.2. Exposure controls

Appropriate engineering controls

Ensure adequate ventilation.

Individual protection measures, such as personal protective equipment

Eye/face protection

Suitable eye protection: Eye glasses with side protection (EN166)

Hand protection

Suitable chemical resistant safety gloves (EN 374) also with prolonged, direct contact (Recommended: Protective index 6, corresponding > 480 minutes of permeation time according to EN 374): E.g. nitrile rubber (0.4 mm), chloroprene rubber (0.5 mm), butyl rubber (0.7 mm) etc.

When handling with chemical substances, protective gloves must be worn with the CE-label including the four control digits. The quality of the protective gloves resistant to chemicals must be chosen as a function of the specific working place concentration and quantity of hazardous substances. 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.

Skin protection

Body protection must be chosen depending on activity and possible exposure, e.g. apron, protecting boots, chemical-protection suit (according to EN 14605 in case of splashes or EN ISO 13982 in case of dust).

Respiratory protection

In case of inadequate ventilation wear respiratory protection. Particle filter with medium efficiency for solid and liquid particles (e.g. EN 143 or 149, Type P2 or FFP2)

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state:	liquid
Colour:	yellowish
Odour:	of hydrocarbons



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Changes in the physical state		
Melting point/freezing point:	<0 ℃	
Boiling point or initial boiling point and	>140 (1.013 hPa) °C	
boiling range:		
Sublimation point:	No data available	
Softening point: Pour point:	No data available No data available	
Flash point:		DIN 51755
		DIN 31735
Flammability Solid/liquid:	No data available	
Gas:	No data available	
Explosive properties		
not Explosive.		
Lower explosion limits:	No data available	
Upper explosion limits:	No data available	
Auto-ignition temperature:	>250 °C	
Self-ignition temperature		
Solid:	No data available	
Gas:	No data available	
Decomposition temperature:	No data available	
pH-Value (at 20 °C):	approx. 8	
Viscosity / dynamic: (at 20 °C)	No data available	
Viscosity / kinematic:	No data available	
Flow time:	No data available	
Water solubility:	poorly soluble	
Solubility in other solvents No data available		
Partition coefficient n-octanol/water:	No data available	
Vapour pressure: (at 50 °C)	<800 hPa	
Density (at 20 °C):	1.06 a/cm³	DIN 51757
Relative vapour density:	No data available	
9.2. Other information		
Sustaining combustion:	No data available	
Oxidizing properties	···· ·································	
No data available		
Solvent separation test:	No data available	
Evaporation rate:	No data available	
Further Information		
flow time 100 s (23°C) DIN EN ISO 2431		
SECTION 10: Stability and reactivity		



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10.1. Reactivity

No dangerous reactivity under regular conditions.

10.2. Chemical stability

The substance is chemically stable under recommended conditions of storage, use and temperature.

10.3. Possibility of hazardous reactions

No hazardous reaction when handled and stored according to provisions.

10.4. Conditions to avoid

Electrostatic charges. Avoid heat, sparks, open flames and other ignition sources. storage temperature: <0°C

10.5. Incompatible materials

Oxidizing agents. Acids Isocyanates.

10.6. Hazardous decomposition products

In case of fire may be liberated: Carbon monoxide. Carbon dioxide. Irritating/poisonous gasses and vapours.

SECTION 11: Toxicological information

11.1. Information on hazard classes as defined in Regulation (EC) No 1272/2008

Acute toxicity

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

CAS No	Chemical name					
	Exposure route	Dose		Species	Source	Method
67800-94-6	Benzenediamine, ar-meth	ıyl-, polymer	with 2-meth	yloxirane and oxirane		
	oral	ATE mg/kg	500			
98-94-2	Cyclohexyldimethylamine	Cyclohexyldimethylamine				
	oral	LD50 mg/kg	272	Rat	Registration Dossier / ECHA	
	dermal	ATE mg/kg	300			
	inhalation vapour	ATE	3 mg/l			
	inhalation aerosol	ATE	0,5 mg/l			

Irritation and corrosivity

Causes serious eye irritation.

Skin corrosion/irritation: Based on available data, the classification criteria are not met.

Sensitising effects

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

Carcinogenic/mutagenic/toxic effects for reproduction

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

STOT-single exposure

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

STOT-repeated exposure

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

Aspiration hazard

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

11.2. Information on other hazards



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Endocrine disrupting properties

none known

SECTION 12: Ecological information

12.1. Toxicity

There are no data available on the mixture itself.

12.2. Persistence and degradability

Poorly biodegradable.

12.3. Bioaccumulative potential

Does not significantly accumulate in organisms.

12.4. Mobility in soil

Adsorption in soil: Adsorption to solid soil phase is not expected.

12.5. Results of PBT and vPvB assessment

The components in this mixture do not meet the criteria for classification as PBT or vPvB.

12.6. Endocrine disrupting properties

none known

12.7. Other adverse effects

Contains the following substances that deplete the ozone layer: none known This product contains no organically-bound halogen.

Further information

Do not allow to enter into surface water or drains. Do not allow to enter into soil/subsoil.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Disposal recommendations

Dispose of waste according to applicable legislation. Incinerate in suitable incineration plant, observing local authority regulations. According to the European Waste Catalogue (EWC), allocation of waste identity numbers/waste descriptions must be carried out in a specific way for every industry and process.

List of Wastes Code - residues/unused products

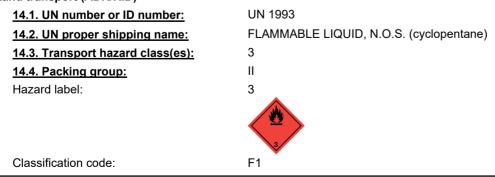
070208 WASTES FROM ORGANIC CHEMICAL PROCESSES; wastes from the MFSU of plastics, synthetic rubber and man-made fibres; other still bottoms and reaction residues; hazardous waste

Contaminated packaging

Contaminated packaging: Contaminated packaging should be emptied as far as possible; then it can be passed on for recycling after being thoroughly cleaned.

SECTION 14: Transport information

Land transport (ADR/RID)





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Special Provisions:	274 601 640D	
Limited quantity:	1 L	
Excepted quantity:	E2	
Transport category:	2	
Hazard No: Tunnel restriction code:	33 D/E	
Inland waterways transport (ADN)		
14.1. UN number or ID number:	UN 1993	
14.2. UN proper shipping name:	FLAMMABLE LIQUID, N.O.S. (cyclopentane)	
14.3. Transport hazard class(es):	3	
14.4. Packing group:	II	
Hazard label:	3	
Classification code:	F1	
Special Provisions:	274 601 640D	
Limited quantity:	1 L	
Excepted quantity:	E2	
Marine transport (IMDG)		
<u>14.1. UN number or ID number:</u>	UN 1993	
14.2. UN proper shipping name:	FLAMMABLE LIQUID, N.O.S. (cyclopentane)	
14.3. Transport hazard class(es):	3	
14.4. Packing group:	II	
Hazard label:		
Special Provisions:	274	
Limited quantity:	1 L	
Excepted quantity:	E2	
EmS:	F-E, S-E	
Air transport (ICAO-TI/IATA-DGR) <u>14.1. UN number or ID number:</u>	UN 1993	
14.2. UN proper shipping name:	FLAMMABLE LIQUID, N.O.S. (cyclopentane)	
14.3. Transport hazard class(es):	3 	
14.4. Packing group:		
Hazard label:		
Special Provisions:	A3	
Limited quantity Passenger:	1L	
Passenger LQ:	Y341	
Excepted quantity:	E2	
IATA-packing instructions - Passenger:	353	
IATA-max. quantity - Passenger:	5 L	
IATA-packing instructions - Cargo:	364	



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IATA-max. quantity - Cargo:	60 L	
14.5. Environmental hazards		

ENVIRONMENTALLY HAZARDOUS:

14.6. Special precautions for user

No special precautions known.

14.7. Maritime transport in bulk according to IMO instruments

not applicable

SECTION 15: Regulatory information

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

No

EU regulatory information

Restrictions on use (REACH, annex XVII): Entry 3, Entry 40 Information according to 2012/18/EU (SEVESO III): P5b FLAMMABLE LIQUIDS

Additional information

Regulation (EC) No. 648/2004 (Detergents regulation): not applicable

Regulation (EC) No. 1005/2009 on substances that lead to the depletion of the ozone layer: not applicable Regulation (EC) No 850/2004 on persistent organic pollutants: not applicable

Regulation (EC) No 649/2012 of the European Parliament and of the Council concerning the export and import of dangerous chemicals: This mix contains no chemicals that are subject to the export notification procedures (annex 1).

This mixture contains the following substances of very high concern (SVHC) which are included in the Candidate List according to Article 59 of REACH: none

This mixture contains the following substances of very high concern (SVHC) which are subject to authorisation according to Annex XIV of REACH: none

National regulatory information

Employment restrictions:

Observe restrictions to employment for juveniles according to the 'juvenile work protection guideline' (94/33/EC). Observe employment restrictions under the Maternity Protection Directive (92/85/EEC) for expectant or nursing mothers. Observe employment restrictions for women of child-bearing age.

Water hazard class (D):

2 - obviously hazardous to water

Additional information

Observe in addition any national regulations!

15.2. Chemical safety assessment

For the following substances of this mixture a chemical safety assessment has been carried out: Benzenediamine, ar-methyl-, polymer with 2-methyloxirane and oxirane cyclopentane Cyclohexyldimethylamine

SECTION 16: Other information

Changes

This data sheet contains changes from the previous version in section(s): 1,2,4,5,6,7,8,9,10,11,12,13,14,15,16. Version 1,00 - 11.05.2021 - first creation

Version 1,01 - 17.01.2022 - General revision as part of of translation activities

Abbreviations and acronyms

ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)



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BImSchV (Fed.Imm.Prot.Act): Directive on the I CAS: Chemical Abstracts Service DIN: Norm of the Deutsche Institut für Normung EC: Effective Concentration EG: European Community (Europäische Gemei EN: European Norm		
IATA: International Air Transport Association	ion and Equipment of ships carrying Dangerous Chemicals in	
ICAO: International Civil Aviation Organization IMDG: International Maritime Code for Dangero ISO: Norm of the International Standards Organ CLP: Classification, Labeling, Packaging	nization	
IUCLID: International Uniform ChemicaL Inform LC: Lethal concentration LD: Lethal dose log Kow: Octanol/water partition coefficient	ation Database	
OECD: Organisation for Economic Co-operation PBT: Persistent, bio-cumulative, toxic		
RID: Regulation Concerning the International Tr TRGS: Technische Regeln für Gefahrstoffe UN: United Nations VOC: Volatile Organic Compounds	ansport of Dangerous Goods by Rail	
vPvB: very persistent and very bio-cumulative VwVwS: Administrative Regulation for Water Pc WGK: German Water Hazard Class		
GHS: Globally Harmonized System of Classifica EINECS: European Inventory of Existing Comm ELINCS: European List of Notified Chemical Su DNEL: Derived No Effect Level	nercial Chemical Substances	
PNEC: Predicted No Effect Concentration TLV: Threshold Limiting Value STOT: Specific Target Organ Toxicity		
AwSV: Ordinance on Installations for Handling	Substances Hazardous to Water thod according to Regulation (EC) No. 1272/2008 [CLP]	

Classification for mixtures and used evaluation method according to Regulation (EC) No. 1272/2008 [CLP]		
Classification	Classification procedure	
Flam. Liq. 2; H225	On basis of test data	
Eye Irrit. 2; H319	Calculation method	

Relevant H and EUH statements (number and full text)

Relevant H and EUH statements (number and full text)		
H225	Highly flammable liquid and vapour.	
H226	Flammable liquid and vapour.	
H301	Toxic if swallowed.	
H302	Harmful if swallowed.	
H304	May be fatal if swallowed and enters airways.	
H311	Toxic in contact with skin.	
H314	Causes severe skin burns and eye damage.	
H318	Causes serious eye damage.	
H319	Causes serious eye irritation.	
H331	Toxic if inhaled.	
H336	May cause drowsiness or dizziness.	
H411	Toxic to aquatic life with long lasting effects.	
H412	Harmful to aquatic life with long lasting effects.	



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Further Information

The information given in this safety data sheet is to describe the product's safety regulations. It is not for guaranteeing certain characteristics and is based on today's knowledge. The safety data sheet was generated upon information of pre-suppliers by:

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(The data for the hazardous ingredients were taken respectively from the last version of the sub-contractor's safety data sheet.)