

SDS (SAFETY DATA SHEET)

ISOKIT SPRAY FOAM INSULATION KIT

1 – IDENTIFICATION

Product Name: ISOKIT SPRAY FOAM KIT (QR 200,600 - HFC) Company Identification: ISOTECH ISOLASJONER A.S. SELMA ELLEFSENSVEİ 6 0581 OSLO / NORWAY Customer Information Number: 47 9192 3550 Email: kundeservice@isotech.no webside: www.isotech.no

2 - HAZARDS IDENTIFICATION

GHS Classification Acute Tox. 4 Inhalation, Carc. 2, Comp. Gas, Eye Irrit. 2, Resp. Sens. 1, Skin Irrit. 2, Skin Sens. 1, STOT RE 2, STOT SE 3 NE, STOT SE 3 RTI

Symbol(s) of Product



Signal word: WARNING!

İSOKİT SPRAY FOAM INSULATION KIT (QR 200,600 –(HFC)

Hazard Statements:

H280 Contains gas under pressure; may explode if heated

H315 Causes skin irritation

H319 Causes serious eye irritation

H373 May cause damage to organs through prolonged or repeated exposure

Prevention:

P202 Do not handle until all safety precautions have been read and understood

P251 Pressurized container: Do not pierce or burn, even after use

P260 Do not breathe mist/vapors/spray

P264 Wash hands and other skin areas exposed to material thoroughly after handling

P271 Use outdoors or in a well-ventilated area

P280 Wear protective gloves, protective clothing and eye protection

Response:

P302+P352 IF ON SKIN: Wash with plenty of soap and water.

P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P321 Specific treatment: Seek immediate medical advice. Refer to product label and Section 4 of this SDS

P333+P313 If skin irritation or rash occurs: Get medical attention

P337+P313 If eye irritation persists: Get medical attention

P362 Take off contaminated clothing and wash before reuse.

Storage:

P405 Store locked up

P410+P403 Protect from sunlight. Store in a well-ventilated place. Disposal:

P501 Dispose of contents/container in accordance with applicable

local/regional/national/international regulations.

3-COMPOSITION / INFORMATION ON INGREDIENTS

Mixtures

Chemical characterization (preparation):

% by Weight	Ingredient	CAS No
30-60	4,4' Diphenylmethane diisocyanate	101-68-8
30-60	Polymethylene polyphenyl isocyanate	9016-87-9
10-20	1,1,1,2-Tetrafluoroethane	811-97-2
<10	Nitrogen	7727-37-9

4-FIRST AID MEASURES

4.1 Description of first aid measures

Inhalation: If product vapors cause respiratory irritation or distress, move the exposed person to fresh air immediately. If breathing is difficult or irregular, administer oxygen. If respiratory arrest occurs, start

artificial respiration by a trained individual. Loosen tight fitting clothing such as a jacket or tie. Seek medical attention immediately.

Eye: Immediately flush eyes with large amounts of water for at least 15 minutes, holding the eyes open with fingers and occasionally lifting the upper and lower lids. Use lukewarm water if possible. If present and easy to do, remove contact lenses. If irritation persists, get medical attention. **Skin:** Flush skin with large amounts of water while removing contaminated clothing. Gently wipe

product from skin with a damp cloth and continue rinsing for 15 minutes. Wash clothing before reuse. Call a physician if irritation persists.

Ingestion: If swallowed, do NOT induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an

unconscious person. Get medical advice/attention.

4.2 Notes to the physician

If case of an accident or if you feel unwell, seek medical advice immediately (show label or SDS if possible)

5. FIRE-FIGHTING MEASURES

UNUSUAL FIRE AND EXPLOSION HAZARDS: Closed containers may burst if exposed to extreme heat or fire. Containers may explode if exposed to extreme heat.

SPECIAL FIREFIGHTING PROCEDURES: Wear self-contained breathing apparatus pressure-demand (NIOSH approved or equivalent) and full protective gear. Use water spray to cool exposed surfaces.

EXTINGUISHING MEDIA: Alcohol Foam, Carbon Dioxide, Dry Chemical, Water Fog

6- ACCIDENTAL RELEASE MEASURES

ENVIRONMENTAL MEASURES: No Information

STEPS TO BE TAKEN IF MATERIAL IS RELEASED OR SPILLED: Contain spilled material and remove with inert absorbent.

Dispose of contaminated absorbent, container and unused contents in accordance with local, state and federal regulations. Use personal protective equipment as necessary. Read all product instructions before using. Personal protective equipment should include impervious gloves, protective eye wear, and suitable work clothes. Scrape up dried material and place into containers.

Uncured product is very sticky, so carefully remove the bulk of the foam by scraping it up and then immediately remove residue with a rag and solvent such as polyurethane cleaner, mineral spirits, acetone (nail polish remover), paint thinner, etc. Once the product has cured, it can only be removed physically by scraping, buffing, etc. Dispose as plastic waste (foam plastic) in accordance with all applicable guidelines and regulations.

7-HANDLING AND STORAGE

HANDLING: KEEP OUT OF REACH OF CHILDREN!

DO NOT TAKE INTERNALLY. Make sure nozzle is directed away from yourself prior to discharge. Keep away from open flames, hot surfaces and sources of ignition. Wear appropriate personal protection. Avoid breathing vapor and contact with eyes, skin and clothing. Use only with adequate ventilation. Ensure fresh air entry during application and drying. Do not breathe dust. While dry sanding, use of a NIOSH-approved dust mask is recommended. Wash thoroughly after handling. Contains isocyanates. See information supplied by the manufacturer. Persons allergic to isocyanates, and particularly those suffering from asthma or other respiratory conditions, should not work with isocyanates.

STORAGE: Store away from sources of ignition and heat. Protect material from direct sunlight. Keep containers tightly closed in a dry, cool and well-ventilated place. Do not store at temperatures above 120 degrees F. Store containers away from excessive heat and freezing. Store away from caustics and oxidizers.

8- EXPOSURE CONTROLS/ PERSONAL PROTECTION

8.1 Control Parameters

Ingredient	CAS Number	OSHA-PEL	ACGIH-TLV	Other
Diethylene Glycol	111-46-6			WEEL 10 mg/kg
1,1,1,2-Tetrafluoroethane	811-97-2		TWA	WEEL 1000 ppm
Ethylene Glycol	107-21-1		100 mg/m3	

8.2 Exposure controls:

Engineering Controls: Use local and general exhaust ventilation to control levels of exposure.

Eye/face Protection: Wear protective goggles or safety glasses with side shields.

Hand Protection: Use chemically resistant gloves (i.e., Nitrile gloves). Nitrile/butadiene rubber, butyl rubber, polyethylene, PVC (vinyl), or neoprene gloves are also effective. Glove selection should consider potential body reactions to certain materials and manufacturer's instructions for use. Break through time of selected gloves must be greater than the intended use period.

Other Protective Equipment: Use clothing that protects against dermal exposure. Appropriate protective clothing varies depending on the potential for exposure. To ensure proper skin protection, wear PPE in such a manner that no skin is exposed.

Respiratory Protection: ESPIRATORY PROTECTION: When concentrations exceed the exposure limits specified, use of a NIOSH-approved dust, mist and fume respirator is recommended. Where the protection factor of the respirator may be exceeded, use of a full facepiece, supplied air, or Self Contained Breathing Apparatus (SCBA) may be necessary. No personal respiratory protective equipment normally required. If concentrations exceed the exposure limits specified, use of a NIOSH-approved supplied air respirator is recommended.

Where the protection factor is exceeded, use of a Self Contained Breathing Apparatus (SCBA) may be necessary.

Ventilation controls must be in place. Note: If used in other applications other than underground mining, please contact İSOTECH (+47 91815309) for guidance. A respirator with organic vapor cartridges is required.

Hygiene Measures: An eye wash station or portable eye wash station should be in the area. Wash hands thoroughly after use, before eating, drinking or using the lavatory. Employees/Users should be educated and trained in the safe use and handling of this product.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance: Cream	Physical State: Foam
Odor: Slight Solvent	Odor Threshold: Not Established
Density, g/cm3: 0.38 - 1.23	pH: Not Applicable
Freeze Point, °C: Not Established	Viscosity (mPa.s): Not Applicable
Solubility in Water: No Information	Partition Coeff., n-octanol/water: Not Established
Decomposition Temperature, °C: Not Established	Explosive Limits, %: N.E N.E.
Boiling Range, °C: N.E N.E.	Auto-Ignition Temperature, °C Not Established
Minimum Flash Point, °C: Not Applicable Vapor Pressure, mmHg: Not Established	Vapor Pressure, mmHg: Not Established
Evaporation Rate: Faster Than n-Butyl Acetate	Flash Method: Not Applicable
Vapor Density: Heavier Than Air	Flammability, NFPA: Non-Flammable
Combustible Dust: Does not support combustion	

SECTION 10- STABILITY AND REACTIVITY

10.1 Reactivity

No dangerous reaction known under conditions of normal use.

10.2 Chemical stability

Stable under normal conditions of use and recommended storage conditions. See Section 7 for storage recommendations.

10.3 Possibility of hazardous reactions

Exposure to elevated temperatures can cause containers to rupture or explode. Contents are under pressure.

10.4 Conditions to avoid

Temperatures below 60°F (16°C) or temperatures above 90°F (32°C). Avoid heat and flames.

10.5 Incompatible materials

Alcohols, strong bases, amines, metal compounds, ammonia, and strong oxidizers.

10.6 Hazardous decomposition products

See Section 5 for hazardous decomposition products due to combustion.

11- TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects

Toxicological information on this product or its components appear in this section when such data is available.

Acute oral toxicity

Low toxicity if swallowed. Small amounts swallowed incidentally as a result of normal handling operations are not likely to cause injury; however, swallowing larger amounts may cause injury. Observations in animals include: Gastrointestinal irritation. As product: Single dose oral LD50 has not been determined. LD50, Rat, > 2,000 mg/kg Estimated.

Acute dermal toxicity

Prolonged skin contact is unlikely to result in absorption of harmful amounts. As product: The dermal LD50 has not been determined. LD50, Rabbit, > 2,000 mg/kg Estimated.

Acute inhalation toxicity

In confined or poorly ventilated areas, vapor can easily accumulate and can cause unconsciousness and death due to displacement of oxygen. Excessive exposure may cause irritation to upper respiratory tract (nose and throat) and lungs. May cause pulmonary edema (fluid in the lungs.) Effects may be delayed. Decreased lung function has been associated with overexposure to isocyanates. Excessive exposure may increase sensitivity to epinephrine and increase myocardial irritability (irregular heartbeats). May cause central nervous system effects. Symptoms of excessive exposure may be anesthetic or narcotic effects; dizziness and drowsiness may be observed. As product: The LC50 has not been determined.

Skin corrosion/irritation

Prolonged contact may cause skin irritation with local redness. May stain skin.

Serious eye damage/eye irritation

May cause moderate eye irritation.

May cause slight temporary corneal injury.

Sensitization

Skin contact may cause an allergic skin reaction.

Animal studies have shown that skin contact with isocyanates may play a role in respiratory sensitization May cause allergic respiratory reaction.

MDI concentrations below the exposure guidelines may cause allergic respiratory reactions in individuals already sensitized.

Asthma-like symptoms may include coughing, difficult breathing and a feeling of tightness in the chest. Occasionally, breathing difficulties may be life threatening

Specific Target Organ Systemic Toxicity (Repeated Exposure)

Tissue injury in the upper respiratory tract and lungs has been observed in laboratory animals after repeated excessive exposures to MDI/polymeric MDI aerosols.

Carcinogenicity

Lung tumors have been observed in laboratory animals exposed to respirable aerosol droplets of MDI/Polymeric MDI (6 mg/m3) for their lifetime. Tumors occurred concurrently with respiratory irritation and lung injury. Current exposure guidelines are expected to protect against these effects reported for MDI.

Teratogenicity

In laboratory animals, MDI/polymeric MDI did not cause birth defects; other fetal effects occurred only at high doses which were toxic to the mother. Contains component(s) which did not cause birth defects in animals; other fetal effects occurred only at doses toxic to the mother.

Reproductive toxicity

No relevant data found.

Mutagenicity

Genetic toxicity data on MDI are inconclusive. MDI was weakly positive in some in vitro studies; other in vitro studies were negative. Animal mutagenicity studies were predominantly negative.

Aspiration Hazard

Based on physical properties, not likely to be an aspiration hazard.

COMPONENTS INFLUENCING TOXICOLOGY:

Diphenylmethane Diisocyanate, isomers and homologues Acute inhalation toxicity LC50, Rat, 4 Hour, dust/mist, 0.49 mg/l For similar material(s): 2,4'-Diphenylmethane diisocyanate (CAS 5873-54-1). LC50, Rat, 4 Hour, Aerosol, 0.31 mg/l For similar material(s): 4,4'-Methylenediphenyl diisocyanate (CAS 101-68-8). LC50, Rat, 1 Hour, Aerosol, 2.24 mg/l **4,4' -Methylenediphenyl diisocyanate** Acute inhalation toxicity LC50, Rat, 1 Hour, dust/mist, 2.24 mg/l **1,1,2-Tetrafluoroethane** Acute inhalation toxicity LC50, Rat, 4 Hour, vapour, > 1,500 mg/l

12- ECOLOGICAL INFORMATION

Ecotoxicological information on this product or its components appear in this section when such data is available.

Toxicity

Diphenylmethane Diisocyanate, isomers and homologues Acute toxicity to fish

The measured ecotoxicity is that of the hydrolyzed product, generally under

conditions maximizing production of soluble species.

Material is practically non-toxic to aquatic organisms on an acute basis

(LC50/EC50/EL50/LL50 >100 mg/L in the most sensitive species tested).

Based on information for a similar material:

LC50, Danio rerio (zebra fish), static test, 96 Hour, > 1,000 mg/l, OECD Test Guideline 203 or Equivalent

Acute toxicity to aquatic invertebrates

Based on information for a similar material:

EC50, Daphnia magna (Water flea), static test, 24 Hour, > 1,000 mg/l, OECD Test Guideline 202 or Equivalent

Acute toxicity to algae/aquatic plants

Based on information for a similar material:

NOEC, Desmodesmus subspicatus (green algae), static test, 72 Hour, Growth rate inhibition, 1,640 mg/l, OECD Test Guideline 201 or Equivalent

Toxicity to bacteria

Based on information for a similar material:

EC50, activated sludge, static test, 3 Hour, Respiration rates., > 100

mg/l Toxicity to soil-dwelling organisms

EC50, Eisenia fetida (earthworms), Based on information for a similar material:, 14 d, > 1,000 mg/kg

Toxicity to terrestrial plants

EC50, Avena sativa (oats), Growth inhibition, 1,000 mg/l EC50,

Lactuca sativa (lettuce), Growth inhibition, 1,000 mg/l

4,4' -Methylenediphenyl diisocyanate

Acute toxicity to fish

The measured ecotoxicity is that of the hydrolyzed product, generally under

conditions maximizing production of soluble species.

Material is practically non-toxic to aquatic organisms on an acute basis

(LC50/EC50/EL50/LL50 >100 mg/L in the most sensitive species tested).

Based on information for a similar material:

LC50, Danio rerio (zebra fish), static test, 96 Hour, > 1,000 mg/l, OECD Test Guideline 203 or Equivalent

Acute toxicity to aquatic invertebrates

Based on information for a similar material:

EC50, Daphnia magna (Water flea), static test, 24 Hour, > 1,000 mg/l, OECD Test

Guideline 202 or Equivalent

Acute toxicity to algae/aquatic plants

Based on information for a similar material:

NOEC, Desmodesmus subspicatus (green algae), static test, 72 Hour, Growth rate inhibition,

1,640 mg/l, OECD Test Guideline 201 or Equivalent

Toxicity to bacteria

Based on information for a similar material:

EC50, activated sludge, static test, 3 Hour, Respiration rates., > 100

mg/l Toxicity to soil-dwelling organisms

EC50, Eisenia fetida (earthworms), Based on information for a similar material:, 14 d, > 1,000 mg/kg

Toxicity to terrestrial plants

EC50, Avena sativa (oats), Growth inhibition, 1,000 mg/l $\,$

EC50, Lactuca sativa (lettuce), Growth inhibition, 1,000 mg/l

<u>1,1,1,2-Tetrafluoroethane</u>

Acute toxicity to fish

Material is practically non-toxic to aquatic organisms on an acute basis (LC50/EC50/EL50/LL50 >100 mg/L in the most sensitive species tested). LC50, Oncorhynchus mykiss (rainbow trout), semi-static test, 96 Hour, 450 mg/l

Acute toxicity to aquatic invertebrates

EC50, Daphnia magna (Water flea), 48 Hour, 980 mg/l

Toxicity to bacteria

EC50, Pseudomonas putida, static test, 6 Hour, Growth inhibition, > 730 mg/l Persistence and degradability.

Persistence and degradability

Diphenylmethane Diisocyanate, isomers and homologues

Biodegradability: In the aquatic and terrestrial environment, material reacts with water forming predominantly insoluble polyureas which appear to be stable. In the atmospheric environment, material is expected to have a short tropospheric half-life, based on calculations and by analogy with related diisocyanates.

10-day Window: Not applicable

Biodegradation: 0 %

Exposure time: 28 d

Method: OECD Test Guideline 302C or Equivalent

4,4' -Methylenediphenyl diisocyanate

Biodegradability: In the aquatic and terrestrial environment, material reacts with water forming predominantly insoluble polyureas which appear to be stable. In the atmospheric environment, material is expected to have a short tropospheric half-life, based on calculations and by analogy with related diisocyanates.

10-day Window: Not applicable

Method: OECD Test Guideline 301D or Equivalent

Theoretical Oxygen Demand: 0.47 mg/mg

Photodegradation

Test Type: Half-life (indirect photolysis) **Sensitizer:** OH radicals **Atmospheric half-life:** 1,700 d Method: Estimated.

Bioaccumulative potential

Diphenylmethane Diisocyanate, isomers and homologues

Bioaccumulation: Bioconcentration potential is low (BCF < 100 or Log Pow < 3). Reacts with water. In the aquatic and terrestrial environment, movement is expected to be limited by its reaction with water forming predominantly insoluble polyureas.

Bioconcentration factor (BCF): 92 Cyprinus carpio (Carp) 28 d

4,4' -Methylenediphenyl diisocyanate

Bioaccumulation: Bioconcentration potential is low (BCF < 100 or Log Pow < 3). Reacts with water. In the aquatic and terrestrial environment, movement is expected to be limited by its reaction with water forming predominantly insoluble polyureas.

Bioconcentration factor (BCF): 92 Cyprinus carpio (Carp) 28 d

1,1,1,2-Tetrafluoroethane

Bioaccumulation: Bioconcentration potential is low (BCF < 100 or Log Pow < 3). **Partition coefficient:** n-octanol/water(log Pow): 1.68 Estimated.

Mobility in soil

Diphenylmethane Diisocyanate, isomers and homologues

In the aquatic and terrestrial environment, movement is expected to be limited by its reaction with water forming predominantly insoluble polyureas.

4,4' -Methylenediphenyl diisocyanate

In the aquatic and terrestrial environment, movement is expected to be limited by its reaction with water forming predominantly insoluble polyureas.

1,1,1,2-Tetrafluoroethane

Potential for mobility in soil is high (Koc between 50 and 150). **Partition coefficient(Koc):** 97 Estimated.

13- DISPOSAL CONSIDERATIONS

13.1 Waste Treatment Methods

Always wear proper protective equipment as you would while spraying the two-component foam in a well-ventilated area.

Procedure for handling empty or partially used disposable cylinders (not returnable):

1. DO NOT INCINERATE CYLINDERS.

2. Empty cylinders by dispensing the foam into a waste container like a cardboard box or plastic bag. Depressurize the used

cylinders using the dispensing unit with a new nozzle attached. Spray the foam until one of the components/cylinders no longer

sprays chemical.

3. Remove the nozzle and then continue to depressurize by dispensing the remaining chemical(s) into a waste container (a box lined

with a plastic bag) that has adequate industrial liquid absorbing medium in the bottom. Dispense the residual chemicals until the

pressure is down to a minimum or there are just large bubbles in the hose.

4. Close the cylinder valves completely, and then operate the dispensing unit again to empty and depressurize the hoses. Use a

9/16" wrench and remove the hoses from the cylinders. Use caution in case there is some residual chemical and/or pressure in

the hoses.

5. Invert the cylinder and point away from face. Slowly open the cylinder over the waste container to catch any residual spray.

6. Return the cylinder to an upright position. Shake the container; there should not be any sloshing of liquid. Make sure to leave

valves OPEN-do not close. DO NOT PUNCTURE.

7. The user of this material has the responsibility to dispose of empty cylinders, unused material and residues in compliance to all

applicable federal, state, international and local regulations regarding the treatment, storage, and disposal for hazardous and nonhazardous wastes. Check with your local waste disposal service for guidance. NOTE: After dispensing if one cylinder has chemical left in it, treat as hazardous material.

14- TRANSPORTATION INFORMATION

Note: Transportation information is for reference only. Customer is urged to consult 49 CFR 100-177, IMDG, IATA, EC, United Nations.

DOT

Proper Shipping Name: CHEMICAL UNDER PRESSURE, N.O.S. (Inert Gases) UN Number: UN 3500 Class: 2.2 Packing Group: N/A

Classification for SEA Transport (IMO-IMDG) Proper Shipping Name: CHEMICAL UNDER PRESSURE, N.O.S. (Inert Gases) Un Number: UN 3500 Class: 2.2 Packing Group: N/A Marine Pollutant: NO Transport in bulk Consult IMO regulations before transporting ocean bulk According to Annex I or II of MARPOL 73/78 and the IBC or IGC Code

Classification for AIR Transport (IATA/ICAO) Proper Shipping Name: CHEMICAL UNDER PRESSURE, N.O.S. (Inert Gases) Un Number: UN 3500 Class: 2.2 Packing Group: N/A

SECTION 15 – REGULATORY INFORMATION

Superfund Amendments and Reauthorization Act of 1986 Title III (Emergency Planning
and Community Right-to-Know Act of 1986) Sections 311 and 312Acute Health HazardChronic Health HazardSudden Release of Pressure HazardReactivity HazardSuperfund Amendments and Reauthorization Act of 1986 Title III (Emergency Planning
and Community Right-to-Know Act of 1986) Section 313This product contains the following substances which are subject to the reporting requirements of
Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 and which
are listed in 40 CFR 372.ComponentsCASRN
101-68-8

4,4' -Methylenediphenyl diisocyanate	101

Diphenylmethane Diisocyanate, isomers and homologues	9016-87
Pennsylvania Worker and Community Right-To-Know Act:	

To the best of our knowledge, this product does not contain chemicals at levels which require reporting under this statute.

Components	CASRN
Diphenylmethane Diisocyanate, isomers and homologues	9016-87-9
4,4' -Methylenediphenyl diisocyanate	101-68-8

United States TSCA Inventory (TSCA)

All components of this product are in compliance with the inventory listing requirements of the U.S. Toxic Substances Control Act (TSCA) Chemical Substance Inventory

16 – OTHER INFORMATION

LEGEND	
ACGIH.	USA ACGIH Threshold Limit Values (TLV)
С	Ceiling
OSHA Z-1 USA.	Occupational Exposure Limits (OSHA) - Table Z-1 Limits for Air Contaminants
TWA	8-hour, time-weighted average
US WEEL	USA. Workplace Environmental Exposure Levels (WEEL)

GHS06	
GHS07	$\langle \cdot \rangle$

Legend: N.A. - Not Applicable, N.E. - Not Established, N.D. - Not Determined

The information and recommendations set forth herein are presented in good faith and believed to be correct as of the date hereof. The manufacturer makes no representations as to the completeness or accuracy thereof. Information is supplied upon the condition that the persons receiving it will make their own determination as to its suitability for their purposes prior to use. In no event will the manufacturer be responsible for damages of any nature whatsoever resulting from the use of or reliance upon information. No representations or warranties, either expressed or implied, of merchantability or fitness for a particular use are made hereunder with respect to this information or the product to which information refers.

Information contained herein is deemed to be reliable, conservative and accurate ISOTECH ISOLASJONER A.S. reserves the right to change the design, specifications, or any other features at any time and without notice, while otherwise maintaining regulatory compliance.

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This SDS is prepared by KAVI DANISMANLIK SAN. TIC. LTD. STI.Yakuplu Mah. Mareşal Fevzi Çakmak Cad. No:125 Daire:4 Beylikdüzü/ISTANBULCertificate of QualificationChemical Evaluation Specialist Handan KAVICetificate No: TUV 11.25.0408.11.2022