

Safety Data Sheet

according to Regulation (EC) No. 1907/2006 (REACH) Date of issue: 16/04/2015 Revision date: 16/04/2015

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Country	Organisation/Company	Address	Emergency number
UNITED KINGDOM	Guy's & St Thomas' Poisons Unit Medical Toxicology Unit, Guy's & St Thomas' Hospital Trust	Avonley Road SE14 5ER London	0870 243 2241

#### SECTION 2: Hazards identification

#### 2.1. Classification of the substance or mixture

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

Acute Tox. 4 (Oral)H302Skin Sens. 1H317Aquatic Acute 1H400Aquatic Chronic 1H410

Full text of H-phrases: see section 16

#### Classification according to Directive 67/548/EEC [DSD] or 1999/45/EC [DPD]

Xn; R22 R43 N; R50/53 Full text of R-phrases: see section 16

2.2. Label elements		
Labelling according to Regulation (EC) No. 1	1272/2008 [CLP]	
Hazard pictograms (CLP)	GHS07 GHS09	
Signal word (CLP)	: Warning	
Hazardous ingredients	: 6-methyl-2,4-bis(methylthio)phenylene-1,3-diamine	
Hazard statements (CLP)	: H302 - Harmful if swallowed H317 - May cause an allergic skin reaction H410 - Very toxic to aquatic life with long lasting effects	
Precautionary statements (CLP)	: P273 - Avoid release to the environment P280 - Wear protective gloves, protective clothing, eye protection	
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P301+P312 - IF SWALLOWED: Call a POISON CENTER, a doctor if you feel unwell P302+P352 - IF ON SKIN: Wash with plenty of water, soap P333+P313 - If skin irritation or rash occurs: Get medical advice/attention P501 - Dispose of contents/container to hazardous or special waste collection point, in accordance with local, regional, national and/or international regulation

#### 2.3. Other hazards

No additional information available

### SECTION 3: Composition/information on ingredients

3.1. Substance

#### Not applicable

#### 3.2. Mixture

Name	Product identifier	%	Classification according to Directive 67/548/EEC	Classification according to Regulation (EC) No. 1272/2008 [CLP]
6-methyl-2,4-bis(methylthio)phenylene- 1,3-diamine	(CAS No) 106264-79-3 (EC no) 403-240-8 (EC index no) 612-113-00-8 (REACH-no) 01- 0000015292-76	50 - 80	Xn; R22 R43 N; R50/53	Acute Tox. 4 (Oral), H302 Skin Sens. 1, H317 Aquatic Acute 1, H400 Aquatic Chronic 1, H410
bis(isopropyl)naphthalene	(CAS No) 38640-62-9 (EC no) 254-052-6 (REACH-no) 01- 2119565150-48	10 - 20	R53	Asp. Tox. 1, H304 Aquatic Chronic 4, H413
Red phosphorus	(CAS No) 7723-14-0 (EC no) 231-768-7 (EC index no) 015-002-00-7	5 - 10	F; R11 R16 R52/53	Flam. Sol. 1, H228 Aquatic Chronic 3, H412
4-Methylpentan-2-one substance with a Community workplace exposure limit	(CAS No) 108-10-1 (EC no) 203-550-1 (EC index no) 606-004-00-4 (REACH-no) 01- 2119473980-30	0,5 - 1	F; R11 Xn; R20 Xi; R36/37 R66	Flam. Liq. 2, H225 Acute Tox. 4 (Inhalation), H332 Eye Irrit. 2, H319 STOT SE 3, H335
Solvent naphta light aromatic (low boiling point)	(CAS No) 64742-95-6 (EC no) 265-199-0 (EC index no) 649-356-00-4 (REACH-no) 01- 2119486773-24	0,5 - 1	Xn; R65 Xi; R37 N; R51/53 R10 R66 R67	Asp. Tox. 1, H304 Flam. Liq. 3, H226 STOT SE 3, H335 STOT SE 3, H336 Aquatic Chronic 2, H411

#### Full text of R- and H-phrases: see section 16

SECTION 4: First aid measures			
4.1. Description of first aid measures			
First-aid measures general	: Never give anything by mouth to an unconscious person. If you feel unwell, seek medical advice (show the label where possible).		
First-aid measures after inhalation	: Allow victim to breathe fresh air. If you feel unwell, seek medical advice.		
First-aid measures after skin contact	: Remove affected clothing and wash all exposed skin area with mild soap and water, followed by warm water rinse.		
First-aid measures after eye contact	: Rinse immediately with plenty of water. Obtain medical attention if pain, blinking or redness persist.		
First-aid measures after ingestion	: Do NOT induce vomiting. Obtain emergency medical attention.		
4.2. Most important symptoms and effects, both acute and delayed			
Symptoms/injuries after inhalation	: May cause an allergic skin reaction.		
Symptoms/injuries after ingestion	: Swallowing a small quantity of this material will result in serious health hazard.		
4.3. Indication of any immediate medical attention and special treatment needed			
No additional information available			
<b>SECTION 5: Firefighting measures</b>			
5.1. Extinguishing media			
Suitable extinguishing media	: Foam. Carbon dioxide. Water spray. Dry powder.		
5.2. Special hazards arising from the s	ubstance or mixture		
No additional information available			

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5.3. Advice f	or firefighters	
Firefighting instruct	ions	: Use water spray or fog for cooling exposed containers. Exercise caution when fighting any chemical fire. Prevent fire-fighting water from entering environment.
Protection during fi	refighting	: Do not enter fire area without proper protective equipment, including respiratory protection.
SECTION 6: A	ccidental release meas	ures
6.1. Persona	I precautions, protective equi	ipment and emergency procedures
6.1.1. For non-	emergency personnel	
Emergency proced	ures	: Evacuate unnecessary personnel.
6.1.2. For eme	rgency responders	
Protective equipme	ent	: Equip cleanup crew with proper protection.
Emergency proced	ures	: Ventilate area.
6.2. Environ	mental precautions	
Prevent entry to se	wers and public waters. Avoid	release to the environment. Notify authorities if product enters sewers or public waters.
6.3. Methods	and material for containmen	and cleaning up
Methods for cleaning	ıg up	: Soak up spills with inert solids, such as clay or diatomaceous earth as soon as possible. Shovel into suitable and closed container for disposal. Store away from other materials. Dispose of this material and its container to hazardous or special waste collection point.
6.4. Reference	ce to other sections	
See Heading 8. Ex	posure controls and personal p	rotection.
<b>SECTION 7: H</b>	andling and storage	
	ons for safe handling	
Precautions for saf	e handling	: Provide good ventilation in process area to prevent formation of vapour. Avoid contact with skin and eyes. Heat. Keep away from ignition sources. Wear personal protective equipment.
Hygiene measures		: Do not eat, drink or smoke when using this product. Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work. Wash contaminated clothing before reuse.
7.2. Conditio	ons for safe storage, including	g any incompatibilities
Storage conditions		: Keep container closed when not in use. Keep container below 50°C in a well ventilated place. Keep away from food, drink and animal feedingstuffs. Keep away from oxidising agents and strongly alkaline and strongly acidic materials to prevent the possibility of exothermic reaction.
Incompatible produ	cts	: Strong acids. Strong oxidizers.
7.3. Specific	end use(s)	
No additional inform	nation available	
SECTION 8: E	xposure controls/perso	nal protection
	parameters	
4-Methylpentan-	2-one (108-10-1)	

4-Methylpentan-2-one (108-10-1)			
EU	IOELV TWA (mg/m <sup>3</sup> )	83 mg/m <sup>3</sup>	
EU	IOELV TWA (ppm)	20 ppm	
EU	IOELV STEL (mg/m <sup>3</sup> )	208 mg/m <sup>3</sup>	
EU	IOELV STEL (ppm)	50 ppm	
France	VME (mg/m <sup>3</sup> )	83 mg/m <sup>3</sup>	
France	VME (ppm)	20 ppm	
France	VLE (mg/m <sup>3</sup> )	208 mg/m <sup>3</sup>	
France	VLE (ppm)	50 ppm	
Netherlands	Grenswaarde TGG 8H (mg/m <sup>3</sup> )	104 mg/m <sup>3</sup>	
Netherlands	Grenswaarde TGG 15MIN (mg/m <sup>3</sup> )	208 mg/m <sup>3</sup>	

#### 8.2. **Exposure controls**

Personal protective equipment

: Gloves. Safety glasses. Protective clothing.

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- Hand protection
- Eye protection
- Respiratory protection



Other information

- : PVC or other plastic material gloves
- : Chemical goggles or safety glasses
- : In case of insufficient ventilation, wear suitable respiratory equipment
- : Do not eat, drink or smoke during use. Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work.

<b>SECTION 9: Physical and chemical</b>	properties		
9.1. Information on basic physical and chemical properties			
Physical state	: Liquid		
Colour	: Black.		
Odour	: Characteristics.		
Odour threshold	: No data available		
рН	: No data available		
Relative evaporation rate (butylacetate=1)	: No data available		
Melting point	: No data available		
Freezing point	: No data available		
Boiling point	: No data available		
Flash point	: > 100 °C		
Auto-ignition temperature	: No data available		
Decomposition temperature	: No data available		
Flammability (solid, gas)	: No data available		
Vapour pressure	: No data available		
Relative vapour density at 20 °C	: No data available		
Relative density	: 1,2		
Solubility	: Insoluble in water. Soluble in organic solvents. Hydrocarbon.		
Log Pow	: No data available		
Viscosity, kinematic	: No data available		
Viscosity, dynamic	: 1500 mPa.s		
Explosive properties	: No data available		
Oxidising properties	: No data available		
Explosive limits	: No data available		
9.2. Other information			
No additional information available			
SECTION 10: Stability and reactivity			
10.1. Reactivity			
No additional information available			
10.2. Chemical stability			
Explosive when mixed with oxidizing substances			
10.3. Possibility of hazardous reactions			
Exothermic reaction on contact with : Isocyanate	s. Aromatic.		
10.4 Conditions to avoid			

10.4. Conditions to avoid

No additional information available

10.5. Incompatible materials

Strong acids. Strong oxidizers.

#### 10.6. Hazardous decomposition products

Sulphur oxides. Carbon oxides (CO, CO2). Carbon monoxide. Nitrogen oxides.

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SECTION 11: Toxicological informati	on
11.1. Information on toxicological effects	
Acute toxicity	: Oral: Harmful if swallowed.
4-Methylpentan-2-one (108-10-1)	
LD50 oral rat	2080 mg/kg
LD50 oral	> 2080 mg/kg bodyweight
LD50 dermal rat	> 2000 mg/kg
LD50 dermal	5990 mg/kg bodyweight
LC50 inhalation rat (mg/l)	8,2 - 16,4 mg/l/4h
LC50 inhalation rat (Dust/Mist - mg/l/4h)	> 8200 mg/m <sup>3</sup>
6-methyl-2,4-bis(methylthio)phenylene-1,3-d	
LD50 oral rat	> 1515 mg/kg
LD50 dermal rabbit	> 2000 mg/kg
Red phosphorus (7723-14-0)	
LD50 oral	> 2000 mg/kg
bis(isopropyl)naphthalene (38640-62-9)	
LD50 oral rat	> 4000 mg/kg
LD50 dermal rat	> 4000 mg/kg
LC50 inhalation rat (mg/l)	> 5,6 mg/l/4h
Skin corrosion/irritation	: Not classified
	Based on available data, the classification criteria are not met
Serious eye damage/irritation	: Not classified
	Based on available data, the classification criteria are not met
Respiratory or skin sensitisation	: May cause an allergic skin reaction.
Germ cell mutagenicity	: Not classified
denni cen mutagementy	Based on available data, the classification criteria are not met
Carcinogenicity	: Not classified
Carcinogenicity	Based on available data, the classification criteria are not met
Deserve du atives terrisiter	
Reproductive toxicity	: Not classified
	Based on available data, the classification criteria are not met
Specific target organ toxicity (single exposure)	: Not classified
	Based on available data, the classification criteria are not met
Specific target organ toxicity (repeated	: Not classified
exposure)	Based on available data, the classification criteria are not met
Aspiration hazard	: Not classified
	Based on available data, the classification criteria are not met
Potential adverse human health effects and symptoms	: Harmful if swallowed.

### SECTION 12: Ecological information

12.1. Toxicity Ecology - water

: Very toxic to aquatic life with long lasting effects.

4-Methylpentan-2-one (108-10-1)		
LC50 fish 1	> 179 mg/l	
EC50 other aquatic organisms 1	> 200 mg/l	
EC50 other aquatic organisms 2	IC50 algea (72 h) mg/l	
6-methyl-2,4-bis(methylthio)phenylene-1,3-diamine (106264-79-3)		
LC50 fish 1	7,3 mg/l	
EC50 Daphnia 1	0,9 mg/l	
bis(isopropyl)naphthalene (38640-62-9)		
LC50 fish 1	0,5 mg/l	
EC50 Daphnia 1	> 0,16 mg/l	
EC50 other aquatic organisms 1	0,15 mg/l	

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12.2. Persistence and degradability	
PRA794-P-SH194000	
Persistence and degradability	May cause long-term adverse effects in the environment. Not readily biodegradable.
12.3. Bioaccumulative potential	
PRA794-P-SH194000	
Bioaccumulative potential	Not established.
4-Methylpentan-2-one (108-10-1)	
Log Pow	1,31
12.4. Mobility in soil	
PRA794-P-SH194000	
Ecology - soil	low mobility.
12.5. Results of PBT and vPvB assessm	ent
No additional information available	
12.6. Other adverse effects	
Additional information	: Avoid release to the environment. Do not contaminate ground and surface water
SECTION 13: Disposal consideratio	ns
13.1. Waste treatment methods	
Waste disposal recommendations	: This material and its container must be disposed of as hazardous waste. Dispose in a safe
masie uispusai recummenualiuns	manner in accordance with local/national regulations.
Ecology - waste materials	: Avoid release to the environment. Do not dispose of waste into sewer.
SECTION 14: Transport information	
In accordance with ADR / RID / IMDG / IATA / A	ADN
14.1. UN number	
UN-No. (ADR)	: 3082
UN-No. (IMDG)	: 3082
UN-No.(IATA)	: 3082
UN-No.(ADN)	: 3082
UN-No. (RID)	: 3082
14.2. UN proper shipping name	
Proper Shipping Name (ADR)	: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.
Proper Shipping Name (IMDG)	: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.
Proper Shipping Name (IATA)	: Environmentally hazardous substance, liquid, n.o.s.
Proper Shipping Name (ADN)	: Not applicable
Proper Shipping Name (RID)	: Not applicable
Transport document description (ADR)	: UN 3082 ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (6-methyl-2,4-bis(methylthio)phenylene-1,3-diamine(106264-79-3)), 9, III, (E)
Transport document description (IMDG)	: UN 3082 ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S., 9, III, MARINE POLLUTANT/ENVIRONMENTALLY HAZARDOUS
14.3. Transport hazard class(es)	
ADR	
Transport hazard class(es) (ADR)	: 9
Danger labels (ADR)	: 9
IMDG Transport hazard class(es) (IMDG)	: 9
Danger labels (IMDG)	: 9

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### ΙΑΤΑ

Transport hazard class(es) (IATA) Hazard labels (IATA)



ADN
Transport hazard class(es) (ADN)

### RID

Transport hazard class(es) (RID) Danger labels (RID)



: 9

: 9

: 9 :



14.4. Packing group	
Packing group (ADR)	: III
Packing group (IMDG)	: III
Packing group (IATA)	: III
Packing group (ADN)	: Not applicable
Packing group (RID)	: Not applicable
14.5. Environmental hazards	
Dangerous for the environment	: Yes
Marine pollutant	: Yes
Other information	: No supplementary information available
14.6. Special precautions for user	
- Overland transport	
Classification code (ADR)	: M6
Special provisions (ADR)	: 274, 335, 601
Limited quantities (ADR)	: 51
Excepted quantities (ADR)	: E1
Packing instructions (ADR)	: P001, IBC03, LP01, R001
Special packing provisions (ADR)	: PP1
Mixed packing provisions (ADR)	: MP19
Portable tank and bulk container instructions (ADR)	: T4
Portable tank and bulk container special provisions (ADR)	: TP1, TP29
Tank code (ADR)	: LGBV
Vehicle for tank carriage	: AT

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Transport category (ADR)	: 3
Special provisions for carriage - Packages (ADR)	: V12
Special provisions for carriage - Loading, unloading and handling (ADR)	: CV13
Hazard identification number (Kemler No.)	: 90
Orange plates	<b>90</b> <b>3082</b>
Tunnel restriction code (ADR)	: E
EAC code	: •3Z
- Transport by sea	
Special provisions (IMDG)	: 274, 335
Limited quantities (IMDG)	: 5L
Excepted quantities (IMDG)	: E1
Packing instructions (IMDG)	: P001, LP01
Special packing provisions (IMDG)	: PP1
IBC packing instructions (IMDG)	: IBC03
Tank instructions (IMDG)	: T4
Tank special provisions (IMDG)	: TP2, TP29
EmS-No. (Fire)	: F-A
EmS-No. (Spillage)	: S-F
Stowage category (IMDG)	: A
- Air transport	
PCA Excepted quantities (IATA)	: E1
PCA Limited quantities (IATA)	: Y964
PCA limited quantity max net quantity (IATA)	: 30kgG
PCA packing instructions (IATA)	: 964
PCA max net quantity (IATA)	: 450L
CAO packing instructions (IATA)	: 964
CAO max net quantity (IATA)	: 450L
Special provisions (IATA)	: A97, A158, A197
ERG code (IATA)	: 9L
- Inland waterway transport	
Not subject to ADN	: No
- Rail transport	
Carriage prohibited (RID)	: No
14.7. Transport in bulk according to Anno	ex II of MARPOL 73/78 and the IBC Code
Not applicable	
SECTION 15: Regulatory information	n
ocorrow is integration with one of the second	

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

15.1.1. **EU-Regulations** 

Contains no substances with Annex XVII restrictions Contains no substance on the REACH candidate list Contains no REACH Annex XIV substances

### 15.1.2. National regulations

### Germany

Germany	
VwVwS Annex reference	: Water hazard class (WGK) 3, severe hazard to waters (Classification according to VwVwS, Annex 4)
12th Ordinance Implementing the Federal Immission Control Act - 12.BImSchV	: Is not subject of the 12. BImSchV (Hazardous Incident Ordinance)

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Netherlands	
SZW-lijst van kankerverwekkende stoffen	: Solvent naphta light aromatic (low boiling point) are listed
SZW-lijst van mutagene stoffen	: Solvent naphta light aromatic (low boiling point) are listed
NIET-limitatieve lijst van voor de voortplanting giftige stoffen – Borstvoeding	: None of the components are listed
NIET-limitatieve lijst van voor de voortplanting giftige stoffen – Vruchtbaarheid	: None of the components are listed
NIET-limitatieve lijst van voor de voortplanting giftige stoffen – Ontwikkeling	: None of the components are listed
Denmark	
Classification remarks	: Emergency management guidelines for the storage of flammable liquids must be followed
Recommendations Danish Regulation	: Young people below the age of 18 years are not allowed to use the product
15.2. Chemical safety assessment	
No additional information available	
SECTION 16: Other information	
Data sources	: REGULATION (EC) No 1272/2008 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 16 December 2008 on classification, labelling and packaging of substances and mixtures, amending and repealing Directives 67/548/EEC and 1999/45/EC, and amending Regulation (EC) No 1907/2006.

ull text of R-, H- and EUH-phrases:	
Acute Tox. 4 (Inhalation)	Acute toxicity (inhal.), Category 4
Acute Tox. 4 (Oral)	Acute toxicity (oral), Category 4
Aquatic Acute 1	Hazardous to the aquatic environment — Acute Hazard, Category 1
Aquatic Chronic 1	Hazardous to the aquatic environment — Chronic Hazard, Category 1
Aquatic Chronic 2	Hazardous to the aquatic environment — Chronic Hazard, Category 2
Aquatic Chronic 3	Hazardous to the aquatic environment — Chronic Hazard, Category 3
Aquatic Chronic 4	Hazardous to the aquatic environment — Chronic Hazard, Category 4
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
Flam. Sol. 1	Flammable solids, Category 1
Skin Sens. 1	Sensitisation — Skin, category 1
STOT SE 3	Specific target organ toxicity — Single exposure, Category 3, Respiratory tract irritation
STOT SE 3	Specific target organ toxicity — Single exposure, Category 3, Narcosis
H225	Highly flammable liquid and vapour
H226	Flammable liquid and vapour
H228	Flammable solid
H302	Harmful if swallowed
H304	May be fatal if swallowed and enters airways
H317	May cause an allergic skin reaction
H319	Causes serious eye irritation
H332	Harmful if inhaled
H335	May cause respiratory irritation
H336	May cause drowsiness or dizziness
H400	Very toxic to aquatic life
H410	Very toxic to aquatic life with long lasting effects
H411	Toxic to aquatic life with long lasting effects
H412	Harmful to aquatic life with long lasting effects
H413	May cause long lasting harmful effects to aquatic life
R10	Flammable
R11	Highly flammable
R16	Explosive when mixed with oxidizing substances
R20	Harmful by inhalation
R22	Harmful if swallowed
R36/37	Irritating to eyes and respiratory system
R37	Irritating to respiratory system

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R43	May cause sensitisation by skin contact
R50/53	Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment
R51/53	Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment
R52/53	Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment
R53	May cause long-term adverse effects in the aquatic environment
R65	Harmful: may cause lung damage if swallowed
R66	Repeated exposure may cause skin dryness or cracking
R67	Vapours may cause drowsiness and dizziness
F	Highly flammable
Ν	Dangerous for the environment
Xi	Irritant
Xn	Harmful

SDS EU (REACH Annex II)

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product