Safety Data Sheet

23 Mix organochlorine in n-hexane/acetone

Version：V2.0.0.1
Report No.：BWN5893-2016-MSDS-EP
Creation Date：2026/01/08
Revision Date：-

***Prepared in accordance with EU REACH Regulation (REACH 1907/2006 with amendment 2020/878)**

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

1.1 Product identifier

Product Name	23 Mix organochlorine in n-hexane/acetone
Cat No.	BWN5893-2016
CAS No.	Not applicable
EC No.	Not applicable
Molecular Formula	Not applicable
REACH Registration Number	-
UFI	No information available

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

Relevant identified uses	Please consult manufacturer.
Uses advised against	Please consult manufacturer.

1.3 Details of the supplier of the Safety Data Sheet

Name of the company	Weiyel Inc
Address of the company	Hedian Light Industrial Park, Chengguan Town, Shangcheng County, Xinyang City, Henan Province, China
Post code	465350
Telephone number	010-58103678
Fax number	010-84840368
E-mail address	info@weiyel.com

1.4 Emergency telephone number

Emergency telephone number	010-58103678
Opening hours	24h

2 Hazards identification

2.1 CLP classification according to Regulation（EC）No. 1272/2008 with amendment 2023/707

Flammable liquids	Category 2
Aspiration hazard	Category 1
Skin Corrosion/Irritation	Category 2
Serious eye damage/irritation	Category 2
Specific target organ toxicity - single exposure; narcotic	Category 3

effects	
Reproductive toxicity	Category 2
Specific target organ toxicity - repeated exposure	Category 1
Hazardous to the aquatic environment - long-term (chronic) hazard	Category 2

2.2 Label elements

Hazard pictograms	
Signal word	**Danger**

Hazard statements

H225	Highly flammable liquid and vapour
H304	May be fatal if swallowed and enters airways
H315	Causes skin irritation
H319	Causes serious eye irritation
H336	May cause drowsiness or dizziness
H361df	Suspected of damaging fertility and the unborn child
H372	Causes damage to organs through prolonged or repeated exposure(oral, nervous system)
H411	Toxic to aquatic life with long lasting effects
EUH066	Repeated exposure may cause skin dryness or cracking

Precautionary statements

- Prevention

P201	Obtain special instructionsbefore use.
P202	Do not handle until allsafety precautions havebeen read and understood.
P210	Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P233	Keep container tightly closed.
P240	Ground and bond container and receiving equipment.
P241	Use explosion-proof [electrical/ventilating/lighting] equipment.
P242	Use non-sparking tools.
P243	Take action to prevent static discharges.
P260	Do not breathe gas/mist/vapour/spray.
P264	Wash hands and other parts of the body (if related) thoroughly after handling.
P270	Do not eat, drink or smoke when using this product.
P271	Use only outdoors or in a well-ventilated area.
P273	Avoid release to the environment.
P280	Wear protective gloves/protective clothing/eye protection/face protection.

- Response

P312	Call a POISON CENTRE/ doctor/… if you feel unwell.

P314	Get medical advice/ attention if you feel unwell.
P321	Specific treatment (see related instructions on the label).
P331	Do NOT induce vomiting.
P391	Collect spillage.
P301+P310	IF SWALLOWED: Immediately call a POISON CENTER/doctor.
P302+P352	IF ON SKIN: Wash with plenty of water.
P304+P340	IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P308+P313	IF exposed or concerned: Get medical advice/attention.
P332+P313	If skin irritation occurs: Get medical advice/attention.
P337+P313	If eye irritation persists: Get medical advice/attention.
P362+P364	Take off contaminated clothing and wash it before reuse.
P370+P378	Small fire: dry chemical, CO_2 or alcohol-resistant foam; Large fire: alcohol-resistant foam; Fire involving tanks, rail tank cars or highway tanks: Fight fire from maximum distance or use unmanned master stream devices or monitor nozzles. Cool containers with flooding quantities of water until well after fire is out.
P303+P361+P353	IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse affected areas with water [or shower].
P305+P351+P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

◆ Storage

P405	Store locked up.
P403+P233	Store in a well-ventilated place. Keep container tightly closed.
P403+P235	Store in a well-ventilated place. Keep cool.

◆ Disposal

P501	Dispose of contents/container in accordance with local/regional/national/ international regulations.

2.3 Other hazards

◆ Results of PBT and vPvB assessment

Component	Results of PBT and vPvB assessment [according to (EC) No 1907/2006]
N-hexane	Not PBT/vPvB
Acetone	Not PBT/vPvB
(1α,2α,3β,4α,5β,6β)-1,2,3,4,5,6-hexachlorocyclohexane	Insufficient information, temporarily unable to evaluate
Hexachlorobenzene	Insufficient information, temporarily unable to evaluate
Lindane	Insufficient information, temporarily unable to evaluate
(1α,2β,3α,4β,5α,6β)-1,2,3,4,5,6-hexachlorocyclohexane	Insufficient information, temporarily unable to evaluate
δ-Hexachlorocyclohexane	Insufficient information, temporarily unable to evaluate
alpha-Endosulfan	Insufficient information, temporarily unable to evaluate
β-Endosulfan	Insufficient information, temporarily unable to evaluate
Aldrin	Insufficient information, temporarily unable to evaluate

Heptachlor epoxide	Insufficient information, temporarily unable to evaluate
Heptachlor endo-epoxide isomer	Insufficient information, temporarily unable to evaluate
2,2,o,p'-tetrachlorovinylidenebisbenzene	Insufficient information, temporarily unable to evaluate
trans-Chlordan	Insufficient information, temporarily unable to evaluate
cis-Chlordane	Insufficient information, temporarily unable to evaluate
trans-Nonachlor	Insufficient information, temporarily unable to evaluate
2,2-bis(p-chlorophenyl)-1,1-dichloroethylene	Insufficient information, temporarily unable to evaluate
Mitotane	Insufficient information, temporarily unable to evaluate
Dieldrin	Insufficient information, temporarily unable to evaluate
Endrin	Insufficient information, temporarily unable to evaluate
o,p′-DDT	Insufficient information, temporarily unable to evaluate
TDE	Insufficient information, temporarily unable to evaluate
cis-Nonachlor	Insufficient information, temporarily unable to evaluate
Clofenotane	Insufficient information, temporarily unable to evaluate
Dodecachloropentacyclo[5.2.1.02,6.03,9.05,8]decane	Insufficient information, temporarily unable to evaluate

◆ Results of endocrine disrupting properties assessment

Component	Results of endocrine disrupting properties assessment [according to (EU) No 2017/2100 or (EU) No 2018/605]
N-hexane	Insufficient information, temporarily unable to evaluate
Acetone	Insufficient information, temporarily unable to evaluate
(1α,2α,3β,4α,5β,6β)-1,2,3,4,5,6-hexachlorocyclohexane	Insufficient information, temporarily unable to evaluate
Hexachlorobenzene	Insufficient information, temporarily unable to evaluate
Lindane	Insufficient information, temporarily unable to evaluate
(1α,2β,3α,4β,5α,6β)-1,2,3,4,5,6-hexachlorocyclohexane	Insufficient information, temporarily unable to evaluate
δ-Hexachlorocyclohexane	Insufficient information, temporarily unable to evaluate
alpha-Endosulfan	Insufficient information, temporarily unable to evaluate
β-Endosulfan	Insufficient information, temporarily unable to evaluate
Aldrin	Insufficient information, temporarily unable to evaluate
Heptachlor epoxide	Insufficient information, temporarily unable to evaluate
Heptachlor endo-epoxide isomer	Insufficient information, temporarily unable to evaluate
2,2,o,p'-tetrachlorovinylidenebisbenzene	Insufficient information, temporarily unable to evaluate
trans-Chlordan	Insufficient information, temporarily unable to evaluate

cis-Chlordane	Insufficient information, temporarily unable to evaluate
trans-Nonachlor	Insufficient information, temporarily unable to evaluate
2,2-bis(p-chlorophenyl)-1,1-dichloroethylene	Insufficient information, temporarily unable to evaluate
Mitotane	Insufficient information, temporarily unable to evaluate
Dieldrin	Insufficient information, temporarily unable to evaluate
Endrin	Insufficient information, temporarily unable to evaluate
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TDE	Insufficient information, temporarily unable to evaluate
cis-Nonachlor	Insufficient information, temporarily unable to evaluate
Clofenotane	Insufficient information, temporarily unable to evaluate
Dodecachloropentacyclo[5.2.1.02,6.03,9.05,8]decane	Insufficient information, temporarily unable to evaluate

◆ Other

	Not applicable.

3 Composition/information on ingredients

3.1 Substance

	Not applicable

3.2 Mixture

Component	Weight % content(or range)	Classification according to Regulation (EC) No. 1272/2008 with amendment 2023/707 [CLP]	Specific Conc. Limits, M-factors
N-hexane CAS : 110-54-3 EC : 203-777-6 Index No. : 601-037-00-0	45.3213	Flammable liquids, Category 2, H225; Aspiration hazard, Category 1, H304; Skin Corrosion/Irritation, Category 2, H315; Specific target organ toxicity - single exposure; narcotic effects, Category 3, H336; Reproductive toxicity, Category 2, H361; Specific target organ toxicity - repeated exposure, Category 1, H372; Hazardous to the aquatic environment - long-term (chronic) hazard, Category 2, H411	-
Acetone CAS : 67-64-1 EC : 200-662-2 Index No. : 606-001-00-8	54.3613	Flammable liquids, Category 2, H225; Serious eye damage/irritation, Category 2, H319; Specific target organ toxicity - single exposure; narcotic effects, Category 3, H336; Repeated exposure may cause skin dryness or cracking, EUH066	-
(1α,2α,3β,4α,5β,6β)-1,2,3,4,5,6-hexachlorocyclohexane CAS : 319-84-6 EC : 206-270-8 Index No. : -	0.0138	Acute Toxicity - Oral, Category 3, H301; Acute Toxicity - Dermal, Category 4, H312; Carcinogenicity, Category 2, H351; Hazardous to the aquatic environment - short-term (acute) hazard, Category 1, H400; Hazardous to the aquatic environment - long-term (chronic) hazard, Category 1, H410	-
Hexachlorobenzene CAS : 118-74-1	0.0138	Carcinogenicity, Category 1B, H350; Specific target organ toxicity - repeated	-

EC：204-273-9 Index No.：602-065-00-6		exposure, Category 1, H372; Hazardous to the aquatic environment - short-term (acute) hazard, Category 1, H400; Hazardous to the aquatic environment - long-term (chronic) hazard, Category 1, H410	
Lindane CAS：58-89-9 EC：200-401-2 Index No.：602-043-00-6	0.0138	Acute Toxicity - Oral, Category 3, H301; Acute Toxicity - Dermal, Category 4, H312; Acute Toxicity - Inhalation, Category 4, H332; Reproductive Toxicity - effects on or via lactation, Additional, H362; Specific target organ toxicity - repeated exposure, Category 2, H373; Hazardous to the aquatic environment - short-term (acute) hazard, Category 1, H400; Hazardous to the aquatic environment - long-term (chronic) hazard, Category 1, H410	M=10
(1α,2β,3α,4β,5α,6β)-1,2,3,4,5,6-hexachlorocyclohexane CAS：319-85-7 EC：206-271-3 Index No.：-	0.0138	Acute Toxicity - Oral, Category 3, H301; Acute Toxicity - Dermal, Category 4, H312; Carcinogenicity, Category 2, H351; Hazardous to the aquatic environment - short-term (acute) hazard, Category 1, H400; Hazardous to the aquatic environment - long-term (chronic) hazard, Category 1, H410	-
δ-Hexachlorocyclohexane CAS：319-86-8 EC：206-272-9 Index No.：-	0.0138	Acute Toxicity - Oral, Category 3, H301; Acute Toxicity - Dermal, Category 4, H312; Carcinogenicity, Category 2, H351; Hazardous to the aquatic environment - short-term (acute) hazard, Category 1, H400; Hazardous to the aquatic environment - long-term (chronic) hazard, Category 1, H410	-
alpha-Endosulfan CAS：959-98-8 EC：625-034-9 Index No.：-	0.0138	Acute Toxicity - Oral, Category 3, H301; Hazardous to the aquatic environment - short-term (acute) hazard, Category 1, H400	-
β-Endosulfan CAS：33213-65-9 EC：625-635-6 Index No.：-	0.0138	Acute Toxicity - Oral, Category 3, H301; Acute Toxicity - Dermal, Category 2, H310; Acute Toxicity - Inhalation, Category 2, H330; Hazardous to the aquatic environment - short-term (acute) hazard, Category 1, H400; Hazardous to the aquatic environment - long-term (chronic) hazard, Category 1, H410	-
Aldrin CAS：309-00-2 EC：206-215-8 Index No.：602-048-00-3	0.0138	Acute Toxicity - Oral, Category 3, H301; Acute Toxicity - Dermal, Category 3, H311; Carcinogenicity, Category 2, H351; Specific target organ toxicity - repeated exposure, Category 1, H372; Hazardous to the aquatic environment - short-term (acute) hazard, Category 1, H400; Hazardous to the aquatic environment - long-term (chronic) hazard, Category 1, H410	-
Heptachlor epoxide CAS：1024-57-3 EC：213-831-0 Index No.：602-063-00-5	0.0138	Acute Toxicity - Oral, Category 3, H301; Carcinogenicity, Category 2, H351; Specific target organ toxicity - repeated exposure, Category 2, H373; Hazardous to the aquatic environment - short-term (acute) hazard, Category 1, H400; Hazardous to the aquatic environment -	-

		long-term (chronic) hazard, Category 1, H410	
Heptachlor endo-epoxide isomer CAS : 28044-83-9 EC : 634-785-1 Index No. : -	0.0138	Acute Toxicity - Oral, Category 3, H301; Carcinogenicity, Category 2, H351; Specific target organ toxicity - repeated exposure, Category 2, H373; Hazardous to the aquatic environment - short-term (acute) hazard, Category 1, H400; Hazardous to the aquatic environment - long-term (chronic) hazard, Category 1, H410	-
2,2,o,p'-tetrachlorovinylidenebisbenzene CAS : 3424-82-6 EC : 222-318-0 Index No. : -	0.0138	Acute Toxicity - Oral, Category 4, H302; Carcinogenicity, Category 2, H351; Hazardous to the aquatic environment - short-term (acute) hazard, Category 1, H400; Hazardous to the aquatic environment - long-term (chronic) hazard, Category 1, H410	-
trans-Chlordan CAS : 5103-74-2 EC : 225-826-0 Index No. : -	0.0138	Acute Toxicity - Oral, Category 4, H302; Carcinogenicity, Category 2, H351; Hazardous to the aquatic environment - short-term (acute) hazard, Category 1, H400	-
cis-Chlordane CAS : 5103-71-9 EC : 225-825-5 Index No. : -	0.0138	Acute Toxicity - Oral, Category 4, H302; Skin Corrosion/Irritation, Category 2, H315; Serious eye damage/irritation, Category 2, H319; Acute Toxicity - Inhalation, Category 4, H332; Specific target organ toxicity - single exposure; respiratory tract irritation, Category 3, H335; Hazardous to the aquatic environment - short-term (acute) hazard, Category 1, H400; Hazardous to the aquatic environment - long-term (chronic) hazard, Category 1, H410	-
trans-Nonachlor CAS : 39765-80-5 EC : - Index No. : -	0.0138	Acute Toxicity - Oral, Category 4, H302; Skin Corrosion/Irritation, Category 2, H315; Serious eye damage/irritation, Category 2, H319; Specific target organ toxicity - single exposure; respiratory tract irritation, Category 3, H335; Hazardous to the aquatic environment - short-term (acute) hazard, Category 1, H400; Hazardous to the aquatic environment - long-term (chronic) hazard, Category 1, H410	-
2,2-bis(p-chlorophenyl)-1,1-dichloroethylene CAS : 72-55-9 EC : 200-784-6 Index No. : -	0.0138	Acute Toxicity - Oral, Category 3, H301; Carcinogenicity, Category 2, H351; Specific target organ toxicity - repeated exposure, Category 1, H372; Hazardous to the aquatic environment - short-term (acute) hazard, Category 1, H400; Hazardous to the aquatic environment - long-term (chronic) hazard, Category 1, H410	-
Mitotane CAS : 53-19-0 EC : 200-166-6 Index No. : -	0.0138	Carcinogenicity, Category 2, H351	-
Dieldrin CAS : 60-57-1 EC : 200-484-5	0.0138	Acute Toxicity - Oral, Category 3, H301; Acute Toxicity - Dermal, Category 2, H310; Carcinogenicity, Category 2, H351;	-

Index No. : 602-049-00-9		Specific target organ toxicity - repeated exposure, Category 1, H372; Hazardous to the aquatic environment - short-term (acute) hazard, Category 1, H400; Hazardous to the aquatic environment - long-term (chronic) hazard, Category 1, H410	
Endrin CAS : 72-20-8 EC : 200-775-7 Index No. : 602-051-00-X	0.0138	Acute Toxicity - Oral, Category 2, H300; Acute Toxicity - Dermal, Category 3, H311; Hazardous to the aquatic environment - short-term (acute) hazard, Category 1, H400; Hazardous to the aquatic environment - long-term (chronic) hazard, Category 1, H410	-
o,p′ -DDT CAS : 789-02-6 EC : 212-332-5 Index No. : -	0.0138	Acute Toxicity - Oral, Category 3, H301; Carcinogenicity, Category 2, H351; Specific target organ toxicity - repeated exposure, Category 1, H372; Hazardous to the aquatic environment - short-term (acute) hazard, Category 1, H400; Hazardous to the aquatic environment - long-term (chronic) hazard, Category 1, H410	-
TDE CAS : 72-54-8 EC : 200-783-0 Index No. : -	0.0138	Acute Toxicity - Oral, Category 3, H301; Acute Toxicity - Dermal, Category 4, H312; Hazardous to the aquatic environment - short-term (acute) hazard, Category 1, H400; Hazardous to the aquatic environment - long-term (chronic) hazard, Category 1, H410	-
cis-Nonachlor CAS : 5103-73-1 EC : - Index No. : -	0.0138	Acute Toxicity - Oral, Category 4, H302; Hazardous to the aquatic environment - short-term (acute) hazard, Category 1, H400	-
Clofenotane CAS : 50-29-3 EC : 200-024-3 Index No. : 602-045-00-7	0.0138	Acute Toxicity - Oral, Category 3, H301; Carcinogenicity, Category 2, H351; Specific target organ toxicity - repeated exposure, Category 1, H372; Hazardous to the aquatic environment - short-term (acute) hazard, Category 1, H400; Hazardous to the aquatic environment - long-term (chronic) hazard, Category 1, H410	-
Dodecachloropentacyclo[5.2.1.02,6.03,9.05,8]decane CAS : 2385-85-5 EC : 219-196-6 Index No. : 602-077-00-1	0.0138	Acute Toxicity - Oral, Category 4, H302; Acute Toxicity - Dermal, Category 4, H312; Carcinogenicity, Category 2, H351; Reproductive toxicity, Category 2, H361; Reproductive Toxicity - effects on or via lactation, Additional, H362; Hazardous to the aquatic environment - short-term (acute) hazard, Category 1, H400; Hazardous to the aquatic environment - long-term (chronic) hazard, Category 1, H410	-

4 First-aid measures

4.1 Description of first aid measures

General advice	Immediate medical attention is required. Show this safety data sheet (SDS) to the doctor in attendance.

Eye contact	First rinse with plenty of water for several minutes (remove contact lenses if easily possible), then take to a doctor.
Skin contact	Remove contaminated clothes. Rinse and then wash skin with water and soap.
Ingestion	Rinse mouth. Refer for medical attention.
Inhalation	Fresh air, rest. Refer for medical attention.
Protecting of first-aiders	Ensure that medical personnel are aware of the substance involved. Take precautions to protect themselves and prevent spread of contamination.

4.2 Most important symptoms/effects, acute and delayed

1	Substance accumulation, in the human body, may occur and may cause some concern following repeated or long-term occupational exposure.

4.3 Indication of any immediate medical attention and special treatment needed

1	Treat symptomatically.
2	Symptoms may be delayed.

5 Fire-fighting measures

5.1 Extinguishing media

Suitable extinguishing media	Small fire: dry chemical, CO_2 or alcohol-resistant foam; Large fire: alcohol-resistant foam; Fire involving tanks, rail tank cars or highway tanks: Fight fire from maximum distance or use unmanned master stream devices or monitor nozzles. Cool containers with flooding quantities of water until well after fire is out.
Unsuitable extinguishing media	Use of water spray when fighting fire may be inefficient.

5.2 Specific hazards arising from the substance or mixture

1	Will form explosive mixtures with air.
2	Fire exposed containers may vent contents through pressure relief valves thereby increasing fire intensity and/ or vapour concentration.
3	Vapours may travel to source of ignition and flash back.
4	Liquid and vapour are flammable.
5	Development of hazardous combustion gases or vapor possible in the event of fire.
6	May expansion or decompose explosively when heated or involved in fire.

5.3 Advice for firefighters

1	As in any fire, wear self-contained breathing apparatus (MSHA/NIOSH approved or equivalent) and full protective gear.
2	Fight fire from a safe distance, with adequate cover.
3	Prevent fire extinguishing water from contaminating surface water or the ground water system.

6 Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

1	Avoid breathing vapours and contacting with skin and eye.
2	Beware of vapours accumulating to form explosive concentrations.
3	Vapours can accumulate in low areas.
4	Emergency personnel wear positive pressure self-contained breathing apparatus. Wear protective and anti-static clothing. Wear chemical impermeable gloves.
5	Use personal protective equipment,do not breathe gas/mist/vapour/spray.

6	Ensure adequate ventilation. Remove all sources of ignition. Take precautionary measures against static discharges.
7	Evacuate personnel to safe areas. Keep people away from and upwind of spill/leak.

6.2 Environmental precautions

1	Prevent further leakage or spillage if safe to do so.
2	Discharge into the environment must be avoided.

6.3 Methods and materials for containment and cleaning up

1	It is recommended that emergency personnel wear positive pressure self-contained breathing apparatus and wear anti-static clothing.
2	In case of small amount of spillage, use clean non sparking tools to collect absorption materials.
3	In case of large amount of spillage, construct cofferdam or dig a hole to collect the spillage. Use foam cover to reduce evaporation. Water spray mist can reduce evaporation, but can not reduce the flammability of the leakage in the restricted space.
4	Collect absorbent material using a clean, non-sparking tool.
5	Cover with anti-solvent foam to reduce evaporation.
6	Cover with DRY earth, DRY sand or other non-combustible material followed with plastic sheet to minimize spreading or contact with rain.
7	Water spray reduces evaporation but does not reduce the flammability of spills in confined spaces.
8	Cut off the source of the leak as much as possible.
9	Keep leaks in a ventilated place.
10	Absorb spilled material in dry sand or inert absorbent. In case of large amount of spillage, contain a spill by bunding.
11	Remove all sources of ignition. Use spark-proof tools and explosion-proof equipment.
12	Contain spillage, and then collect with an electrically protected vacuum cleaner or by wet-brushing and place in container.
13	Remove all sources of ignition. Use spark-proof tools and explosion-proof equipment.

6.4 Reference to other sections

1	Personal Protective Equipment advice is contained in Section 8 of the SDS.
2	Disposal considerations advice is contained in Section 13 of the SDS.

7 Handling and storage

7.1 Precautions for safe handling

◆ Protective measures

1	Handling is performed in a well ventilated place.
2	Wear suitable protective equipment.
3	Avoid contact with skin and eyes.

◆ Measures to prevent fire

1	Use only non-sparking tools.
2	To prevent fire caused by electrostatic discharge steam, equipment on all metal parts should be grounded.
3	Use explosion proof equipment.
4	Keep away from heat/sparks/open flames/ hot surfaces.

◆ Measures to prevent aerosol and dust generation

1	Not applicable.

◆ Advice on general occupational hygiene

1	Wash hands and face after using the substances.
2	Replace the contaminated clothing immediately.

7.2 Conditions for safe storage, including any incompatibilities

1	Keep containers tightly closed.
2	Keep containers in a dry, cool and well-ventilated place.
3	Keep away from heat/sparks/open flames/hot surfaces.
4	Store away from incompatible materials and foodstuff containers.

7.3 Specific end use(s)

1	In addition to use mentioned in the Section 1.2, unforeseen other specific end uses.

8 Exposure controls/personal protection

8.1 Control parameters

◆Occupational exposure limit values

Component	Country/Region	Limit value - Eight hours		Limit value - Short term	
		ppm	mg/m³	ppm	mg/m³
N-hexane	Japan - JSOH(2024–2025)	40	140	-	-
	Permissible exposure standards for workers in the workplace	50	176	75	220
	European Union	20	72	-	-
	France	20	72	-	-
	Germany (AGS)	50	180	400	1440
	Germany (DFG)	50	180	400	1440
Acetone	Japan - JSOH(2024–2025)	200	475	-	-
	Permissible exposure standards for workers in the workplace	200	475	250	593.75
	European Union	500	1210	-	-
	France	500	1210	1000	2420
	Germany (AGS)	500	1200	1000	2400
	Germany (DFG)	500	1200	1000	2400
(1α,2α,3β,4α,5β,6β)-1,2,3,4,5,6-hexachlorocyclohexane	Germany (DFG)	-	0.5	-	4
	Austria	-	0.5(inhalable aerosol)	-	-
	Denmark	-	0.5	-	1
	Switzerland	-	1(inhalable	-	-

			aerosol)		
Hexachlorobenzene	Belgium	-	0.002	-	-
	Denmark	-	0.025	-	0.05
	Finland	-	0.002	-	-
	Latvia	-	0.9	-	-
	Netherlands	-	0.006	-	-
	Poland	-	0.003	-	-
Lindane	Permissible exposure standards for workers in the workplace	-	-	-	-
	France	-	0.5	-	-
	Germany (DFG)	-	0.1	-	0.8
	Austria	-	0.5(inhalable aerosol)	-	5(inhalable aerosol)
	Belgium	-	0.5	-	-
	Denmark	-	0.5	-	1
(1α,2β,3α,4β,5α,6β)-1,2,3,4,5,6-hexachlorocyclohexane	Germany (DFG)	-	0.1	-	0.8
	Denmark	-	0.5	-	1
	Switzerland	-	0.2(inhalable aerosol)	-	-
Aldrin	Permissible exposure standards for workers in the workplace	-	-	-	-
	France	-	0.25	-	-
	Germany (AGS)	-	0.25	-	2
	Austria	-	0.25(inhalable aerosol)	-	2.5(inhalable aerosol)
	Belgium	0.003	0.05	-	-
	Denmark	-	0.25	-	0.5
Heptachlor epoxide	Belgium	-	0.05	-	-
	Ireland	-	0.05	-	-
	Spain	-	0.05	-	-
	Canada - Ontario	-	0.05	-	-
	Canada - Québec	-	0.05	-	-
	South Korea	-	0.05	-	-
Dieldrin	Permissible exposure standards for workers in the workplace	-	-	-	-
	France	-	0.25	-	-
	Germany (AGS)	-	0.25	-	2

	Austria	-	0.25(inhalable aerosol)	-	0.5(inhalable aerosol)
	Belgium	-	0.1	-	-
	Denmark	-	0.25	-	0.5
Endrin	Permissible exposure standards for workers in the workplace	-	-	-	-
	France	-	0.1	-	-
	Germany (AGS)	-	0.05	-	0.4
	Germany (DFG)	-	0.05	-	0.4
	Austria	-	0.1(inhalable aerosol)	-	1(inhalable aerosol)
	Belgium	-	0.1	-	-
Clofenotane	France	-	1	-	-
	Austria	-	1(inhalable aerosol)	-	10(inhalable aerosol)
	Belgium	-	1	-	-
	Denmark	-	1	-	2
	Finland	-	1	-	3
	Hungary	-	1	-	1

◆ Biological limit values

Component	Standard	Biological monitoring index	Biological limits value	Sampling time	Remark
N-hexane	USA -ACGIH	2,5-Hexanedione, without hydrolysis(Urine)	0.5mg/L	End of shift	
Acetone	USA -ACGIH	Acetone(Urine)	25mg/L	End of shift	
Clofenotane	USA -ACGIH	Acetylcholinesterase activity(Hemoglobin adducts)	70%	End of shift	
		Butyrylcholinesterase activity(Serum or Plasma)	60%	End of shift	

◆ Monitoring methods

1	EN 14042 Workplace atmospheres. Guide for the application and use of procedures for the assessment of exposure to chemical and biological agents.
2	GBZ/T 300 and GBZ/T 160 series standard Determination of toxic substances in workplace air.

◆ Derived No effect level (DNEL)

Component	Route of exposure	DNEL for Workers			
		Acute effects (local)	Acute effects (systemic)	Chronic effects (local)	Chronic effects (systemic)
N-hexane	Inhalation	No data available	No data available	No data available	75 mg/m3
	Oral	No data available	No data available	No data available	No data available
	Dermal	No data available	No data available	No data available	No data available
Acetone	Inhalation	No data available	No data available	No data available	1210 mg/m3
	Oral	No data available	No data available	No data available	No data available
	Dermal	No data available	No data available	No data available	No data available
(1α,2α,3β,4α,5β,6β)-1,2,3,4,5,6-hexachlorocyclohexane	Inhalation	No data available	No data available	No data available	No data available
	Oral	No data available	No data available	No data available	No data available
	Dermal	No data available	No data available	No data available	No data available
Hexachlorobenzene	Inhalation	No data available	No data available	No data available	No data available
	Oral	No data available	No data available	No data available	No data available
	Dermal	No data available	No data available	No data available	No data available
Lindane	Inhalation	No data available	No data available	No data available	No data available
	Oral	No data available	No data available	No data available	No data available
	Dermal	No data available	No data available	No data available	No data available
(1α,2β,3α,4β,5α,6β)-1,2,3,4,5,6-hexachlorocyclohexane	Inhalation	No data available	No data available	No data available	No data available
	Oral	No data available	No data available	No data available	No data available
	Dermal	No data available	No data available	No data available	No data available
δ-Hexachlorocyclohexane	Inhalation	No data available	No data available	No data available	No data available
	Oral	No data available	No data available	No data available	No data available
	Dermal	No data available	No data available	No data available	No data available
alpha-Endosulfan	Inhalation	No data available	No data available	No data available	No data available
	Oral	No data available	No data available	No data available	No data available
	Dermal	No data available	No data available	No data available	No data available
β-Endosulfan	Inhalation	No data available	No data available	No data available	No data available
	Oral	No data available	No data available	No data available	No data available
	Dermal	No data available	No data available	No data available	No data available
Aldrin	Inhalation	No data available	No data available	No data available	No data available
	Oral	No data available	No data available	No data available	No data available
	Dermal	No data available	No data available	No data available	No data available
Heptachlor epoxide	Inhalation	No data available	No data available	No data available	No data available
	Oral	No data available	No data available	No data available	No data available
	Dermal	No data available	No data available	No data available	No data available
Heptachlor endo-epoxide isomer	Inhalation	No data available	No data available	No data available	No data available
	Oral	No data available	No data available	No data available	No data available

	Dermal	No data available	No data available	No data available	No data available
2,2,o,p'-tetrachlorovinylidenebisbenzene	Inhalation	No data available	No data available	No data available	No data available
	Oral	No data available	No data available	No data available	No data available
	Dermal	No data available	No data available	No data available	No data available
trans-Chlordan	Inhalation	No data available	No data available	No data available	No data available
	Oral	No data available	No data available	No data available	No data available
	Dermal	No data available	No data available	No data available	No data available
cis-Chlordane	Inhalation	No data available	No data available	No data available	No data available
	Oral	No data available	No data available	No data available	No data available
	Dermal	No data available	No data available	No data available	No data available
trans-Nonachlor	Inhalation	No data available	No data available	No data available	No data available
	Oral	No data available	No data available	No data available	No data available
	Dermal	No data available	No data available	No data available	No data available
2,2-bis(p-chlorophenyl)-1,1-dichloroethylene	Inhalation	No data available	No data available	No data available	No data available
	Oral	No data available	No data available	No data available	No data available
	Dermal	No data available	No data available	No data available	No data available
Mitotane	Inhalation	No data available	No data available	No data available	No data available
	Oral	No data available	No data available	No data available	No data available
	Dermal	No data available	No data available	No data available	No data available
Dieldrin	Inhalation	No data available	No data available	No data available	No data available
	Oral	No data available	No data available	No data available	No data available
	Dermal	No data available	No data available	No data available	No data available
Endrin	Inhalation	No data available	No data available	No data available	No data available
	Oral	No data available	No data available	No data available	No data available
	Dermal	No data available	No data available	No data available	No data available
o,p′-DDT	Inhalation	No data available	No data available	No data available	No data available
	Oral	No data available	No data available	No data available	No data available
	Dermal	No data available	No data available	No data available	No data available
TDE	Inhalation	No data available	No data available	No data available	No data available
	Oral	No data available	No data available	No data available	No data available
	Dermal	No data available	No data available	No data available	No data available
cis-Nonachlor	Inhalation	No data available	No data available	No data available	No data available
	Oral	No data available	No data available	No data available	No data available
	Dermal	No data available	No data available	No data available	No data available
Clofenotane	Inhalation	No data available	No data available	No data available	No data available
	Oral	No data available	No data available	No data available	No data available
	Dermal	No data available	No data available	No data available	No data available

Dodecachloropentacyclo[5.2.1.02,6.03,9.05,8]decane	Inhalation	No data available	No data available	No data available	No data available
	Oral	No data available	No data available	No data available	No data available
	Dermal	No data available	No data available	No data available	No data available

◆ Predicted No Effect Concentration (PNEC)

Component	A	B	C	D	E	F	G	H
N-hexane	No data available	No data available	No data available	No data available	No data available	No hazard identified	No data available	No potential for bioaccumulation
Acetone	10.6 mg/L	1.06 mg/L	100 mg/L	30.4 mg/kg sediment dw	3.04 mg/kg sediment dw	No hazard identified	29.5 mg/kg soil dw	No potential for bioaccumulation

Note 1:

A: Freshwater; B: Seawater; C: Sewage treatment plant; D: Sediment (freshwater); E: Sediment (seawater); F: Air; G: Soil; H: Secondary poisoning(Hazard for Predators).

Note 2:

The PNEC values of the remaining components not shown in the product are not available yet.

8.2 Exposure controls

8.2.1 Engineering controls

1	Ensure adequate ventilation, especially in confined areas.
2	Ensure that eyewash stations and safety showers are close to the workstation location.
3	Use explosion-proof electrical/ventilating/lighting/equipment.
4	Set up emergency exit and necessary risk-elimination area.

8.2.2 Personal protection equipment

General requirement	
Eye protection	Must wear appropriate safety goggles.
Hand protection	Must wear anti static chemical protective gloves.
Respiratory protection	Must wear appropriate personal respiratory protective equipment.
Skin and body protection	Must wear anti static chemical protective clothing and anti static shoes.

8.2.3 Environmental exposure controls

Environmental exposure controls	No information available

9 Physical and chemical properties

9.1 Information on basic physical and chemical properties

Physical state	bright yellow to pale yellow transparent liquid
Colour	bright yellow to pale yellow transparent liquid
Odor	No information available
Odor threshold	No information available
pH	No information available
Melting point/freezing point(°C)	-95 (Acetone)
Initial boiling point and boiling range(°C)	56 (Acetone)
Flash point(Closed cup,°C)	-18 (Acetone)
Evaporation rate	No information available
Flammability	No information available
Upper/lower explosive limits[%(v/v)]	Upper limit : 13 (Acetone); Lower limit : 2.2 (Acetone)
Vapor pressure	24kPa (20°C,Acetone)
Vapor density(Air = 1)	2.0 (Acetone)
Relative density(Water=1)	0.8 (Acetone)
Solubility	Miscible with water (Acetone)
n-octanol/water partition coefficient	-0.24 (Acetone)
Auto-ignition temperature(°C)	465 (Acetone)
Decomposition temperature(°C)	No information available
Kinematic viscosity	No information available
Explosive properties	No information available
Oxidizing properties	No information available
Particle characteristics	Not applicable

9.2 Other information

9.2.1 Information with regard to physical hazard classes

Information with regard to physical hazard classes	No information available

9.2.2 Other safety characteristics

Other safety characteristics	No information available

10 Stability and reactivity

Stability and reactivity

10.1 Reactivity	Contact with incompatible substances can cause decomposition or other chemical reactions.
10.2 Chemical stability	Stable under proper operation and storage conditions.
10.3 Possibility of hazardous reactions	In contact with an open flame may cause a fire or explosion. In contact with oxidants may cause a fire or an explosion.
10.4 Conditions to avoid	Incompatible materials, heat, flame and spark.
10.5 Incompatible materials	Oxidantss and halogen. Oxidants, chloroform and bromoform
10.6 Hazardous decomposition products	Under normal conditions of storage and use, hazardous decomposition products should not be produced.

11 Toxicological information

11.1 Information on hazard classes as defined in Regulation (EC) No 1272/2008 with amendment 2023/707

23 Mix organochlorine in n-hexane/acetone	
Skin corrosion/irritation	Causes skin irritation(Category 2)
Serious eye damage/irritation	Causes serious eye irritation(Category 2)
Skin sensitization	Based on available data, the classification criteria are not met
Respiratory sensitization	Based on available data, the classification criteria are not met
Reproductive toxicity	Suspected of damaging fertility and the unborn child(Category 2)
STOT-single exposure	May cause drowsiness or dizziness(Category 3)
STOT-repeated exposure	Causes damage to organs through prolonged or repeated exposure(oral, nervous system)(Category 1)
Aspiration hazard	May be fatal if swallowed and enters airways(Category 1)
Germ cell mutagenicity	Based on available data, the classification criteria are not met

Acute toxicity

Component	LD_{50}(oral)	LD_{50}(dermal)	LC_{50}(inhalation,4h)
(1α,2α,3β,4α,5β,6β)-1,2,3,4,5,6-hexachlorocyclohexane	177mg/kg(Rat)	No information available	No information available
Endrin	3mg/kg(Rat)	60mg/kg(Rabbit)	No information available
2,2,o,p'-tetrachlorovinylidenebisbenzene	880mg/kg(Rat)	No information available	No information available
β-Endosulfan	240mg/kg(Rat)	No information available	No information available
Dieldrin	38.3mg/kg(Rat)	250mg/kg(Rabbit)	0.013mg/L(Rat)
Acetone	5800mg/kg(Rat)	> 15800mg/kg(Rabbit)	76mg/L(Rat)
N-hexane	25000mg/kg(Rat)	No information available	169.188mg/L(Rat)
trans-Chlordan	275mg/kg(Mouse)	No information available	No information available
TDE	113mg/kg(Rat)	1200mg/kg(Rabbit)	No information available
Hexachlorobenzene	10000mg/kg(Rat)	10000mg/kg(Rat)	No information available
Clofenotane	113mg/kg(Rat)	300mg/kg(Rabbit)	No information available
Aldrin	39mg/kg(Rat)	15mg/kg(Rabbit)	No information available
(1α,2β,3α,4β,5α,6β)-1,2,3,4,5,6-hexachlorocyclohexane	6000mg/kg(Rat)	No information available	No information available
Heptachlor epoxide	15mg/kg(Rat)	No information available	No information available
Lindane	88mg/kg(Rat)	50mg/kg(Rabbit)	No information available
cis-Chlordane	500mg/kg(Rat)	No information available	No information available
Dodecachloropentacyclo[5.2.1.02,6.03,9.05,8]decane	235mg/kg(Rat)	800mg/kg(Rabbit)	No information available
Mitotane	> 5000mg/kg(Rat)	No information available	No information available
trans-Nonachlor	500mg/kg(Rat)	No information available	No information available
alpha-Endosulfan	76mg/kg(Rat)	No information available	No information available
δ-Hexachlorocyclohexane	1000mg/kg(Rat)	No information available	No information available

2,2-bis(p-chlorophenyl)-1,1-dichloroethylene	880mg/kg(Rat)	No information available	No information available

Carcinogenicity

Component	List of carcinogens by the IARC Monographs	Report on Carcinogens by NTP
N-hexane	Not Listed	Not Listed
Acetone	Not Listed	Not Listed
(1α,2α,3β,4α,5β,6β)-1,2,3,4,5,6-hexachlorocyclohexane	Not Listed	Category R
Hexachlorobenzene	Category 2B	Category R
Lindane	Category 1	Category R
(1α,2β,3α,4β,5α,6β)-1,2,3,4,5,6-hexachlorocyclohexane	Not Listed	Category R
δ-Hexachlorocyclohexane	Not Listed	Category R
alpha-Endosulfan	Not Listed	Not Listed
β-Endosulfan	Not Listed	Not Listed
Aldrin	Category 2A	Not Listed
Heptachlor epoxide	Not Listed	Not Listed
Heptachlor endo-epoxide isomer	Not Listed	Not Listed
2,2,o,p'-tetrachlorovinylidenebisbenzene	Not Listed	Not Listed
trans-Chlordan	Not Listed	Not Listed
cis-Chlordane	Not Listed	Not Listed
trans-Nonachlor	Not Listed	Not Listed
2,2-bis(p-chlorophenyl)-1,1-dichloroethylene	Not Listed	Not Listed
Mitotane	Not Listed	Not Listed
Dieldrin	Category 2A(Remark 1)	Not Listed
Endrin	Category 3	Not Listed
o,p′-DDT	Not Listed	Not Listed
TDE	Not Listed	Not Listed
cis-Nonachlor	Not Listed	Not Listed
Clofenotane	Category 2A	Category R
Dodecachloropentacyclo[5.2.1.02,6.03,9.05,8]decane	Category 2B	Category R

Remark 1: see aldrin metabolized to dieldrin

11.2 Information on other hazards

11.2.1 Endocrine disrupting properties

Component	Endocrine disrupting properties
N-hexane	No information available
Acetone	No information available
(1α,2α,3β,4α,5β,6β)-1,2,3,4,5,6-hexachlorocyclohexane	No information available
Hexachlorobenzene	No information available
Lindane	No information available
(1α,2β,3α,4β,5α,6β)-1,2,3,4,5,6-hexachlorocyclohexane	No information available
δ-Hexachlorocyclohexane	No information available
alpha-Endosulfan	No information available
β-Endosulfan	No information available
Aldrin	No information available
Heptachlor epoxide	No information available
Heptachlor endo-epoxide isomer	No information available
2,2,o,p'-tetrachlorovinylidenebisbenzene	No information available
trans-Chlordan	No information available
cis-Chlordane	No information available
trans-Nonachlor	No information available
2,2-bis(p-chlorophenyl)-1,1-dichloroethylene	No information available
Mitotane	No information available
Dieldrin	No information available
Endrin	No information available
o,p′-DDT	No information available
TDE	No information available
cis-Nonachlor	No information available
Clofenotane	No information available
Dodecachloropentacyclo[5.2.1.02,6.03,9.05,8]decane	No information available

11.2.2 Other Information

Other Information	See Section 11.1

12 Ecological information

12.1 Toxicity

Acute aquatic toxicity

Component	Fish	Crustaceans	Algae or other aquatic plants
Endrin	LC_{50} : 0.000505mg/L (96h)(Fish)	EC_{50} : 0.02mg/L (48h)(Crustaceans)	No information available
(1α,2α,3β,4α,5β,6β)-1,2,3,4,5,6-hexachlorocyclohexane	LC_{50} : 1.5mg/L (96h)(Fish)	EC_{50} : 0.9mg/L (48h)(Crustaceans)	No information available
Heptachlor epoxide	LC_{50} : 0.0126mg/L (96h)(Fish)	No information available	No information available
Lindane	LC_{50} : 0.0714mg/L (96h)(Fish)	EC_{50} : 0.58mg/L (48h)(Crustaceans)	ErC_{50} : 1.62mg/L (96h)(Algae)
Acetone	LC_{50} : 5540mg/L (96h)(Fish)	EC_{50} : 18500mg/L (48h)(Crustaceans)	ErC_{50} : 7200mg/L (96h)(Algae)
Dieldrin	LC_{50} : 0.008mg/L (96h)(Fish)	EC_{50} : 0.19mg/L (48h)(Crustaceans)	No information available
N-hexane	LC_{50} : 57.8mg/L (96h)(Fish)	No information available	No information available
Dodecachloropentacyclo[5.2.1.02,6.03,9.05,8]decane	LC_{50} :124mg/L (96h)(Fish)	EC_{50} : 1.58mg/L (48h)(Crustaceans)	No information available
TDE	LC_{50} : 0.056mg/L (96h)(Fish)	EC_{50} : 0.0052mg/L (48h)(Crustaceans)	No information available
Hexachlorobenzene	LC_{50} : 7.6mg/L (96h)(Fish)	No information available	No information available
δ-Hexachlorocyclohexane	LC_{50} : 1.21mg/L (96h)(Fish)	No information available	No information available
Clofenotane	LC_{50} : 0.008mg/L (96h)(Fish)	EC_{50} : 0.0011mg/L (48h)(Crustaceans)	No information available
Aldrin	LC_{50} : 0.012mg/L (96h)(Fish)	EC_{50} : 0.02mg/L (48h)(Crustaceans)	No information available
2,2-bis(p-chlorophenyl)-1,1-dichloroethylene	LC_{50} : 0.096mg/L (96h)(Fish)	EC_{50} : 0.02mg/L (48h)(Crustaceans)	No information available
(1α,2β,3α,4β,5α,6β)-1,2,3,4,5,6-hexachlorocyclohexane	LC_{50} : 1.52mg/L (96h)(Fish)	No information available	No information available

Chronic aquatic toxicity

Chronic aquatic toxicity	No information available

12.2 Persistence and degradability

Component	Persistence (water/soil)	Persistence (air)
N-hexane	Low	Low
(1α,2α,3β,4α,5β,6β)-1,2,3,4,5,6-hexachlorocyclohexane	High(Half-life = 270 days)	Low(Half-life = 3.85 days)
Hexachlorobenzene	High(Half-life = 4178 days)	High(Half-life = 1563.75 days)
Lindane	High(Half-life = 240.21 days)	Low(Half-life = 3.85 days)
(1α,2β,3α,4β,5α,6β)-1,2,3,4,5,6-hexachlorocyclohexane	High(Half-life = 248 days)	Low(Half-life = 3.85 days)

δ-Hexachlorocyclohexane	High(Half-life = 200 days)	Low(Half-life = 3.85 days)
Aldrin	High(Half-life = 1183.33 days)	Low(Half-life = 0.38 days)
2,2,o,p'-tetrachlorovinylidenebisbenzene	High	High
2,2-bis(p-chlorophenyl)-1,1-dichloroethylene	High(Half-life = 11250 days)	Low(Half-life = 1.7 days)
Dieldrin	High(Half-life = 2160 days)	Low(Half-life = 1.69 days)
Endrin	High	High
TDE	High(Half-life = 11250 days)	Low(Half-life = 5.54 days)
Clofenotane	High(Half-life = 11250 days)	Low(Half-life = 7.38 days)
Dodecachloropentacyclo[5.2.1.02,6.03,9.05,8]decane	High	High

12.3 Bioaccumulative potential

Component	Bioaccumulative potential	Comments
N-hexane	Medium	Log Kow=3.9
(1α,2α,3β,4α,5β,6β)-1,2,3,4,5,6-hexachlorocyclohexane	Medium	Log Kow=3.8
Hexachlorobenzene	High	BCF=575440
Lindane	Medium	BCF=1400
(1α,2β,3α,4β,5α,6β)-1,2,3,4,5,6-hexachlorocyclohexane	Medium	Log Kow=3.8
δ-Hexachlorocyclohexane	Medium	Log Kow=4.14
Aldrin	High	BCF=20000
2,2,o,p'-tetrachlorovinylidenebisbenzene	High	Log Kow=5.9956
2,2-bis(p-chlorophenyl)-1,1-dichloroethylene	High	Log Kow=6.51
Dieldrin	High	BCF=14500
Endrin	High	BCF=12600
TDE	High	Log Kow=6.02
Clofenotane	High	BCF=4020
Dodecachloropentacyclo[5.2.1.02,6.03,9.05,8]decane	Low	Log Kow=7.18

12.4 Mobility in soil

Component	log Koc	Remark
N-hexane	≥2.37 - ≤3.16	20 ℃， pH=7.0

(1α,2α,3β,4α,5β,6β)-1,2,3,4,5,6-hexachlorocyclohexane	3.529	
Hexachlorobenzene	3.529	
Lindane	3.529	
(1α,2β,3α,4β,5α,6β)-1,2,3,4,5,6-hexachlorocyclohexane	3.529	
δ-Hexachlorocyclohexane	3.529	
Aldrin	5.024	
2,2,o,p'-tetrachlorovinylidenebisbenzene	5.192	
2,2-bis(p-chlorophenyl)-1,1-dichloroethylene	5.183	
Dieldrin	4.025	
Endrin	4.025	
TDE	5.183	
Clofenotane	5.343	
Dodecachloropentacyclo[5.2.1.02,6.03,9.05,8]decane	5.675	

12.5 Results of PBT and vPvB assessment

Component	Results of PBT and vPvB assessment [according to (EC) No 1907/2006]
N-hexane	Not PBT/vPvB
Acetone	Not PBT/vPvB
(1α,2α,3β,4α,5β,6β)-1,2,3,4,5,6-hexachlorocyclohexane	Insufficient information, temporarily unable to evaluate
Hexachlorobenzene	Insufficient information, temporarily unable to evaluate
Lindane	Insufficient information, temporarily unable to evaluate
(1α,2β,3α,4β,5α,6β)-1,2,3,4,5,6-hexachlorocyclohexane	Insufficient information, temporarily unable to evaluate
δ-Hexachlorocyclohexane	Insufficient information, temporarily unable to evaluate
alpha-Endosulfan	Insufficient information, temporarily unable to evaluate
β-Endosulfan	Insufficient information, temporarily unable to evaluate
Aldrin	Insufficient information, temporarily unable to evaluate
Heptachlor epoxide	Insufficient information, temporarily unable to evaluate
Heptachlor endo-epoxide isomer	Insufficient information, temporarily unable to evaluate
2,2,o,p'-tetrachlorovinylidenebisbenzene	Insufficient information, temporarily unable to evaluate
trans-Chlordan	Insufficient information, temporarily unable to evaluate

cis-Chlordane	Insufficient information, temporarily unable to evaluate
trans-Nonachlor	Insufficient information, temporarily unable to evaluate
2,2-bis(p-chlorophenyl)-1,1-dichloroethylene	Insufficient information, temporarily unable to evaluate
Mitotane	Insufficient information, temporarily unable to evaluate
Dieldrin	Insufficient information, temporarily unable to evaluate
Endrin	Insufficient information, temporarily unable to evaluate
o,p′-DDT	Insufficient information, temporarily unable to evaluate
TDE	Insufficient information, temporarily unable to evaluate
cis-Nonachlor	Insufficient information, temporarily unable to evaluate
Clofenotane	Insufficient information, temporarily unable to evaluate
Dodecachloropentacyclo[5.2.1.02,6.03,9.05,8]decane	Insufficient information, temporarily unable to evaluate

12.6 Endocrine disrupting properties

Component	Endocrine disrupting properties
N-hexane	No information available
Acetone	No information available
(1α,2α,3β,4α,5β,6β)-1,2,3,4,5,6-hexachlorocyclohexane	No information available
Hexachlorobenzene	No information available
Lindane	No information available
(1α,2β,3α,4β,5α,6β)-1,2,3,4,5,6-hexachlorocyclohexane	No information available
δ-Hexachlorocyclohexane	No information available
alpha-Endosulfan	No information available
β-Endosulfan	No information available
Aldrin	No information available
Heptachlor epoxide	No information available
Heptachlor endo-epoxide isomer	No information available
2,2,o,p'-tetrachlorovinylidenebisbenzene	No information available
trans-Chlordan	No information available
cis-Chlordane	No information available
trans-Nonachlor	No information available
2,2-bis(p-chlorophenyl)-1,1-dichloroethylene	No information available
Mitotane	No information available
Dieldrin	No information available

Endrin	No information available
o,p′-DDT	No information available
TDE	No information available
cis-Nonachlor	No information available
Clofenotane	No information available
Dodecachloropentacyclo[5.2.1.02,6.03,9.05,8]decane	No information available

12.7 Other adverse effects

	No information available

13 Disposal considerations

13.1 Waste treatment methods

Waste chemicals	Before disposal should refer to the relevant national and local laws and regulation. Recommend the use of incineration disposal.
Contaminated packaging	Containers may still present chemical hazard when empty. Keep away from hot and ignition source of fire. Return to supplier for recycling if possible.
Disposal recommendations	Refer to section waste chemicals and contaminated packaging.

14 Transport information

Label and Mark

Transporting Label	

IMDG-CODE

14.1 UN number	1993
14.2 UN proper shipping name	FLAMMABLE LIQUID, N.O.S.
14.3 Transport hazard class	3
14.4 Packing group	Ⅱ
14.5 Environmental hazards (Yes or no)	Yes

IATA-DGR

14.1 UN number	1993
14.2 UN proper shipping name	FLAMMABLE LIQUID, N.O.S.
14.3 Transport hazard class	3
14.4 Packing group	Ⅱ
14.5 Environmental hazards (Yes or no)	Yes

UN-ADR

14.1 UN number	1993
14.2 UN proper shipping name	FLAMMABLE LIQUID, N.O.S.

14.3 Transport hazard class	3
14.4 Packing group	Ⅱ
14.5 Environmental hazards (Yes or no)	Yes

Special precautions for user

	Shipment of the goods vehicle exhaust pipe must be equipped with fire retardant devices, prohibit using mechanical equipment and tools of which easy to produce sparks. Transit should be anti-exposure, anti-rain, anti-high temperature. Transportation used tank (tank) cars should be grounded chain, tank can be installed to reduce the partition hole static electricity shocks. Strictly prohibited shipping or transportation with oxidants, acids, food and food additives etc. When bulk transport, Prohibit the use of cement or wooden boats. Transport vehicles should be equipped with the appropriate variety and quantity of fire equipment and emergency equipment leakage during transport. Before transport, should be preceded by checking whether container integrity, sealing. The transport unit must be placarded and marked in accordance with relevant transporting requirements.

Maritime transport in bulk according to IMO instruments

◆Transport in bulk according to Annex Ⅱ of MARPOL and the IBC code

	Not Available

◆Transport in bulk in accordance with MARPOL Annex V and the IMSBC Code

	Not Available

◆Transport in bulk in accordance with the IGC Code

	Not Available

15 Regulatory information

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

International chemical inventory

Component	A	B	C	D	E	F	G	H	I	J	K	L	M
N-hexane	√	√	√	√	√	√	√	√	√	√	√	√	√
Acetone	√	√	√	√	√	√	√	√	√	√	√	√	√
(1α,2α,3β,4α,5β,6β)-1,2,3,4,5,6-hexachlorocyclohexane	×	√	√	×	×	×	×	×	√	×	×	√	√
Hexachlorobenzene	√	√	√	√	×	√	×	√	√	√	√	√	√
Lindane	√	√	√	√	×	√	√	×	√	×	√	√	√
(1α,2β,3α,4β,5α,6β)-1,2,3,4,5,6-hexachlorocyclohexane	√	√	√	×	×	×	×	×	√	×	×	√	√
δ-Hexachlorocyclohexane	√	√	√	×	√	×	√	×	√	×	×	√	√
alpha-Endosulfan	×	×	×	×	×	×	×	×	√	×	×	√	√
β-Endosulfan	×	×	×	×	×	×	×	×	√	×	×	√	√
Aldrin	√	√	×	×	×	√	√	×	√	×	√	√	√
Heptachlor epoxide	×	√	×	×	×	×	×	×	×	×	×	√	√

Heptachlor endo-epoxide isomer	×	×	×	×	×	×	×	×	×	×	×	√	√
2,2,o,p'-tetrachlorovinylidenebisbenzene	√	√	×	×	√	×	×	√	×	×	×	√	√
trans-Chlordan	×	√	×	×	×	×	×	×	√	×	×	√	√
cis-Chlordane	×	√	×	×	×	×	×	×	√	×	×	√	√
trans-Nonachlor	×	×	×	×	×	×	×	×	×	×	×	√	×
2,2-bis(p-chlorophenyl)-1,1-dichloroethylene	√	√	×	×	√	√	×	×	×	×	×	√	√
Mitotane	×	√	×	√	√	×	×	×	×	×	×	√	√
Dieldrin	√	√	×	×	×	√	√	×	√	×	√	√	√
Endrin	√	√	×	×	×	√	√	×	√	×	√	√	√
o,p′-DDT	√	√	×	×	√	×	×	×	×	×	×	√	√
TDE	√	√	×	×	√	√	×	×	×	×	√	√	√
cis-Nonachlor	×	×	×	×	×	×	×	×	×	×	×	×	×
Clofenotane	√	√	√	×	×	√	√	×	√	×	√	√	√
Dodecachloropentacyclo[5.2.1.02,6.03,9.05,8]decane	√	√	×	×	×	×	×	×	√	×	√	√	√

【A】 China Inventory of Existing Chemical Substances(IECSC)
【B】 European Inventory of Existing Commercial Chemical Substances(EC inventory)
【C】 United States Toxic Substances Control Act Inventory(TSCA)
【D】 Canadian Domestic Substances List(DSL)
【E】 New Zealand Inventory of Chemicals(NZIoC)
【F】 Philippines Inventory of Chemicals and Chemical Substances(PICCS)
【G】 Korea Existing Chemicals Inventory(KECL)
【H】 Australian. Inventory of Industrial Chemical (AIICS)
【I】 Japan Inventory of Existing & New Chemical Substances(ENCS)
【J】 Thailand Existing Chemicals Inventory(TECI)
【K】 Mexico National Inventory of Chemical Substances (INSQ)
【L】 Russia Inventory of Existing Substances(DRAFT)
【M】 Inventory of Existing Chemical Substances in Taiwan, China (TCSI)

List of Chemical Substances under International Conventions

Component	A	B	C
N-hexane	×	×	×
Acetone	×	×	×
(1α,2α,3β,4α,5β,6β)-1,2,3,4,5,6-hexachlorocyclohexane	×	√	×
Hexachlorobenzene	×	√	√
Lindane	×	√	√
(1α,2β,3α,4β,5α,6β)-1,2,3,4,5,6-hexachlorocyclohexane	×	√	×
δ-Hexachlorocyclohexane	×	×	×
alpha-Endosulfan	×	√	×
β-Endosulfan	×	√	×

Aldrin	×	√	√
Heptachlor epoxide	×	×	×
Heptachlor endo-epoxide isomer	×	×	×
2,2,o,p'-tetrachlorovinylidenebisbenzene	×	×	×
trans-Chlordan	×	×	×
cis-Chlordane	×	×	×
trans-Nonachlor	×	×	×
2,2-bis(p-chlorophenyl)-1,1-dichloroethylene	×	×	×
Mitotane	×	×	×
Dieldrin	×	√	√
Endrin	×	√	×
o,p′-DDT	×	×	×
TDE	×	×	×
cis-Nonachlor	×	×	×
Clofenotane	×	√	√
Dodecachloropentacyclo[5.2.1.02,6.03,9.05,8]decane	×	√	×

【A】 The Montreal Protocol on Substances that Deplete the Ozone Layer
【B】 Stockholm Convention on Persistent Organic Pollutants (POPs)
【C】 Rotterdam Convention on the prior informed consent procedure for certain hazardous chemicals and pesticides in international trade

European chemical inventory

Component	A	B	C	D	E	F	G	H	I
N-hexane	×	×	×	√	√	√	×	×	×
Acetone	×	×	×	√	√	×	×	×	×
(1α,2α,3β,4α,5β,6β)-1,2,3,4,5,6-hexachlorocyclohexane	×	×	×	√	×	×	×	×	√
Hexachlorobenzene	×	×	√	√	×	×	√	×	√
Lindane	×	×	×	√	×	×	×	×	√
(1α,2β,3α,4β,5α,6β)-1,2,3,4,5,6-hexachlorocyclohexane	×	×	×	√	×	×	×	×	√
δ-Hexachlorocyclohexane	×	×	×	√	×	×	×	×	×
alpha-Endosulfan	×	×	×	×	×	×	×	×	√
β-Endosulfan	×	×	×	×	×	×	×	×	√
Aldrin	×	×	×	√	×	×	×	×	√
Heptachlor epoxide	×	×	×	√	×	×	√	×	×
Heptachlor endo-epoxide isomer	×	×	×	×	×	×	×	×	×

2,2,o,p'-tetrachlorovinylidenebisbenzene	×	×	×	√	×	×	×	×	×
trans-Chlordan	×	×	×	√	×	×	×	×	×
cis-Chlordane	×	×	×	√	×	×	×	×	×
trans-Nonachlor	×	×	×	×	×	×	×	×	×
2,2-bis(p-chlorophenyl)-1,1-dichloroethylene	×	×	×	√	×	×	×	×	×
Mitotane	×	×	×	√	×	×	×	×	×
Dieldrin	×	×	×	√	×	×	×	×	√
Endrin	×	×	×	√	×	×	×	×	√
o,p′-DDT	×	×	×	√	×	×	×	×	×
TDE	×	×	×	√	×	×	×	×	×
cis-Nonachlor	×	×	×	×	×	×	×	×	×
Clofenotane	×	×	×	√	×	×	×	×	√
Dodecachloropentacyclo[5.2.1.02,6.03,9.05,8]decane	×	×	×	√	×	×	×	×	√

[A] Candidate list of Substances of Very High Concern for authorization under EU REACH regulation
[B] Substances requiring authorisation under EU REACH regulation
[C] Substances restricted under EU REACH
[D] Pre-registered substances under EU REACH
[E] Registered substances under EU REACH
[F] Substance Evaluation – CoRAP under EU REACH
[G] List of priority substances under EU water policy （Directive 2455/2001/EC）
[H] Substances subject to POPs Regulation
[I] Substances proposed as POPs

Note:
"√" Indicates that the substance included in the regulations.
"×" No data or not included in the regulations.

German water hazard class(WGK)

Component	WGK	Remark
N-hexane	WGK 3	
Acetone	WGK 1	
Hexachlorobenzene	WGK 3	
Lindane	WGK 3	
Aldrin	WGK 3	
2,2-bis(p-chlorophenyl)-1,1-dichloroethylene	WGK 3	
Dieldrin	WGK 3	
Endrin	WGK 3	
TDE	WGK 3	
Clofenotane	WGK 3	

【WGK 1】 slightly hazardous to water
【WGK 2】 obviously hazardous to water

【WGK 3】 highly hazardous to water
【nwg】 non-hazardous to water
【awg】 hazardous to water in general

German technical instructions on air quality control(TA LUFT)

Component	TA LUFT	Remark
N-hexane	Chapter 5.2.5 Organic Substances, class I. The following values are in all not allowed to be exceeded in the exhaust gas:Mass flow:0,10 kg/hr or Mass conc.:20 mg/m³	
Acetone	Chapter 5.2.5 Organic Substances.The following values, specified as overall carbon, are in all not allowed to be exceeded in exhaust gas:Mass flow:0,50 kg/hr or Mass conc.:50 mg/m³ At old units with an annual mass flow till 1,5 Mg/a, specified as total carbon, the emissions in exhaust gas are not allowed to exceed 1,5 kg/h.	
(1α,2α,3β,4α,5β,6β)-1,2,3,4,5,6-hexachlorocyclohexane	Chapter 5.2.5 Organic Substances, class I. The following values are in all not allowed to be exceeded in the exhaust gas:Mass flow:0,10 kg/hr or Mass conc.:20 mg/m³	
Hexachlorobenzene	Chapter 5.2.7.1.1 Carcinogenic SubstancesThe substance must be assigned to the class (I, II or III) whose substances have the nearest potency. We can not accomplish this evaluation due to insufficiency of data.Carcinogenic substances not mentioned by name and for which no information on potency is available should be assigned to Class I as a precautionary measure.	
Lindane	Chapter 5.2.5 Organic Substances, class I. The following values are in all not allowed to be exceeded in the exhaust gas:Mass flow:0,10 kg/hr or Mass conc.:20 mg/m³	
(1α,2β,3α,4β,5α,6β)-1,2,3,4,5,6-hexachlorocyclohexane	Chapter 5.2.5 Organic Substances, class I. The following values are in all not allowed to be exceeded in the exhaust gas:Mass flow:0,10 kg/hr or Mass conc.:20 mg/m³	
δ-Hexachlorocyclohexane	Chapter 5.2.5 Organic Substances, class I. The following values are in all not allowed to be exceeded in the exhaust gas:Mass flow:0,10 kg/hr or Mass conc.:20 mg/m³	
Aldrin	Chapter 5.2.5 Organic Substances, class I. The following values are in all not allowed to be exceeded in the exhaust gas:Mass flow:0,10 kg/hr or Mass conc.:20 mg/m³	
Heptachlor epoxide	Chapter 5.2.5 Organic Substances, class I. The following values are in all not allowed to be exceeded in the exhaust gas:Mass flow:0,10 kg/hr or	

	Mass conc.:20 mg/m³	
2,2-bis(p-chlorophenyl)-1,1-dichloroethylene	Chapter 5.2.5 Organic Substances, class I. The following values are in all not allowed to be exceeded in the exhaust gas:Mass flow:0,10 kg/hr or Mass conc.:20 mg/m³	
Dieldrin	Chapter 5.2.5 Organic Substances, class I. The following values are in all not allowed to be exceeded in the exhaust gas:Mass flow:0,10 kg/hr or Mass conc.:20 mg/m³	
Endrin	Chapter 5.2.5 Organic Substances, class I. The following values are in all not allowed to be exceeded in the exhaust gas:Mass flow:0,10 kg/hr or Mass conc.:20 mg/m³	
TDE	Chapter 5.2.5 Organic Substances, class I. The following values are in all not allowed to be exceeded in the exhaust gas:Mass flow:0,10 kg/hr or Mass conc.:20 mg/m³	
Clofenotane	Chapter 5.2.5 Organic Substances, class I. The following values are in all not allowed to be exceeded in the exhaust gas:Mass flow:0,10 kg/hr or Mass conc.:20 mg/m³	
Dodecachloropentacyclo[5.2.1.02,6.03,9.05,8]decane	Chapter 5.2.5 Organic Substances, class I. The following values are in all not allowed to be exceeded in the exhaust gas:Mass flow:0,10 kg/hr or Mass conc.:20 mg/m³	

German technical rules for hazardous substances(TRGS)

Component	TRGS	Remark
N-hexane	TRGS 201|TRGS 400|TRGS 555|TRGS 600|TRGS 402|TRGS 401|TRGS 500|TRGS 509|TRGS 510|TRGS 800|TRGS 720|TRGS 721|TRGS 722|TRGS 723|TRGS 724	
Acetone	TRGS 201|TRGS 400|TRGS 555|TRGS 600|TRGS 402|TRGS 401|TRGS 500|TRGS 509|TRGS 510|TRGS 800|TRGS 720|TRGS 721|TRGS 722|TRGS 723|TRGS 724	
(1α,2α,3β,4α,5β,6β)-1,2,3,4,5,6-hexachlorocyclohexane	TRGS 201|TRGS 400|TRGS 555|TRGS 600|TRGS 401|TRGS 500|TRGS 509|TRGS 510	
Hexachlorobenzene	TRGS 201|TRGS 400|TRGS 555|TRGS 600|TRGS 401|TRGS 410|TRGS 500|TRGS 509|TRGS 510|TRGS 800|TRGS 560	
Lindane	TRGS 201|TRGS 400|TRGS 555|TRGS 600|TRGS 401|TRGS 500|TRGS 509|TRGS 510|TRGS 523	
(1α,2β,3α,4β,5α,6β)-1,2,3,4,5,6-hexachlorocyclohexane	TRGS 201|TRGS 400|TRGS 555|TRGS 600|TRGS 401|TRGS 500|TRGS 509|TRGS 510	

δ-Hexachlorocyclohexane	TRGS 201|TRGS 400|TRGS 555|TRGS 600|TRGS 401|TRGS 500|TRGS 509|TRGS 510	
Aldrin	TRGS 201|TRGS 400|TRGS 555|TRGS 600|TRGS 401|TRGS 500|TRGS 509|TRGS 510|TRGS 523	
Heptachlor epoxide	TRGS 201|TRGS 400|TRGS 555|TRGS 600|TRGS 401|TRGS 500|TRGS 509|TRGS 510	
2,2-bis(p-chlorophenyl)-1,1-dichloroethylene	TRGS 201|TRGS 400|TRGS 555|TRGS 600|TRGS 401|TRGS 500|TRGS 509|TRGS 510|TRGS 800	
Dieldrin	TRGS 201|TRGS 400|TRGS 555|TRGS 600|TRGS 401|TRGS 500|TRGS 509|TRGS 510|TRGS 523	
Endrin	TRGS 201|TRGS 400|TRGS 555|TRGS 600|TRGS 402|TRGS 401|TRGS 500|TRGS 509|TRGS 510|TRGS 523	
TDE	TRGS 201|TRGS 400|TRGS 555|TRGS 600|TRGS 401|TRGS 500|TRGS 509|TRGS 510	
Clofenotane	TRGS 201|TRGS 400|TRGS 555|TRGS 600|TRGS 401|TRGS 500|TRGS 509|TRGS 510|TRGS 800|TRGS 523	
Dodecachloropentacyclo[5.2.1.02,6.03,9.05,8]decane	TRGS 201|TRGS 400|TRGS 555|TRGS 600|TRGS 401|TRGS 500|TRGS 509|TRGS 510|TRGS 800	

15.2 Chemical safety assessment

	No Chemical Safety Assessment has been carried out for this substance/mixture by the supplier.

16 Other information

Information on revision

Creation Date	2026/01/08
Revision Date	-
Reason for revision	-

Reference

[1] IPCS: The International Chemical Safety Cards (ICSC), website: http://www.ilo.org/dyn/icsc/showcard.home.
[2] IARC, website: http://www.iarc.fr/.
[3] OECD: The Global Portal to Information on Chemical Substances, website: https://www.echemportal.org/echemportal/.
[4] CAMEO Chemicals, website: http://cameochemicals.noaa.gov/search/simple.
[5] NLM: ChemIDplus, website: http://chem.sis.nlm.nih.gov/chemidplus/chemidlite.jsp.
[6] EPA: Integrated Risk Information System, website: http://cfpub.epa.gov/iris/.
[7] U.S. Department of Transportation: ERG, website: http://www.phmsa.dot.gov/hazmat/library/erg.
[8] Germany GESTIS-database on hazard substance, website: http://gestis-en.itrust.de/.

Abbreviations and acronyms

CAS	Chemical Abstracts Service	UN	The United Nations
PC-STEL	Short term exposure limit	OECD	Organization for Economic Co-operation and Development

PC-TWA	Time Weighted Average	IMDG-CODE	International Maritime Dangerous Goods CODE
MAC	Maximum Allowable Concentration	IARC	International Agency for Research on Cancer
DNEL	Derived No Effect Level	ICAO	International Civil Aviation Organization
PNEC	Predicted No Effect Concentration	IATA	International Air Transportation Association
NOEC	No Observed Effect Concentration	ACGIH	American Conference of Governmental Industrial Hygienists
LC_{50}	Lethal Concentration 50%	NFPA	National Fire Protection Association
LD_{50}	Lethal Dose 50%	NTP	National Toxicology Program
EC_{50}	Effective Concentration 50%	PBT	Persistent, Bioaccumulative, Toxic
EC_X	Effective Concentration X%	vPvB	very Persistent, very Bioaccumulative
P_{OW}	Partition coefficient Octanol: Water	CMR	Carcinogens, mutagens or substances toxic to reproduction
BCF	Bioconcentration factor	RPE	Respiratory Protective Equipment
ED	Endocrine disruptor		

Disclaimer

This Safety Data Sheet (SDS) was prepared according to REACH Regulation The data included was derived from international authoritative database and provided by the enterprise. Other information was based on the present state of our knowledge. We try to ensure the correctness of all information. However, due to the diversity of information sources and the limitations of our knowledge, this document is only for user's reference. Users should make their independent judgment of suitability of this information for their particular purposes. We do not assume responsibility for loss, damage or expense arising out of or in any way connected with the handling, storage, use or disposal of the product.