

SAFETY DATA SHEET

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

1.1. Product identifier

Trade name or designation of the mixture Insulgel 70CC FRNS - Part B

Registration number -

Synonyms None.

SKU# IE406H, IE420H

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

Identified uses Not available.

Uses advised against None known.

1.3. Details of the supplier of the safety data sheet

Supplier

Company name Not available.

Address Not available.

Telephone Not available.

e-mail Not available.

Contact person Not available.

1.4. Emergency telephone number Not available.

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

The mixture has been assessed and/or tested for its physical, health and environmental hazards and the following classification applies.

Classification according to Regulation (EC) No 1272/2008 as amended

Health hazards

Acute toxicity, oral	Category 4	H302 - Harmful if swallowed.
Acute toxicity, dermal	Category 4	H312 - Harmful in contact with skin.
Skin corrosion/irritation	Category 1B	H314 - Causes severe skin burns and eye damage.
Serious eye damage/eye irritation	Category 1	H318 - Causes serious eye damage.
Skin sensitization	Category 1	H317 - May cause an allergic skin reaction.
Reproductive toxicity (fertility, the unborn child)	Category 2	H361fd - Suspected of damaging fertility. Suspected of damaging the unborn child.

Environmental hazards

Hazardous to the aquatic environment, acute aquatic hazard	Category 1	H400 - Very toxic to aquatic life.
Hazardous to the aquatic environment, long-term aquatic hazard	Category 1	H410 - Very toxic to aquatic life with long lasting effects.

2.2. Label elements

Label according to Regulation (EC) No. 1272/2008 as amended

UFI:

Austria: 8F25-91CX-J00K-1W94
Belgium: 8F25-91CX-J00K-1W94
Bulgaria: 8F25-91CX-J00K-1W94
Croatia: 8F25-91CX-J00K-1W94
Cyprus: 8F25-91CX-J00K-1W94
Czech Republic: 8F25-91CX-J00K-1W94
Denmark: 8F25-91CX-J00K-1W94
Estonia: 8F25-91CX-J00K-1W94
EU: 8F25-91CX-J00K-1W94
Finland: 8F25-91CX-J00K-1W94
France: 8F25-91CX-J00K-1W94
Germany: 8F25-91CX-J00K-1W94
Greece: 8F25-91CX-J00K-1W94
Hungary: 8F25-91CX-J00K-1W94
Iceland: 8F25-91CX-J00K-1W94
Ireland: 8F25-91CX-J00K-1W94
Italy: 8F25-91CX-J00K-1W94
Latvia: 8F25-91CX-J00K-1W94
Lithuania: 8F25-91CX-J00K-1W94
Luxembourg: 8F25-91CX-J00K-1W94
Malta: 8F25-91CX-J00K-1W94
Netherlands: 8F25-91CX-J00K-1W94
Norway: 8F25-91CX-J00K-1W94
Poland: 8F25-91CX-J00K-1W94
Portugal: 8F25-91CX-J00K-1W94
Romania: 8F25-91CX-J00K-1W94
Slovakia: 8F25-91CX-J00K-1W94
Slovenia: 8F25-91CX-J00K-1W94
Spain: 8F25-91CX-J00K-1W94
Sweden: 8F25-91CX-J00K-1W94

Contains:

2-piperazin-1-ylethylamine, 3,6,9-triazaundecamethylenediamine; tetraethylenepentamine, nonylphenol; [1] 4-nonylphenol, branched [2], piperazine [liquid], POLY(OXYPROPYLENE)DIAMINE, Triethylolamine

Hazard pictograms



Signal word

Danger

Hazard statements

H302	Harmful if swallowed.
H312	Harmful in contact with skin.
H314	Causes severe skin burns and eye damage.
H317	May cause an allergic skin reaction.
H318	Causes serious eye damage.
H361fd	Suspected of damaging fertility. Suspected of damaging the unborn child.
H400	Very toxic to aquatic life.
H410	Very toxic to aquatic life with long lasting effects.

Precautionary statements

Prevention

P201	Obtain special instructions before use.
P202	Do not handle until all safety precautions have been read and understood.
P260	Do not breathe mist/vapors.
P264	Wash 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.
P273	Avoid release to the environment.
P280	Wear protective gloves/protective clothing/eye protection/face protection/hearing protection.

Response

P330	Rinse mouth.
P301 + P330 + P331	IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.
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.
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.
P333 + P313	If skin irritation or rash occurs: Get medical advice/attention.

P362 + P364
P391

Take off contaminated clothing and wash it before reuse.
Collect spillage.

Storage

P405

Store locked up.

Disposal

P501

Dispose of contents/container in accordance with local/regional/national/international regulations.

Supplemental label information

57,37% of the mixture consists of component(s) of unknown acute dermal toxicity. 99,19% of the mixture consists of component(s) of unknown acute inhalation toxicity. 72,15% of the mixture consists of component(s) of unknown acute hazards to the aquatic environment. 32,17% of the mixture consists of component(s) of unknown long-term hazards to the aquatic environment.

2.3. Other hazards

This mixture does not contain substances assessed to be vPvB / PBT according to Regulation (EC) No 1907/2006, Annex XIII. The mixture does not contain any substances included in the list established in accordance with REACH Article 59(1) for having endocrine disrupting properties at a concentration equal to or greater than 0.1% by weight.

SECTION 3: Composition/information on ingredients

3.2. Mixtures

General information

Chemical name	%	CAS-No. / EC No.	REACH Registration No.	Index No.	Notes
2-piperazin-1-ylethylamine	10 - 30	140-31-8 205-411-0	-	612-105-00-4	
Classification: Acute Tox. 4;H302;(ATE: 500 mg/kg bw), Acute Tox. 4;H312;(ATE: 1100 mg/kg bw), Skin Corr. 1B;H314, Eye Dam. 1;H318, Skin Sens. 1;H317, Aquatic Chronic 3;H412					
3,6,9-triazaundecamethylenediamine; tetraethylenepentamine	10 - 30	112-57-2 203-986-2	-	612-060-00-0	
Classification: Acute Tox. 4;H302;(ATE: 500 mg/kg bw), Acute Tox. 4;H312;(ATE: 1100 mg/kg bw), Skin Corr. 1B;H314, Eye Dam. 1;H318, Skin Sens. 1;H317, Aquatic Chronic 2;H411					
nonylphenol; [1] 4-nonylphenol, branched [2]	10 - 30	84852-15-3 284-325-5	-	601-053-00-8	ED
Classification: Acute Tox. 4;H302;(ATE: 500 mg/kg bw), Skin Corr. 1B;H314, Eye Dam. 1;H318, Repr. 2;H361fd, Aquatic Acute 1;H400, Aquatic Chronic 1;H410					
POLY(OXYPROPYLENE)DIAMINE	10 - 30	9046-10-0	-	-	
Classification: -					
Triethylolamine	1 - 5	102-71-6 203-049-8	-	-	
Classification: Eye Irrit. 2;H319					
piperazine [liquid]	0,1 - 1	110-85-0 203-808-3	-	612-057-01-1	#
Classification: Skin Corr. 1B;H314, Eye Dam. 1;H318, Resp. Sens. 1;H334, Skin Sens. 1;H317, Repr. 2;H361fd					

List of abbreviations and symbols that may be used above

ATE: Acute toxicity estimate.

M: M-factor

vPvB: very persistent and very bioaccumulative substance.

PBT: persistent, bioaccumulative and toxic substance.

#: This substance has been assigned Union workplace exposure limit(s).

All concentrations are in percent by weight unless ingredient is a gas. Gas concentrations are in percent by volume.

Composition comments

The full text for all H-statements is displayed in section 16.

SECTION 4: First aid measures

General information

IF exposed or concerned: Get medical advice/attention. If you feel unwell, seek medical advice (show the label where possible). Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves. Show this safety data sheet to the doctor in attendance. Wash contaminated clothing before reuse.

4.1. Description of first aid measures

Inhalation

Move to fresh air. Call a physician if symptoms develop or persist.

Skin contact	Remove contaminated clothing immediately and wash skin with soap and water. Chemical burns must be treated by a physician. Get medical advice/attention if you feel unwell. In case of eczema or other skin disorders: Seek medical attention and take along these instructions. Wash contaminated clothing before reuse.
Eye contact	Immediately flush eyes with plenty of water for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Get medical attention immediately.
Ingestion	Call a physician or poison control center immediately. Rinse mouth. Do not induce vomiting. If vomiting occurs, keep head low so that stomach content doesn't get into the lungs.
4.2. Most important symptoms and effects, both acute and delayed	Burning pain and severe corrosive skin damage. Causes serious eye damage. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. Permanent eye damage including blindness could result.
4.3. Indication of any immediate medical attention and special treatment needed	Provide general supportive measures and treat symptomatically. Chemical burns: Flush with water immediately. While flushing, remove clothes which do not adhere to affected area. Call an ambulance. Continue flushing during transport to hospital. Keep victim warm. Keep victim under observation. Symptoms may be delayed.

SECTION 5: Firefighting measures

General fire hazards	No unusual fire or explosion hazards noted.
5.1. Extinguishing media	
Suitable extinguishing media	Alcohol resistant foam. Powder. Carbon dioxide (CO ₂).
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	During fire, gases hazardous to health may be formed.
5.3. Advice for firefighters	
Special protective equipment for firefighters	Self-contained breathing apparatus and full protective clothing must be worn in case of fire.
Special fire fighting procedures	Move containers from fire area if you can do so without risk.
Specific methods	Use standard firefighting procedures and consider the hazards of other involved materials.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures	
For non-emergency personnel	Do not breathe mist/vapors. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing.
For emergency responders	Keep unnecessary personnel away. Ensure adequate ventilation. Avoid breathing mist/vapors. Local authorities should be advised if significant spillages cannot be contained. Use personal protection recommended in Section 8 of the SDS.
6.2. Environmental precautions	Avoid release to the environment. Inform appropriate managerial or supervisory personnel of all environmental releases. Prevent further leakage or spillage if safe to do so. Avoid discharge into drains, water courses or onto the ground.
6.3. Methods and material for containment and cleaning up	Prevent entry into waterways, sewer, basements or confined areas. Large Spills: Stop the flow of material, if this is without risk. Dike the spilled material, where this is possible. Absorb in vermiculite, dry sand or earth and place into containers. Following product recovery, flush area with water. Small Spills: Wipe up with absorbent material (e.g. cloth, fleece). Clean surface thoroughly to remove residual contamination. Never return spills to original containers for re-use.
6.4. Reference to other sections	For personal protection, see section 8 of the SDS. For waste disposal, see section 13 of the SDS.

SECTION 7: Handling and storage

7.1. Precautions for safe handling	Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Do not breathe mist/vapors. Do not get in eyes, on skin, or on clothing. Do not taste or swallow. Avoid prolonged exposure. When using, do not eat, drink or smoke. Pregnant or breastfeeding women must not handle this product. Should be handled in closed systems, if possible. Provide adequate ventilation. Wear appropriate personal protective equipment. Wash hands thoroughly after handling. Avoid release to the environment. Wash contaminated clothing before reuse. Observe good industrial hygiene practices.
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7.2. Conditions for safe storage, including any incompatibilities

Store locked up. Store in tightly closed container. Store away from incompatible materials (see Section 10 of the SDS).

Directive 2012/18/EU on major accident hazards involving dangerous substances, as amended

ANNEX 1, PART 1 Categories of dangerous substances

Hazard categories in accordance with Regulation (EC) No 1272/2008

- E1 Hazardous to the Aquatic Environment Acute (Lower-tier requirements = 100 tons; Upper-tier requirements = 200 tons)

- E1 Hazardous to the Aquatic Environment Chronic (Lower-tier requirements = 100 tons; Upper-tier requirements = 200 tons)

7.3. Specific end use(s)

Observe industrial sector guidance on best practices.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Occupational exposure limits

Austria. MAK List, OEL Ordinance (GwV), BGBl. II, no. 184/2001, as amended

Components	Type	Value	Form
piperazine [liquid] (CAS 110-85-0)	MAK	0,1 mg/m ³	
	STEL	0,3 mg/m ³	
Triethylamine (CAS 102-71-6)	MAK	5 mg/m ³	Inhalable fraction.
		0,8 ppm	Inhalable fraction.
	STEL	10 mg/m ³	Inhalable fraction.
		1,6 ppm	Inhalable fraction.

Belgium. OEL. Exposure Limit Values to Chemical Substances at Work, Code of Well-being at work, Book VI, Title 1 - Chemical agents, as amended

Components	Type	Value	Form
piperazine [liquid] (CAS 110-85-0)	STEL	0,3 mg/m ³	Vapor and aerosol.
	TWA	0,1 mg/m ³	Vapor and aerosol.
Triethylamine (CAS 102-71-6)	TWA	5 mg/m ³	

Bulgaria. OELs. Ordinance No 13 on protection of workers against risks of exposure to chemical agents at work, as amended

Components	Type	Value
piperazine [liquid] (CAS 110-85-0)	STEL	0,3 mg/m ³
	TWA	0,1 mg/m ³

Croatia. OELs (GVI). Regulation on Protection of Workers against Exposure to Dangerous Chemicals at Work, OELs and Biological Limit Values, Annex I (NN 91/2018), as amended

Components	Type	Value
piperazine [liquid] (CAS 110-85-0)	MAC	0,1 mg/m ³
	STEL	0,3 mg/m ³

Cyprus. OELs. Occupational Exposure Limit Values of Chemicals at Work (Safety and Health at Work (Chem. Agents) Reg., Ann. 1, R.A.A. 268/2001, as amended)

Components	Type	Value	Form
piperazine [liquid] (CAS 110-85-0)	STEL	0,3 mg/m ³	Vapor and dust.
	TWA	0,1 mg/m ³	Vapor and dust.

Czech Republic. Occupational exposure limit values of chemicals at work (Decree on protection of health at work, 361/2007, Annex 2, Part A & Annex 3, Part A, as amended)

Components	Type	Value
piperazine [liquid] (CAS 110-85-0)	Ceiling	0,3 mg/m ³
	TWA	0,1 mg/m ³

Czech Republic. Occupational exposure limit values of chemicals at work (Decree on protection of health at work, 361/2007, Annex 2, Part A & Annex 3, Part A, as amended)

Components	Type	Value
Triethylamine (CAS 102-71-6)	Ceiling	10 mg/m ³
	TWA	5 mg/m ³

Denmark. Work Environment Authority. Exposure Limits for Substances & Materials, Annex 2

Components	Type	Value
piperazine [liquid] (CAS 110-85-0)	TLV	0,1 mg/m ³ 0,003 ppm
	TLV	3,1 mg/m ³ 0,5 ppm

Estonia. OELs. Occupational Exposure Limits of Hazardous Substances (Regulation No. 105/2001, Annex), as amended

Components	Type	Value
piperazine [liquid] (CAS 110-85-0)	STEL	0,3 mg/m ³
	TWA	0,1 mg/m ³
Triethylamine (CAS 102-71-6)	STEL	10 mg/m ³
	TWA	5 mg/m ³

Finland. HTP-arvot, App 3., Binding Limit Values, Social Affairs and Ministry of Health

Components	Type	Value
piperazine [liquid] (CAS 110-85-0)	STEL	0,3 mg/m ³ 0,084 ppm
	TWA	0,1 mg/m ³ 0,028 ppm
	TWA	5 mg/m ³

France. OELs. Indicative Occupational Exposure Limits as Prescribed by Order of 30 June 2004, as amended

Components	Type	Value	Form
piperazine [liquid] (CAS 110-85-0)	VLE	0,3 mg/m ³	Vapor and dust.
	VME	0,1 mg/m ³	Vapor and dust.

France. Threshold Limit Values (VLEP) for Occupational Exposure to Chemicals in France, INRS ED 984

Components	Type	Value	Form
piperazine [liquid] (CAS 110-85-0)	VLE	0,3 mg/m ³	Vapor and dust.
	VME	0,1 mg/m ³	Vapor and dust.
Regulatory status: Regulatory indicative (VRI)			
Regulatory status: Regulatory indicative (VRI)			

Germany. DFG MAK List (advisory OELs). Commission for the Investigation of Health Hazards of Chemical Compounds in the Work Area (DFG), as updated

Components	Type	Value	Form
Triethylamine (CAS 102-71-6)	TWA	1 mg/m ³	Inhalable fraction.

Germany. TRGS 900, Limit Values in the Ambient Air at the Workplace

Components	Type	Value	Form
piperazine [liquid] (CAS 110-85-0)	AGW	0,1 mg/m ³	Vapor and aerosol.
Triethylamine (CAS 102-71-6)	AGW	1 mg/m ³	Inhalable fraction.

Greece. OELs, Presidential Decree No. 307/1986, as amended

Components	Type	Value	Form
piperazine [liquid] (CAS 110-85-0)	STEL	0,3 mg/m3	Vapor and dust.
	TWA	0,1 mg/m3	Vapor and dust.

Hungary. OELs. Decree on protection of workers exposed to chemical agents (5/2020. (II.6)), Annex 1&2, as amended

Components	Type	Value
piperazine [liquid] (CAS 110-85-0)	STEL	0,3 mg/m3
	TWA	0,1 mg/m3

Iceland. OELs. Regulation 390/2009 on Pollution Limits and Measures to Reduce Pollution at the Workplace, as amended

Components	Type	Value
piperazine [liquid] (CAS 110-85-0)	STEL	0,3 mg/m3
	TWA	0,1 mg/m3
Triethylamine (CAS 102-71-6)	TWA	5 mg/m3

Ireland. OELVs, Schedules 1 & 2, Code of Practice for Chemical Agents and Carcinogens Regulations

Components	Type	Value
piperazine [liquid] (CAS 110-85-0)	STEL	0,3 mg/m3
	TWA	0,1 mg/m3
Triethylamine (CAS 102-71-6)	TWA	5 mg/m3

Italy. OELs (Legislative Decree n.81, 9 April 2008), as amended

Components	Type	Value	Form
piperazine [liquid] (CAS 110-85-0)	STEL	0,3 mg/m3	Vapor and dust.
	TWA	0,1 mg/m3	Vapor and dust.
Triethylamine (CAS 102-71-6)	TWA	5 mg/m3	

Latvia. OELs. Occupational Exposure Limits of Chemical Substances at Workplace (Reg. No. 325/ 2007, L.V. 80, Annex 1), as amended

Components	Type	Value
piperazine [liquid] (CAS 110-85-0)	STEL	0,3 mg/m3
	TWA	0,1 mg/m3

Lithuania. OELs. Occupational Exposure Limit Values for Chemical Substances (Hygiene Norm HN 23:2011; Order No. V-824/A1-389), as amended

Components	Type	Value
piperazine [liquid] (CAS 110-85-0)	TWA	0,1 mg/m3
		0,3 ppm
Triethylamine (CAS 102-71-6)	STEL	10 mg/m3
	TWA	5 mg/m3

Luxembourg. OELs. Binding Occupational Exposure Limit Values (Annex I), G.D.R. of 14 November 2016, OJ Memorial A, n ° 235/2016, as amended

Components	Type	Value	Form
piperazine [liquid] (CAS 110-85-0)	STEL	0,3 mg/m3	Vapor and dust.
	TWA	0,1 mg/m3	Vapor and dust.

Malta. OELs. Protection of Health and Safety of Workers from Risks related to Chemical Agents at Work (L.N 227/2003 Schedules I and V), as amended

Components	Type	Value
piperazine [liquid] (CAS 110-85-0)	STEL	0,3 mg/m ³
	TWA	0,1 mg/m ³

Netherlands. OELs per Annex XIII of Working Conditions Regulation (Staatscourant no. 252, 29 December 2006), as amended

Components	Type	Value
piperazine [liquid] (CAS 110-85-0)	STEL	0,3 mg/m ³
	TWA	0,1 mg/m ³

Norway. Regulation No. 1358 on Measures and Limit Values for Physical and Chemical Factors in Work Environment and Infection Groups for Biological Factors, as amended

Components	Type	Value
piperazine [liquid] (CAS 110-85-0)	STEL	0,3 mg/m ³
	TLV	0,1 mg/m ³
Triethylamine (CAS 102-71-6)	TLV	5 mg/m ³

Poland. Maximum permissible concentrations and intensities of harmful factors in the work environment (Dz.U.Poz. 1286/2018, Annex 1)

Components	Type	Value
piperazine [liquid] (CAS 110-85-0)	STEL	0,3 mg/m ³
	TWA	0,1 mg/m ³

Portugal. Decree-Law No. 24/2012, Occupational Exposure Limit Values, Annex II, as amended

Components	Type	Value
piperazine [liquid] (CAS 110-85-0)	STEL	0,3 mg/m ³
	TWA	0,1 mg/m ³

Portugal. VLEs. Norm on occupational exposure to chemical agents (NP 1796-2014)

Components	Type	Value	Form
piperazine [liquid] (CAS 110-85-0)	TWA	0,03 ppm	Inhalable fraction and vapor.
Triethylamine (CAS 102-71-6)	TWA	5 mg/m ³	

Romania. OELs. Limit Values of Chemical Agents at Workplace (Regulation 1.218/2006, M.O 845, Annex 1, 3&4, as amended)

Components	Type	Value
piperazine [liquid] (CAS 110-85-0)	STEL	0,3 mg/m ³
	TWA	0,1 mg/m ³

Slovakia. OELs. Maximum permissible exposure limits for chemical factors in workplace air (Regulation No 355/2006, Annex 1, Table 1, as amended)

Components	Type	Value
piperazine [liquid] (CAS 110-85-0)	STEL	0,3 mg/m ³
	TWA	0,1 mg/m ³

Slovenia. OELs. Occupational Exposure Limits of Chemicals at Workplace (Reg. on Protection of Workers from Risks due to Exp. to Chemicals at Work, Annex I), as amended

Components	Type	Value
piperazine [liquid] (CAS 110-85-0)	TWA	0,1 mg/m ³

Spain. OELs. INSST, Límites de Exposición Profesional Para Agentes Químicos, Table 1-Valores Límites Ambientales (VLAs)

Components	Type	Value	Form
piperazine [liquid] (CAS 110-85-0)	STEL	0,3 mg/m3	Inhalable fraction and vapor.
	TWA	0,1 mg/m3	Inhalable fraction and vapor.
Triethylamine (CAS 102-71-6)	TWA	5 mg/m3	

Sweden. OELs (Annex 1). Work Environment Authority (AV), Occupational Exposure Limit Values (AFS 2018:1), as amended

Components	Type	Value
piperazine [liquid] (CAS 110-85-0)	Ceiling	0,3 mg/m3
	TWA	0,08 ppm 0,1 mg/m3 0,03 ppm
Triethylamine (CAS 102-71-6)	STEL	10 mg/m3 1,6 ppm
	TWA	5 mg/m3 0,8 ppm

Switzerland. SUVA Grenzwerte am Arbeitsplatz: Aktuelle MAK-Werte

Components	Type	Value	Form
Triethylamine (CAS 102-71-6)	STEL	5 mg/m3	Inhalable fraction.
	TWA	5 mg/m3	Inhalable fraction.

UK. OELs. Workplace Exposure Limits (WELs) (EH40/2005 (Fourth Edition 2020)), Table 1

Components	Type	Value
piperazine [liquid] (CAS 110-85-0)	STEL	0,3 mg/m3
	TWA	0,1 mg/m3

EU. Indicative Exposure Limit Values in Directives 91/322/EEC, 2000/39/EC, 2006/15/EC, 2009/161/EU, 2017/164/EU

Components	Type	Value
piperazine [liquid] (CAS 110-85-0)	STEL	0,3 mg/m3
	TWA	0,1 mg/m3

Biological limit values No biological exposure limits noted for the ingredient(s).

Recommended monitoring procedures Follow standard monitoring procedures.

Derived no effect levels (DNELs) Not available.

Predicted no effect concentrations (PNECs) Not available.

Exposure guidelines

Czech Republic PELs: Skin designation

Triethylamine (CAS 102-71-6)

Can be absorbed through the skin.

Sweden Threshold Limit Values: Skin designation

Triethylamine (CAS 102-71-6)

Can be absorbed through the skin.

8.2. Exposure controls

Appropriate engineering controls

Good general ventilation should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level. Eye wash facilities and emergency shower must be available when handling this product.

Individual protection measures, such as personal protective equipment

General information	Use personal protective equipment as required. Personal protection equipment should be chosen according to the CEN standards and in discussion with the supplier of the personal protective equipment.
Eye/face protection	Chemical respirator with organic vapor cartridge and full facepiece.
Skin protection	
- Hand protection	Wear appropriate chemical resistant gloves.
- Other	Wear appropriate chemical resistant clothing. Use of an impervious apron is recommended.
Respiratory protection	Chemical respirator with organic vapor cartridge and full facepiece.
Thermal hazards	Wear appropriate thermal protective clothing, when necessary.
Hygiene measures	Observe any medical surveillance requirements. Keep away from food and drink. Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants. Contaminated work clothing should not be allowed out of the workplace.
Environmental exposure controls	Inform appropriate managerial or supervisory personnel of all environmental releases. Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. Fume scrubbers, filters or engineering modifications to the process equipment may be necessary to reduce emissions to acceptable levels.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	Liquid.
Form	Liquid.
Color	Colorless to light yellow.
Odor	Ammoniacal.
Melting point/freezing point	Not available.
Boiling point or initial boiling point and boiling range	428 °F (220 °C) estimated
Flammability	Not applicable.
Flash point	>201,0 °F (>93,9 °C)
Auto-ignition temperature	609,8 °F (321 °C) estimated
Decomposition temperature	Not available.
pH	Not available.
Kinematic viscosity	Not available.
Solubility	
Solubility (water)	Not available.
Partition coefficient (n-octanol/water) (log value)	Not available.
Vapor pressure	<0,5 mm Hg
Density and/or relative density	
Density	0,98 g/cm ³
Vapor density	Not available.
Particle characteristics	Not available.

9.2. Other information

9.2.1. Information with regard to physical hazard classes No relevant additional information available.

9.2.2. Other safety characteristics

Specific gravity 0,98

SECTION 10: Stability and reactivity

10.1. Reactivity	The product is stable and non-reactive under normal conditions of use, storage and transport.
10.2. Chemical stability	Material is stable under normal conditions.
10.3. Possibility of hazardous reactions	No dangerous reaction known under conditions of normal use.
10.4. Conditions to avoid	Avoid temperatures exceeding the flash point. Contact with incompatible materials.
10.5. Incompatible materials	Alkaline metals. Peroxides. Phenols.

10.6. Hazardous decomposition products

No hazardous decomposition products are known.

SECTION 11: Toxicological information

General information Occupational exposure to the substance or mixture may cause adverse effects.

Information on likely routes of exposure

- Inhalation** May cause irritation to the respiratory system. Prolonged inhalation may be harmful.
- Skin contact** Causes severe skin burns. Harmful in contact with skin. May cause an allergic skin reaction.
- Eye contact** Causes serious eye damage.
- Ingestion** Causes digestive tract burns. Harmful if swallowed.

Symptoms Burning pain and severe corrosive skin damage. Causes serious eye damage. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. Permanent eye damage including blindness could result.

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

Acute toxicity Harmful in contact with skin. Harmful if swallowed.

Components	Species	Test Results
nonylphenol; [1] 4-nonylphenol, branched [2] (CAS 84852-15-3)		
Acute		
Dermal		
LD50	Rabbit	2140 mg/kg
piperazine [liquid] (CAS 110-85-0)		
Acute		
Oral		
LD50	Rat	2050 mg/kg
Triethylolamine (CAS 102-71-6)		
Acute		
Dermal		
LD50	Rabbit	> 20000 mg/kg
Oral		
LD50	Rat	8 g/kg
Skin corrosion/irritation	Causes severe skin burns and eye damage.	
Serious eye damage/eye irritation	Causes serious eye damage.	
Respiratory sensitization	Due to partial or complete lack of data the classification is not possible.	
Skin sensitization	May cause an allergic skin reaction.	
Germ cell mutagenicity	Due to partial or complete lack of data the classification is not possible.	
Carcinogenicity	Due to partial or complete lack of data the classification is not possible.	
Hungary. 26/2000 EüM Ordinance on protection against and preventing risk relating to exposure to carcinogens at work (as amended)		
nonylphenol; [1] 4-nonylphenol, branched [2] (CAS 84852-15-3)		
IARC Monographs. Overall Evaluation of Carcinogenicity		
Triethylolamine (CAS 102-71-6)	3 Not classifiable as to carcinogenicity to humans.	
Reproductive toxicity	Suspected of damaging fertility. Suspected of damaging the unborn child.	
Slovenia. OELs. Regulations concerning protection of workers against risks due to exposure to chemicals while working (Official Gazette of the Republic of Slovenia)		
piperazine [liquid] (CAS 110-85-0)	Toxic for reproduction - category 2.	
Specific target organ toxicity - single exposure	Due to partial or complete lack of data the classification is not possible.	
Specific target organ toxicity - repeated exposure	Due to partial or complete lack of data the classification is not possible.	
Aspiration hazard	Due to partial or complete lack of data the classification is not possible.	
Mixture versus substance information	No information available.	

11.2. Information on other hazards

Endocrine disrupting properties	This mixture does not contain any substances having endocrine disrupting properties with respect to human health as assessed in accordance with the criteria set out in Regulations (EC) No 1907/2006, (EU) No 2017/2100 and (EU) 2018/605, at a concentration equal to or greater than 0.1% by weight.
Other information	Not available.

SECTION 12: Ecological information

12.1. Toxicity	Very toxic to aquatic life with long lasting effects.
12.2. Persistence and degradability	No data is available on the degradability of any ingredients in the mixture.
12.3. Bioaccumulative potential	
Partition coefficient n-octanol/water (log Kow)	
2-piperazin-1-ylethylamine	-1,57
3,6,9-triazaundecamethylenediamine; tetraethylenepentamine	1,503
nonylphenol; [1] 4-nonylphenol, branched [2]	5,71
piperazine [liquid]	-1,5
Triethylamine	-1
Bioconcentration factor (BCF)	Not available.
12.4. Mobility in soil	No data available.
12.5. Results of PBT and vPvB assessment	This mixture does not contain substances assessed to be vPvB / PBT according to Regulation (EC) No 1907/2006, Annex XIII.
12.6. Endocrine disrupting properties	This mixture does not contain any substances having endocrine disrupting properties with respect to the environment as assessed in accordance with the criteria set out in Regulations (EC) No 1907/2006, (EU) No 2017/2100 and (EU) 2018/605, at a concentration equal to or greater than 0.1% by weight.
12.7. Other adverse effects	No other adverse environmental effects (e.g. ozone depletion, photochemical ozone creation potential, endocrine disruption, global warming potential) are expected from this component.

SECTION 13: Disposal considerations

13.1. Waste treatment methods	
Residual waste	Dispose of in accordance with local regulations. Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe manner (see: Disposal instructions).
Contaminated packaging	Since emptied containers may retain product residue, follow label warnings even after container is emptied. Empty containers should be taken to an approved waste handling site for recycling or disposal.
EU waste code	The Waste code should be assigned in discussion between the user, the producer and the waste disposal company.
Disposal methods/information	Collect and reclaim or dispose in sealed containers at licensed waste disposal site. Do not allow this material to drain into sewers/water supplies. Do not contaminate ponds, waterways or ditches with chemical or used container. Dispose of contents/container in accordance with local/regional/national/international regulations.
Special precautions	Dispose in accordance with all applicable regulations.

SECTION 14: Transport information

ADR

14.1. UN number	UN3066
14.2. UN proper shipping name	Paint
14.3. Transport hazard class(es)	
Class	8
Subsidiary risk	-
Label(s)	8
Hazard No. (ADR)	80
Tunnel restriction code	Not assigned.
14.4. Packing group	III
14.5. Environmental hazards	No.
14.6. Special precautions for user	Read safety instructions, SDS and emergency procedures before handling.

RID

14.1. UN number	UN3066
14.2. UN proper shipping name	Paint

14.3. Transport hazard class(es)

Class 8
 Subsidiary risk -
 Label(s) 8

14.4. Packing group III**14.5. Environmental hazards** No.**14.6. Special precautions for user** Read safety instructions, SDS and emergency procedures before handling.**ADN****14.1. UN number** UN3066**14.2. UN proper shipping name** Paint**14.3. Transport hazard class(es)**

Class 8
 Subsidiary risk -
 Label(s) 8

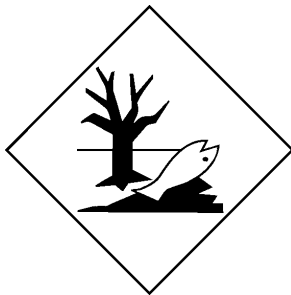
14.4. Packing group III**14.5. Environmental hazards** No.**14.6. Special precautions for user** Read safety instructions, SDS and emergency procedures before handling.**IATA****14.1. UN number** UN3066**14.2. UN proper shipping name** Paint**14.3. Transport hazard class(es)**

Class 8
 Subsidiary risk -

14.4. Packing group III**14.5. Environmental hazards** No.**ERG Code** 8L**14.6. Special precautions for user** Read safety instructions, SDS and emergency procedures before handling.**Other information****Passenger and cargo aircraft** Allowed with restrictions.**Cargo aircraft only** Allowed with restrictions.**IMDG****14.1. UN number** UN3066**14.2. UN proper shipping name** Paint, MARINE POLLUTANT**14.3. Transport hazard class(es)**

Class 8
 Subsidiary risk -

14.4. Packing group III**14.5. Environmental hazards****Marine pollutant** Yes**EmS** F-A, S-B**14.6. Special precautions for user** Read safety instructions, SDS and emergency procedures before handling.**14.7. Maritime transport in bulk according to IMO instruments** Not established.**ADN; ADR; IATA; IMDG; RID**



General information

IMDG Regulated Marine Pollutant.

SECTION 15: Regulatory information

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

EU regulations

Regulation (EC) No. 1005/2009 on substances that deplete the ozone layer, Annex I and II, as amended

Not listed.

Regulation (EU) 2019/1021 On persistent organic pollutants (recast), as amended

Not listed.

Regulation (EU) No. 649/2012 concerning the export and import of dangerous chemicals, Annex I, Part 1 as amended

nonylphenol; [1] 4-nonylphenol, branched [2] (CAS 84852-15-3)

Regulation (EU) No. 649/2012 concerning the export and import of dangerous chemicals, Annex I, Part 2 as amended

nonylphenol; [1] 4-nonylphenol, branched [2] (CAS 84852-15-3)

Regulation (EU) No. 649/2012 concerning the export and import of dangerous chemicals, Annex I, Part 3 as amended

Not listed.

Regulation (EU) No. 649/2012 concerning the export and import of dangerous chemicals, Annex V as amended

Not listed.

Regulation (EC) No. 166/2006 Annex II Pollutant Release and Transfer Registry, as amended

Not listed.

Regulation (EC) No. 1907/2006, REACH Article 59(10) Candidate List as currently published by ECHA

nonylphenol; [1] 4-nonylphenol, branched [2] (CAS 84852-15-3)

UFI:

Austria: 8F25-91CX-J00K-1W94
Belgium: 8F25-91CX-J00K-1W94
Bulgaria: 8F25-91CX-J00K-1W94
Croatia: 8F25-91CX-J00K-1W94
Cyprus: 8F25-91CX-J00K-1W94
Czech Republic: 8F25-91CX-J00K-1W94
Denmark: 8F25-91CX-J00K-1W94
Estonia: 8F25-91CX-J00K-1W94
EU: 8F25-91CX-J00K-1W94
Finland: 8F25-91CX-J00K-1W94
France: 8F25-91CX-J00K-1W94
Germany: 8F25-91CX-J00K-1W94
Greece: 8F25-91CX-J00K-1W94
Hungary: 8F25-91CX-J00K-1W94
Iceland: 8F25-91CX-J00K-1W94
Ireland: 8F25-91CX-J00K-1W94
Italy: 8F25-91CX-J00K-1W94
Latvia: 8F25-91CX-J00K-1W94
Lithuania: 8F25-91CX-J00K-1W94
Luxembourg: 8F25-91CX-J00K-1W94
Malta: 8F25-91CX-J00K-1W94
Netherlands: 8F25-91CX-J00K-1W94
Norway: 8F25-91CX-J00K-1W94
Poland: 8F25-91CX-J00K-1W94
Portugal: 8F25-91CX-J00K-1W94
Romania: 8F25-91CX-J00K-1W94
Slovakia: 8F25-91CX-J00K-1W94
Slovenia: 8F25-91CX-J00K-1W94
Spain: 8F25-91CX-J00K-1W94
Sweden: 8F25-91CX-J00K-1W94

Authorizations

Regulation (EC) No. 1907/2006, REACH Annex XIV Substances subject to authorization, as amended

Not listed.

Restrictions on use

Regulation (EC) No. 1907/2006, REACH Annex XVII Substances subject to restriction on marketing and use, as amended - Conditions of restriction given for the associated entry number should be considered

Not listed.

Directive 2004/37/EC: on the protection of workers from the risks related to exposure to carcinogens and mutagens at work, as amended

nonylphenol; [1] 4-nonylphenol, branched [2] (CAS 84852-15-3)

piperazine [liquid] (CAS 110-85-0)

Other EU regulations Directive 2012/18/EU on major accident hazards involving dangerous substances, as amended

ANNEX 1, PART 1 Categories of dangerous substances
Hazard categories in accordance with Regulation (EC) No 1272/2008
- E1 Hazardous to the Aquatic Environment Acute
- E1 Hazardous to the Aquatic Environment Chronic

Other regulations The product is classified and labelled in accordance with Regulation (EC) 1272/2008 (CLP Regulation) as amended. This Safety Data Sheet complies with the requirements of Regulation (EC) No 1907/2006, as amended.

National regulations According to Directive 92/85/EEC as amended, pregnant women should not work with the product, if there is the least risk of exposure.

Young people under 18 years old are not allowed to work with this product according to EU Directive 94/33/EC on the protection of young people at work, as amended. Follow national regulation for work with chemical agents in accordance with Directive 98/24/EC, as amended.

France regulations

France INRS Table of Occupational Diseases

Not regulated.

Product registration number

Austria	UFI: 8F25-91CX-J00K-1W94
Belgium	UFI: 8F25-91CX-J00K-1W94
Czech Republic	UFI: 8F25-91CX-J00K-1W94
Denmark	UFI: 8F25-91CX-J00K-1W94
European Union	UFI: 8F25-91CX-J00K-1W94
Finland	UFI: 8F25-91CX-J00K-1W94
France	UFI: 8F25-91CX-J00K-1W94
Germany	UFI: 8F25-91CX-J00K-1W94
Greece	UFI: 8F25-91CX-J00K-1W94
Hungary	UFI: 8F25-91CX-J00K-1W94
Italy	UFI: 8F25-91CX-J00K-1W94
Netherlands	UFI: 8F25-91CX-J00K-1W94
Norway	UFI: 8F25-91CX-J00K-1W94
Poland	UFI: 8F25-91CX-J00K-1W94
Portugal	UFI: 8F25-91CX-J00K-1W94
Slovakia	UFI: 8F25-91CX-J00K-1W94
Slovenia	UFI: 8F25-91CX-J00K-1W94
Spain	UFI: 8F25-91CX-J00K-1W94
Sweden	UFI: 8F25-91CX-J00K-1W94
Switzerland	UFI: 8F25-91CX-J00K-1W94

15.2. Chemical safety assessment No Chemical Safety Assessment has been carried out.

SECTION 16: Other information

List of abbreviations

ADN: European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways.
ADR: Agreement concerning the International Carriage of Dangerous Goods by Road.
AGW: Occupational threshold limit value (Arbeitsplatzgrenzwert – Germany).
CAS: Chemical Abstract Service.
CEN: European Committee for Standardization.
IATA: International Air Transport Association.
IBC Code: International Code for the Construction and Equipment of Ships Carrying Dangerous Chemicals in Bulk.
IMDG: International Maritime Dangerous Goods.
MAC: Maximum Allowed Concentration.
MARPOL: International Convention for the Prevention of Pollution from Ships.
PBT: Persistent, bioaccumulative and toxic.
RID: Regulations concerning the International Carriage of Dangerous Goods by Rail.
STEL: Short term exposure limit.
TLV: Threshold Limit Value.

TWA: Time Weighted Average.
VLE: Exposure Limit Value.
VME: Exposure Average Value.
vPvB: Very persistent and very bioaccumulative.

References

Not available.

Information on evaluation method leading to the classification of mixture

The classification for health and environmental hazards is derived by a combination of calculation methods and test data, if available.

Full text of any statements, which are not written out in full under sections 2 to 15

H302 Harmful if swallowed.
H312 Harmful in contact with skin.
H314 Causes severe skin burns and eye damage.
H317 May cause an allergic skin reaction.
H318 Causes serious eye damage.
H319 Causes serious eye irritation.
H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.
H361fd Suspected of damaging fertility. Suspected of damaging the unborn child.
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.

Revision information

Physical & Chemical Properties: Multiple Properties

Training information

Follow training instructions when handling this material.

Disclaimer

ITW Performance Polymers cannot anticipate all conditions under which this information and its product, or the products of other manufacturers in combination with its product, may be used. It is the user's responsibility to ensure safe conditions for handling, storage and disposal of the product, and to assume liability for loss, injury, damage or expense due to improper use. The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release.