

**Safety Data Sheet**

according to Regulation (EC) No 1907/2006

**27541-42 THM Plus Reagent 3**

Revision date: 22.08.2017

Product code: 2754142

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**SECTION 1: Identification of the substance/mixture and of the company/undertaking****1.1. Product identifier**

27541-42 THM Plus Reagent 3

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

Water analysis

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

Company name: HACH LANGE GmbH  
Street: Willstätterstr. 11  
Place: D-40549 Düsseldorf  
Telephone: +49 (0)211 5288-383  
e-mail: SDS@hach.com  
Internet: www.de.hach.com  
Responsible Department: HACH LANGE Ltd.  
5, Pacific Way  
Salford Manchester M50 1DL - United Kingdom  
Tel. +44 (0) 161 872 1487 \* Fax +44 (0) 161 848 7324  
e-Mail: info-uk@hach.com

HACH LANGE Ltd.  
Unit 1, Chestnut Road Western Industrial Estate  
IRL-Dublin 12  
Tel. +353 (0)1 4602522  
e-Mail: info-ie@hach.com

**1.4. Emergency telephone number:**

Poison Control Center Mainz: Tel: +49 (0) 6131 19240 - 24 hour emergency service -

**SECTION 2: Hazards identification****2.1. Classification of the substance or mixture****Regulation (EC) No. 1272/2008**

Hazard categories:

Substance or mixture corrosive to metals: Met. Corr. 1

Skin corrosion/irritation: Skin Corr. 1A

Serious eye damage/eye irritation: Eye Dam. 1

Hazard Statements:

May be corrosive to metals.

Causes severe skin burns and eye damage.

Causes serious eye damage.

**2.2. Label elements****Regulation (EC) No. 1272/2008****Hazard components for labelling**

phosphoric acid; orthophosphoric acid ... %

sulphuric acid ... %

**Signal word:** Danger**Pictograms:**

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#### Hazard statements

H290 May be corrosive to metals.  
H314 Causes severe skin burns and eye damage.

#### Precautionary statements

P304+P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.  
P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.  
P303+P361+P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water or shower.  
P301+P330+P331 IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.  
P310 Immediately call a POISON CENTER/doctor.

#### Additional advice on labelling

The product is classified as dangerous in accordance with Regulation (EC) No. 1272/2008.

#### 2.3. Other hazards

None known.

### SECTION 3: Composition/information on ingredients

#### 3.2. Mixtures

##### Hazardous components

CAS No	Chemical name			Quantity
	EC No	Index No	REACH No	
	Classification according to Regulation (EC) No. 1272/2008 [CLP]			
7664-38-2	phosphoric acid; orthophosphoric acid ... %			60-70 %
	231-633-2	015-011-00-6		
	Skin Corr. 1B; H314			
7664-93-9	sulphuric acid ... %			15-25 %
	231-639-5	016-020-00-8		
	Skin Corr. 1A; H314			
7732-18-5	Water			10-20 %
	231-791-2			

Full text of H and EUH statements: see section 16.

### SECTION 4: First aid measures

#### 4.1. Description of first aid measures

##### General information

Take off all contaminated clothing immediately.  
Consult a physician. Show this safety data sheet to the doctor in attendance.

##### After inhalation

Move to fresh air.

##### After contact with skin

Wash off immediately with plenty of water for at least 15 minutes. Consult a physician. Show this safety data sheet to the doctor in attendance.

##### After contact with eyes

Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician. Show this safety data sheet to the doctor in attendance.

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#### After ingestion

Clean mouth with water and drink afterwards plenty of water. Do NOT induce vomiting.  
Consult a physician. Show this safety data sheet to the doctor in attendance.

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

Irritation and corrosion, Cough, Shortness of breath, Nausea, Vomiting, Diarrhoea

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

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. The product itself does not burn.

#### Unsuitable extinguishing media

None known.

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

Fire may liberate hazardous vapours. The following may develop in event of fire: sulfur oxides.

### 5.3. Advice for firefighters

In the event of fire, wear self-contained breathing apparatus. In order to avoid contact with skin, keep a safety distance and wear suitable protective clothing.

#### Additional information

Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations.

## SECTION 6: Accidental release measures

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

Use personal protective equipment. Do not breathe vapours, mist or gas. Ensure adequate ventilation.

### 6.2. Environmental precautions

Do not flush into surface water or sanitary sewer system.

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

Soak up with inert absorbent material and dispose of as hazardous waste.

### 6.4. Reference to other sections

13. Disposal considerations

## SECTION 7: Handling and storage

### 7.1. Precautions for safe handling

#### Advice on safe handling

Use only in well-ventilated areas. Do not breathe vapours/dust.  
Avoid contact with skin and eyes.

#### Advice on protection against fire and explosion

None known.

#### Further information on handling

Observe label precautions.

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

#### Requirements for storage rooms and vessels

Keep tightly closed in a dry, cool and well-ventilated place.

### 7.3. Specific end use(s)

Reagent for analysis

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## SECTION 8: Exposure controls/personal protection

### 8.1. Control parameters

#### Exposure limits (EH40)

CAS No	Substance	ppm	mg/m <sup>3</sup>	fibres/ml	Category	Origin
7664-38-2	Orthophosphoric acid	-	1		TWA (8 h)	WEL
		-	2		STEL (15 min)	WEL
7664-93-9	Sulphuric acid (mist)	-	0.05		TWA (8 h)	WEL

#### Additional advice on limit values

None known.

### 8.2. Exposure controls

#### Appropriate engineering controls

Technical measures and appropriate working operations should be given priority over the use of personal protective equipment.

#### Protective and hygiene measures

The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

#### Eye/face protection

Safety glasses with side-shields

#### Hand protection

Use barrier skin cream.

Wash hands before breaks and after work.

Chemical resistant gloves made of butyl rubber or nitrile rubber category III according to EN 374.

#### Skin protection

Remove and wash contaminated clothing before re-use.

#### Respiratory protection

Breathing apparatus only if aerosol or dust is formed.

Recommended Filter type: ABEK-filter

## SECTION 9: Physical and chemical properties

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

Physical state:	liquid
Colour:	colourless
Odour:	odourless
pH-Value (at 20 °C):	<1

#### Changes in the physical state

Melting point:	no data available
Initial boiling point and boiling range:	no data available
Sublimation point:	not applicable
Softening point:	not applicable
Pour point:	no data available
Flash point:	not applicable
Sustaining combustion:	No data available

#### Flammability

Solid:	no data available
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Gas: no data available

**Explosive properties**

no data available

Lower explosion limits: not applicable

Upper explosion limits: not applicable

Ignition temperature: not applicable

**Auto-ignition temperature**

Solid: no data available

Gas: no data available

Decomposition temperature: no data available

**Oxidizing properties**

no data available

Vapour pressure: no data available

Density (at 20 °C): 1,72 g/cm<sup>3</sup>

Bulk density: not applicable

Water solubility:  
(at 20 °C) completely soluble**Solubility in other solvents**

soluble

Partition coefficient: no data available

Viscosity / dynamic: no data available

Viscosity / kinematic: no data available

Flow time: no data available

Vapour density: no data available

Evaporation rate: no data available

Solvent separation test: no data available

Solvent content: no data available

**9.2. Other information**

Solid content: no data available

no data available

**SECTION 10: Stability and reactivity****10.1. Reactivity**

Corrosive to metals

**10.2. Chemical stability**

Stable under recommended storage conditions.

**10.3. Possibility of hazardous reactions**

Hazardous polymerisation does not occur.

Reacts violently with water. Reacts with the following substances: Alkali metals, Alkaline earth metals, Peroxides

**10.4. Conditions to avoid**

To avoid thermal decomposition, do not overheat. Above 300 °C, hazardous fumes may be released. Gives off hydrogen by reaction with metals.

**10.5. Incompatible materials**

Metals

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#### 10.6. Hazardous decomposition products

Sulphur trioxide

#### Further information

very reactive

### SECTION 11: Toxicological information

#### 11.1. Information on toxicological effects

##### Acute toxicity

No data is available on the product itself.

CAS No	Chemical name					
	Exposure route	Dose	Species	Source	Method	
7664-38-2	phosphoric acid; orthophosphoric acid ... %					
	dermal	LD50 mg/kg	2740	rabbit	IUCLID	

##### Irritation and corrosivity

The product causes burns of eyes, skin and mucous membranes.

##### Sensitising effects

This information is not available.

##### Carcinogenic/mutagenic/toxic effects for reproduction

Contains no ingredient listed as a carcinogen

##### STOT-single exposure

The substance or mixture is not classified as specific target organ toxicant, single exposure.

##### STOT-repeated exposure

The substance or mixture is not classified as specific target organ toxicant, repeated exposure.

##### Aspiration hazard

No aspiration toxicity classification

##### Specific effects in experiment on an animal

No toxicology information is available.

#### Further information

Other dangerous properties can not be excluded. Handle in accordance with good industrial hygiene and safety practice.

### SECTION 12: Ecological information

#### 12.1. Toxicity

Do not flush into surface water or sanitary sewer system.

CAS No	Chemical name					
	Aquatic toxicity	Dose	[h]   [d]	Species	Source	Method
7664-38-2	phosphoric acid; orthophosphoric acid ... %					
	Acute fish toxicity	LC50	138 mg/l	96 h	Gambusia affinis	

#### 12.2. Persistence and degradability

This mixture contains no substance considered to be persistent, bioaccumulating nor toxic (PBT).

#### 12.3. Bioaccumulative potential

no data available

#### 12.4. Mobility in soil

no data available

#### 12.5. Results of PBT and vPvB assessment

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no data available

#### **12.6. Other adverse effects**

Discharge into the environment must be avoided.

### SECTION 13: Disposal considerations

#### **13.1. Waste treatment methods**

##### Advice on disposal

In accordance with local and national regulations.

##### Waste disposal number of waste from residues/unused products

160506 WASTES NOT OTHERWISE SPECIFIED IN THE LIST; gases in pressure containers and discarded chemicals; laboratory chemicals, consisting of or containing hazardous substances, including mixtures of laboratory chemicals; hazardous waste

##### Waste disposal number of used product

160506 WASTES NOT OTHERWISE SPECIFIED IN THE LIST; gases in pressure containers and discarded chemicals; laboratory chemicals, consisting of or containing hazardous substances, including mixtures of laboratory chemicals; hazardous waste

### SECTION 14: Transport information

#### Land transport (ADR/RID)

<b>14.1. UN number:</b>	UN 3264
<b>14.2. UN proper shipping name:</b>	Corrosive liquid, acidic, inorganic, n.o.s.
<b>14.3. Transport hazard class(es):</b>	8
<b>14.4. Packing group:</b>	II

#### Inland waterways transport (ADN)

##### Other applicable information (inland waterways transport)

Not tested

#### Marine transport (IMDG)

<b>14.1. UN number:</b>	UN 3264
<b>14.2. UN proper shipping name:</b>	Corrosive liquid, acidic, inorganic, n.o.s. (Sulphuric acid, phosphoric acid solution)
<b>14.3. Transport hazard class(es):</b>	8
<b>14.4. Packing group:</b>	II
Marine pollutant:	--
EmS:	F-A,S-B

#### Air transport (ICAO-TI/IATA-DGR)

<b>14.1. UN number:</b>	UN 3264
<b>14.2. UN proper shipping name:</b>	Corrosive liquid, acidic, inorganic, n.o.s. (Sulphuric acid, phosphoric acid solution)
<b>14.3. Transport hazard class(es):</b>	8
<b>14.4. Packing group:</b>	II

#### **14.5. Environmental hazards**

ENVIRONMENTALLY HAZARDOUS: no

#### **14.6. Special precautions for user**

Use personal protective equipment.

#### **14.7. Transport in bulk according to Annex II of Marpol and the IBC Code**

Not relevant

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**Other applicable information**

Additional Information: This product may be shipped as part of a chemical kit composed of various compatible dangerous goods for analytical or testing purposes. This kit would have the following classification: Proper Shipping Name: Chemical Kit, Hazard Class: 9, UN Number 3316, Package group II, EMS Code: F-A, S-P

**SECTION 15: Regulatory information****15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture****National regulatory information**

Water contaminating class (D): 1 - slightly water contaminating

**15.2. Chemical safety assessment**

Chemical safety assessments for substances in this mixture were not carried out.

**SECTION 16: Other information****Changes**

Revision: 22.08.2017

Safety datasheet sections which have been updated: 2, 9

Revision: 30.09.2015

Safety datasheet sections which have been updated: 2

**Classification for mixtures and used evaluation method according to Regulation (EC) No. 1272/2008 [CLP]**

Classification	Classification procedure
Met. Corr. 1; H290	On basis of test data
Skin Corr. 1A; H314	Calculation method
Eye Dam. 1; H318	Calculation method

**Relevant H and EUH statements (number and full text)**

H290 May be corrosive to metals.  
H314 Causes severe skin burns and eye damage.

**Further Information**

The information is based on present level of our knowledge. It does not, however, give assurances of product properties and establishes no contract legal rights.

*(The data for the hazardous ingredients were taken respectively from the last version of the sub-contractor's safety data sheet.)*