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

1.1 Product Identifier

Trade name: Insola Thermo Spray 2D (aerosol mixture)
Type: spraying thermal insulation

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

Use(-s):	Insola Thermo Spray 2D spray insulation is a high-quality, one-component thermal insulation with versatile application. It is used to build internal and external insulation systems in new constructions, as well as during thermos-modernization of old buildings.
Uses advised against:	Any use other than the recommended use.

1.3 Details of the supplier of the Safety Data Sheet:

JSC "INSOLA"
Lauko str. 23, Šventininkų village, Trakų district, LT-21156,
Lithuania
Ph./fax: +370 67488421
E-mail: info@insola.lt
Website: www.insola.lt
E-mail of the responsible person on the safety data sheet: saugosduomenulapai@gmail.com

1.4 Emergency Telephone Number: In case of emergency contact your local healthcare provider (poison centre). Below is a list of nationally appointed bodies and their contact details for direct inquiries in relation to the submission of information for the purpose of emergency health response.
Full list contacts of National Appointed Bodies (and/or Poison Centre's) across the EU please see: https://poisoncentres.echa.europa.eu/appointed-bodies

Austria	Poisons Information Centre	+43 1 406 43 43
Belgium	Centre Antipoisons	+32022649636
Bulgaria	Temporary body - Ministry of Health	+359 2 9301214
Croatia	Croatian Institute of Public Health, Division for Toxicology	+38514686910
Cyprus	Ministry of Labour, Welfare and Social Insurance, Department of Labour Inspection	+35722405611
Czech Republic	Ministry of Health of the Czech Republic Chemical Substances and Biocidal Products Unit	+420267082257
Denmark	Danish Environmental Protection Agency	+45 72 54 40 00
Estonia	Health Board	+372 794 3500
Finland	Finnish Safety and Chemicals Agency (Tukes)	+358 5052 000
France	French National Products and Composition Database (B.N.P.C.); French Poison and toxicovigilance Centre Network	+ 33 3 83 85 21 92
Germany	German Federal Institute for Risk Assessment	+49-30-18412-0
Greece	Hellenic Republic Independent Authority for Public Revenue D.G. of the General Chemical State Laboratory Directorate of Energy, Industrial and Chemical Products	+302106479250
Hungary	National Public Health Center	+36 (1) 476 1135
Iceland	Poisons Information Center - Icelandic University Hospital	+354 543 22 22
Ireland	National Poisons Information Centre	not provided

Italy	Istituto Superiore di Sanità (ISS)	not provided
Latvia	State Ltd "Latvian Environment, Geology and Meteorology Centre"	+371 67032600
Liechtenstein –	Not provided	not provided
Luxembourg	Centre Antipoisons (BE) on behalf of Ministère-Direction de la Santé	+320 22649636
Malta	Malta Competition and Consumer Affairs Authority (MCCAA)	+356 2395 2000
Netherlands	National Poisons Information Center	+31 88 75 585 61
Norway	Norwegian Poison Information Centre	+47 21 07 70 00
Poland	Bureau for Chemical Substances	+48 42 2538 400
Portugal	Centro de informação antivenenos	+351213303271
Romania	National Institute for Public Health, Ministry of Health	+40213183606
Slovakia	National Toxicological Information Centre	+421 2 5465 2307
Slovenia	Centre for Clinical Pharmacology and Toxicology, Division of Internal Medicine, University Medical Centre Ljubljana	+ 386 1 522 1293
Spain	Instituto Nacional de Toxicología y Ciencias Forenses (INTCF)	+34 917689800
Sweden	Swedish Poisons Information Centre	+46104566750

For more precise information about National Poison Centres please contact with your National Helpdesk. The list of helpdesks across the EU please sees: https://echa.europa.eu/support/helpdesks

SECTION 2: Hazards identification

Products is classified as hazardous according to Regulation (EC) No 1272/2008 and its amendments and / or contain dangerous ingredients above the generic or specific concentration limits, thus Safety Data Sheet, in accordance with Annex II and Article 31 of Regulation EC 1907/2006 (including latest consolidated version and amendments) have been provided.

2.1 Classification according to Regulation (EC) No 1272/2008 (CLP):

Hazard class	Hazard category	Hazard statement
Aerosols	1	H222, H229
Skin Irritant	2	H315
Skin Sensitizing	1	H317
Eye Irritant	2	H319
Respiratory sensitisation	1	H334
STOT SE	3	H335
Carcinogenicity	2	H351
STOT RE	2	H373

2.2 Label elements according to Regulation (EC) No 1272/2008 [CLP]:

Hazard pictogram (s):



GHS02 GHS07 GHS08

Signal word: Danger

Hazard statement (s):

H222 Extremely flammable aerosol
H229 Pressurised container: May burst if heated
H315 Causes skin irritation
H317 May cause an allergic skin reaction
H319 Causes serious eye irritation
H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled

H335 May cause respiratory irritation
H351 Suspected of causing cancer
H373 May cause damage to organs through prolonged or repeated exposure

Precautionary statements:

General	P102 Keep out of reach of children. P103 Read label before use.
Prevention	P201 Obtain special instructions before use. P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. P211 Do not spray on an open flame or other ignition source. P251 Do not pierce or burn, even after use. P260 Do not breathe mist/vapours/ spray. P264 Wash hands thoroughly after handling. P271 Use only outdoors or in a well-ventilated area (*applicable only for general public*). P280 Wear protective gloves/protective clothing/eye protection/face protection.
Response	P312 Call a POISON CENTRE/doctor if you feel unwell. P302 + P352 IF ON SKIN: Wash with plenty of water (*applicable only for general public*). 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 (*applicable only for general public*). P308 + P313 IF exposed or concerned: Get medical advice/attention. P342 + P311 If experiencing respiratory symptoms: Call a POISON CENTER or doctor/physician. P362 + P364 Take off contaminated clothing and wash it before reuse.
Storage	P403 + P235 + 405 Store in a well-ventilated place. Keep cool. Store locked up (*applicable only for general public*). P410 + P412 Protect from sunlight. Do not expose to temperatures exceeding 50 ºC/122 ºF.
Disposal	P501 Dispose of contents/container in accordance with local/national regulations.

Names of the hazardous constituents in the label: Isocyanic acid, polymethylenepolyphenylene ester (P-MDI)

Additional labelling information:
"As from 24 August 2023 adequate training is required before industrial or professional use".
EUH phrase: EUH204 "Contains isocyanates. May produce an allergic reaction".
Child-resistant fastening (CRF): Not applicable.
Tactile warnings of danger (TWDs): Applicable for packaging of whatever capacity supplied to the general public. Not applicable for packaging of whatever capacity supplied to the professional users.

2.3 Other hazards: none
PBT and vPvB: Not applicable. Constituents of the mixture does not fulfil criteria for PBT or vPvB in accordance with Annexe XIII of the REACH regulations EC 1907/2006.
ED: Not applicable. Mixture does not contain any known or suspected endocrine disruptors.

SECTION 3: Composition/information on ingredients

3.1 Substances: Not applicable, product is a mixture.

3.2 Mixture: Constituents of the mixture according Regulation No. 1907/2006 (REACH) and Regulation No. 1272/2008 (CLP) requirements:

Constituents / REACH No.	**CAS / EC (Index) Nr.**	***Classification according Regulation No. 1272/2008 (CLP)***	**m. d. %**
** Isocyanic acid, polymethylenepolyphenylene ester (P-MDI) / -	9016-87-9 / 618-498-9 (-)	Skin Irrit. 2, H315 Skin Sens. 1, H317 Eye Irrit. 2, H319 Acute Tox. (inhale vapours) 4, H332 (ATE 11 mg/l) Resp. Sens. 1, H334 STOT SE 3, H335 Carc. 2, H351 STOT RE 2, H373	20 - 50
Reaction products of phosphoryl trichloride and 2-methyloxirane (TCPP) / 01-2119486772-26-xxxx	1244733-77-4 / 807-935-0 (-)	Acute Tox. (oral) 4, H302 (ATE 632 mg/kg) Carc. 2, H351 Aquatic Chronic 3, H412	5 - 15
Isobutane / 01-2119485395-27-xxxx	75-28-5 / 200-857-2 (601-004-00-0)	Flam. Gas 1, H220 Press. Gas (Compressed), H280	2 - 8
Dimethyl ether / 01-2119472128-37-xxxx	115-10-6 / 204-065-8 (603-019-00-8)	Flam. Gas 1, H220 Press. Gas (Compressed), H280	2 - 8
2,2'-dimorpholinyldiethyl ether / 01-2119969278-20-xxxx	6425-39-4 / 229-194-7 (-)	Skin Irrit. 2, H315 Eye Irrit. 2, H319	0 – 1,5

** Annex XVII of REACH (see Section 15)

Full text of hazard (H) statements related to the classification is listed in the Section 16.6

SECTION 4: First aid measures

4.1 Description of first aid measures

General Advice: Consult a physician if any symptoms persist. Call a POISON CENTER or doctor if you feel unwell. Show this safety data sheet or product label to the doctor in attendance. Remove person to fresh air and keep comfortable for breathing.
First Aider Protection: Use personal protective equipment when providing first aid.

Ingestion: Never give anything to an unconscious person. Rinse mouth with water. Drink lot of water. Get medical advice/attention if feel unwell or symptoms occur.
Skin contact: Flush skin with plenty of soap and water whilst removing contaminated clothing. Seek medical attention if any skin reaction persists.
Eye contact: Rinse eyes cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Get medical advice/attention if eye irritation persists.
Inhalation: Remove from exposure site to fresh air and keep at rest in a position comfortable for breathing. If breathing has stopped give artificial respiration. Observe for possible delayed reaction. Get medical advice/attention if concerned.

4.2 Most important symptoms and effects, both acute and delayed

Ingestion: May cause stomach distress, nausea or vomiting, shortness of breath, choke.
Skin contact: Symptoms may include redness, drying, dermatitis, itching, defatting and cracking of the

skin, allergy or allergic skin reactions, irritation.
Eye contact: Symptoms may include discomfort or slight pain, excess blinking and tear production, with possible redness and swelling, as well as corneal / retinal slight irritation, reversible damage.
Inhalation: May cause mucous membranes and upper respiratory track irritation, respiratory difficulties, cough, increased drowsiness.

4.3 Indication of any immediate medical attention and special treatment needed.
Apply symptomatic treatment. Symptoms may not appear immediately. In case of accident or if you feel unwell, seek medical advice immediately.

SECTION 5: Fire-fighting measures

5.1 Extinguishing media
Suitable Extinguishing Media: For small (incipient) fires, use media such as "alcohol foam", dry chemical, or carbon dioxide. For large fires, apply water from as far away as possible. Use very large quantities of water applied as mist or spray; solid streams of water may be ineffective. Cool all affected containers with flooding quantities of water.
Unsuitable extinguishing media: strong water jet.

5.2 Special hazards arising from the substance or mixture
Product is extremely flammable aerosol. Pressurised container: May burst if heated. During a fire, irritating and toxic gases may be generated by thermal decomposition or combustion. Use appropriate fire-fighting measures with respect to surrounding conditions.

5.3 Advice for fire-fighters
Use water spray to cool unopened containers. Collect contaminated extinguishing water separately; do not allow reaching sewage or effluent systems.
Protective equipment: Wear full protective clothing and self-contained breathing apparatus in pressure-demand, MSHA/NIOSH (EN469 approved or equivalent).

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency measures
6.1.1 For non-emergency personnel
Establish a suitable distance in all directions at leak area. Avoid direct contact with the product, do not inhale. Use personal protective equipment as described in Section 8 and comply with the safety requirements of Section 7. Take off contaminated clothing and wash it before reuse. Rinse skin with water.
6.1.2 For emergency responders
Prevent further leakage or spillage if safe to do so. Ensure adequate ventilation. Use protective equipment, as described in section 8. Remove possible sources of ignition. Overlook on vapours/mist concentration in the air as vapours can accumulate in low areas. Avoid cracks in the equipment and pipes used, overfilling of tanks, any other spillage of the product. In the event there are any victims, bring them out of the area of the accident, render them the first medical aid, and call an ambulance. Only Authorised personnel should enter the leak area, utilising appropriate personal protective equipment.

6.2 Environmental precautions
Prevent spills or contaminated rinse water from entering sewers or watercourses. Do not allow enter to

drains, surface water, ground water, drainage systems. If the product release into sewage and / or surface water / groundwater, as well as release in large quantities and / or large areas inform the relevant authorities.

6.3 Methods and material for containment and cleaning up

Pour absorbent material (sand, absorbent) on a small amount of spilled mixture and collect it in a suitable, marked, sealed container and dispose of in accordance with the requirements of legislation (section 13). In the case of large spills dike the spill, if possible, install barriers that prevent from entering to the outflow pipes, watercourses, cellars, and other enclosed spaces. Absorb the chemical then place in a chemical waste container and dispose of according to local regulations. Then wash the contaminated area with water. Collect the resulting cleaning solutions by mechanical / manual or technical / automated instruments. Utilize according to legal requirements.
Ensure that dust/vapour does not accumulate during the cleaning process.

6.4 Reference to other sections

For safe handling and storage, see Section 7. For personal protection equipment, see Section 8. For disposal of waste from clean-up operations, see Section 13.

SECTION 7: Handling and storage

7.1 Conditions for safe storage, including any incompatibilities

7.1.1. Precautions for safe handling

Wear proper protective equipment and avoid contact with skin, eyes, or clothing. Use in well-ventilated place.
Information on protection against fire and explosion: Store at cool, dry place, keep away from heat/cold exposure, sparks and flame. Keep container tightly closed. Avoid direct sunlight, UV rays, and physical effects. Do not smoke. Install ground/bond container and receiving equipment. Do not weld, heat, cut, drill, throw, grind or otherwise make damage on the containers. In case of fire keep containers cool by spraying with water. Keep fire extinguishers and non-combustible absorption material on easily accessible place. Ground and bond container and receiving equipment. Use explosion-proof equipment as well use non-sparking tools. Take action to prevent static discharges.
Information on aerosols and dust prevention: Avoid high vapour / aerosol concentrations in the air. Ensure that the workplace is an adequate air supply – exhaust ventilation. Do not inhale or ingest. Avoid inhalation of vapour or mist.
Environmental precautions: Do not allow enter to drains, surface water, ground water, drainage systems. Avoid release to the environment. Formation and accumulation of wastes and cleaning cloth shall be minimized.

7.1.2. Advice on general occupational hygiene

Do not eat, drink or smoke whilst using this product. Wash hands thoroughly after handling this material. Take off contaminated clothing and wash it before reuse. Provide good personal hygiene after handling. Follow all applicable local regulations for handling and storage (practises of occupational good hygiene).

7.2 Conditions for safe storage, including any incompatibilities

Keep out of reach of children. Store the product in a dry, cool and well-ventilated place. Keep container tightly closed. Containers that are opened must be carefully resealed and kept upright to prevent leakage.
Keep away from heat and sources of ignition. Prevent from air, water, sun or other environmental effects, dust or other various mechanical impurities, physical impact. Keep away from food, drink and

animal feed. At the storage should be well-ventilated premises with extraction and supply ventilation systems installed. Recommended storage temperature is +5 - +30 ^{0}C. The containers must be sealed and resistant to the effects of the products. Do not expose to temperatures exceeding 50 ^{0}C /122 ^{0}F.

Storage incompatibilities

It shall not be stored in the same premise with explosive materials; compressed gases, liquefied and dissolved under pressure; easily inflammable liquids and solid substances; organic peroxides and other oxidizing substances; substances exuding the inflammable gases which interact with water; caustic and corrosive substances.

Other information

Avoid of spillage or spreading even a small amount of product. Do not throw of residues in to container to avoid contamination and not be shortened validity of the products. Do not dispose to the landfills or sewers. Is not allowed to weld, heat, cut, drill, throw, grind or otherwise physically act on the containers with the product as well as on the containers without the product.

7.3 Specific end use(s)

Apart from the uses mentioned in section 1.2 no other specific uses are stipulated.

SECTION 8: Exposure controls/personal protection

Using the PE (protective equipment) must be accompanied by additional measures: operating time (duration of exposure) should reflect the additional physiological stress for the worker's use PE. Furthermore, it is considered that the use of certain PE reduces the employee's ability to use tools and communication for these reasons, the employee should be: healthy (especially in view of medical problems that can affect the PE using) and must ensure im-permeability / tightness between the body and the PE (taking into account factors such as scarring, hair et al).

The employer and self-employed persons are legally responsible for the issuance and management of PE making adequate use in the workplace. Therefore, they should define and documented an appropriate PE use policies, including the employees training.

8.1 Control parameters

8.1.1 Occupational Exposure Limits: Not applicable for the mixture. Available occupational exposure limit values for constituents is provided below:

Substance	Limit value (8 hours) TWA		Limit value (15 min) STEL		Region
	mg/m^3	ppm	mg/m^3	ppm	
Diisocyanates	0,05	0,005	0,1 - 0,2	0,01 - 0,02	EU OEL's
	0,02		0,07		Australia (HCIS)
	0,02	0,005	0,07	0,02	USA (ACGIH)
Isobutane	1900	800	-	-	USA (NIOSH REL)
Dimethyl ether	1920	1000	-	-	EU OEL's

8.1.2 Information on currently recommended monitoring procedures

To ensure regular monitoring of the technical parameters according to the technical specifications / instructions provided for the equipment. The qualitative risk assessment and risk management at the workplace may be asked to assess.

Recommended standard at EU level:

EN 689 Workplace exposure - Measurement of Exposure by Inhalation to Chemical Agents

EN 14042 Workplace atmospheres - Guide for the application and use of procedures for the assessment of exposure to chemical and biological agents

EN 482 Workplace exposure - General requirements for the performance of procedures for the measurement of chemical agents

Note: approved national monitoring methods should / could be used as well and will take precedence over others difference methods.

8.1.3 Biological Limit Value (BLV): Not applicable for the mixture or ingredients of the mixture.

8.1.4 Predicted No Effect Concentration (PNECs) and Derived No-Effect Level (DNELs): Not applicable for the mixture.

Constituents with derived DNEL:

Substance	Workers		General population		
	Inhalation route	Dermal route	Inhalation route	Dermal route	Oral route
Isocyanic acid, polymethylene polyphenylene ester (P-MDI)	N/A	N/A	N/A	N/A	N/A
Reaction products of phosphoryl trichloride and 2-methyloxirane	8.2 mg/m^3 (systemic, long-term)	2.91 mg/kg (systemic long-term)	1.45 mg/m^3 (systemic, long-term)	1.04 mg/kg (systemic, long-term)	0.52 mg/kg (systemic, long-term)
Isobutane	N/A	N/A	N/A	N/A	N/A
Dimethyl ether	1894 mg/m^3 (Systemic, long-term)	no hazard identified	471 mg/m^3 (Systemic, long-term)	no hazard identified	no hazard identified
2,2'-di morpholinyl diethyl ether	7,28 mg/m^3 (Systemic, long-term)	1 mg/kg (systemic, long-term)	1,8 mg/m^3 (Systemic, long-term)	0,5 mg/kg mg/m^3 (Systemic, long-term)	0,5 mg/kg mg/m^3 (Systemic, long-term)

Constituents with derived PNEC:

Substance	Fresh water		Marine water		Intermittent releases	STP	Soil
	aqua	sediment	aqua	sediment			
Isocyanic acid, polymethylene polyphenylene ester (P-MDI)	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Reaction products of phosphoryl trichloride and 2-methyloxirane	0,32 mg/l	11.5 mg/k	0.032 mg/l	1.15 mg/kg	0.51 mg/l	19.1 mg/l	0.34 mg/kg
Isobutane	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Dimethyl ether	0,155 mg/l	0,681 mg/kg	0,016 mg/l	0,069 mg/kg	1,549 mg/l	160 mg/l	0,045 mg/kg
2,2'-di morpholinyl diethyl ether	0,1 mg/l	0,01 mg/l	8,2 mg/kg	0,82 mg/kg	1 mg/l	100 mg/l	1,58 mg/kg

8.1.5 Qualitative Risk Assessment and Risk Management

Qualitative risk assessment and risk management at the workplace may require individual monitoring of the workplace and / or biological factors in order to assess the adequacy of the risk management measures and the various controlled parameters and / or operational conditions.

8.2 Exposure controls

8.2.1 Appropriate engineering controls

The working time is an open-ended (till 480 minutes/shift, 5 shifts per week). Ensure regular air quality control on the working place. Perform continuous monitoring of parameters according to technical ventilation requirements. Make available eye wash stations and safety showers close to the workstation location. Employ good industrial hygiene practice.

8.2.2 Individual protection measures, such as personal protective equipment

Wear suitable personal protective equipment. When using /work with the product do not eat, drink or smoke. Before breaks and after work wash hands using appropriate tools (soap, etc.). Remove contaminated clothing and protective equipment after work or before breaks. Use certified protection equipment according to EU or equivalent requirements and standards. Ensure sufficiently limited risk using the technical measure as well as collective protection tools, methods or work organization procedures.

Eye/Face Protective Equipment

EN 166 Standard: Ensures adequate eye protection.

- Mechanical resistance: S (enhanced resistance).
- Protection against specific hazards: Level 3 (protection against liquid droplets and splashes).

Hand and Skin Protective Equipment

EN ISO 374 Standard: Protective gloves against hazardous chemicals and microorganisms.

- Type A: Gloves resistant to at least 6 chemicals from the approved list, with a permeation time of no less than 30 minutes.

Suitable glove materials: Nitrile, neoprene, butyl rubber, natural rubber latex.
Glove thickness:

- For short-term exposure: 0.15 mm, permeation time >240 minutes.
- For long-term exposure: 0.2–0.3 mm, permeation time >480 minutes.

If there is a risk of mechanical damage to gloves, consider EN 388 Standard.
If the risk involves thermal effects, refer to EN 407 Standard.

Other Body Protective Equipment

EN 14605 Standard: Protective clothing against liquid chemicals, including resistance to liquid and aerosol penetration.

- Type 4: Spray-tight clothing – protection against liquid splashes.

EN ISO 20345 Standard: Protective footwear against mechanical hazards and other risks.

- Type SB: Basic safety footwear with toe protection.

Respiratory Protective Equipment

When selecting respiratory protection and/or filter protection levels, consider:

- Known or anticipated exposure.
- Aggregate state and exposure level or method.
- Additional factors such as specific hazards and safe working limits with the selected equipment.

If ventilation is inadequate, exposure is elevated, or ventilation is improperly adjusted, individual respiratory protective equipment is recommended.
EN 149 Standard: Filtering facepieces (FFP) for particle protection, designed for single shift use. Applicable only if there is no gas/vapor exposure.

- Filtration efficiency classes:
  - FFP1: Filters at least 80% of airborne particles.
  - FFP2: Filters at least 94% of airborne particles.
  - FFP3: Filters at least 99% of airborne particles.

EN 1827 Standard: Half masks without inhalation valves and with separate filters for protection against gases, gas and particles, or particles only. Used only with manufacturer-specified filters, marked according to filter type and class, with the label FM.
EN 405 Standard: Filtering half masks with valves for protection against gases or combined gases and particle filters. Used with filters for specific gases or combined gases and particle filters.
Filter Types:

1. Gas/Vapor filters (ABEK 1/2/3):
   - A: Organic gases and vapors with a boiling point above 65°C.
   - B: Inorganic gases and vapors (e.g., chlorine, hydrogen sulfide).
   - E: Acidic gases and vapors (e.g., sulfur dioxide, hydrogen chloride).
   - K: Ammonia and organic ammonium derivatives.
2. Combined filters (ABEK 1/2/3 + P 1/2/3): Provide protection against both particles and gases/vapors. Marked to indicate capabilities and efficiency.

EN 143 Standard: Particle filters used with half masks and/or full-face masks (standards EN 1827 and EN 405). Not applicable for FFP masks (EN 149 Standard).

- Filtration efficiency:
  - P1: Filters at least 80% of airborne particles.
  - P2: Filters at least 94% of airborne particles.
  - P3: Filters at least 99% of airborne particles.

Remark: The complete suit protecting against chemicals and the exact type and/or class (category) of protection must be selected based on specific operational conditions and implemented risk management measures at workplace considering concentration and amount of the dangerous substances at the specific workplace, combined exposure route and level and combined risk.
Thermal hazards: The usual precautions for working with the chemical substances.

8.2.3 Environmental exposure controls

Prevent further leakage or spillage if safe to do so. Do not allow to enter drains, sewers or watercourses. Emission from ventilation and/or manufacturing equipment must be tested at least annually to make sure the compliance to the environmental legislation.
Air: The impact on air must be carried in accordance with dust particle emissions calculation methodology and local/regional/national legislation.
Water: The impact on water must be carried in accordance with procedure for the discharge of wastewater and the methods / criteria for determining the inputs into the environment.
Soil: The impact on soil must be carried in accordance with procedure for the discharge of wastewater and the methods / criteria for determining the inputs into the environment.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Appearance:	Aerosol, liquid.
Odour:	mild
Odour threshold:	Not applicable / No data available
pH:	7

Melting/freezing point:	Not applicable / No data available
Initial boiling point and boiling range:	Not applicable / No data available
Flash point:	320 °C
Evaporation rate:	Not applicable / No data available
Flammability (solid, gas):	Extremely flammable aerosol
Upper/lower flammability or explosive limits:	Not applicable / No data available
Vapour pressure at 25 °C:	Not applicable / No data available
Vapour density:	Not applicable / No data available
Density:	17 - 25 kg/cm^3
Solubility (water):	Not applicable / No data available)
Partition coefficient (n-octanol/water):	Not applicable / No data available)
Auto-ignition temperature:	Not applicable / No data available
Decomposition temperature:	No data available
Viscosity:	No data available
Explosive properties:	Not explosive
Oxidising properties:	Not applicable

9.2 Other information

9.2.1 Information with regard to physical hazard classes: Based on its physical chemical properties, substance classified as Extremely flammable aerosol in category 1 according to the criteria set out in Regulation No. 1272/2008/EC (CLP). Aerosols, this means aerosol dispensers, are any non-refillable receptacles made of metal, glass or plastics and containing a gas compressed, liquefied or dissolved under pressure, with or without a liquid, paste or powder, and fitted with a release device allowing the contents to be ejected as solid or liquid particles in suspension in a gas, as a foam, paste or powder or in a liquid state or in a gaseous state.

Explosives	Not applicable
Flammable gas	Not applicable
Aerosols	According to United Nations Recommendations on the Transport of Dangerous Goods (UN RTDG) classification is based on the criteria and tests outlined in Part III, Chapter 31 of the United Nations Manual of Tests and Criteria (UN MTC).
Oxidising gases	Not applicable
Gases under pressure	Not applicable
Flammable liquid	Not applicable
Flammable solids	Not applicable
Self-reactive substances and mixtures	Not applicable
Pyrophoric liquids	Not applicable
Pyrophoric solids	Not applicable
Self-heating substances and mixtures	Not applicable
Substances and mixtures, which emit flammable gases in contact with water	Not applicable
Oxidising liquids	Not applicable
Oxidising solids	Not applicable
Organic peroxides	Not applicable
Corrosive to metals	Not applicable

Desensitised explosives	Not applicable

9.2.2 Other safety characteristics: Not applicable

SECTION 10: Stability and reactivity

10.1 Reactivity: No decomposition processes or exothermic reactions occur if the substance is used according to the intended purpose and conditions.
10.2 Chemical stability: Stable under normal storage/handling conditions
10.3 Possibility of hazardous reactions: not occur under normal storage/handling conditions.
10.4 Conditions to avoid: Keep away from heat / sparks / open flames / hot surfaces, avoid contamination with combustible materials, alkalis, strong acids, oxidizers, do not freeze. Protect from sunlight. Do not expose to temperatures exceeding 50 °C/122 °F. Do not store at > 30 °C.
10.5 Incompatible materials: explosive, oxidising agents, flammable material, strong acids / bases, acid chlorides, acid anhydrides, alcohol, amines.
10.6 Hazardous decomposition products: product of combustion.

SECTION 11: Toxicological information

11.1 Information on toxicological effects
Acute toxicity: Mixture according to the criteria of CLP regulation (Annex I, part 3.1.) does not classified as acute toxic / harmful by oral, dermal and/or inhales. Based on available data, the classification criteria are not met. Non-classification is based on constituents and them concentration approach with respect to toxicity value and /or converted acute toxicity point estimate (ATE).

Isocyanic acid, polymethylenepolyphenylene ester (P-MDI)	LC50 (inhale, vapours) >10 - < 20 mg/l (ATE 11)
Reaction products of phosphoryl trichloride and 2-methyloxirane	LD50 (oral) = 632 mg/kg (ATE 632)

ATE_{mix} (oral) ≥ 3335 mg/kg
ATE_{mix} (dermal) ≥ 5000 mg/kg
ATE_{mix} (inhale) ≥ 22 mg/kg

Skin corrosion/irritation: Mixture according to the criteria of CLP regulation (Annex I, part 3.2.) does classify as irritant to skin. Based on available data, the classification criteria are met. Classification is based on constituents and them concentration approach with respect to generic and/or specific concentration limits.

Serious eye damage/ irritation: Mixture according to the criteria of CLP regulation (Annex I, part 3.3.) does classify as serious eye irritation. Based on available data, the classification criteria are met. Classification is based on constituents and them concentration approach with respect to generic and/or specific concentration limits.

Skin sensitization: Mixture according to the criteria of CLP regulation (Annex I, part 3.4.) does classify as skin sensitizer. Based on available data, the classification criteria are met. Classification is based on constituents and them concentration approach with respect to generic and/or specific concentration limits.

Respiratory sensitization: Mixture according to the criteria of CLP regulation (Annex I, part 3.4.) does classify as respiratory sensitizer. Based on available data, the classification criteria are met. Classification is based on constituents and them concentration approach with respect to generic and/or specific concentration limits.

Carcinogenicity: Mixture according to the criteria of CLP regulation (Annex I, part 3.6.) does classify as carcinogenic, suspected of causing cancer. Based on available data, the classification criteria are met. Classification is based on constituents and them concentration approach with respect to generic and/or specific concentration limits.

Mutagenicity / Reproductive toxicity: Mixture according to the criteria of CLP regulation (Annex I, part 3.5. / 3.7.) does not classify as mutagenic / reproductive toxic. Based on available data, the classification criteria are not met. Non-classification is based on constituents and them concentration approach with respect to generic and/or specific concentration limits.

STOT SE: Mixture according to the criteria of CLP regulation (Annex I, part 3.8.) does classified as specific target organ toxic after single exposure, may cause respiratory irritation. Based on available data, the classification criteria are met. Classification is based on constituents and them concentration approach with respect to generic and/or specific concentration limits.

STOT RE: Mixture according to the criteria of CLP regulation (Annex I, part 3.8.) does classified as specific target organ toxic after repeated exposure, May cause damage to organs through prolonged or repeated exposure. Based on available data, the classification criteria are met. Classification is based on constituents and them concentration approach with respect to generic and/or specific concentration limits.

Aspiration toxicity: Mixture according to the criteria of CLP regulation (Annex I, part 3.10.) does not classify as hazard for aspiration toxicity. Based on available data, the classification criteria are not met. Classification is based on constituents and them concentration approach with respect to generic and/or specific concentration limits.

11.2 Other information:

Symptoms related to the physical, chemical and toxicological characteristics and delayed and immediate effects as well as chronic effects from short and long-term exposure: short-term exposure with the skin may cause slight skin irritation, redness and rash. Long-term exposure or repeated exposure may cause skin dryness or cracking, severe irritation. Effects on the eyes may induce high pain, corneal / retinal irritation, eyeball slight damage. Acute / chronic toxicity may occur as irritation, spasms in the throat, mouth, stomach, respiratory tract. As well high blood pressure may occur. At prolonged exposure may cause damage to organs such as lungs, liver, kidney as well may cause respiratory irritation and suspected of causing cancer. At exceptional case acute exposure may occur as convulsion, arrhythmia, disrupting of coordination, losses of consciousness.

Endocrine disruptor's properties: not applicable.

The product does not contain any substance listed in accordance with Article 59 (1) as having endocrine disrupting properties in a concentration equal to or greater than 0,1 % by weight.

The product does not contain any substances identified as having endocrine disrupting properties in accordance with the criteria laid down in Commission Delegated Regulation (EU) 2017/2100 or

Commission Regulation (EU) 2018/605 in concentrations equal to or greater than 0,1 % by weight.

SECTION 12: Ecological information

12.1. Eco toxicity

Aquatic Acute: Mixture according to the criteria of CLP regulation (Annex I, part 4.1.) does not classified as acute toxic to aquatic life. Based on available data, the classification criteria are not met.
Aquatic Chronic: Mixture according to the criteria of CLP regulation (Annex I, part 4.1.) does not classified as chronic toxic / harmful to aquatic life with long lasting effects. Based on available data, the classification criteria are not met.
There are data gap on acute / chronic toxicity data for all constituents to all trophic levels. Therefore, overall conclusion on non-classification for aquatic toxicity is based on constituents and them concentration approach with respect to derived M-factors.

12.2. Persistence and degradability

As ready biodegradation tests for the mixture are not applicable overall degradation is based on degradability of constituents. Available data indicate that major of constituents of the mixture demonstrated to be not readily biodegradable. In addition, when no useful data on degradability are available, either experimentally determined or estimated data, the substance should be regarded as not rapidly degradable.

12.3. Bioaccumulative potential

As bioaccumulation tests for the mixture are not applicable bioaccumulation potential is based on of constituents as BCF and/or log Kow. Major of constituents have log Know <4 and / or BCF < 500 therefore potential for bioaccumulation is not likely.

12.4. Mobility in soil

No further relevant information on the substance is available. Mobility in the soil much depends on various conditions including but not limited to soil type, humidity, temperature and other relevant environment conditions.

12.5. Results of PBT and vPvB assessment

The substance itself or constituents fulfils neither the PBT nor the vPvB criteria in accordance with Annexe XIII of the REACH regulations EC 1907/2006.

12.6. Endocrine disruptor information

The substance itself or constituents does not contain any known or suspected endocrine disruptors.

12.7. Other adverse effects

No adverse effects or critical hazards know however product should be used with all precautions in order to avoid any adverse effects for environment surrounding.

SECTION 13: Disposal considerations

13.1 Waste treatment methods

Recommendations: Not allows dispose into drainage systems or into the environment. As well do not dispose on household waste. Waste should not be disposed of by release to sewers. Disposal shall be in accordance with EU / national regulations. Combustible material may be burned in a chemical incinerator

equipped with afterburner and scrubber. Offer surplus and non-recyclable solutions to a licensed disposal company. Contact a licensed professional waste disposal service to a dispose of this material.

Properties of waste which render it hazardous (HP codes): HP3 (Flammable), HP4 (Irritant), HP5 (Specific toxic), HP6 (Acute toxic), HP7 (Carcinogenic), HP13 (Sensitizing).
Waste code: final decision on the appropriate waste management method, in line with regional, national and European legislation, and possible adaptation to local conditions, remains the responsibility of the waste treatment operator.

Contaminated packaging: EWC (European waste catalogue) code: 15 01 10* - packaging containing residues of or contaminated by hazardous substances.
Completely empty container and disposed according the local, national and European waste management.
Warning: Do not weld, heat, cut, drill, throw, grind or otherwise physically or thermically act on the empty containers / package.

SECTION 14: Transport information

For the product does apply requirements and classification of transport of dangerous goods

		ADR / RID
14.1.	**UN number**	UN 1950
14.2.	**UN proper shipping name**	AEROSOLS, flammable
14.3.	**UN Transport hazards class (-es)**	2
14.4	**Classification code**	5F
14.6.	**Label**	2.1
14.7	**Special provisions**	190, 327, 344, 625
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 / mixture
2006 Regulation of the European Parliament and of the Council (EC) No. 1907/2006 (REACH)

- ✓ SVHC (Candidate List of Substances of Very High Concern) – does not apply
- ✓ Authorized substances (REACH Annex XIV) – does not apply
- ✓ Restricted substances (REACH Annex XVII) – Entry No. 74

… "1. Shall not be used as substances on their own, as a constituent in other substances or in mixtures for industrial and professional use(s) after 24 August 2023, unless:

(a) the concentration of diisocyanates individually and in combination is less than 0,1 % by weight, or

(b) the employer or self-employed ensures that industrial or professional user(s) have successfully completed training on the safe use of diisocyanates prior to the use of the substance(s) or mixture(s).

2. Shall not be placed on the market as substances on their own, as a constituent in other substances or in mixtures for industrial and professional use(s) after 24 February 2022, unless:

(a) the concentration of diisocyanates individually and in combination is less than 0,1 % by weight, or

(b) the supplier ensures that the recipient of the substance(s) or mixture(s) is provided with information on the requirements referred to in point (b) of paragraph 1 and the following

statement is placed on the packaging, in a manner that is visibly distinct from the rest of the label information: "As from 24 August 2023 adequate training is required" before industrial or professional use" …

2008 Regulation of the European Parliament and of the Council (EC) No. 1272/2008 (CLP)
2016 Regulation of the European Parliament and of the Council (EC) No. 2016/425 (Personal Protective Equipment)
2015 Commission Regulation (EU) No. 2020/8 (SDS)
2008 Commission Regulation (EU) No. 440/2008 (Test method)
2008 Directive of the European Parliament and of the Council (EC) No. 2008/98/EB (Waste)
2012 Directive 2012/18/EC (SEVESO)
1998 Directive 98/24/EC (protection of workers from chemical agents at work)
1989 Directive 89/391/EC (Safety and Health at Work)
1994 Directive 94/33/EC (protection of young people at work)
2000 Commission decision No. 2000/532/EC (List of Waste)
European Agreement concerning the International Carriage of Dangerous Goods (ADR/RID; ADNR/IMDG)
Regulation No. 649/2012/EB – does not apply
Regulation No. 850/2004/EB – does not apply
Regulation No. 1005/2009/EB – does not apply
Regulation No. 1107/2009/EB – does not apply
Regulation No. 528/2012/EB – does not apply
Regulation No. 648/2004/EB – does not apply
Regulation No. 2019/1009/EB – does not apply
Directive No. 2004/37/EB – does not apply
Note: – Respectively the latest version, including all amendment and corrections. The list of legislation is not comprehensive.

15.2 Chemical Safety Assessment

In accordance with Regulation (EC) 1907/2006 (REACH) Article 14 a Chemical Safety Assessment not carried out.

SECTION 16: Other information

16.1. Indication of changes: Second edition: 2024-12-28. Version: No. 2.
Revised sections of SDS: 3, 8, 9.

16.2. Methods used for classification:

Physical hazards	Physical – chemical properties of the mixture, test data / information itself of the mixture.
Human Health hazards Environmental hazards	Based on constituent's calculation methods with regards to concentration thresholds, including ATE, SCLs and M-factors.

16.3. Relevant identified uses of the substance or mixture:
Used to build internal and external insulation systems in new constructions, as well as during thermos-modernization of old buildings.

16.4. Abbreviations and acronyms
ACGIH American Conference of Industrial Hygienists
ADR/RID European agreement concerning the international carriage of dangerous goods by Road/ Rail.

PPE Personal protective equipment
CAS Chemical Abstracts Service
CLP Regulation of classification, labelling and packaging (EB) No. 1272/2008
DNEL Derived no-effect level
EC50 Term half maximal effective concentration
ED Endocrine disruptor
ECHA European Chemicals Agency
EINECS European Inventory of Existing Commercial chemical Substances
EWC European Waste Catalogue
IARC International Agency for Research on Cancer
IATA International Air Transport Association
IMDG International Maritime Dangerous Goods
LC50 Median lethal dose
NIOSH National Institute for Occupational Safety and Health of US
OEL Occupational Exposure Limit
OSHA Occupational Safety and Health Administration
PBT Persistent Bioaccumulative and Toxic substances
PNEC Predicted No Effect Concentration
RE repeated exposure
REACH Regulation on Registration, Evaluation, Authorisation and Restriction of Chemicals
REL Recommended exposure limits
SCOEL Scientific Committee on Occupational Exposure Limit
SDS Safety data sheet
SE single exposure
STP Sewage treatment plant
STOT Specific target organ toxicity
TWA Time weighted average
STEL Short-term exposure limit
vPvB Very persistent and very bioaccumulative

16.5. Literature references

Information from manufacture, safety data sheets of constituents, European chemicals agency (ECHA), European Agency for safety and health at work (OSHA), European food safety agency (EFSA), Organisation for economic co-operation and development (OECD), Germany IFA (GESTIS), Swedish Chemicals Agency (Kemi), The International Labour Organization (ILO), TOXNET, etc. databases and public provided data.

16.6. Full list of provided (section 2 and/or 3) hazard statements (H) for danger indications

Flammable gases, 1	H220	Extremely flammable gas
Aerosols, 1	H222	Extremely flammable aerosol
	H229	Pressurised container: May burst if heated
Gases under pressure, Compressed gas	H280	Contains gas under pressure; may explode if heated
Acute Toxicity, (oral), 4	H302	Harmful if swallowed
Skin irritation, 2	H315	Causes skin irritation
Skin sensitisation, 1	H317	May cause an allergic skin reaction
Eye irritation, 2	H319	Causes serious eye irritation
Acute toxicity (inhale), 4	H332	Harmful if inhaled

Respiratory sensitisation, 1	H334	May cause allergy or asthma symptoms or breathing difficulties if inhaled
Specific target organ toxicity after single exposure	H335	May cause respiratory irritation
Carcinogenicity, 2	H351	Suspected of causing cancer
Specific target organ toxicity after repeated exposure	H373	May cause damage to organs through prolonged or repeated exposure
Aquatic Chronic, 3	H412	Harmful to aquatic life with long lasting effects

16.7. Information on trainings

Workers/users shall be trained / introduced with the provided relevant hazard / safety information.

16.8. Disclaimer

The information above is believed to be accurate and represents the best information currently available to us. However, we make no warranty of merchantability or any other warranty, express or implied, with respect to such information, and we assume no liability resulting from its use. Users should make their own investigations to determine the suitability of the information for their particular purposes. In no event shall be liable for any claims, losses, or damages of any third party or for lost profits or any special, indirect, incidental, consequential or exemplary damages, howsoever arising, even if has been advised of the possibility of such damages.

This product should be store, handled and used in accordance with good industrial hygienic practices and in conformity with any legal regulation. The above information is based on the present state of our knowledge of the product at the time of publication. The user must satisfy him-self that the product is entirely suitable for his purpose.

Overall note: The product has not been subjected to (eco) toxicological testing as an entity, but has been blended from materials with established (eco) toxicological biographies. In view of the difficulty of using current standard (eco) toxicological evaluation techniques to predict potential hazards to susceptible individuals / environment or arising from unforeseen potentiation, this preparation should be considered and handled as if it displayed health / environment hazards and treated in consequence with all possible precaution.

END OF SAFETY DATA SHEET