SAFETY DATA SHEET

Agilent Technologies

Dioxin Analyzer Standard

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

1.1 Product identifier

Product name : Dioxin Analyzer Standard

Part no. (chemical kit) : G3440-85039

Part no. :

Dioxin/Furan/DL-PCB Check Standard	G3440-85039-1
DL/NDL-PCB Check Standard	G3440-85039-2

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

Identified uses : Reagents and Standards for Analytical Chemistry Laboratory Use

Dioxin/Furan/DL-PCB Check Standard	1 ml
DL/NDL-PCB Check Standard	1 ml

Uses advised against : None known.

1.3 Details of the supplier of the safety data sheet

Agilent Technologies Deutschland GmbH
Hewlett-Packard-Str. 8
76337 Waldbronn
Germany
0800 603 1000

e-mail address of person responsible for this SDS : pdl-msds_author@agilent.com

1.4 Emergency telephone number

Emergency telephone number (with hours of operation) : CHEMTREC®: +353 1 901 4670

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Product definition :

Dioxin/Furan/DL-PCB Check Standard	Mixture
DL/NDL-PCB Check Standard	Mixture

Classification according to Regulation (EC) No. 1272/2008 [CLP/GHS]

Dioxin/Furan/DL-PCB Check Standard

H226	FLAMMABLE LIQUIDS	Category 3
H332	ACUTE TOXICITY (inhalation)	Category 4
H315	SKIN CORROSION/IRRITATION	Category 2
H319	SERIOUS EYE DAMAGE/EYE IRRITATION	Category 2
H336	SPECIFIC TARGET ORGAN TOXICITY - SINGLE EXPOSURE (Narcotic effects)	Category 3
H304	ASPIRATION HAZARD	Category 1
H400	SHORT-TERM (ACUTE) AQUATIC HAZARD	Category 1
H410	LONG-TERM (CHRONIC) AQUATIC HAZARD	Category 1

DL/NDL-PCB Check Standard

H225	FLAMMABLE LIQUIDS	Category 2
H315	SKIN CORROSION/IRRITATION	Category 2
H336	SPECIFIC TARGET ORGAN TOXICITY - SINGLE EXPOSURE (Narcotic effects)	Category 3
H304	ASPIRATION HAZARD	Category 1

SECTION 2: Hazards identification

H400	SHORT-TERM (ACUTE) AQUATIC HAZARD	Category 1
H410	LONG-TERM (CHRONIC) AQUATIC HAZARD	Category 1

Dioxin/Furan/DL-PCB Check Standard: The product is classified as hazardous according to Regulation (EC) 1272/2008 as amended.

DL/NDL-PCB Check Standard: The product is classified as hazardous according to Regulation (EC) 1272/2008 as amended.

See Section 16 for the full text of the H statements declared above.

See Section 11 for more detailed information on health effects and symptoms.

2.2 Label elements

Hazard pictograms : Dioxin/Furan/DL-PCB Check Standard

DL/NDL-PCB Check Standard

Signal word : Dioxin/Furan/DL-PCB Check Standard: Danger

DL/NDL-PCB Check Standard: Danger

Hazard statements : Dioxin/Furan/DL-PCB Check Standard

H226 - Flammable liquid and vapour.

H304 - May be fatal if swallowed and enters airways.
H315 - Causes skin irritation.
H319 - Causes serious eye irritation.
H332 - Harmful if inhaled.
H336 - May cause drowsiness or dizziness.
H410 - Very toxic to aquatic life with long lasting effects.

DL/NDL-PCB Check Standard

H225 - Highly flammable liquid and vapour.

H304 - May be fatal if swallowed and enters airways.
H315 - Causes skin irritation.
H336 - May cause drowsiness or dizziness.
H410 - Very toxic to aquatic life with long lasting effects.

Precautionary statements

Prevention : Dioxin/Furan/DL-PCB Check Standard

P210 - Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P273 - Avoid release to the environment.

DL/NDL-PCB Check Standard

P210 - Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P273 - Avoid release to the environment.

Response : Dioxin/Furan/DL-PCB Check Standard

P391 - Collect spillage.

P301 + P310 - IF SWALLOWED: Immediately call a POISON CENTER or doctor.

DL/NDL-PCB Check Standard

P391 - Collect spillage.

P301 + P310 - IF SWALLOWED: Immediately call a POISON CENTER or doctor.

Storage : Dioxin/Furan/DL-PCB Check Standard

P403 + P233 - Store in a well-ventilated place. Keep container tightly closed.

DL/NDL-PCB Check Standard

P403 + P233 - Store in a well-ventilated place. Keep container tightly closed.

SECTION 2: Hazards identification

Disposal	:	Dioxin/Furan/DL-PCB Check Standard	P501 - Dispose of contents and container in accordance with all local, regional, national and international regulations.
		DL/NDL-PCB Check Standard	P501 - Dispose of contents and container in accordance with all local, regional, national and international regulations.
Hazardous ingredients	:	Dioxin/Furan/DL-PCB Check Standard	nonane
		DL/NDL-PCB Check Standard	2,2,4-trimethylpentane
Supplemental label elements	:	Dioxin/Furan/DL-PCB Check Standard	Not applicable.
		DL/NDL-PCB Check Standard	Not applicable.
Annex XVII - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles	:	Dioxin/Furan/DL-PCB Check Standard	Not applicable.
		DL/NDL-PCB Check Standard	Not applicable.

Special packaging requirements

Tactile warning of danger	:	Dioxin/Furan/DL-PCB Check Standard	Not applicable.
		DL/NDL-PCB Check Standard	Not applicable.

2.3 Other hazards

Product meets the criteria for PBT or vPvB according to Regulation (EC) No. 1907/2006, Annex XIII	:	Dioxin/Furan/DL-PCB Check Standard	This mixture does not contain any substances that are assessed to be a PBT or a vPvB.
		DL/NDL-PCB Check Standard	This mixture does not contain any substances that are assessed to be a PBT or a vPvB.
Other hazards which do not result in classification	:	Dioxin/Furan/DL-PCB Check Standard	None known.
		DL/NDL-PCB Check Standard	None known.

SECTION 3: Composition/information on ingredients

3.1 Substances	:	Dioxin/Furan/DL-PCB Check Standard	Mixture
		DL/NDL-PCB Check Standard	Mixture

Product/ingredient name	Identifiers	%	Classification	Specific Conc. Limits, M-factors and ATEs	Type
Dioxin/Furan/DL-PCB Check Standard					
nonane	EC: 203-913-4 CAS: 111-84-2	≥90	Flam. Liq. 3, H226 Acute Tox. 4, H332 Skin Irrit. 2, H315 Eye Irrit. 2, H319 STOT SE 3, H336 Asp. Tox. 1, H304 Aquatic Acute 1, H400 Aquatic Chronic 1, H410	ATE [Inhalation (vapours)] = 17 mg/l M [Acute] = 1 M [Chronic] = 1	[1] [2]
2,2,4-trimethylpentane	EC: 208-759-1 CAS: 540-84-1	≤0.3	Flam. Liq. 2, H225 Skin Irrit. 2, H315 STOT SE 3, H336 Asp. Tox. 1, H304	M [Acute] = 1 M [Chronic] = 1	[1]

SECTION 3: Composition/information on ingredients

			Aquatic Acute 1, H400 Aquatic Chronic 1, H410		
2,3,7,8-tetrachlorodibenzo[b, e][1,4]dioxin	EC: 217-122-7 CAS: 1746-01-6	<0.1	Acute Tox. 1, H300 Acute Tox. 1, H310 Eye Irrit. 2, H319 Aquatic Acute 1, H400 Aquatic Chronic 1, H410	ATE [Oral] = 0.02 mg/kg ATE [Dermal] = 0.275 mg/kg M [Acute] = 1 M [Chronic] = 1000000	[1]
DL/NDL-PCB Check Standard					
2,2,4-trimethylpentane	EC: 208-759-1 CAS: 540-84-1	≥90	Flam. Liq. 2, H225 Skin Irrit. 2, H315 STOT SE 3, H336 Asp. Tox. 1, H304 Aquatic Acute 1, H400 Aquatic Chronic 1, H410 **See Section 16 for the full text of the H statements declared above.**	M [Acute] = 1 M [Chronic] = 1	[1]

There are no additional ingredients present which, within the current knowledge of the supplier, are classified and contribute to the classification of the substance and hence require reporting in this section.

Type

Dioxin/Furan/DL-PCB Check Standard	[1] Substance classified with a health or environmental hazard [2] Substance with a workplace exposure limit
DL/NDL-PCB Check Standard	[1] Substance classified with a health or environmental hazard

Occupational exposure limits, if available, are listed in Section 8.

SECTION 4: First aid measures

4.1 Description of first aid measures

Eye contact :

Dioxin/Furan/DL-PCB Check Standard: Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Continue to rinse for at least 10 minutes. Get medical attention.

DL/NDL-PCB Check Standard: Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Continue to rinse for at least 10 minutes. Get medical attention.

Inhalation :

Dioxin/Furan/DL-PCB Check Standard: Remove victim to fresh air and keep at rest in a position comfortable for breathing. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Get medical attention. If necessary, call a poison center or physician. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.

DL/NDL-PCB Check Standard: Remove victim to fresh air and keep at rest in a position comfortable for breathing. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. If not breathing, if

SECTION 4: First aid measures

			breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Get medical attention. If necessary, call a poison center or physician. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.
Skin contact	:	Dioxin/Furan/DL-PCB Check Standard	Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Continue to rinse for at least 10 minutes. Get medical attention. Wash clothing before reuse. Clean shoes thoroughly before reuse.
		DL/NDL-PCB Check Standard	Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Continue to rinse for at least 10 minutes. Get medical attention. Wash clothing before reuse. Clean shoes thoroughly before reuse.
Ingestion	:	Dioxin/Furan/DL-PCB Check Standard	Get medical attention immediately. Call a poison center or physician. Wash out mouth with water. Remove dentures if any. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Stop if the exposed person feels sick as vomiting may be dangerous. Aspiration hazard if swallowed. Can enter lungs and cause damage. Do not induce vomiting. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.
		DL/NDL-PCB Check Standard	Get medical attention immediately. Call a poison center or physician. Wash out mouth with water. Remove dentures if any. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Stop if the exposed person feels sick as vomiting may be dangerous. Aspiration hazard if swallowed. Can enter lungs and cause damage. Do not induce vomiting. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.
Protection of first-aiders	:	Dioxin/Furan/DL-PCB Check Standard	No action shall be taken involving any personal risk or without suitable training. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation.
		DL/NDL-PCB Check Standard	No action shall be taken involving any personal risk or without suitable training. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation.

4.2 Most important symptoms and effects, both acute and delayed

Potential acute health effects

Eye contact	:	Dioxin/Furan/DL-PCB Check Standard	Causes serious eye irritation.
		DL/NDL-PCB Check Standard	No known significant effects or critical hazards.

SECTION 4: First aid measures

Inhalation	:	Dioxin/Furan/DL-PCB Check Standard	Harmful if inhaled. Can cause central nervous system (CNS) depression. May cause drowsiness or dizziness.
		DL/NDL-PCB Check Standard	Can cause central nervous system (CNS) depression. May cause drowsiness or dizziness.
Skin contact	:	Dioxin/Furan/DL-PCB Check Standard	Causes skin irritation.
		DL/NDL-PCB Check Standard	Causes skin irritation.
Ingestion	:	Dioxin/Furan/DL-PCB Check Standard	Can cause central nervous system (CNS) depression. May be fatal if swallowed and enters airways.
		DL/NDL-PCB Check Standard	Can cause central nervous system (CNS) depression. May be fatal if swallowed and enters airways.

Over-exposure signs/symptoms

Eye contact	:	Dioxin/Furan/DL-PCB Check Standard	Adverse symptoms may include the following: pain or irritation watering redness
		DL/NDL-PCB Check Standard	Adverse symptoms may include the following: pain or irritation watering redness
Inhalation	:	Dioxin/Furan/DL-PCB Check Standard	Adverse symptoms may include the following: nausea or vomiting headache drowsiness/fatigue dizziness/vertigo unconsciousness
		DL/NDL-PCB Check Standard	Adverse symptoms may include the following: nausea or vomiting headache drowsiness/fatigue dizziness/vertigo unconsciousness
Skin contact	:	Dioxin/Furan/DL-PCB Check Standard	Adverse symptoms may include the following: irritation redness
		DL/NDL-PCB Check Standard	Adverse symptoms may include the following: irritation redness
Ingestion	:	Dioxin/Furan/DL-PCB Check Standard	Adverse symptoms may include the following: nausea or vomiting
		DL/NDL-PCB Check Standard	Adverse symptoms may include the following: nausea or vomiting

4.3 Indication of any immediate medical attention and special treatment needed

Notes to physician	:	Dioxin/Furan/DL-PCB Check Standard	Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
		DL/NDL-PCB Check Standard	Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
Specific treatments	:	Dioxin/Furan/DL-PCB Check Standard	No specific treatment.
		DL/NDL-PCB Check Standard	No specific treatment.

SECTION 5: Firefighting measures

5.1 Extinguishing media

Suitable extinguishing media	:	Dioxin/Furan/DL-PCB Check Standard	Use dry chemical, CO_2, water spray (fog) or foam.
		DL/NDL-PCB Check Standard	Use dry chemical, CO_2, water spray (fog) or foam.
Unsuitable extinguishing media	:	Dioxin/Furan/DL-PCB Check Standard	Do not use water jet.
		DL/NDL-PCB Check Standard	Do not use water jet.

5.2 Special hazards arising from the substance or mixture

Hazards from the substance or mixture	:	Dioxin/Furan/DL-PCB Check Standard	Flammable liquid and vapour. Runoff to sewer may create fire or explosion hazard. In a fire or if heated, a pressure increase will occur and the container may burst, with the risk of a subsequent explosion. This material is very toxic to aquatic life with long lasting effects. Fire water contaminated with this material must be contained and prevented from being discharged to any waterway, sewer or drain.
		DL/NDL-PCB Check Standard	Highly flammable liquid and vapour. Runoff to sewer may create fire or explosion hazard. In a fire or if heated, a pressure increase will occur and the container may burst, with the risk of a subsequent explosion. The vapour/gas is heavier than air and will spread along the ground. Vapours may accumulate in low or confined areas or travel a considerable distance to a source of ignition and flash back. This material is very toxic to aquatic life with long lasting effects. Fire water contaminated with this material must be contained and prevented from being discharged to any waterway, sewer or drain.
Hazardous combustion products	:	Dioxin/Furan/DL-PCB Check Standard	Decomposition products may include the following materials: carbon dioxide carbon monoxide
		DL/NDL-PCB Check Standard	Decomposition products may include the following materials: carbon dioxide carbon monoxide

5.3 Advice for firefighters

Special precautions for fire-fighters	:	Dioxin/Furan/DL-PCB Check Standard	Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training. Move containers from fire area if this can be done without risk. Use water spray to keep fire-exposed containers cool.
		DL/NDL-PCB Check Standard	Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training. Move containers from fire area if this can be done without risk. Use water spray to keep fire-exposed containers cool.
Special protective equipment for fire-fighters	:	Dioxin/Furan/DL-PCB Check Standard	Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode. Clothing for fire-fighters (including helmets, protective boots and gloves) conforming to European standard EN 469 will provide a basic level of protection for chemical incidents.
		DL/NDL-PCB Check Standard	Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode. Clothing for fire-fighters (including helmets, protective boots and gloves) conforming to European standard EN 469 will provide a

SECTION 5: Firefighting measures

basic level of protection for chemical incidents.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

For non-emergency personnel	:	Dioxin/Furan/DL-PCB Check Standard	No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilt material. Shut off all ignition sources. No flares, smoking or flames in hazard area. Avoid breathing vapour or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.
		DL/NDL-PCB Check Standard	No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilt material. Shut off all ignition sources. No flares, smoking or flames in hazard area. Avoid breathing vapour or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.
For emergency responders	:	Dioxin/Furan/DL-PCB Check Standard	If specialised clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".
		DL/NDL-PCB Check Standard	If specialised clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".

6.2 Environmental precautions

	:	Dioxin/Furan/DL-PCB Check Standard	Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air). Water polluting material. May be harmful to the environment if released in large quantities. Collect spillage.
		DL/NDL-PCB Check Standard	Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air). Water polluting material. May be harmful to the environment if released in large quantities. Collect spillage.

6.3 Methods and material for containment and cleaning up

Methods for cleaning up	:	Dioxin/Furan/DL-PCB Check Standard	Stop leak if without risk. Move containers from spill area. Use spark-proof tools and explosion-proof equipment. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.
		DL/NDL-PCB Check Standard	Stop leak if without risk. Move containers from spill area. Use spark-proof tools and explosion-proof equipment. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.

6.4 Reference to other sections

: See Section 1 for emergency contact information.
See Section 8 for information on appropriate personal protective equipment.
See Section 13 for additional waste treatment information.

SECTION 7: Handling and storage

7.1 Precautions for safe handling

Protective measures	:	Dioxin/Furan/DL-PCB Check Standard	Put on appropriate personal protective equipment (see Section 8). Do not swallow. Avoid contact with eyes, skin and clothing. Avoid breathing vapour or mist. Avoid release to the environment. Use only with adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Do not enter storage areas and confined spaces unless adequately ventilated. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Store and use away from heat, sparks, open flame or any other ignition source. Use explosion-proof electrical (ventilating, lighting and material handling) equipment. Use only non-sparking tools. Take precautionary measures against electrostatic discharges. Empty containers retain product residue and can be hazardous. Do not reuse container.
		DL/NDL-PCB Check Standard	Put on appropriate personal protective equipment (see Section 8). Do not swallow. Avoid contact with eyes, skin and clothing. Avoid breathing vapour or mist. Avoid release to the environment. Use only with adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Do not enter storage areas and confined spaces unless adequately ventilated. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Store and use away from heat, sparks, open flame or any other ignition source. Use explosion-proof electrical (ventilating, lighting and material handling) equipment. Use only non-sparking tools. Take precautionary measures against electrostatic discharges. Empty containers retain product residue and can be hazardous. Do not reuse container.
Advice on general occupational hygiene	:	Dioxin/Furan/DL-PCB Check Standard	Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.
		DL/NDL-PCB Check Standard	Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.

7.2 Conditions for safe storage, including any incompatibilities

Storage	:	Dioxin/Furan/DL-PCB Check Standard	Store in accordance with local regulations. Store in a segregated and approved area. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Store locked up. Eliminate all ignition sources. Separate from oxidising materials. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabelled containers. Use appropriate containment to avoid environmental contamination. See Section 10 for incompatible materials before handling or use.
		DL/NDL-PCB Check Standard	Store in accordance with local regulations. Store in a segregated and approved area. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Store locked up. Eliminate

SECTION 7: Handling and storage

all ignition sources. Separate from oxidising materials. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabelled containers. Use appropriate containment to avoid environmental contamination. See Section 10 for incompatible materials before handling or use.

Seveso Directive - Reporting thresholds

Danger criteria

Category	Notification and MAPP threshold	Safety report threshold
Dioxin/Furan/DL-PCB Check Standard		
P5c	5000 tonne	50000 tonne
E1	100 tonne	200 tonne
DL/NDL-PCB Check Standard		
P5c	5000 tonne	50000 tonne
E1	100 tonne	200 tonne

7.3 Specific end use(s)

Recommendations	:	Dioxin/Furan/DL-PCB Check Standard	Industrial applications, Professional applications.
		DL/NDL-PCB Check Standard	Industrial applications, Professional applications.
Industrial sector specific solutions	:	Dioxin/Furan/DL-PCB Check Standard	Not available.
		DL/NDL-PCB Check Standard	Not available.

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

Occupational exposure limits

Product/ingredient name	Exposure limit values
Dioxin/Furan/DL-PCB Check Standard	
nonane	**NAOSH (Ireland, 5/2021). [nonane] Notes: Advisory Occupational Exposure Limit Values (OELVs)** OELV: 200 ppm 8 hours. OELV: 1050 mg/m³ 8 hours.

Biological exposure indices

No exposure indices known.

Recommended monitoring procedures : Reference should be made to monitoring standards, such as the following: European Standard EN 689 (Workplace atmospheres - Guidance for the assessment of exposure by inhalation to chemical agents for comparison with limit values and measurement strategy) European Standard EN 14042 (Workplace atmospheres - Guide for the application and use of procedures for the assessment of exposure to chemical and biological agents) European Standard EN 482 (Workplace atmospheres - General requirements for the performance of procedures for the measurement of chemical agents) Reference to national guidance documents for methods for the determination of hazardous substances will also be required.

DNELs/DMELs

SECTION 8: Exposure controls/personal protection

Product/ingredient name	Type	Exposure	Value	Population	Effects
Dioxin/Furan/DL-PCB Check Standard					
nonane	DNEL	Long term Inhalation	608 mg/m³	General population	Systemic
	DNEL	Long term Oral	699 mg/kg bw/day	General population	Systemic
	DNEL	Long term Dermal	699 mg/kg bw/day	General population	Systemic
	DNEL	Long term Dermal	773 mg/kg bw/day	Workers	Systemic
	DNEL	Long term Inhalation	2035 mg/m³	Workers	Systemic
2,2,4-trimethylpentane	DNEL	Long term Inhalation	608 mg/m³	General population	Systemic
	DNEL	Long term Oral	699 mg/kg bw/day	General population	Systemic
	DNEL	Long term Dermal	699 mg/kg bw/day	General population	Systemic
	DNEL	Long term Dermal	773 mg/kg bw/day	Workers	Systemic
	DNEL	Long term Inhalation	2035 mg/m³	Workers	Systemic
DL/NDL-PCB Check Standard					
2,2,4-trimethylpentane	DNEL	Long term Inhalation	608 mg/m³	General population	Systemic
	DNEL	Long term Oral	699 mg/kg bw/day	General population	Systemic
	DNEL	Long term Dermal	699 mg/kg bw/day	General population	Systemic
	DNEL	Long term Dermal	773 mg/kg bw/day	Workers	Systemic
	DNEL	Long term Inhalation	2035 mg/m³	Workers	Systemic

PNECs

No PNECs available

8.2 Exposure controls

Appropriate engineering controls : Use only with adequate ventilation. Use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits. The engineering controls also need to keep gas, vapour or dust concentrations below any lower explosive limits. Use explosion-proof ventilation equipment.

Individual protection measures

Hygiene measures : Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

Eye/face protection : Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: chemical splash goggles.

Skin protection

SECTION 8: Exposure controls/personal protection

Hand protection : Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary. Considering the parameters specified by the glove manufacturer, check during use that the gloves are still retaining their protective properties. It should be noted that the time to breakthrough for any glove material may be different for different glove manufacturers. In the case of mixtures, consisting of several substances, the protection time of the gloves cannot be accurately estimated.

Body protection : Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product. When there is a risk of ignition from static electricity, wear anti-static protective clothing. For the greatest protection from static discharges, clothing should include anti-static overalls, boots and gloves. Refer to European Standard EN 1149 for further information on material and design requirements and test methods.

Other skin protection : Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

Respiratory protection : Based on the hazard and potential for exposure, select a respirator that meets the appropriate standard or certification. Respirators must be used according to a respiratory protection program to ensure proper fitting, training, and other important aspects of use.

Environmental exposure controls : Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

SECTION 9: Physical and chemical properties

The conditions of measurement of all properties are at standard temperature and pressure unless otherwise indicated.

9.1 Information on basic physical and chemical properties

Appearance

Physical state	:	Dioxin/Furan/DL-PCB Check Standard	Liquid.
		DL/NDL-PCB Check Standard	Liquid.
Colour	:	Dioxin/Furan/DL-PCB Check Standard	Not available.
		DL/NDL-PCB Check Standard	Not available.
Odour	:	Dioxin/Furan/DL-PCB Check Standard	Not available.
		DL/NDL-PCB Check Standard	Not available.
Odour threshold	:	Dioxin/Furan/DL-PCB Check Standard	Not available.
		DL/NDL-PCB Check Standard	Not available.
Melting point/freezing point	:	Dioxin/Furan/DL-PCB Check Standard	-53°C
		DL/NDL-PCB Check Standard	-107°C
Initial boiling point and boiling range	:	Dioxin/Furan/DL-PCB Check Standard	151°C
		DL/NDL-PCB Check Standard	98 to 99°C
Flammability	:	Dioxin/Furan/DL-PCB Check Standard	Not applicable.
		DL/NDL-PCB Check Standard	Not applicable.

SECTION 9: Physical and chemical properties

Upper/lower flammability or explosive limits :

Dioxin/Furan/DL-PCB Check Standard	Lower: 0.87% Upper: 2.9%
DL/NDL-PCB Check Standard	Lower: 1% Upper: 6%

Flash point :

Dioxin/Furan/DL-PCB Check Standard	Closed cup: 31°C
DL/NDL-PCB Check Standard	Closed cup: -12°C

Auto-ignition temperature :

Dioxin/Furan/DL-PCB Check Standard	205°C
DL/NDL-PCB Check Standard	396°C

Decomposition temperature :

Dioxin/Furan/DL-PCB Check Standard	Not available.
DL/NDL-PCB Check Standard	Not available.

pH :

Dioxin/Furan/DL-PCB Check Standard	Not available.
DL/NDL-PCB Check Standard	Not available.

Viscosity :

Dioxin/Furan/DL-PCB Check Standard	Not available.
DL/NDL-PCB Check Standard	Not available.

Solubility(ies) :

Media	Result
Dioxin/Furan/DL-PCB Check Standard	
water	Insoluble
DL/NDL-PCB Check Standard	
water	Insoluble

Partition coefficient: n-octanol/water :

Dioxin/Furan/DL-PCB Check Standard	Not applicable.
DL/NDL-PCB Check Standard	Not applicable.

Vapour pressure :

DL/NDL-PCB Check Standard: 5.5 kPa (41 mm Hg)

Ingredient name	Vapour Pressure at 20˚C			Vapour pressure at 50˚C		
	mm Hg	kPa	Method	mm Hg	kPa	Method
Dioxin/Furan/DL-PCB Check Standard						
nonane	3.15026	0.42	-	18.076	2.4	-

Evaporation rate :

Dioxin/Furan/DL-PCB Check Standard	Not available.
DL/NDL-PCB Check Standard	Not available.

Relative density :

Dioxin/Furan/DL-PCB Check Standard	Not available.
DL/NDL-PCB Check Standard	Not available.

Vapour density :

Dioxin/Furan/DL-PCB Check Standard	Not available.
DL/NDL-PCB Check Standard	3.94 [Air = 1]

SECTION 9: Physical and chemical properties

Explosive properties	:	Dioxin/Furan/DL-PCB Check Standard	Explosive in the presence of the following materials or conditions: heat.
		DL/NDL-PCB Check Standard	Explosive in the presence of the following materials or conditions: heat.
Oxidising properties	:	Dioxin/Furan/DL-PCB Check Standard	Not available.
		DL/NDL-PCB Check Standard	Not available.
Particle characteristics			
Median particle size	:	Dioxin/Furan/DL-PCB Check Standard	Not applicable.
		DL/NDL-PCB Check Standard	Not applicable.

9.2 Other information

No additional information.

SECTION 10: Stability and reactivity

10.1 Reactivity	:	Dioxin/Furan/DL-PCB Check Standard	No specific test data related to reactivity available for this product or its ingredients.
		DL/NDL-PCB Check Standard	No specific test data related to reactivity available for this product or its ingredients.
10.2 Chemical stability	:	Dioxin/Furan/DL-PCB Check Standard	The product is stable.
		DL/NDL-PCB Check Standard	The product is stable.
10.3 Possibility of hazardous reactions	:	Dioxin/Furan/DL-PCB Check Standard	Under normal conditions of storage and use, hazardous reactions will not occur.
		DL/NDL-PCB Check Standard	Under normal conditions of storage and use, hazardous reactions will not occur.
10.4 Conditions to avoid	:	Dioxin/Furan/DL-PCB Check Standard	Avoid all possible sources of ignition (spark or flame). Do not pressurise, cut, weld, braze, solder, drill, grind or expose containers to heat or sources of ignition.
		DL/NDL-PCB Check Standard	Avoid all possible sources of ignition (spark or flame). Do not pressurise, cut, weld, braze, solder, drill, grind or expose containers to heat or sources of ignition. Do not allow vapour to accumulate in low or confined areas.
10.5 Incompatible materials	:	Dioxin/Furan/DL-PCB Check Standard	Reactive or incompatible with the following materials: oxidising materials
		DL/NDL-PCB Check Standard	Reactive or incompatible with the following materials: oxidising materials
10.6 Hazardous decomposition products	:	Dioxin/Furan/DL-PCB Check Standard	Under normal conditions of storage and use, hazardous decomposition products should not be produced.
		DL/NDL-PCB Check Standard	Under normal conditions of storage and use, hazardous decomposition products should not be produced.

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Acute toxicity

Product/ingredient name	Result	Species	Dose	Exposure
Dioxin/Furan/DL-PCB Check Standard				
nonane	LC50 Inhalation Vapour	Rat	17000 mg/m³	4 hours
	LC50 Inhalation Vapour	Rat	3200 ppm	4 hours
	LD50 Oral	Rat - Male, Female	>5000 mg/kg	-
2,2,4-trimethylpentane	LC50 Inhalation Vapour	Rat - Male, Female	>33.52 mg/l	4 hours
	LD50 Oral	Rat - Male, Female	>5000 mg/kg	-
2,3,7,8-tetrachlorodibenzo[b, e][1,4]dioxin	LD50 Dermal	Rabbit	275 µg/kg	-
	LD50 Oral	Rat	20 µg/kg	-
DL/NDL-PCB Check Standard				
2,2,4-trimethylpentane	LC50 Inhalation Vapour	Rat - Male, Female	>33.52 mg/l	4 hours
	LD50 Oral	Rat - Male, Female	>5000 mg/kg	-

Acute toxicity estimates

Product/ingredient name	Oral (mg/kg)	Dermal (mg/kg)	Inhalation (gases) (ppm)	Inhalation (vapours) (mg/l)	Inhalation (dusts and mists) (mg/l)
Dioxin/Furan/DL-PCB Check Standard					
Dioxin/Furan/DL-PCB Check Standard	N/A	N/A	N/A	17.0	N/A
nonane	N/A	N/A	N/A	17	N/A
2,3,7,8-tetrachlorodibenzo[b,e][1,4]dioxin	0.02	0.275	N/A	N/A	N/A

Irritation/Corrosion

Product/ingredient name	Result	Species	Score	Exposure	Observation
Dioxin/Furan/DL-PCB Check Standard					
nonane	Skin - Moderate irritant	Rat	-	96 hours 300 uL	-
2,3,7,8-tetrachlorodibenzo[b, e][1,4]dioxin	Eyes - Moderate irritant	Rabbit	-	2 mg	-

Sensitiser

Conclusion/Summary : Not available.

Mutagenicity

Conclusion/Summary : Not available.

Carcinogenicity

Conclusion/Summary : Not available.

Reproductive toxicity

Conclusion/Summary : Not available.

Teratogenicity

Conclusion/Summary : Not available.

Specific target organ toxicity (single exposure)

SECTION 11: Toxicological information

Product/ingredient name	Category	Route of exposure	Target organs
Dioxin/Furan/DL-PCB Check Standard			
nonane	Category 3	-	Narcotic effects
2,2,4-trimethylpentane	Category 3	-	Narcotic effects
DL/NDL-PCB Check Standard			
2,2,4-trimethylpentane	Category 3	-	Narcotic effects

Specific target organ toxicity (repeated exposure)

Not available.

Aspiration hazard

Product/ingredient name	Result
Dioxin/Furan/DL-PCB Check Standard	
Dioxin/Furan/DL-PCB Check Standard	ASPIRATION HAZARD - Category 1
nonane	ASPIRATION HAZARD - Category 1
2,2,4-trimethylpentane	ASPIRATION HAZARD - Category 1
DL/NDL-PCB Check Standard	
DL/NDL-PCB Check Standard	ASPIRATION HAZARD - Category 1
2,2,4-trimethylpentane	ASPIRATION HAZARD - Category 1

Information on likely routes of exposure

: Dioxin/Furan/DL-PCB Check Standard — Routes of entry anticipated: Oral, Dermal, Inhalation, Eyes.

DL/NDL-PCB Check Standard — Routes of entry anticipated: Oral, Dermal, Inhalation, Eyes.

Potential acute health effects

Inhalation

: Dioxin/Furan/DL-PCB Check Standard — Harmful if inhaled. Can cause central nervous system (CNS) depression. May cause drowsiness or dizziness.

DL/NDL-PCB Check Standard — Can cause central nervous system (CNS) depression. May cause drowsiness or dizziness.

Ingestion

: Dioxin/Furan/DL-PCB Check Standard — Can cause central nervous system (CNS) depression. May be fatal if swallowed and enters airways.

DL/NDL-PCB Check Standard — Can cause central nervous system (CNS) depression. May be fatal if swallowed and enters airways.

Skin contact

: Dioxin/Furan/DL-PCB Check Standard — Causes skin irritation.

DL/NDL-PCB Check Standard — Causes skin irritation.

Eye contact

: Dioxin/Furan/DL-PCB Check Standard — Causes serious eye irritation.

DL/NDL-PCB Check Standard — No known significant effects or critical hazards.

Symptoms related to the physical, chemical and toxicological characteristics

Inhalation

: Dioxin/Furan/DL-PCB Check Standard — Adverse symptoms may include the following:

nausea or vomiting
headache
drowsiness/fatigue
dizziness/vertigo
unconsciousness

DL/NDL-PCB Check Standard — Adverse symptoms may include the following:

nausea or vomiting
headache
drowsiness/fatigue
dizziness/vertigo
unconsciousness

SECTION 11: Toxicological information

Ingestion	:	Dioxin/Furan/DL-PCB Check Standard	Adverse symptoms may include the following: nausea or vomiting
		DL/NDL-PCB Check Standard	Adverse symptoms may include the following: nausea or vomiting
Skin contact	:	Dioxin/Furan/DL-PCB Check Standard	Adverse symptoms may include the following: irritation redness
		DL/NDL-PCB Check Standard	Adverse symptoms may include the following: irritation redness
Eye contact	:	Dioxin/Furan/DL-PCB Check Standard	Adverse symptoms may include the following: pain or irritation watering redness
		DL/NDL-PCB Check Standard	Adverse symptoms may include the following: pain or irritation watering redness

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Short term exposure

Potential immediate effects : Not available.

Potential delayed effects : Not available.

Long term exposure

Potential immediate effects : Not available.

Potential delayed effects : Not available.

Potential chronic health effects

Conclusion/Summary : Not available.

General	:	Dioxin/Furan/DL-PCB Check Standard	No known significant effects or critical hazards.
		DL/NDL-PCB Check Standard	No known significant effects or critical hazards.
Carcinogenicity	:	Dioxin/Furan/DL-PCB Check Standard	No known significant effects or critical hazards.
		DL/NDL-PCB Check Standard	No known significant effects or critical hazards.
Mutagenicity	:	Dioxin/Furan/DL-PCB Check Standard	No known significant effects or critical hazards.
		DL/NDL-PCB Check Standard	No known significant effects or critical hazards.
Reproductive toxicity	:	Dioxin/Furan/DL-PCB Check Standard	No known significant effects or critical hazards.
		DL/NDL-PCB Check Standard	No known significant effects or critical hazards.

11.2 Information on other hazards

11.2.1 Endocrine disrupting properties

Not available.

SECTION 11: Toxicological information

11.2.2 Other information

Dioxin/Furan/DL-PCB Check Standard	Adverse symptoms may include the following: Prolonged or repeated contact can defat the skin and lead to irritation, cracking and/or dermatitis.
DL/NDL-PCB Check Standard	Adverse symptoms may include the following: Repeated exposure may cause skin dryness or cracking.

SECTION 12: Ecological information

12.1 Toxicity

Product/ingredient name	Result	Species	Exposure
Dioxin/Furan/DL-PCB Check Standard			
2,3,7,8-tetrachlorodibenzo[b, e][1,4]dioxin	Chronic NOEC 0.000038 µg/l Fresh water	Fish - *Oncorhynchus mykiss*	56 days

12.2 Persistence and degradability

Not available.

Product/ingredient name	Aquatic half-life	Photolysis	Biodegradability
Dioxin/Furan/DL-PCB Check Standard			
nonane	-	-	Readily
2,2,4-trimethylpentane	-	-	Inherent
DL/NDL-PCB Check Standard			
2,2,4-trimethylpentane	-	-	Inherent

12.3 Bioaccumulative potential

Product/ingredient name	$LogP_{ow}$	BCF	Potential
Dioxin/Furan/DL-PCB Check Standard			
nonane	5.65	105	Low
2,2,4-trimethylpentane	4.08	231	Low
2,3,7,8-tetrachlorodibenzo[b, e][1,4]dioxin	6.8	97723.72	High
DL/NDL-PCB Check Standard			
2,2,4-trimethylpentane	4.08	231	Low

12.4 Mobility in soil

Soil/water partition coefficient (K_{OC}) : Not available.

Mobility : Not available.

12.5 Results of PBT and vPvB assessment

This mixture does not contain any substances that are assessed to be a PBT or a vPvB.

12.6 Endocrine disrupting properties

Not available.

12.7 Other adverse effects

No known significant effects or critical hazards.

SECTION 13: Disposal considerations

13.1 Waste treatment methods

Product

Methods of disposal : The generation of waste should be avoided or minimised wherever possible. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction.

Hazardous waste : The classification of the product may meet the criteria for a hazardous waste.

Packaging

Methods of disposal : The generation of waste should be avoided or minimised wherever possible. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible.

Special precautions : This material and its container must be disposed of in a safe way. Care should be taken when handling emptied containers that have not been cleaned or rinsed out. Empty containers or liners may retain some product residues. Vapour from product residues may create a highly flammable or explosive atmosphere inside the container. Do not cut, weld or grind used containers unless they have been cleaned thoroughly internally. Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers.

SECTION 14: Transport information

	ADR/RID	IMDG	IATA
14.1 UN number or ID number	UN3295	UN3295	UN3295
14.2 UN proper shipping name	HYDROCARBONS, LIQUID, N.O.S.(NONANE , 2,2,4-trimethylpentane)	HYDROCARBONS, LIQUID, N.O.S.(NONANE , 2,2,4-trimethylpentane)	Hydrocarbons, liquid, n.o.s.(NONANE , 2,2,4-trimethylpentane)
14.3 Transport hazard class(es)	3 	3 	3 
14.4 Packing group	II	II	II
14.5 Environmental hazards	Yes.	Yes.	Yes. The environmentally hazardous substance mark is not required.

Additional information

Remarks : De minimis quantities

ADR/RID : The environmentally hazardous substance mark is not required when transported in sizes of ≤5 L or ≤5 kg.
Hazard identification number 33
Limited quantity 1 L
Special provisions 640C
Tunnel code (D/E)

IMDG : The marine pollutant mark is not required when transported in sizes of ≤5 L or ≤5 kg.
Emergency schedules F-E, S-D

IATA : The environmentally hazardous substance mark may appear if required by other transportation regulations.
Quantity limitation Passenger and Cargo Aircraft: 5 L. Packaging instructions: 353. Cargo Aircraft Only: 60 L. Packaging instructions: 364. Limited Quantities - Passenger Aircraft: 1 L. Packaging instructions: Y341.
Special provisions A3, A324

SECTION 14: Transport information

14.6 Special precautions for user	: **Transport within user's premises:** always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or spillage.
14.7 Transport in bulk according to IMO instruments	: Not available.

SECTION 15: Regulatory information

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

EU Regulation (EC) No. 1907/2006 (REACH)

Annex XIV - List of substances subject to authorisation

Annex XIV

None of the components are listed.

Substances of very high concern

None of the components are listed.

Annex XVII - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles

Product / Ingredient name	Identifiers	Designation [Usage]
Dioxin/Furan/DL-PCB Check Standard		
Dioxin/Furan/DL-PCB Check Standard	-	3
DL/NDL-PCB Check Standard		
DL/NDL-PCB Check Standard	-	3

Label	: Dioxin/Furan/DL-PCB Check Standard	Not applicable.
	DL/NDL-PCB Check Standard	Not applicable.

Other EU regulations

Ozone depleting substances (1005/2009/EU)

Not listed.

Prior Informed Consent (PIC) (649/2012/EU)

Not listed.

Persistent Organic Pollutants

Annex	Ingredient name	Status
Dioxin/Furan/DL-PCB Check Standard		
Annex IV	polychlorinated dibenzo-p-dioxins and dibenzofurans and dioxin-like polychlorinated biphenyls	Listed
	polychlorinated dibenzo-p-dioxins and dibenzofurans and dioxin-like polychlorinated biphenyls	Listed
	polychlorinated dibenzo-p-dioxins and dibenzofurans and dioxin-like polychlorinated biphenyls	Listed
	polychlorinated dibenzo-p-dioxins and dibenzofurans and dioxin-like polychlorinated biphenyls	Listed
	polychlorinated dibenzo-p-dioxins and dibenzofurans and dioxin-like polychlorinated biphenyls	Listed
	polychlorinated dibenzo-p-dioxins and dibenzofurans and dioxin-like polychlorinated biphenyls	Listed
	polychlorinated dibenzo-p-dioxins and dibenzofurans and dioxin-like polychlorinated biphenyls	Listed
	polychlorinated dibenzo-p-dioxins and dibenzofurans and dioxin-like polychlorinated biphenyls	Listed
	polychlorinated dibenzo-p-dioxins and dibenzofurans and dioxin-like polychlorinated biphenyls	Listed
	polychlorinated dibenzo-p-dioxins and dibenzofurans and dioxin-like	Listed

SECTION 15: Regulatory information

	polychlorinated biphenyls polychlorinated dibenzo-p-dioxins and dibenzofurans and dioxin-like polychlorinated biphenyls polychlorinated dibenzo-p-dioxins and dibenzofurans and dioxin-like polychlorinated biphenyls polychlorinated dibenzo-p-dioxins and dibenzofurans and dioxin-like polychlorinated biphenyls polychlorinated dibenzo-p-dioxins and dibenzofurans and dioxin-like polychlorinated biphenyls polychlorinated dibenzo-p-dioxins and dibenzofurans and dioxin-like polychlorinated biphenyls	Listed Listed Listed Listed Listed

Seveso Directive

This product is controlled under the Seveso Directive.

Danger criteria

Category
Dioxin/Furan/DL-PCB Check Standard P5c E1 **DL/NDL-PCB Check Standard** P5c E1

International regulations

Chemical Weapon Convention List Schedules I, II & III Chemicals

Not listed.

Montreal Protocol

Not listed.

Stockholm Convention on Persistent Organic Pollutants

Not listed.

Rotterdam Convention on Prior Informed Consent (PIC)

Not listed.

UNECE Aarhus Protocol on POPs and Heavy Metals

Not listed.

Inventory list

Australia : Not determined.

Canada : Not determined.

China : Not determined.

Eurasian Economic Union : **Russian Federation inventory**: All components are listed or exempted.

Japan : **Japan inventory (CSCL)**: Not determined.
Japan inventory (ISHL): Not determined.

New Zealand : Not determined.

Philippines : Not determined.

Republic of Korea : Not determined.

Taiwan : Not determined.

Thailand : Not determined.

Turkey : Not determined.

United States : Not determined.

Viet Nam : Not determined.

SECTION 15: Regulatory information

15.2 Chemical safety assessment : This product contains substances for which Chemical Safety Assessments might still be required.

SECTION 16: Other information

Indicates information that has changed from previously issued version.

Abbreviations and acronyms : ATE = Acute Toxicity Estimate
CLP = Classification, Labelling and Packaging Regulation [Regulation (EC) No. 1272/2008]
DMEL = Derived Minimal Effect Level
DNEL = Derived No Effect Level
EUH statement = CLP-specific Hazard statement
N/A = Not available
PBT = Persistent, Bioaccumulative and Toxic
PNEC = Predicted No Effect Concentration
RRN = REACH Registration Number
vPvB = Very Persistent and Very Bioaccumulative

Procedure used to derive the classification according to Regulation (EC) No. 1272/2008 [CLP/GHS]

Classification	Justification
Dioxin/Furan/DL-PCB Check Standard	
Flam. Liq. 3, H226	On basis of test data
Acute Tox. 4, H332	Calculation method
Skin Irrit. 2, H315	Calculation method
Eye Irrit. 2, H319	Calculation method
STOT SE 3, H336	Calculation method
Asp. Tox. 1, H304	Expert judgment
Aquatic Acute 1, H400	Calculation method
Aquatic Chronic 1, H410	Calculation method
DL/NDL-PCB Check Standard	
Flam. Liq. 2, H225	On basis of test data
Skin Irrit. 2, H315	Calculation method
STOT SE 3, H336	Calculation method
Asp. Tox. 1, H304	Expert judgment
Aquatic Acute 1, H400	Calculation method
Aquatic Chronic 1, H410	Calculation method

Full text of abbreviated H statements

Dioxin/Furan/DL-PCB Check Standard	
H225	Highly flammable liquid and vapour.
H226	Flammable liquid and vapour.
H300	Fatal if swallowed.
H304	May be fatal if swallowed and enters airways.
H310	Fatal in contact with skin.
H315	Causes skin irritation.
H319	Causes serious eye irritation.
H332	Harmful if inhaled.
H336	May cause drowsiness or dizziness.
H400	Very toxic to aquatic life.
H410	Very toxic to aquatic life with long lasting effects.
DL/NDL-PCB Check Standard	
H225	Highly flammable liquid and vapour.
H304	May be fatal if swallowed and enters airways.
H315	Causes skin irritation.
H336	May cause drowsiness or dizziness.
H400	Very toxic to aquatic life.
H410	Very toxic to aquatic life with long lasting effects.

Full text of classifications [CLP/GHS]

SECTION 16: Other information

Dioxin/Furan/DL-PCB Check Standard	
Acute Tox. 1	ACUTE TOXICITY - Category 1
Acute Tox. 4	ACUTE TOXICITY - Category 4
Aquatic Acute 1	SHORT-TERM (ACUTE) AQUATIC HAZARD - Category 1
Aquatic Chronic 1	LONG-TERM (CHRONIC) AQUATIC HAZARD - Category 1
Asp. Tox. 1	ASPIRATION HAZARD - Category 1
Eye Irrit. 2	SERIOUS EYE DAMAGE/EYE IRRITATION - Category 2
Flam. Liq. 2	FLAMMABLE LIQUIDS - Category 2
Flam. Liq. 3	FLAMMABLE LIQUIDS - Category 3
Skin Irrit. 2	SKIN CORROSION/IRRITATION - Category 2
STOT SE 3	SPECIFIC TARGET ORGAN TOXICITY - SINGLE EXPOSURE - Category 3
DL/NDL-PCB Check Standard	
Aquatic Acute 1	SHORT-TERM (ACUTE) AQUATIC HAZARD - Category 1
Aquatic Chronic 1	LONG-TERM (CHRONIC) AQUATIC HAZARD - Category 1
Asp. Tox. 1	ASPIRATION HAZARD - Category 1
Flam. Liq. 2	FLAMMABLE LIQUIDS - Category 2
Skin Irrit. 2	SKIN CORROSION/IRRITATION - Category 2
STOT SE 3	SPECIFIC TARGET ORGAN TOXICITY - SINGLE EXPOSURE - Category 3

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