

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

### 1.1. Product identifier

Trade name or designation of the mixture TUFLINE LW  
 Registration number -  
 Synonyms None.  
 Brand Code 2727  
 Issue date 28-June-2016  
 Version number 01

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

Identified uses For Industrial Use Only  
 Uses advised against None known.

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

## 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 Directive 67/548/EEC or 1999/45/EC as amended

This item is defined as an article per OSHA and REACH and is therefore exempt from labeling. A Safety Data Sheet is available

This item is not Classified as hazardous per CLP Regulations. However, individual customer processes (such as grinding, sawing, or blasting) may result in the formation of dust that may present health hazards. Limit skin contact. Wash hands after handling. Wear protective gloves/protective clothing/eye protection.

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

This item is defined as an article per OSHA and REACH and is therefore exempt from labeling. A Safety Data Sheet is available

This item is not Classified as hazardous per CLP Regulations. However, individual customer processes (such as grinding, sawing, or blasting) may result in the formation of dust that may present health hazards. Limit skin contact. Wash hands after handling. Wear protective gloves/protective clothing/eye protection.

### 2.2. Label elements

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

This item is defined as an article per OSHA and REACH and is therefore exempt from labeling. A Safety Data Sheet is available

This item is not Classified as hazardous per CLP Regulations. However, individual customer processes (such as grinding, sawing, or blasting) may result in the formation of dust that may present health hazards. Limit skin contact. Wash hands after handling. Wear protective gloves/protective clothing/eye protection.

### 2.3. Other hazards

None known.

## SECTION 3: Composition/information on ingredients

### 3.2. Mixtures

#### General information

Chemical name	%	CAS-No. / EC No.	REACH Registration No.	INDEX No.	Notes
Aluminium Oxide (Non-Fibrous)	90 - 100	1344-28-1 215-691-6	01-2119529248-35-0134	-	
<b>Classification:</b>					
<b>DSD:</b>	-				
<b>CLP:</b>	-				

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

CLP: Regulation No. 1272/2008.

DSD: Directive 67/548/EEC.

M: M-factor

vPvB: very persistent and very bioaccumulative substance.

PBT: persistent, bioaccumulative and toxic substance.

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

## SECTION 4: First aid measures

**General information** Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves.

### 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** Direct contact with eyes may cause temporary irritation.

**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.

**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.

**6.4. Reference to other sections** Not available.

## SECTION 7: Handling and storage

**7.1. Precautions for safe handling** Avoid prolonged exposure. Observe good industrial hygiene practices.

**7.2. Conditions for safe storage, including any incompatibilities** Store in original tightly closed container. Store away from incompatible materials (see Section 10 of the SDS).

**7.3. Specific end use(s)** 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.
	STEL	10 mg/m <sup>3</sup>	Inhalable fraction.
		20 mg/m <sup>3</sup>	Inhalable fraction.
		10 mg/m <sup>3</sup>	Respirable fume.
	10 mg/m <sup>3</sup>	Respirable fraction.	

##### 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.

##### 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	10 mg/m <sup>3</sup>	Dust.
		1,5 mg/m <sup>3</sup>	Respirable fraction.

##### 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.

##### Czech Republic. OELs. Government Decree 361

Components	Type	Value	Form
Aluminium Oxide (Non-Fibrous) (CAS 1344-28-1)	TWA	0,1 mg/m <sup>3</sup>	Respirable dust.

##### Denmark. Exposure Limit Values

Components	Type	Value	Form
Aluminium Oxide (Non-Fibrous) (CAS 1344-28-1)	TLV	5 mg/m <sup>3</sup>	Total
		2 mg/m <sup>3</sup>	Respirable.

##### 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/m <sup>3</sup>	Respirable dust.
		10 mg/m <sup>3</sup>	Total dust.

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

Components	Type	Value
Aluminium Oxide (Non-Fibrous) (CAS 1344-28-1)	VME	10 mg/m <sup>3</sup>

**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.

**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.

**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.

**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.

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

<b>Components</b>	<b>Type</b>	<b>Value</b>
Aluminium Oxide (Non-Fibrous) (CAS 1344-28-1)	TWA	10 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.

**Italy. Occupational Exposure Limits**

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

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

<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>	Decomposition aerosol.
		4 mg/m <sup>3</sup>	

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

<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 fraction.
		2 mg/m <sup>3</sup>	Respirable fraction.

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

<b>Components</b>	<b>Type</b>	<b>Value</b>
Aluminium Oxide (Non-Fibrous) (CAS 1344-28-1)	TLV	10 mg/m <sup>3</sup>

**Poland. MACs. Minister of Labour and Social Policy Regarding Maximum Allowable Concentrations and Intensities in Working Environment**

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.

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

Components	Type	Value	Form
Aluminium Oxide (Non-Fibrous) (CAS 1344-28-1)	TWA	10 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)	TWA	5 mg/m <sup>3</sup>	Aerosol
		1,2 ppm	Aerosol
		2 mg/m <sup>3</sup>	Aerosol
		0,5 ppm	Aerosol

**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>	

**Spain. Occupational Exposure Limits**

Components	Type	Value	Form
Aluminium Oxide (Non-Fibrous) (CAS 1344-28-1)	TWA	10 mg/m <sup>3</sup>	

**Sweden. Occupational Exposure Limit Values**

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.

**Switzerland. SUVA Grenzwerte am Arbeitsplatz**

Components	Type	Value	Form
Aluminium Oxide (Non-Fibrous) (CAS 1344-28-1)	TWA	24 mg/m <sup>3</sup>	Fume and respirable dust.
		3 mg/m <sup>3</sup>	Respirable dust.
		3 mg/m <sup>3</sup>	Fume and respirable dust.

**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.

**Biological limit values** No biological exposure limits noted for the ingredient(s).

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

**Derived no-effect level (DNEL)** Not available.

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

**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.

**Colour** Not available.

**Odour** Not available.

**Odour threshold** Not available.

**pH** Not available.

**Melting point/freezing point** Not available.

**Initial boiling point and boiling range** Not available.

**Flash point** Not available.

**Evaporation rate** Not available.

**Flammability (solid, gas)** Not available.

#### Upper/lower flammability or explosive limits

**Flammability limit - lower (%)** Not available.

**Flammability limit - upper (%)** Not available.

**Vapour pressure** Not available.

**Vapour density** Not available.

**Relative density** Not available.

#### Solubility(ies)

**Solubility (water)** Not available.

**Solubility (other)** Not available.

**Partition coefficient (n-octanol/water)** Not available.

**Auto-ignition temperature** Not available.

**Decomposition temperature** Not available.

**Viscosity** Not available.

**Explosive properties** Not available.

**Oxidizing properties** Not available.

**9.2. Other information** No relevant additional information available.

## **SECTION 10: Stability and reactivity**

**10.1. Reactivity** The product is stable and non-reactive under normal conditions of use, storage and transport.

**10.2. Chemical stability** Material is stable under normal conditions.

**10.3. Possibility of hazardous reactions** No dangerous reaction known under conditions of normal use.

**10.4. Conditions to avoid** Contact with incompatible materials.

**10.5. Incompatible materials** Acids. Chlorine.  
Incompatibility is based strictly upon potential theoretical reactions between chemicals and may not be specific to industrial application exposure.

**10.6. Hazardous decomposition products** No hazardous decomposition products are known.

## **SECTION 11: Toxicological information**

**General information** Occupational exposure to the substance or mixture may cause adverse effects.

### **Information on likely routes of exposure**

**Inhalation** Prolonged inhalation may be harmful.

**Skin contact** No adverse effects due to skin contact are expected.

**Eye contact** Direct contact with eyes may cause temporary irritation.

**Ingestion** May cause discomfort if swallowed. However, ingestion is not likely to be a primary route of occupational exposure.

**Symptoms** Exposure may cause temporary irritation, redness, or discomfort.

### **11.1. Information on toxicological effects**

**Acute toxicity** No data available.

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

**Serious eye damage/eye irritation** Due to partial or complete lack of data the classification is not possible.

**Respiratory sensitisation** Due to partial or complete lack of data the classification is not possible.

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

**Germ cell mutagenicity** Due to partial or complete lack of data the classification is not possible.

**Carcinogenicity** Due to partial or complete lack of data the classification is not possible.

**Reproductive toxicity** Due to partial or complete lack of data the classification is not possible.

**Specific target organ toxicity - single exposure** Due to partial or complete lack of data the classification is not possible.

**Specific target organ toxicity - repeated exposure** Due to partial or complete lack of data the classification is not possible.

**Aspiration hazard** Due to partial or complete lack of data the classification is not possible.

**Mixture versus substance information** No information available.

**Other information** Not available.

## **SECTION 12: Ecological information**

**12.1. Toxicity** The product is not classified as environmentally hazardous. However, this does not exclude the possibility that large or frequent spills can have a harmful or damaging effect on the environment.

**12.2. Persistence and degradability** No data is available on the degradability of this product.

**12.3. Bioaccumulative potential** No data available.

**Partition coefficient n-octanol/water (log Kow)** Not available.

**Bioconcentration factor (BCF)** Not available.

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

**12.5. Results of PBT and vPvB assessment** Not available.

**12.6. Other adverse effects** No other adverse environmental effects (e.g. ozone depletion, photochemical ozone creation potential, endocrine disruption, global warming potential) are expected from this component.

## SECTION 13: Disposal considerations

### 13.1. Waste treatment methods

<b>Residual waste</b>	Not available.
<b>Contaminated packaging</b>	Not available.
<b>EU waste code</b>	Not available.

## SECTION 14: Transport information

### ADR

Not regulated as dangerous goods.

### RID

Not regulated as dangerous goods.

### ADN

Not regulated as dangerous goods.

### IATA

Not regulated as dangerous goods.

### IMDG

Not regulated as dangerous goods.

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

## SECTION 15: Regulatory information

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

#### EU regulations

**Regulation (EC) No. 2037/2000 on substances that deplete the ozone layer, Annex I**

Not listed.

**Regulation (EC) No. 2037/2000 on substances that deplete the ozone layer, Annex II**

Not listed.

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

Not listed.

**Regulation (EC) No. 689/2008 concerning the export and import of dangerous chemicals, Annex I, part 1**

Not listed.

**Regulation (EC) No. 689/2008 concerning the export and import of dangerous chemicals, Annex I, part 2**

Not listed.

**Regulation (EC) No. 689/2008 concerning the export and import of dangerous chemicals, Annex I, part 3**

Not listed.

**Regulation (EC) No. 689/2008 concerning the export and import of dangerous chemicals, Annex V**

Not listed.

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

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 Annex XVII Substances subject to restriction on marketing and use**

Not regulated.

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

Not listed.

**Directive 92/85/EEC: on the safety and health of pregnant workers and workers who have recently given birth or are breastfeeding**

Not listed.

#### Other EU regulations

**Directive 96/82/EC (Seveso II) on the control of major-accident hazards involving dangerous substances**

Not listed.



**Directive 98/24/EC on the protection of the health and safety of workers from the risks related to chemical agents at work**

Not listed.

**Directive 94/33/EC on the protection of young people at work**

Not listed.

**Other regulations**

The product is classified and labelled in accordance with EC directives or respective national laws.

**National regulations**

Follow national regulation for work with chemical agents.

**15.2. Chemical safety assessment**

No Chemical Safety Assessment has been carried out.

**SECTION 16: Other information**

**References**

Not available.

**Information on evaluation method leading to the classification of mixture**

Not available.

**Full text of any statements or R-phrases and H-statements under Sections 2 to 15**

None.

**Revision information**

Product and Company Identification: Product and Company Identification  
Composition / Information on Ingredients: After Reaction Composition

**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.