

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

### 1.1. Product identifier

<b>Trade name or designation of the mixture</b>	SHAMROCK 392 MORTAR
<b>Registration number</b>	-
<b>Synonyms</b>	None.
<b>Brand Code</b>	9994
<b>Issue date</b>	04-May-2022
<b>Version number</b>	01

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

<b>Identified uses</b>	For Industrial or Professional Use Only
<b>Uses advised against</b>	Avoid dry cutting, blasting, or dust generation.

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

#### Supplier

<b>Company name</b>	HarbisonWalker International	
<b>Address</b>	1305 Cherrington Parkway, Suite 100 Moon Township, PA 15108, USA United States	
<b>Division</b>		
<b>Telephone</b>	General Phone:	412-375-6743
	CHEMTREC EMERGENCY	1-800-424-9300
	US/CAN ONLY	
<b>e-mail</b>	sds@thinkHWI.com	
<b>Contact person</b>	HWI USA	

<b>1.4. Emergency telephone number</b>	General Phone:	412-375-6600
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## SECTION 2: Hazards identification

### 2.1. Classification of the substance or mixture

The mixture has been assessed and/or tested for its physical, health and environmental hazards and the following classification applies.

#### Classification according to Regulation (EC) No 1272/2008 as amended

This mixture does not meet the criteria for classification according to Regulation (EC) 1272/2008 as amended.

<b>Hazard summary</b>	Not classified for health hazards. However, occupational exposure to the mixture or substance(s) may cause adverse health effects.
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### 2.2. Label elements

#### Label according to Regulation (EC) No. 1272/2008 as amended

<b>Hazard pictograms</b>	None.
<b>Signal word</b>	None.
<b>Hazard statements</b>	The mixture does not meet the criteria for classification.

#### Precautionary statements

<b>Prevention</b>	Observe good industrial hygiene practices.
<b>Response</b>	Wash hands after handling.
<b>Storage</b>	Store away from incompatible materials.
<b>Disposal</b>	Dispose of waste and residues in accordance with local authority requirements.

<b>Supplemental label information</b>	None.
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<b>2.3. Other hazards</b>	Not a PBT or vPvB substance or mixture.
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## SECTION 3: Composition/information on ingredients

### 3.2. Mixtures

## General information

Chemical name	%	CAS-No. / EC No.	REACH Registration No.	Index No.	Notes
Orthophosphoric acid	2,5 - 10	7664-38-2 231-633-2	-	015-011-00-6	#
<b>Classification:</b>	Skin Irrit. 2;H315, Eye Irrit. 2;H319				B
Other components below reportable levels	80 - 100				

### List of abbreviations and symbols that may be used above

#: This substance has been assigned Union workplace exposure limit(s).

M: M-factor

PBT: persistent, bioaccumulative and toxic substance.

vPvB: very persistent and very bioaccumulative substance.

**Composition comments** The full text for all H-statements is displayed in section 16.

## SECTION 4: First aid measures

**General information** Not available.

### 4.1. Description of first aid measures

**Inhalation** Move to fresh air. Call a physician if symptoms develop or persist.

**Skin contact** Wash off with soap and water. Get medical attention if irritation develops and persists.

**Eye contact** Rinse with water. Get medical attention if irritation develops and persists.

**Ingestion** Rinse mouth. Get medical attention if symptoms occur.

**4.2. Most important symptoms and effects, both acute and delayed** Exposure may cause temporary irritation, redness, or discomfort.

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

## SECTION 5: Firefighting measures

**General fire hazards** Not available.

### 5.1. Extinguishing media

**Suitable extinguishing media** Use fire-extinguishing media appropriate for surrounding materials.

**Unsuitable extinguishing media** Not available.

**5.2. Special hazards arising from the substance or mixture** Not available.

### 5.3. Advice for firefighters

**Special protective equipment for firefighters** Not available.

**Special fire fighting procedures** Not available.

## SECTION 6: Accidental release measures

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

**For non-emergency personnel** Keep unnecessary personnel away. For personal protection, see section 8 of the SDS.

**For emergency responders** Keep unnecessary personnel away. Use personal protection recommended in Section 8 of the SDS.

**6.2. Environmental precautions** Avoid discharge into drains, water courses or onto the ground.

**6.3. Methods and material for containment and cleaning up** Stop the flow of material, if this is without risk. Following product recovery, flush area with water. For waste disposal, see section 13 of the SDS.

**6.4. Reference to other sections** For personal protection, see section 8 of the SDS. For waste disposal, see section 13 of the SDS.

## SECTION 7: Handling and storage

<b>7.1. Precautions for safe handling</b>	Observe good industrial hygiene practices.
<b>7.2. Conditions for safe storage, including any incompatibilities</b>	Store in tightly closed container. Store away from incompatible materials (see Section 10 of the SDS).
<b>7.3. Specific end use(s)</b>	Not available.

## SECTION 8: Exposure controls/personal protection

### 8.1. Control parameters

#### Occupational exposure limits

##### Austria. MAK List, OEL Ordinance (GwV), BGBl. II, no. 184/2001

Components	Type	Value	Form
Aluminium Oxide (Non-Fibrous) (CAS 1344-28-1)	MAK	5 mg/m <sup>3</sup>	Respirable fraction.
		5 mg/m <sup>3</sup>	Respirable fume.
	10 mg/m <sup>3</sup>	Inhalable fraction.	
	STEL	20 mg/m <sup>3</sup>	Inhalable fraction.
		10 mg/m <sup>3</sup>	Respirable fraction.
Chromium (III) oxide (CAS 1308-38-9)	MAK	10 mg/m <sup>3</sup>	Respirable fume.
		2 mg/m <sup>3</sup>	
Orthophosphoric acid (CAS 7664-38-2)	MAK	1 mg/m <sup>3</sup>	
	STEL	2 mg/m <sup>3</sup>	

##### Belgium. Exposure Limit Values.

Components	Type	Value	Form
Aluminium Oxide (Non-Fibrous) (CAS 1344-28-1)	TWA	1 mg/m <sup>3</sup>	Respirable fraction.
	STEL	2 mg/m <sup>3</sup>	
Orthophosphoric acid (CAS 7664-38-2)	TWA	1 mg/m <sup>3</sup>	

##### Bulgaria. OELs. Regulation No 13 on protection of workers against risks of exposure to chemical agents at work

Components	Type	Value	Form
Aluminium Oxide (Non-Fibrous) (CAS 1344-28-1)	TWA	3,5 mg/m <sup>3</sup>	Respirable fraction.
		10 mg/m <sup>3</sup>	Dust.
		1,5 mg/m <sup>3</sup>	Respirable fraction.
Chromium (III) oxide (CAS 1308-38-9)	TWA	2 mg/m <sup>3</sup>	
		2 mg/m <sup>3</sup>	
Orthophosphoric acid (CAS 7664-38-2)	STEL	2 mg/m <sup>3</sup>	
	TWA	1 mg/m <sup>3</sup>	

##### Croatia. Dangerous Substance Exposure Limit Values in the Workplace (ELVs), Annexes 1 and 2, Narodne Novine, 13/09

Components	Type	Value	Form
Aluminium Oxide (Non-Fibrous) (CAS 1344-28-1)	MAC	4 mg/m <sup>3</sup>	Respirable dust.
		10 mg/m <sup>3</sup>	Total dust.
Orthophosphoric acid (CAS 7664-38-2)	MAC	1 mg/m <sup>3</sup>	
	STEL	2 mg/m <sup>3</sup>	

**Czech Republic. OELs. Government Decree 361 Components**

Components	Type	Value	Form
Aluminium Oxide (Non-Fibrous) (CAS 1344-28-1)	TWA	0,1 mg/m3	Respirable dust.
Chromium (III) oxide (CAS 1308-38-9)	Ceiling	1,5 mg/m3	Aerosol, inhalable.
	TWA	0,5 mg/m3	Aerosol, inhalable.
Orthophosphoric acid (CAS 7664-38-2)	Ceiling	2 mg/m3	
	TWA	1 mg/m3	

**Denmark. Exposure Limit Values Components**

Components	Type	Value	Form
Aluminium Oxide (Non-Fibrous) (CAS 1344-28-1)	TLV	5 mg/m3	Total
		2 mg/m3	Respirable.
Orthophosphoric acid (CAS 7664-38-2)	TLV	1 mg/m3	

**Estonia. OELs. Occupational Exposure Limits of Hazardous Substances. (Annex of Regulation No. 293 of 18 September 2001)**

Components	Type	Value	Form
Aluminium Oxide (Non-Fibrous) (CAS 1344-28-1)	TWA	4 mg/m3	Fine dust, respiratory fraction
		10 mg/m3	Total dust.
Chromium (III) oxide (CAS 1308-38-9)	STEL	0,06 mg/m3	
	TWA	0,02 mg/m3	
Orthophosphoric acid (CAS 7664-38-2)	STEL	2 mg/m3	Vapour.
	TWA	1 mg/m3	Vapour.

**Finland. Workplace Exposure Limits Components**

Components	Type	Value
Chromium (III) oxide (CAS 1308-38-9)	TWA	0,5 mg/m3
Orthophosphoric acid (CAS 7664-38-2)	STEL	2 mg/m3
	TWA	1 mg/m3

**France. Threshold Limit Values (VLEP) for Occupational Exposure to Chemicals in France, INRS ED 984 Components**

Components	Type	Value
Aluminium Oxide (Non-Fibrous) (CAS 1344-28-1)	VME	10 mg/m3
<b>Regulatory status:</b> Indicative limit (VL)		
Chromium (III) oxide (CAS 1308-38-9)	VME	2 mg/m3
<b>Regulatory status:</b> Regulatory indicative (VRI)		
Orthophosphoric acid (CAS 7664-38-2)	VLE	2 mg/m3
<b>Regulatory status:</b> Regulatory indicative (VRI)		
		0,5 ppm
<b>Regulatory status:</b> Regulatory indicative (VRI)		
	VME	1 mg/m3
<b>Regulatory status:</b> Regulatory indicative (VRI)		
		0,2 ppm
<b>Regulatory status:</b> Regulatory indicative (VRI)		

**Germany. DFG MAK List (advisory OELs). Commission for the Investigation of Health Hazards of Chemical Compounds in the Work Area (DFG)**

<b>Components</b>	<b>Type</b>	<b>Value</b>	<b>Form</b>
Aluminium Oxide (Non-Fibrous) (CAS 1344-28-1)	TWA	4 mg/m <sup>3</sup>	Inhalable dust.
		1,5 mg/m <sup>3</sup>	Respirable dust.
Orthophosphoric acid (CAS 7664-38-2)	TWA	2 mg/m <sup>3</sup>	Inhalable fraction.

**Germany. TRGS 900, Limit Values in the Ambient Air at the Workplace**

<b>Components</b>	<b>Type</b>	<b>Value</b>	<b>Form</b>
Aluminium Oxide (Non-Fibrous) (CAS 1344-28-1)	AGW	10 mg/m <sup>3</sup>	Inhalable fraction.
		1,25 mg/m <sup>3</sup>	Respirable fraction.
Chromium (III) oxide (CAS 1308-38-9)	AGW	2 mg/m <sup>3</sup>	Inhalable fraction.
Orthophosphoric acid (CAS 7664-38-2)	AGW	2 mg/m <sup>3</sup>	Inhalable fraction.

**Greece. OELs (Decree No. 90/1999, as amended)**

<b>Components</b>	<b>Type</b>	<b>Value</b>	<b>Form</b>
Aluminium Oxide (Non-Fibrous) (CAS 1344-28-1)	TWA	5 mg/m <sup>3</sup>	Inhalable
		10 mg/m <sup>3</sup>	Respirable.
Chromium (III) oxide (CAS 1308-38-9)	TWA	0,5 mg/m <sup>3</sup>	
Orthophosphoric acid (CAS 7664-38-2)	STEL	3 mg/m <sup>3</sup>	
	TWA	1 mg/m <sup>3</sup>	

**Hungary. OELs. Joint Decree on Chemical Safety of Workplaces**

<b>Components</b>	<b>Type</b>	<b>Value</b>	<b>Form</b>
Aluminium Oxide (Non-Fibrous) (CAS 1344-28-1)	TWA	6 mg/m <sup>3</sup>	Respirable.
Chromium (III) oxide (CAS 1308-38-9)	STEL	2 mg/m <sup>3</sup>	
	TWA	0,5 mg/m <sup>3</sup>	
Orthophosphoric acid (CAS 7664-38-2)	STEL	2 mg/m <sup>3</sup>	
	TWA	1 mg/m <sup>3</sup>	

**Iceland. OELs. Regulation 154/1999 on occupational exposure limits**

<b>Components</b>	<b>Type</b>	<b>Value</b>	<b>Form</b>
Aluminium Oxide (Non-Fibrous) (CAS 1344-28-1)	TWA	10 mg/m <sup>3</sup>	
Chromium (III) oxide (CAS 1308-38-9)	TWA	0,5 mg/m <sup>3</sup>	Dust.
Orthophosphoric acid (CAS 7664-38-2)	STEL	2 mg/m <sup>3</sup>	
	TWA	1 mg/m <sup>3</sup>	

**Ireland. Occupational Exposure Limits**

<b>Components</b>	<b>Type</b>	<b>Value</b>	<b>Form</b>
Aluminium Oxide (Non-Fibrous) (CAS 1344-28-1)	TWA	4 mg/m <sup>3</sup>	Respirable dust.
		10 mg/m <sup>3</sup>	Total inhalable dust.

**Ireland. Occupational Exposure Limits**

Components	Type	Value	Form
Chromium (III) oxide (CAS 1308-38-9)	TWA	2 mg/m3	
Orthophosphoric acid (CAS 7664-38-2)	STEL	2 mg/m3	
	TWA	1 mg/m3	

**Italy. Occupational Exposure Limits**

Components	Type	Value	Form
Aluminium Oxide (Non-Fibrous) (CAS 1344-28-1)	TWA	1 mg/m3	Respirable fraction.
Orthophosphoric acid (CAS 7664-38-2)	STEL	2 mg/m3	
	TWA	1 mg/m3	

**Latvia. OELs. Occupational exposure limit values of chemical substances in work environment**

Components	Type	Value	Form
Aluminium Oxide (Non-Fibrous) (CAS 1344-28-1)	TWA	6 mg/m3	Decomposition aerosol.
		4 mg/m3	
Chromium (III) oxide (CAS 1308-38-9)	TWA	1 mg/m3	
Orthophosphoric acid (CAS 7664-38-2)	STEL	2 mg/m3	
	TWA	1 mg/m3	

**Lithuania. OELs. Limit Values for Chemical Substances, General Requirements**

Components	Type	Value	Form
Aluminium Oxide (Non-Fibrous) (CAS 1344-28-1)	TWA	5 mg/m3	Inhalable fraction.
		2 mg/m3	Respirable fraction.
Orthophosphoric acid (CAS 7664-38-2)	STEL	2 mg/m3	
	TWA	1 mg/m3	

**Luxembourg. Binding Occupational exposure limit values (Annex I), Memorial A**

Components	Type	Value
Orthophosphoric acid (CAS 7664-38-2)	STEL	2 mg/m3
	TWA	1 mg/m3

**Malta. OELs. Occupational Exposure Limit Values (L.N. 227. of Occupational Health and Safety Authority Act (CAP. 424), Schedules I and V)**

Components	Type	Value
Orthophosphoric acid (CAS 7664-38-2)	STEL	2 mg/m3
	TWA	1 mg/m3

**Netherlands. OELs (binding)**

Components	Type	Value
Orthophosphoric acid (CAS 7664-38-2)	STEL	2 mg/m3
	TWA	1 mg/m3

**Norway. Administrative Norms for Contaminants in the Workplace**

Components	Type	Value
Aluminium Oxide (Non-Fibrous) (CAS 1344-28-1)	TLV	10 mg/m3

**Norway. Administrative Norms for Contaminants in the Workplace**

Components	Type	Value
Chromium (III) oxide (CAS 1308-38-9)	TLV	0,5 mg/m <sup>3</sup>
Orthophosphoric acid (CAS 7664-38-2)	TLV	1 mg/m <sup>3</sup>

**Ordinance of the Minister of Labour and Social Policy on 6 June 2014 on the maximum permissible concentrations and intensities of harmful health factors in the work environment, Journal of Laws 2014, item 817**

Components	Type	Value	Form
Aluminium Oxide (Non-Fibrous) (CAS 1344-28-1)	TWA	2,5 mg/m <sup>3</sup>	Inhalable fraction.
		1,2 mg/m <sup>3</sup>	Respirable fraction.
Chromium (III) oxide (CAS 1308-38-9)	TWA	0,5 mg/m <sup>3</sup>	
Orthophosphoric acid (CAS 7664-38-2)	STEL	2 mg/m <sup>3</sup>	
	TWA	1 mg/m <sup>3</sup>	

**Portugal. OELs. Decree-Law n. 290/2001 (Journal of the Republic - 1 Series A, n.266)**

Components	Type	Value
Orthophosphoric acid (CAS 7664-38-2)	STEL	2 mg/m <sup>3</sup>
	TWA	1 mg/m <sup>3</sup>

**Portugal. VLEs. Norm on occupational exposure to chemical agents (NP 1796)**

Components	Type	Value	Form
Aluminium Oxide (Non-Fibrous) (CAS 1344-28-1)	TWA	1 mg/m <sup>3</sup>	Respirable fraction.
Chromium (III) oxide (CAS 1308-38-9)	TWA	0,5 mg/m <sup>3</sup>	
Orthophosphoric acid (CAS 7664-38-2)	STEL	3 mg/m <sup>3</sup>	
	TWA	1 mg/m <sup>3</sup>	

**Romania. OELs. Protection of workers from exposure to chemical agents at the workplace**

Components	Type	Value	Form
Aluminium Oxide (Non-Fibrous) (CAS 1344-28-1)	STEL	5 mg/m <sup>3</sup>	Aerosol
	TWA	2 mg/m <sup>3</sup>	Aerosol
Chromium (III) oxide (CAS 1308-38-9)	TWA	0,5 mg/m <sup>3</sup>	
Orthophosphoric acid (CAS 7664-38-2)	STEL	2 mg/m <sup>3</sup>	
	TWA	1 mg/m <sup>3</sup>	

**Slovakia. OELs. Regulation No. 300/2007 concerning protection of health in work with chemical agents**

Components	Type	Value	Form
Aluminium Oxide (Non-Fibrous) (CAS 1344-28-1)	TWA	4 mg/m <sup>3</sup>	Inhalable fraction.
		1,5 mg/m <sup>3</sup>	Respirable fraction.
		0,1 mg/m <sup>3</sup>	
Chromium (III) oxide (CAS 1308-38-9)	TWA	2 mg/m <sup>3</sup>	
Orthophosphoric acid (CAS 7664-38-2)	STEL	2 mg/m <sup>3</sup>	
	TWA	1 mg/m <sup>3</sup>	

**Slovenia. OELs. Regulations concerning protection of workers against risks due to exposure to chemicals while working (Official Gazette of the Republic of Slovenia)**

Components	Type	Value	Form
Aluminium Oxide (Non-Fibrous) (CAS 1344-28-1)	TWA	10 mg/m <sup>3</sup>	Inhalable fraction.
		1,25 mg/m <sup>3</sup>	Respirable fraction.
Chromium (III) oxide (CAS 1308-38-9)	TWA	2 mg/m <sup>3</sup>	Inhalable fraction.
Orthophosphoric acid (CAS 7664-38-2)	TWA	1 mg/m <sup>3</sup>	

**Spain. Occupational Exposure Limits**

Components	Type	Value	
Aluminium Oxide (Non-Fibrous) (CAS 1344-28-1)	TWA	10 mg/m <sup>3</sup>	
Chromium (III) oxide (CAS 1308-38-9)	TWA	2 mg/m <sup>3</sup>	
Orthophosphoric acid (CAS 7664-38-2)	STEL	2 mg/m <sup>3</sup>	
	TWA	1 mg/m <sup>3</sup>	

**Sweden. OELs. Work Environment Authority (AV), Occupational Exposure Limit Values (AFS 2015:7)**

Components	Type	Value	Form
Aluminium Oxide (Non-Fibrous) (CAS 1344-28-1)	TWA	5 mg/m <sup>3</sup>	Total dust.
		2 mg/m <sup>3</sup>	Respirable dust.
Orthophosphoric acid (CAS 7664-38-2)	Ceiling	2 mg/m <sup>3</sup>	
	TWA	1 mg/m <sup>3</sup>	

**Switzerland. SUVA Grenzwerte am Arbeitsplatz**

Components	Type	Value	Form
Aluminium Oxide (Non-Fibrous) (CAS 1344-28-1)	STEL	24 mg/m <sup>3</sup>	Respirable dust and/or fume.
	TWA	3 mg/m <sup>3</sup>	Respirable dust and/or fume.
		3 mg/m <sup>3</sup>	Respirable dust.
Chromium (III) oxide (CAS 1308-38-9)	TWA	0,5 mg/m <sup>3</sup>	Inhalable fraction.
Orthophosphoric acid (CAS 7664-38-2)	STEL	4 mg/m <sup>3</sup>	Inhalable fraction.
	TWA	2 mg/m <sup>3</sup>	Inhalable fraction.

**UK. EH40 Workplace Exposure Limits (WELs)**

Components	Type	Value	Form
Aluminium Oxide (Non-Fibrous) (CAS 1344-28-1)	TWA	4 mg/m <sup>3</sup>	Respirable dust.
		10 mg/m <sup>3</sup>	Inhalable dust.
Chromium (III) oxide (CAS 1308-38-9)	TWA	0,5 mg/m <sup>3</sup>	
Orthophosphoric acid (CAS 7664-38-2)	STEL	2 mg/m <sup>3</sup>	
	TWA	1 mg/m <sup>3</sup>	

**EU. Indicative Exposure Limit Values in Directives 91/322/EEC, 2000/39/EC, 2006/15/EC, 2009/161/EU**

Components	Type	Value	
Orthophosphoric acid (CAS 7664-38-2)	STEL	2 mg/m <sup>3</sup>	



TWA

1 mg/m<sup>3</sup>

**Biological limit values**

**Hungary. Chemical Safety at Workplace Ordinance Joint Decree No. 25/2000 (Annex 2): Permissible limit values of biological exposure (effect) indices**

Components	Value	Determinant	Specimen	Sampling Time
Chromium (III) oxide (CAS 1308-38-9)	0,02 mg/g	chromium	Creatinine in urine	*
	0,043 µmol/mmol	chromium	Creatinine in urine	*

\* - For sampling details, please see the source document.

**Switzerland. BAT-Werte (Biological Limit Values in the Workplace as per SUVA)**

Components	Value	Determinant	Specimen	Sampling Time
Aluminium Oxide (Non-Fibrous) (CAS 1344-28-1)	60 µg/g	Aluminium	Creatinine in urine	*

\* - For sampling details, please see the source document.

**Recommended monitoring procedures** Follow standard monitoring procedures.

**Derived no effect levels (DNELs)** Not available.

**Predicted no effect concentrations (PNECs)** Not available.

**Exposure guidelines** Occupational Exposure Limits are not relevant to the current physical form of the product.

**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.

**Individual protection measures, such as personal protective equipment**

**General information** Personal protection equipment should be chosen according to the CEN standards and in discussion with the supplier of the personal protective equipment.

**Eye/face protection** Wear safety glasses with side shields (or goggles).

**Skin protection**

- **Hand protection** Wear appropriate chemical resistant gloves.

- **Other** Wear suitable protective clothing.

**Respiratory protection** Use a NIOSH/MSHA approved respirator if there is a risk of exposure to dust/fume at levels exceeding the exposure limits.

**Thermal hazards** Wear appropriate thermal protective clothing, when necessary.



**Hygiene measures** Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants.

**Environmental exposure controls** Environmental manager must be informed of all major releases.

**SECTION 9: Physical and chemical properties**

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

**Appearance**

**Physical state** Solid.

**Form** Solid. Paste.

**Colour** Not available.

**Odour** Not available.

<b>Odour threshold</b>	Not available.
<b>pH</b>	Not available.
<b>Melting point/freezing point</b>	Not available.
<b>Initial boiling point and boiling range</b>	Not available.
<b>Flash point</b>	Not available.
<b>Evaporation rate</b>	Not available.
<b>Flammability (solid, gas)</b>	Not available.
<b>Upper/lower flammability or explosive limits</b>	
<b>Flammability limit - lower (%)</b>	Not available.
<b>Flammability limit - upper (%)</b>	Not available.
<b>Vapour pressure</b>	Not available.
<b>Vapour density</b>	Not available.
<b>Relative density</b>	Not available.
<b>Solubility(ies)</b>	
<b>Solubility (water)</b>	Not available.
<b>Partition coefficient (n-octanol/water)</b>	Not available.
<b>Auto-ignition temperature</b>	Not available.
<b>Decomposition temperature</b>	Not available.
<b>Viscosity</b>	Not available.
<b>Explosive properties</b>	Not explosive.
<b>Oxidising properties</b>	Not oxidising.
<b>9.2. Other information</b>	No relevant additional information available.

## SECTION 10: Stability and reactivity

<b>10.1. Reactivity</b>	The product is stable and non-reactive under normal conditions of use, storage and transport.
<b>10.2. Chemical stability</b>	Material is stable under normal conditions.
<b>10.3. Possibility of hazardous reactions</b>	No dangerous reaction known under conditions of normal use.
<b>10.4. Conditions to avoid</b>	Contact with incompatible materials.
<b>10.5. Incompatible materials</b>	Acids. Chlorine. Incompatibility is based strictly upon potential theoretical reactions between chemicals and may not be specific to industrial application exposure.
<b>10.6. Hazardous decomposition products</b>	No hazardous decomposition products are known.

## SECTION 11: Toxicological information

<b>General information</b>	Occupational exposure to the substance or mixture may cause adverse effects.
<b>Information on likely routes of exposure</b>	
<b>Inhalation</b>	No adverse effects due to inhalation are expected.
<b>Skin contact</b>	No adverse effects due to skin contact are expected.
<b>Eye contact</b>	Direct contact with eyes may cause temporary irritation.
<b>Ingestion</b>	May cause discomfort if swallowed. However, ingestion is not likely to be a primary route of occupational exposure.
<b>Symptoms</b>	Exposure may cause temporary irritation, redness, or discomfort.

### 11.1. Information on toxicological effects

**Acute toxicity** Not known.

<b>Product</b>	<b>Species</b>	<b>Test Results</b>
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SHAMROCK 392 MORTAR

#### **Presumed Non-Toxic**

##### **Dermal**

**Skin corrosion/irritation** Due to partial or complete lack of data the classification is not possible.

<b>Serious eye damage/eye irritation</b>	Due to partial or complete lack of data the classification is not possible.
<b>Respiratory sensitisation</b>	Due to partial or complete lack of data the classification is not possible.
<b>Skin sensitisation</b>	Due to partial or complete lack of data the classification is not possible.
<b>Germ cell mutagenicity</b>	Due to partial or complete lack of data the classification is not possible.
<b>Carcinogenicity</b>	Due to partial or complete lack of data the classification is not possible.

**Hungary. 26/2000 EüM Ordinance on protection against and preventing risk relating to exposure to carcinogens at work (as amended)**

Not listed.

<b>Reproductive toxicity</b>	Due to partial or complete lack of data the classification is not possible.
<b>Specific target organ toxicity - single exposure</b>	Due to partial or complete lack of data the classification is not possible.
<b>Specific target organ toxicity - repeated exposure</b>	Due to partial or complete lack of data the classification is not possible.
<b>Aspiration hazard</b>	Due to partial or complete lack of data the classification is not possible.
<b>Mixture versus substance information</b>	No information available.
<b>Other information</b>	This product has no known adverse effect on human health.

## SECTION 12: Ecological information

<b>12.1. Toxicity</b>	Based on available data, the classification criteria are not met for hazardous to the aquatic environment.
<b>12.2. Persistence and degradability</b>	No data is available on the degradability of any ingredients in the mixture.
<b>12.3. Bioaccumulative potential</b>	No data available.
<b>Partition coefficient n-octanol/water (log Kow)</b>	Not available.
<b>Bioconcentration factor (BCF)</b>	Not available.
<b>12.4. Mobility in soil</b>	No data available.
<b>12.5. Results of PBT and vPvB assessment</b>	Not a PBT or vPvB substance or mixture. Not available.
<b>12.6. Other adverse effects</b>	No other adverse environmental effects (e.g. ozone depletion, photochemical ozone creation potential, endocrine disruption, global warming potential) are expected from this component.
<b>12.7. Additional information</b>	

### Estonia Dangerous substances in groundwater Data

Orthophosphoric acid (CAS 7664-38-2)	Pesticides (total) 0,5 ug/l Pesticides (total) 5 ug/l
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### Estonia Dangerous substances in soil Data

Orthophosphoric acid (CAS 7664-38-2)	Synthetic pesticides (total of active substances) 0,5 mg/kg Synthetic pesticides (total of active substances) 20 mg/kg Synthetic pesticides (total of active substances) 5 mg/kg
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## SECTION 13: Disposal considerations

### 13.1. Waste treatment methods

<b>Residual waste</b>	As sold, this product is not RCRA hazardous. Final used condition must be evaluated prior to disposal. Dispose of waste product in accordance with Federal, State and Local regulations. The chrome compounds (Cr III) in this product may be altered to a hexavalent compound (Cr VI) under certain use conditions, such as exposure to alkali salts and/or high temperatures. Proper waste testing (such as TCLP) must be done to determine the waste status of used product. Reuse and recycling of chrome Refractories is recommended whenever possible.
<b>Contaminated packaging</b>	Not available.
<b>EU waste code</b>	Not available.

## SECTION 14: Transport information

### ADR

<b>14.1. UN number</b>	UN3077
<b>14.2. UN proper shipping name</b>	Environmentally hazardous substance, solid, n.o.s.

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

**Class** 9  
**Subsidiary risk** -  
**Label(s)** 9  
**Hazard No. (ADR)** 90  
**Tunnel restriction code** E

**14.4. Packing group** III

**14.5. Environmental hazards** Yes

**14.6. Special precautions for user** Read safety instructions, SDS and emergency procedures before handling.

**RID**

**14.1. UN number** UN3077

**14.2. UN proper shipping name** Environmentally hazardous substance, solid, n.o.s.

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

**Class** 9  
**Subsidiary risk** -  
**Label(s)** 9

**14.4. Packing group** III

**14.5. Environmental hazards** Yes

**14.6. Special precautions for user** Read safety instructions, SDS and emergency procedures before handling.

**ADN**

**14.1. UN number** UN3077

**14.2. UN proper shipping name** Environmentally hazardous substance, solid, n.o.s.

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

**Class** 9  
**Subsidiary risk** -  
**Label(s)** 9

**14.4. Packing group** III

**14.5. Environmental hazards** Yes

**14.6. Special precautions for user** Read safety instructions, SDS and emergency procedures before handling.

**IATA**

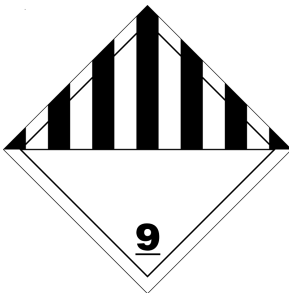
14.1. - 14.6.: Not regulated as dangerous goods.

**IMDG**

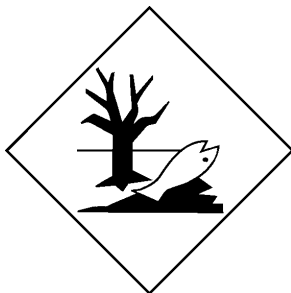
14.1. - 14.6.: Not regulated as dangerous goods.

**14.7. Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code** Not applicable.

**ADN; ADR; RID**



## Marine pollutant



## SECTION 15: Regulatory information

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

#### EU regulations

**Regulation (EC) No. 1005/2009 on substances that deplete the ozone layer, Annex I and II, as amended**

Not listed.

**Regulation (EC) No. 850/2004 On persistent organic pollutants, Annex I as amended**

Not listed.

**Regulation (EU) No. 649/2012 concerning the export and import of dangerous chemicals, Annex I, Part 1 as amended**

Not listed.

**Regulation (EU) No. 649/2012 concerning the export and import of dangerous chemicals, Annex I, Part 2 as amended**

Not listed.

**Regulation (EU) No. 649/2012 concerning the export and import of dangerous chemicals, Annex I, Part 3 as amended**

Not listed.

**Regulation (EU) No. 649/2012 concerning the export and import of dangerous chemicals, Annex V as amended**

Not listed.

**Regulation (EC) No. 166/2006 Annex II Pollutant Release and Transfer Registry, as amended**

Not listed.

**Regulation (EC) No. 1907/2006, REACH Article 59(10) Candidate List as currently published by ECHA**

Not listed.

#### Authorisations

**Regulation (EC) No. 1907/2006, REACH Annex XIV Substances subject to authorization, as amended**

Not listed.

#### Restrictions on use

**Regulation (EC) No. 1907/2006, REACH Annex XVII Substances subject to restriction on marketing and use as amended**

Not listed.

**Directive 2004/37/EC: on the protection of workers from the risks related to exposure to carcinogens and mutagens at work, as amended.**

Not listed.

#### Other EU regulations

**Directive 2012/18/EU on major accident hazards involving dangerous substances, as amended**

Not listed.

#### Other regulations

The product is classified and labelled in accordance with Regulation (EC) 1272/2008 (CLP Regulation) as amended. This Safety Data Sheet complies with the requirements of Regulation (EC) No 1907/2006, as amended.

#### National regulations

Follow national regulation on the protection of workers from the risks of exposure to carcinogens and mutagens at work, in accordance with Directive 2004/37/EC.

#### 15.2. Chemical safety assessment

No Chemical Safety Assessment has been carried out.

## SECTION 16: Other information

**List of abbreviations** Not available.

**References** Not available.

**Information on evaluation method leading to the classification of mixture** Not available.

**Full text of any H-statements  
not written out in full under  
Sections 2 to 15**

H315 Causes skin irritation.  
H319 Causes serious eye irritation.

**Revision information**

Product and Company Identification: Product and Company Identification  
Composition / Information on Ingredients: Ingredients  
Toxicological Information: Toxicological Data  
Transport Information: Product Shipping Name/Packing Group  
HazReg Data: Transportation

**Training information**

Not available.

**Disclaimer**

This information is based on our present knowledge on creation date. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.