

**SECTION 1. IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING****1.1. Product identifier**

**Product Description:** Development Solution  
**Cat No. :** 10-9439-41

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

**Recommended Use** In vitro diagnostic  
**Uses advised against** All other uses

**1.3. Details of the supplier of the safety data sheet**

**Company** Phadia AB  
Rapsgatan 7P  
P.O. Box 6460  
751 37 UPPSALA  
Sweden  
+46 18 16 50 00  
**E-mail address** safetydatasheet.idd@thermofisher.com

**1.4. Emergency telephone number**

CHEMTREC Ireland (Dublin) +(353)-19014670  
CHEMTREC Belgium (Brussels) +(32)-28083237  
Malta 112 Emergency phone number

**SECTION 2: HAZARDS IDENTIFICATION****2.1. Classification of the substance or mixture****CLP Classification - Regulation (EC) No 1272/2008****Physical hazards**

Based on available data, the classification criteria are not met

**Health hazards**

Based on available data, the classification criteria are not met

**Environmental hazards**

Based on available data, the classification criteria are not met

*For the full text of the H-statements mentioned in this Section, see Section 16.*

**2.2. Label elements**

# SAFETY DATA SHEET

Development Solution

Revision Date 02-Jan-2024

EUH208 - Contains (reaction mass of: 5-chloro-2- methyl-4-isothiazolin-3-one [EC no. 247-500-7]and 2-methyl-2H-isothiazol-3- one [EC no. 220-239-6] (3:1); (CMIT/MIT (3:1))). May produce an allergic reaction.

## 2.3. Other hazards

May produce an allergic reaction This product does not contain any known or suspected endocrine disruptors. This preparation contains no substance considered to be persistent, bioaccumulating nor toxic (PBT). This preparation contains no substance considered to be very persistent nor very bioaccumulating (vPvB).

## SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

### 3.1. Substances

### 3.2. Mixtures

Component	CAS No	EC No	Weight %	CLP Classification - Regulation (EC) No 1272/2008
4-Methylumbelliferyl-Beta-D-galactopyranoside	N/A		<0.01	-
5-Chloro-2-methyl-3(2H)-isothiazolone, mixture with 2-methyl-3(2H)-isothiazolone	55965-84-9		<0.0013	Acute Tox. 3 (H301) Acute Tox. 2 (H310) Acute Tox. 2 (H330) Skin Corr. 1C (H314) Eye Dam. 1 (H318) Skin Sens. 1A (H317) Aquatic Acute 1 (H400) Aquatic Chronic 1 (H410) EUH071

Component	Specific concentration limits (SCL's)	M-Factor	Component notes
5-Chloro-2-methyl-3(2H)-isothiazolone, mixture with 2-methyl-3(2H)-isothiazolone	Eye Irrit. 2 (H319) :: 0.06%≤C<0.6% Skin Corr. 1C (H314) :: C≥0.6% Skin Irrit. 2 (H315) :: 0.06%≤C<0.6% Skin Sens. 1A (H317) :: C≥0.0015% Eye Dam. 1 (H318) :: C≥0.6%	100 (acute) 100 (chronic)	-

For the full text of the H-statements mentioned in this Section, see Section 16.

## SECTION 4: FIRST AID MEASURES

### 4.1. Description of first aid measures

**Eye Contact** Rinse thoroughly with plenty of water, also under the eyelids.

**Skin Contact** Wash off immediately with soap and plenty of water.

# SAFETY DATA SHEET

Development Solution

Revision Date 02-Jan-2024

**Ingestion** Clean mouth with water and drink afterwards plenty of water.

**Inhalation** Not applicable.

**Self-Protection of the First Aider** Not Applicable.

## **4.2. Most important symptoms and effects, both acute and delayed**

No information available.

## **4.3. Indication of any immediate medical attention and special treatment needed**

**Notes to Physician** Treat symptomatically.

## **SECTION 5: FIREFIGHTING MEASURES**

### **5.1. Extinguishing media**

#### **Suitable Extinguishing Media**

Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

#### **Extinguishing media which must not be used for safety reasons**

None known.

### **5.2. Special hazards arising from the substance or mixture**

None known.

#### **Hazardous Combustion Products**

None known.

### **5.3. Advice for firefighters**

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

## **SECTION 6: ACCIDENTAL RELEASE MEASURES**

### **6.1. Personal precautions, protective equipment and emergency procedures**

Wear protective gloves/clothing and eye/face protection.

### **6.2. Environmental precautions**

Dispose of in accordance with local regulations.

### **6.3. Methods and material for containment and cleaning up**

Wipe up with adsorbent material (e.g. cloth, fleece). Dispose of waste product or used containers according to local regulations.

### **6.4. Reference to other sections**

Refer to protective measures listed in Sections 8 and 13.

## **SECTION 7: HANDLING AND STORAGE**

# SAFETY DATA SHEET

Development Solution

Revision Date 02-Jan-2024

## 7.1. Precautions for safe handling

Wash thoroughly after handling. Do not eat, drink or smoke when using this product.

## 7.2. Conditions for safe storage, including any incompatibilities

Keep at temperatures between 2 and 8°C.

## 7.3. Specific end use(s)

Observe instructions for use.

## SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

### 8.1. Control parameters

#### Exposure limits

List source(s): **CH** - The Government of Switzerland has set a directive on limit values for working materials (Grenzwerte am Arbeitsplatz) which is based on the Swiss Federal Regulation "Verordnung über die Verhütung von Unfällen und Berufskrankheiten". This directive is administered, periodically revised and enforced by SUVA (Swiss National Accident Insurance Fund).

Component	Austria	Denmark	Switzerland	Poland	Norway
5-Chloro-2-methyl-3(2H)-isothiazolone, mixture with 2-methyl-3(2H)-isothiazolone	MAK-TMW: 0.05 mg/m <sup>3</sup> 8 Stunden		STEL: 0.4 mg/m <sup>3</sup> 15 Minuten TWA: 0.2 mg/m <sup>3</sup> 8 Stunden		

#### Biological limit values

This product, as supplied, does not contain any hazardous materials with biological limits established by the region specific regulatory bodies

#### Monitoring methods

BS EN 14042:2003 Title Identifier: Workplace atmospheres. Guide for the application and use of procedures for the assessment of exposure to chemical and biological agents.

#### Derived Minimum Effect Level (DMEL) / Derived No Effect Level (DNEL)

See table for values

Component	Acute effects local (Inhalation)	Acute effects systemic (Inhalation)	Chronic effects local (Inhalation)	Chronic effects systemic (Inhalation)
5-Chloro-2-methyl-3(2H)-isothiazolone, mixture with 2-methyl-3(2H)-isothiazolone 55965-84-9 ( <0.0013 )	DNEL = 0.04mg/m <sup>3</sup>		DNEL = 0.02mg/m <sup>3</sup>	

#### Predicted No Effect Concentration (PNEC)

See values below.

# SAFETY DATA SHEET

Development Solution

Revision Date 02-Jan-2024

Component	Fresh water	Fresh water sediment	Water Intermittent	Microorganisms in sewage treatment	Soil (Agriculture)
5-Chloro-2-methyl-3(2H)-isothiazolone, mixture with 2-methyl-3(2H)-isothiazolone 55965-84-9 ( <0.0013 )	PNEC = 3.39µg/L	PNEC = 0.027mg/kg sediment dw	PNEC = 3.39µg/L	PNEC = 0.23mg/L	PNEC = 0.01mg/kg soil dw

Component	Marine water	Marine water sediment	Marine water Intermittent	Food chain	Air
5-Chloro-2-methyl-3(2H)-isothiazolone, mixture with 2-methyl-3(2H)-isothiazolone 55965-84-9 ( <0.0013 )	PNEC = 3.39µg/L	PNEC = 0.027mg/kg sediment dw	PNEC = 3.39µg/L		

## 8.2. Exposure controls

### Engineering Measures

None under normal use conditions.

### Personal protective equipment

#### Eye Protection

No special protective equipment required.

#### Hand Protection

No special protective equipment required.

Glove material	Breakthrough time	Glove thickness	EU standard	Glove comments
		-		

#### Skin and body protection

No special protective equipment required.

#### Respiratory Protection

No protective equipment is needed under normal use conditions.

### Large scale/emergency use

No protective equipment is needed under normal use conditions

### Small scale/Laboratory use

No personal respiratory protective equipment normally required.

### Hygiene Measures

Handle in accordance with good industrial hygiene and safety practice.

### Environmental exposure controls

Dispose of contents/containers in accordance with local regulations.

## SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

### 9.1. Information on basic physical and chemical properties

#### Physical State

Liquid

#### Appearance

Clear

#### Odor

None

#### Odor Threshold

None

#### Melting Point/Range

No data available

#### Softening Point

No data available

#### Boiling Point/Range

100 °C

# SAFETY DATA SHEET

Development Solution

Revision Date 02-Jan-2024

Flammability (liquid)	No data available	
Flammability (solid,gas)	Not flammable	
Explosion Limits	Not applicable	
Flash Point	Not applicable	Method - No information available
Autoignition Temperature	Not applicable	
Decomposition Temperature	Not applicable	
pH	6.5	
Viscosity	No data available	
Water Solubility	Soluble in water	
Solubility in other solvents	No information available	
Partition Coefficient (n-octanol/water)		
Component	log Pow	
5-Chloro-2-methyl-3(2H)-isothiazolone, <0.401 mixture with 2-methyl-3(2H)-isothiazolone		
Vapor Pressure	No data available	
Density / Specific Gravity	1 g/cm3	
Bulk Density	No data available	
Vapor Density	No data available	(Air = 1.0)
Particle characteristics	Not applicable (liquid)	

## 9.2. Other information

Explosive Properties	Not applicable
Oxidizing Properties	Not applicable

## SECTION 10: STABILITY AND REACTIVITY

10.1. Reactivity	None known.
------------------	-------------

10.2. Chemical stability	Stable under normal conditions.
--------------------------	---------------------------------

### 10.3. Possibility of hazardous reactions

Hazardous Polymerization	Hazardous polymerization does not occur.
Hazardous Reactions	None under normal processing.

10.4. Conditions to avoid	None known.
---------------------------	-------------

10.5. Incompatible materials	None known.
------------------------------	-------------

10.6. Hazardous decomposition products	None known.
--	-------------

## SECTION 11: TOXICOLOGICAL INFORMATION

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

Product Information	Product does not present an acute toxicity hazard based on known or supplied information.
(a) acute toxicity; Oral	No data available.

# SAFETY DATA SHEET

Development Solution

Revision Date 02-Jan-2024

<b>Dermal</b>	No data available.		
<b>Inhalation</b>	No data available.		
Component	LD50 Oral	LD50 Dermal	LC50 Inhalation
5-Chloro-2-methyl-3(2H)-isothiazolone, mixture with 2-methyl-3(2H)-isothiazolone	LD50 = 53 mg/kg ( Rat )	LD50 = 87.12 mg/kg ( Rabbit )	4h 0.33 mg/l ( Rat )

(b) skin corrosion/irritation; No data available.

(c) serious eye damage/irritation; No data available.

(d) respiratory or skin sensitization;

Respiratory

No data available.

Skin

No data available.

(e) germ cell mutagenicity;

No data available.

Component	Test method	Test species	Study result
5-Chloro-2-methyl-3(2H)-isothiazolone, mixture with 2-methyl-3(2H)-isothiazolone	in vivo in vitro		negative

(f) carcinogenicity;

There are no known carcinogenic chemicals in this product.

Component	Test method	Test species / Duration	Study result
5-Chloro-2-methyl-3(2H)-isothiazolone, mixture with 2-methyl-3(2H)-isothiazolone			negative

(g) reproductive toxicity;

No data available.

Component	Test method	Test species / Duration	Study result
5-Chloro-2-methyl-3(2H)-isothiazolone, mixture with 2-methyl-3(2H)-isothiazolone			negative Animal testing did not show any effects on fetal development

(h) STOT-single exposure;

No data available.

(i) STOT-repeated exposure;

No data available.

(j) aspiration hazard;

No data available.

Symptoms / effects, both acute and delayed No information available.

## 11.2. Information on other hazards

### Endocrine Disrupting Properties

This product does not contain any known or suspected endocrine disruptors.

## SECTION 12: ECOLOGICAL INFORMATION

### 12.1. Toxicity

#### Ecotoxicity effects

No information available.

Component	Freshwater Fish	Water Flea	Freshwater Algae	Microtox
5-Chloro-2-methyl-3(2H)-isothiazolone, mixture with 2-methyl-3(2H)-isothiazolone	Acute toxicity: LC50 96 h 0.19mg/l (Oncorhynchus mykiss) EPA OPP 72-1	Acute toxicity: EC50 48 h 0.126 mg/l (Daphnia magna) OECD Test 202	Acute toxicity: ERC50 72 h 0.027 mg/l (Selenastrum capricornutum)	Chronic toxicity: NOEC 3h 0.91 mg/l (Activated sludge) OECD 209

# SAFETY DATA SHEET

Development Solution

Revision Date 02-Jan-2024

	Chronic toxicity: NOEC 35 days 0.02 mg/l (Pimephales promelas) OECD 210	Chronic toxicity: NOEC 21 days 0.10 mg/l (Daphnia magna)	Chronic toxicity: NOEC 96h 0.004 mg/l, (Skelettonema costatum) OECD 201	
--	--	---	--	--

**12.2. Persistence and degradability** No information available.

Component	Degradability
5-Chloro-2-methyl-3(2H)-isothiazolone, mixture with 2-methyl-3(2H)-isothiazolone	Biodegradable <50 % 10 days Atmospheric half-life: 0.38-1.3 Days

**12.3. Bioaccumulative potential** No information available.

Component	log Pow	Bioconcentration factor (BCF)
5-Chloro-2-methyl-3(2H)-isothiazolone, mixture with 2-methyl-3(2H)-isothiazolone	<0.401	<54

**12.4. Mobility in soil** No information available.

**12.5. Results of PBT and vPvB assessment** This preparation contains no substance considered to be persistent, bioaccumulating nor toxic (PBT). This preparation contains no substance considered to be very persistent nor very bioaccumulating (vPvB).

**12.6. Endocrine disrupting properties**

**Endocrine Disruptor Information** This product does not contain any known or suspected endocrine disruptors

**12.7. Other adverse effects**

**Persistent Organic Pollutant** No known effect.  
**Ozone Depletion Potential** No known effect.

## SECTION 13: DISPOSAL CONSIDERATIONS

**13.1. Waste treatment methods**

**Waste from Residues/Unused Products** Dispose of in accordance with local regulations.

**Contaminated Packaging** Dispose of in accordance with local regulations.

**European Waste Catalogue (EWC)** 18 01 07 Chemicals other than those mentioned in 18 01 06.  
**Other Information** No information available.

## SECTION 14: TRANSPORT INFORMATION

**IMDG/IMO** Not regulated

**14.1. UN number**

**14.2. UN proper shipping name**

**14.3. Transport hazard class(es)**

**14.4. Packing group**

**ADR** Not regulated

**14.1. UN number**

**14.2. UN proper shipping name**

**14.3. Transport hazard class(es)**

**14.4. Packing group**



# SAFETY DATA SHEET

Development Solution

Revision Date 02-Jan-2024

IATA Not regulated

14.1. UN number

14.2. UN proper shipping name

14.3. Transport hazard class(es)

14.4. Packing group

14.5. Environmental hazards No hazards identified.

14.6. Special precautions for user No special precautions required.

14.7. Maritime transport in bulk according to IMO instruments Not applicable, packaged goods.

## SECTION 15: REGULATORY INFORMATION

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

International Inventories X = listed

Component	EINECS	ELINCS	NLP	TSCA	DSL	NDSL	PICCS	ENCS	IECSC	AICS	KECL
5-Chloro-2-methyl-3(2H)-isothiazolone, mixture with 2-methyl-3(2H)-isothiazolone	-	-		-	X	-	X	X	X	-	KE-05738

Component	REACH (1907/2006) - Annex XIV - Substances Subject to Authorization	REACH (1907/2006) - Annex XVII - Restrictions on Certain Dangerous Substances	REACH Regulation (EC 1907/2006) article 59 - Candidate List of Substances of Very High Concern (SVHC)
5-Chloro-2-methyl-3(2H)-isothiazolone, mixture with 2-methyl-3(2H)-isothiazolone		Use restricted. See item 75. (see link for restriction details)	

Component	Seveso III Directive (2012/18/EC) - Qualifying Quantities for Major Accident Notification	Seveso III Directive (2012/18/EC) - Qualifying Quantities for Safety Report Requirements
5-Chloro-2-methyl-3(2H)-isothiazolone, mixture with 2-methyl-3(2H)-isothiazolone	H1: 5-100 ton, E1: 20-200 ton	H1: 5-100 ton, E1: 20-200 ton

**Regulation (EC) No 649/2012 of the European Parliament and of the Council of 4 July 2012 concerning the export and import of dangerous chemicals**

Not applicable

### National Regulations

Component	Germany - Water Classification (AwSV)	Germany - TA-Luft Class
5-Chloro-2-methyl-3(2H)-isothiazolone, mixture with 2-methyl-3(2H)-isothiazolone	WGK3	

**UK** - Take note of Control of Substances Hazardous to Health Regulations (COSHH) 2002 and 2005 Amendment.

15.2. Chemical safety assessment

A Chemical Safety Assessment/Report (CSA/CSR) is not required.

## SECTION 16: OTHER INFORMATION

# SAFETY DATA SHEET

Development Solution

Revision Date 02-Jan-2024

## Full text of H-Statements referred to under sections 2 and 3

H301 - Toxic if swallowed  
H310 - Fatal in contact with skin  
H314 - Causes severe skin burns and eye damage  
H317 - May cause an allergic skin reaction  
H318 - Causes serious eye damage  
H330 - Fatal if inhaled  
H400 - Very toxic to aquatic life  
H410 - Very toxic to aquatic life with long lasting effects  
EUH071 - Corrosive to the respiratory tract  
EUH208 - May produce an allergic reaction

## Legend

**CAS** - Chemical Abstracts Service

**EINECS/ELINCS** - European Inventory of Existing Commercial Chemical Substances/EU List of Notified Chemical Substances

**PICCS** - Philippines Inventory of Chemicals and Chemical Substances

**IECSC** - Chinese Inventory of Existing Chemical Substances

**KECL** - Korean Existing and Evaluated Chemical Substances

**TSCA** - United States Toxic Substances Control Act Section 8(b) Inventory

**DSL/NDL** - Canadian Domestic Substances List/Non-Domestic Substances List

**ENCS** - Japanese Existing and New Chemical Substances

**AICS** - Australian Inventory of Chemical Substances

**NZIoC** - New Zealand Inventory of Chemicals

**WEL** - Workplace Exposure Limit

**ACGIH** - American Conference of Governmental Industrial Hygienists

**DNEL** - Derived No Effect Level

**RPE** - Respiratory Protective Equipment

**LC50** - Lethal Concentration 50%

**NOEC** - No Observed Effect Concentration

**PBT** - Persistent, Bioaccumulative, Toxic

**TWA** - Time Weighted Average

**IARC** - International Agency for Research on Cancer  
Predicted No Effect Concentration (PNEC)

**LD50** - Lethal Dose 50%

**EC50** - Effective Concentration 50%

**POW** - Partition coefficient Octanol:Water

**vPvB** - very Persistent, very Bioaccumulative

**ADR** - European Agreement Concerning the International Carriage of Dangerous Goods by Road

**IMO/IMDG** - International Maritime Organization/International Maritime Dangerous Goods Code

**OECD** - Organisation for Economic Co-operation and Development

**BCF** - Bioconcentration factor

**ICAO/IATA** - International Civil Aviation Organization/International Air Transport Association

**MARPOL** - International Convention for the Prevention of Pollution from Ships

**ATE** - Acute Toxicity Estimate

**VOC** (volatile organic compound)

## Key literature references and sources for data

<https://echa.europa.eu/information-on-chemicals>

Suppliers safety data sheet, Chemadvisor - LOLI, Merck index, RTECS

## Physical hazards

On basis of test data

## Health Hazards

Calculation method

## Environmental hazards

Calculation method

## Training Advice

Chemical hazard awareness training, incorporating labelling, Safety Data Sheets (SDS), Personal Protective Equipment (PPE) and hygiene.

## Revision Date

02-Jan-2024

## Revision Summary

SDS sections updated, 7.

**This safety data sheet complies with the requirements of Regulation (EC) No. 1907/2006  
COMMISSION REGULATION (EU) 2020/878 amending Annex II to Regulation (EC) No  
1907/2006**

## Disclaimer

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text

**End of Safety Data Sheet**