Trade name: Therminol 72
Product no.: 5008649
Current version : 3.2.0, issued: 21.10.2021 **Replaced version:** 3.1.0, issued: 01.07.2021 **Region:** GB

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

1.1 Product identifier

Trade name

Therminol 72

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

Relevant identified uses of the substance or mixture
heat transfer fluids

Uses advised against
No data available.

1.3 Details of the supplier of the safety data sheet

Address
Krahn Chemie Deutschland GmbH
Grimm 10
20457 Hamburg
Deutschland

Telephone no. +49 40 320 92-0
Fax no. +49 40 320 92-322

Information provided by / telephone
+49 40 320 92-0

Advice on Safety Data Sheet
msds@krahn.eu

1.4 Emergency telephone number

For medical advice (in German and English):
+49 551 192 40 (Giftinformationszentrum Nord)
In case of transport incidents and other emergencies:
+44 (0)1235 239 670 (NCEC, National Chemical Emergency Centre)

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Classification in accordance with Regulation (EC) No 1272/2008 (CLP)
Acute Tox. 4; H332
Aquatic Acute 1; H400
Aquatic Chronic 1; H410
Asp. Tox. 1; H304
Skin Sens. 1B; H317
STOT SE 3; H335

Classification information
Classification and labelling are based on toxicological studies performed on the product (mixture).
This product is assessed and classified using the methods and criteria below referred to in Article 9 of Regulation (EC) n° 1272/2008:
Physical hazards: determined through assessment data based on the methods or standards referred to in part 2 of Annex I to CLP
Health hazards and environmental hazards: determined through toxicological and ecotoxicological assessment data based on the methods or standards referred to in Part 3, 4 and 5 of Annex I to CLP.
Classification and labelling of the product (section 2) and ingredients (section 3) according to the original data supplied by the manufacturer.

2.2 Label elements

Labelling according to Regulation (EC) No 1272/2008 (CLP Regulation)

Hazard pictograms


GHS07


GHS08


GHS09

Signal word
Danger

Hazardous component(s) to be indicated on label:
Reaction mass of m-terphenyl and o-terphenyl
biphenyl

Hazard statement(s)
H304 May be fatal if swallowed and enters airways.

H317	May cause an allergic skin reaction.
H332	Harmful if inhaled.
H335	May cause respiratory irritation.
H410	Very toxic to aquatic life with long lasting effects.

Precautionary statement(s)

P261	Avoid breathing dust/fume/gas/mist/vapours/spray.
P273	Avoid release to the environment.
P280	Wear protective gloves.
P301+P310	IF SWALLOWED: Immediately call a POISON CENTER/doctor.
P331	Do NOT induce vomiting.
P391	Collect spillage.

2.3 Other hazards

Contact with molten material may cause thermal burns.

PBT assessment
One or more components of this product are classified as PBT.

vPvB assessment
One or more components of this product are classified as vPvB.

SECTION 3: Composition/information on ingredients

3.1 Substances

Not applicable. The product is not a substance.

3.2 Mixtures

Hazardous ingredients

No	Substance name		Additional information	
	CAS / EC / Index / REACH no	Classification (EC) 1272/2008 (CLP)	Concentration	%
1	**Diphenyl ether**			
	101-84-8 202-981-2 - 01-2119472545-33	Eye Irrit. 2; H319 Aquatic Acute 1; H400 Aquatic Chronic 3; H412	>= 30.00 - < 50.00	wt%
2	**Reaction mass of m-terphenyl and o-terphenyl**			
	- 904-797-4 - 01-2120770947-37	Aquatic Acute 1; H400 Aquatic Chronic 1; H410 Skin Sens. 1B; H317	>= 30.00 - < 50.00	wt%
3	**biphenyl**			
	92-52-4 202-163-5 601-042-00-8 01-2119480408-33	Aquatic Acute 1; H400 Aquatic Chronic 1; H410 Eye Irrit. 2; H319 Skin Irrit. 2; H315 STOT SE 3; H335	>= 10.00 - < 20.00	wt%
4	**phenanthrene**			
	85-01-8 201-581-5 - 	Acute Tox. 4; H302	< 2.00	wt%

Full Text for all H-phrases and EUH-phrases: pls. see section 16

No	Note	Specific concentration limits	M-factor (acute)	M-factor (chronic)
2	-	-	M = 100	M = 100

3.3 Other information

contains an impurity listed as substance of very high concern (SVHC): Phenanthrene, CAS-Nr. 85-01-8

SECTION 4: First aid measures

4.1 Description of first aid measures

General information
In case of persisting adverse effects, consult a physician. Remove contaminated clothing and shoes immediately, and launder thoroughly before reusing. If the patient is likely to become unconscious, place and transport in stable sideways position.

After inhalation
Ensure supply of fresh air. Remove affected person from the immediate area. Irregular breathing/no breathing: artificial respiration. In case of breathing difficulties give oxygen.

After skin contact

When in contact with the skin, clean with soap and water.

After eye contact
Remove contact lenses. Rinse eye thoroughly under running water keeping eyelids wide open and protecting the unaffected eye (at least 10 to 15 minutes).

After ingestion
Rinse the mouth thoroughly with water. Do not induce vomiting - aspiration hazard. Call a doctor immediately. Never give anything by mouth to an unconscious person.

4.2 Most important symptoms and effects, both acute and delayed

Effects
In the case of swallowing with subsequent vomiting, aspiration of the lungs can occur which can lead to chemical pneumonia or asphyxiation.

4.3 Indication of any immediate medical attention and special treatment needed

No data available.

SECTION 5: Firefighting measures

5.1 Extinguishing media

Suitable extinguishing media
Water mist; Carbon dioxide; Dry chemical extinguisher; Foam

Unsuitable extinguishing media
High power water jet

5.2 Special hazards arising from the substance or mixture

In the event of fire, the following can be released: Carbon monoxide (CO); Carbon dioxide (CO2)

5.3 Advice for firefighters

Use self-contained breathing apparatus. Wear protective clothing. Cool endangered containers with water spray jet. Run-off water from fire fighting must not be discharged into drains or enter surface water. Fire residues and contaminated firefighting water must be disposed of in accordance with the local regulations.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

For non-emergency personnel
Refer to protective measures listed in sections 7 and 8. Ensure adequate ventilation. Do not inhale vapours. High risk of slipping due to leakage/spillage of product.

For emergency responders
No data available. Personal protective equipment (PPE) - see Section 8.

6.2 Environmental precautions

Do not discharge into the drains/surface waters/groundwater. Do not discharge into the subsoil/soil.

6.3 Methods and material for containment and cleaning up

Prevent spread over a wide area. Take up with absorbent material (e.g., sand, kieselguhr, universal binder). Send in suitable containers for recovery or disposal.

6.4 Reference to other sections

No data available.

SECTION 7: Handling and storage

7.1 Precautions for safe handling

Advice on safe handling
Provide good ventilation at the work area (local exhaust ventilation, if necessary). If workplace exposure limits are exceeded, respiratory protection approved for this particular job must be worn. Risks inherent to handling the product must be minimised by applying the appropriate protective and preventive measures. Working processes should - so far as possible, according to the state of the art - be designed to rule out bodily contact or the release of hazardous substances. Observe information on personal protection equipment (see section 8).

General protective and hygiene measures
Do not eat, drink or smoke during work time. Keep away from food, drink and animal feeding stuffs. Wash hands before breaks and after work. Avoid contact with eyes and skin. Provide eye wash fountain in work area. Do not inhale vapours. Remove soiled or soaked clothing immediately.

Advice on protection against fire and explosion
Keep away from sources of heat and ignition.

7.2 Conditions for safe storage, including any incompatibilities

Technical measures and storage conditions

Keep container tightly closed and dry in a cool, well-ventilated place. Protect from heat and direct sunlight.

Requirements for storage rooms and vessels
Containers which are opened must be carefully closed and kept upright to prevent leakage. Keep only in the original container.

Incompatible products
Do not store together with: oxidizing agents

7.3 Specific end use(s)
No data available.

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

Occupational exposure limit values

No	Substance name	CAS no.		EC no.	
1	**Diphenyl ether**	**101-84-8**		**202-981-2**	
	2017/164/EU				
	Diphenyl ether				
	WEL short-term (15 min reference period)	14	mg/m³	2	ppm
	WEL long-term (8-hr TWA reference period)	7	mg/m³	1	ppm
	List of approved workplace exposure limits (WELs) / EH40				
	Diphenyl ether				
	WEL short-term (15 min reference period)	14	mg/m³	2	ppm
	WEL long-term (8-hr TWA reference period)	7	mg/m³	1	ppm

DNEL, DMEL and PNEC values

DNEL values (worker)

No	Substance name			CAS / EC no	
	Route of exposure	Exposure time	Effect	Value	
1	**Diphenyl ether**			**101-84-8 202-981-2**	
	dermal	Long term (chronic)	systemic	25.00	mg/kg/day
	inhalative	Long term (chronic)	systemic	59.00	mg/m³
	inhalative	Long term (chronic)	local	7.00	mg/m³
	inhalative	Short term (acut)	local	14.00	mg/m³
2	**Reaction mass of m-terphenyl and o-terphenyl**			**- 904-797-4**	
	dermal	Long term (chronic)	systemic	0.467	mg/kg/day
	inhalative	Long term (chronic)	systemic	1645.00	mg/m³
3	**biphenyl**			**92-52-4 202-163-5**	
	dermal	Long term (chronic)	systemic	63.00	mg/kg/day
	inhalative	Long term (chronic)	systemic	11.17	mg/m³

DNEL value (consumer)

No	Substance name			CAS / EC no	
	Route of exposure	Exposure time	Effect	Value	
1	**biphenyl**			**92-52-4 202-163-5**	
	oral	Long term (chronic)	systemic	1.90	mg/kg/day
	dermal	Long term (chronic)	systemic	38.00	mg/kg/day
	inhalative	Long term (chronic)	systemic	3.30	mg/m³

PNEC values

No	Substance name		CAS / EC no	
	ecological compartment	Type	Value	
1	**Diphenyl ether**		**101-84-8 202-981-2**	
	water	fresh water sediment	0.093	mg/kg dry weight
	water	marine water sediment	0.009	mg/kg dry weight
	soil	-	0.018	mg/kg
	with reference to: dry weight			
	sewage treatment plant	-	10.00	mg/L
2	**Reaction mass of m-terphenyl and o-terphenyl**		**- 904-797-4**	
	water	fresh water	0.007	µg/L
	water	marine water	0.001	µg/L
	water	fresh water sediment	0.012	µg/kg

	with reference to: dry weight			
	water	marine water sediment	0.012	µg/kg
	with reference to: dry weight			
	soil	-	0.024	mg/kg
	with reference to: dry weight			
	sewage treatment plant	-	8.025	mg/L
	secondary poisoning	-	6.67	mg/kg
	with reference to: food			
3	**biphenyl**		**92-52-4 202-163-5**	
	water	fresh water	0.017	mg/L
	water	marine water	0.002	mg/L
	water	fresh water sediment	2.69	mg/kg
	with reference to: dry weight			
	water	marine water sediment	0.269	mg/kg
	with reference to: dry weight			
	soil	-	0.528	mg/kg
	with reference to: dry weight			
	sewage treatment plant	-	10.00	mg/L
	secondary poisoning	-	16.70	mg/kg
	with reference to: food			

8.2 Exposure controls

Appropriate engineering controls
Good general ventilation (typically 10 air changes per hour) should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level.

Personal protective equipment

Respiratory protection
If workplace exposure limits are exceeded, a respiration protection approved for this particular job must be worn. In case of aerosol and mist formation, take appropriate measures for breathing protection in the event workplace threshold values are not specified.

Eye / face protection
Safety glasses with side protection shield (EN 166)

Hand protection
Sufficient protection is given wearing suitable protective gloves checked according to i.e. EN 374, in the event of risk of skin contact with the product. Before use, the protective gloves should be tested in any case for its specific work-station suitability (i.e. mechanical resistance, product compatibility and antistatic properties). Adhere to the manufacturer's instructions and information relating to the use, storage, care and replacement of protective gloves. Protective gloves shall be replaced immediately when physically damaged or worn. Design operations thus to avoid permanent use of protective gloves. Heat-resistant gloves when using hot material (EN 407).

Other
Chemical-resistant work clothes. Make sure when selecting personal protective equipment (PPE), that it is suitable for the activity, workplace conditions in which it will be used according to the applying European CEN standards and upon consultation with the PPE supplier.

Environmental exposure controls
No data available.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

State of aggregation
liquid

Form/Colour
liquid
amber

Odour
aromatic

pH value
No data available

Boiling point / boiling range		
Value	271	°C
Reference pressure	1013	hPa

Melting point/freezing point		
Value	-18	°C

Decomposition temperature

No data available

Flash point			
Value		132	°C
Method	Cleveland open cup		

Ignition temperature
No data available

Auto-ignition temperature			
Value		585	°C

Flammability
Not applicable

Lower explosion limit			
Value		1	% vol

Upper explosion limit			
Value		7	% vol

Vapour pressure			
Value	<	0.01	hPa
Reference temperature		20	°C
Value		0.134	hPa
Reference temperature		50	°C
Value		623.5	kPa
Reference temperature		380	°C

Relative vapour density			
Value		10	

Relative density			
Value		1.05	
Reference temperature		25	°C

Density			
Value		1.084	g/cm³
Reference temperature		15	°C

Solubility in water
Comments: essentially insoluble

Solubility
No data available

Partition coefficient n-octanol/water (log value)				
No	**Substance name**	**CAS no.**		**EC no.**
1	**Reaction mass of m-terphenyl and o-terphenyl**	**-**		**904-797-4**
log Pow			5.84	
Reference temperature			30	°C
Method	OECD 117			
Source	ECHA			

Viscosity			
Value		5.74	mm²/s
Reference temperature		40	°C
Type	kinematic		

Particle characteristics

9.2 Other information

Other information
No data available.

SECTION 10: Stability and reactivity

10.1 Reactivity
Dangerous reactions are not expected if the product is handled according to its intended use.

10.2 Chemical stability
Stable under recommended storage and handling conditions (See section 7).

10.3 Possibility of hazardous reactions
Dangerous reactions are not to be expected when handling product according to its intended use.

10.4 Conditions to avoid

Heat, naked flames and other ignition sources.

10.5 Incompatible materials
Oxidizing agents

10.6 Hazardous decomposition products
No hazardous decomposition products known.

SECTION 11: Toxicological information

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

Acute oral toxicity			
No	**Product Name**		
1	**Therminol 72**		
LD50	>	2000	mg/kg
Species	rat		

Acute dermal toxicity			
No	**Product Name**		
1	**Therminol 72**		
LD50	>	2000	mg/kg
Species	rabbit		

Acute inhalational toxicity			
No	**Product Name**		
1	**Therminol 72**		
LC50		2.66	mg/m³
Duration of exposure		4	h
State of aggregation	Dust/mist		
Species	rat		

Skin corrosion/irritation	
No	**Product Name**
1	**Therminol 72**
Species	rabbit
Evaluation	non-irritant

Serious eye damage/irritation	
No	**Product Name**
1	**Therminol 72**
Species	rabbit
Evaluation	non-irritant

Respiratory or skin sensitisation			
No	**Substance name**	**CAS no.**	**EC no.**
1	**Diphenyl ether**	**101-84-8**	**202-981-2**
Route of exposure	Skin		
Method	maximization test		
Source	ECHA		
Evaluation	non-sensitizing		
2	**Reaction mass of m-terphenyl and o-terphenyl**	**-**	**904-797-4**
Route of exposure	Skin		
Species	guinea pig		
Method	OECD 429		
Evaluation	sensitizing		
3	**biphenyl**	**92-52-4**	**202-163-5**
Route of exposure	Skin		
Species	guinea pig		
Method	OECD 406		
Source	ECHA		
Evaluation	non-sensitizing		

Germ cell mutagenicity			
No	**Substance name**	**CAS no.**	**EC no.**
1	**Diphenyl ether**	**101-84-8**	**202-981-2**
Source	ECHA		
Evaluation/classification	Based on available data, the classification criteria are not met.		
2	**Reaction mass of m-terphenyl and o-terphenyl**	**-**	**904-797-4**
Source	ECHA		
Evaluation/classification	Based on available data, the classification criteria are not met.		

Reproduction toxicity
No data available

Carcinogenicity			
No	**Substance name**	**CAS no.**	**EC no.**
1	**biphenyl**	**92-52-4**	**202-163-5**
Route of exposure	oral		
Species	rat		
Method	OECD 453		
Evaluation/classification	Based on available data, the classification criteria are not met.		

STOT - single exposure
No data available

STOT - repeated exposure			
No	**Substance name**	**CAS no.**	**EC no.**
1	**Diphenyl ether**	**101-84-8**	**202-981-2**
Source	ECHA		
Evaluation/classification	Based on available data, the classification criteria are not met.		

Aspiration hazard
In the case of swallowing with subsequent vomiting, aspiration of the lungs can occur which can lead to chemical pneumonia or asphyxiation.

Delayed and immediate effects as well as chronic effects from short and long-term exposure
Contact with hot material may cause thermal burns. Inhalation of vapours in higher concentration may lead to irritation of eyes, nose and respiratory tract.

11.2 Information on other hazards

Endocrine disrupting properties
No data available.

Other information
No data available.

SECTION 12: Ecological information

12.1 Toxicity

Toxicity to fish (acute)				
No	**Substance name**	**CAS no.**		**EC no.**
1	**Diphenyl ether**	**101-84-8**		**202-981-2**
LC50		4.2		mg/l
Duration of exposure		96		h
Species	Oncorhynchus mykiss			
Source	ECHA			
2	**Reaction mass of m-terphenyl and o-terphenyl**	**-**		**904-797-4**
LC50		0.067		mg/l
Duration of exposure		96		h
Species	fish			
Method	OECD 203			
Source	ECHA			

Toxicity to fish (chronic)				
No	**Substance name**	**CAS no.**		**EC no.**
1	**Reaction mass of m-terphenyl and o-terphenyl**	**-**		**904-797-4**
NOEC		0.037		mg/l
Duration of exposure		30		day(s)
Species	Pimephales promelas			
Method	OECD 210			
2	**biphenyl**	**92-52-4**		**202-163-5**
NOEC		0.229		mg/l
Duration of exposure		96		day(s)
Species	Oncorhynchus mykiss			

Toxicity to Daphnia (acute)				
No	**Substance name**	**CAS no.**		**EC no.**
1	**Diphenyl ether**	**101-84-8**		**202-981-2**
EC50		1.7		mg/l
Duration of exposure		48		h
Species	Daphnia magna			
Source	ECHA			
2	**Reaction mass of m-terphenyl and o-terphenyl**	**-**		**904-797-4**
EC50	>	0.01		mg/l
Duration of exposure		48		h
Species	Daphnia magna			

Method	OECD 202
Source	ECHA

Toxicity to Daphnia (chronic)			
No	**Substance name**	**CAS no.**	**EC no.**
1	**Reaction mass of m-terphenyl and o-terphenyl**	**-**	**904-797-4**
NOEC		0.0048	mg/l
Duration of exposure		21	day(s)
Species	Daphnia magna		
2	**biphenyl**	**92-52-4**	**202-163-5**
NOEC		0.17	mg/l
Duration of exposure		21	day(s)
Species	Daphnia magna		

Toxicity to algae (acute)			
No	**Substance name**	**CAS no.**	**EC no.**
1	**Diphenyl ether**	**101-84-8**	**202-981-2**
EC50		0.455	mg/l
Duration of exposure		72	h
Species	Pseudokirchneriella subcapitata		
Source	ECHA		
2	**Reaction mass of m-terphenyl and o-terphenyl**	**-**	**904-797-4**
EC50		0.027	mg/l
Duration of exposure		72	h
Species	Pseudokirchneriella subcapitata		
Method	OECD 201		
Source	ECHA		

Toxicity to algae (chronic)			
No	**Substance name**	**CAS no.**	**EC no.**
1	**Reaction mass of m-terphenyl and o-terphenyl**	**-**	**904-797-4**
NOEC		0.025	mg/l
Duration of exposure		72	h
Species	Scenedesmus subspicatus		

Bacteria toxicity
No data available

12.2 Persistence and degradability

Biodegradability			
No	**Substance name**	**CAS no.**	**EC no.**
1	**Diphenyl ether**	**101-84-8**	**202-981-2**
Type	aerobic biodegradation		
Source	ECHA		
Evaluation	readily biodegradable		
2	**Reaction mass of m-terphenyl and o-terphenyl**	**-**	**904-797-4**
Type	aerobic biodegradation		
Value		11	%
Duration		28	day(s)
Method	OECD 301 B		
Source	ECHA		
Evaluation	not readily biodegradable		

12.3 Bioaccumulative potential

Bioconcentration factor (BCF)			
No	**Substance name**	**CAS no.**	**EC no.**
1	**Diphenyl ether**	**101-84-8**	**202-981-2**
BCF		196	
Species	Oncorhynchus mykiss		
Source	ECHA		
2	**Reaction mass of m-terphenyl and o-terphenyl**	**-**	**904-797-4**
BCF		600	
Species	Carassius auratus		
3	**biphenyl**	**92-52-4**	**202-163-5**
BCF		1900	
Species	Oncorhynchus mykiss		
Source	ECHA		

Partition coefficient n-octanol/water (log value)			
No	**Substance name**	**CAS no.**	**EC no.**
1	**Reaction mass of m-terphenyl and o-terphenyl**	**-**	**904-797-4**
log Pow		5.84	

Reference temperature	30	°C
Method	OECD 117	
Source	ECHA	

12.4 Mobility in soil

Mobility in soil			
No	**Substance name**	**CAS no.**	**EC no.**
1	**biphenyl**	**92-52-4**	**202-163-5**
log Koc		3.19	
Method		OECD 106	

12.5 Results of PBT and vPvB assessment

Results of PBT and vPvB assessment	
PBT assessment	One or more components of this product are classified as PBT.
vPvB assessment	One or more components of this product are classified as vPvB.

12.6 Endocrine disrupting properties

No data available.

12.7 Other adverse effects

No data available.

12.8 Other information

Other information
Do not discharge product unmonitored into the environment.

SECTION 13: Disposal considerations

13.1 Waste treatment methods

Product

Disposal of the product should be carried out in accordance with all applicable regulations following consultation with the responsible local authority and the disposal company in an authorised and suitable disposal facility.
Allocation of a waste code number, according to the European Waste Catalogue, should be carried out in agreement with the regional waste disposal company.

Packaging

Residues must be removed from packaging and when emptied completely disposed of in accordance with the regulations for waste removal. Incompletely emptied packaging must be disposed of in the form of disposal specified by the regional disposer.

SECTION 14: Transport information

14.1 Transport ADR/RID/ADN

Class	9
Classification code	M6
Packing group	III
Hazard identification no.	90
UN number	UN3082
Proper shipping name	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.
Technical name	Diphenyl ether biphenyl
Tunnel restriction code	-
Label	9
Environmentally hazardous substance mark	Symbol "fish and tree"

14.2 Transport IMDG

Class	9
Packing group	III
UN number	UN3082
Proper shipping name	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.
Technical name	Diphenyl ether biphenyl
EmS	F-A, S-F
Label	9
Marine pollutant mark	Symbol "fish and tree"

14.3 Transport ICAO-TI / IATA

Class	9
Packing group	III
UN number	UN3082
Proper shipping name	Environmentally hazardous substance, liquid, n.o.s.
Technical name	Diphenyl ether biphenyl

Label	9
Environmentally hazardous substance mark	Symbol "fish and tree"

14.4 Other information
No data available.

14.5 Environmental hazards
Information on environmental hazards, if relevant, please see 14.1 - 14.3.

14.6 Special precautions for user
No data available.

14.7 Maritime transport in bulk according to IMO instruments
Not relevant

SECTION 15: Regulatory information

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

EU regulations

Regulation (EC) No 1907/2006 (REACH) Annex XIV (List of substances subject to authorisation)
According to the data available and/or specifications supplied by upstream suppliers, this product does not contain any substances considered as substances requiring authorisation as listed on Annex XIV of the REACH regulation (EC) 1907/2006.

REACH candidate list of substances of very high concern (SVHC) for authorisation			
The product contains following substance(s) meeting the criteria in Article 57 in association with Article 59 of the REACH regulation ((EC) 1907/2006) that are placed on the list of candidates considered for inclusion in annex XIV (substances subject to Authorisation).			
No	**Substance name**	**CAS no.**	**EC no.**
1	**phenanthrene**	**85-01-8**	**201-581-5**

Regulation (EC) No 1907/2006 (REACH) Annex XVII: RESTRICTIONS ON THE MANUFACTURE, PLACING ON THE MARKET AND USE OF CERTAIN DANGEROUS SUBSTANCES, MIXTURES AND ARTICLES	
The product is considered being subject to REACH regulation (EC) 1907/2006 annex XVII.	No 3

Directive 2012/18/EU on the control of major-accident hazards involving dangerous substances	
This product is subject to Part I of Annex I, risk category:	E1

Directive 2010/75/EU on industrial emissions (integrated pollution prevention and control)	
Comments	not applicable

National regulations

National chemical inventories

USA (TSCA)	listed
DSL/NDSL (Canada)	DSL listed
ENCS (Japan)	ENCS/ISHL listed
ECL (Korea)	listed
IECSC / NEPA (China)	listed
CSNN (Taiwan)	TCSI listed

15.2 Chemical safety assessment
A chemical safety assessment has been carried out for the following substance/s in this mixture:

CAS no.	101-84-8 / 92-52-4
EC no.	202-981-2 / 202-163-5 / 904-797-4

SECTION 16: Other information

Sources of key data used to compile the data sheet:
Regulation (EC) No 1907/2006 (REACH), 1272/2008 (CLP) as amended in each case.
Directives 2000/39/EC, 2006/15/EC, 2009/161/EU, (EU) 2017/164.
National Threshold Limit Values of the corresponding countries as amended in each case.
Transport regulations according to ADR, RID, IMDG, IATA as amended in each case.
The data sources used to determine physical, toxic and ecotoxic data, are indicated directly in the corresponding section.

Full text of the H- and EUH- phrases drawn up in sections 2 and 3 (provided not already drawn up in these sections)

H302	Harmful if swallowed.
H315	Causes skin irritation.
H319	Causes serious eye irritation.
H400	Very toxic to aquatic life.
H412	Harmful to aquatic life with long lasting effects.

Creation of the safety data sheet
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This information is based on our present knowledge and experience.
The safety data sheet describes products with a view to safety requirements.
It does not however, constitute a guarantee for any specific product properties and shall not establish a legally valid contractual relationship.

Alterations/supplements:
Alterations to the previous edition are marked in the left-hand margin.

Prod-ID 738120