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# SAFETY DATA SHEET

## AMIPLUS 2.0 LIQUID

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

#### 1.1 Product identifier

Product name : AMIPLUS 2.0 LIQUID  
Product code : PYP8AL  
Product type : Liquid

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

Identified uses	
Industrial distribution. Industrial USE to formulate chemical product mixtures.	
<b>Uses advised against</b>	: Other non-specified industry
<b>Reason</b>	: Due to lack of related experience or data, the supplier cannot approve this use.

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

Yara UK Limited

**Address**

**Street** : Pocklington Industrial Estate  
Pocklington

**Postal code** : YO42 1DN

**City** : York

**Country** : United Kingdom

**Telephone number** : +44 1759 302545

**Fax no.** : +44 1759 303650

**e-mail address of person responsible for this SDS** : yara.uk.hesq@yara.com

#### 1.4 Emergency telephone number

**National advisory body/Poison Center** : Not available.

#### Supplier

**Emergency telephone number (with hours of operation)** : National Chemical Emergency Centre  
+44 (0) 1865 407333 (24h)

## SECTION 2: Hazards identification

### 2.1 Classification of the substance or mixture.

**Product definition** : Mixture

### Classification according to UK CLP/GHS

**Classification** : Eye Dam. 1, H318  
Repr. 2, H361

The product is classified as hazardous according to UK CLP Regulation SI 2019/720 as amended.

See Section 16 for the full text of the H statements declared above.

See Section 11 for more detailed information on health effects and symptoms.

### 2.2 Label elements

**Hazard pictograms** :



**Signal word** : Danger

**Hazard statements** : H318 Causes serious eye damage.  
H361 Suspected of damaging fertility or the unborn child.

### Precautionary statements

**Prevention** : P202 Do not handle until all safety precautions have been read and understood.

P280 Wear protective gloves/clothing and eye/face protection.

**Response** : P308 IF exposed or concerned:

P313 Get medical attention.

P305 IF IN EYES:

P351 Rinse cautiously with water for several minutes.

P338 Remove contact lenses, if present and easy to do. Continue rinsing.

P310 Immediately call a POISON CENTER or doctor/physician.

**Hazardous ingredients** : N-(n-Butyl)thiophosphoric triamide

**EU Regulation (EC) No. 1907/2006 (REACH) Annex XVII - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles** : Applicable, Table 3.

**Special packaging requirements**

Containers to be fitted with child-resistant fastenings : Not applicable.  
 Tactile warning of danger : Not applicable.

**2.3 Other hazards**

Product meets the criteria for PBT or vPvB according to Regulation (EC) No. 1907/2006, Annex XIII : This mixture does not contain any substances that are assessed to be a PBT or a vPvB.

Other hazards which do not result in classification : None known.  
 Additional information : None.

**SECTION 3: Composition/information on ingredients**

**3.2 Mixtures** : Mixture

Product/ingredient name	Identifiers	%	Classification	Type
propane-1,2-diol	REACH #: 01-2119456809-23 EC : 200-338-0 CAS : 57-55-6	>= 80 - <= 90	Not classified.	[2]
N-(n-Butyl)thiophosphoric triamide	REACH #: 01-2119958968-10 EC : 435-740-7 CAS : 94317-64-3	>= 15 - <= 20	Eye Dam. 1, H318 Repr. 2, H361	[1]

See Section 16 for the full text of the H statements declared above.

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment, are PBTs, vPvBs or Substances of equivalent concern, or have been assigned a workplace exposure limit and hence require reporting in this section.

Type

[1] Substance classified with a physical, health or environmental hazard

[2] Substance with a workplace exposure limit

Occupational exposure limits, if available, are listed in Section 8.

**SECTION 4: First aid measures**

**4.1 Description of first aid measures**

**Eye contact** : Immediately flush eyes with running water for at least 15 minutes, keeping eyelids open. Check for and remove any contact lenses. Get medical attention immediately.

**Inhalation** : Avoid inhalation of vapor, spray or mist. If inhaled, remove to fresh air. Get medical attention immediately. If it is suspected

that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus.

- Skin contact** : Wash with soap and water. Get medical attention if irritation develops.
- Ingestion** : Wash out mouth with water. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Get medical attention if you feel unwell.
- Protection of first-aiders** : No action shall be taken involving any personal risk or without suitable training. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. Wash contaminated clothing thoroughly with water before removing it, or wear gloves.

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

**Over-exposure signs/symptoms**

- Eye contact** : Adverse symptoms may include the following: pain, watering, redness
- Inhalation** : No specific data.
- Skin contact** : No specific data.
- Ingestion** : May cause burns to mouth, throat and stomach.

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

- Notes to physician** : Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled. In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours.
- Specific treatments** : No specific treatment.

**SECTION 5: Firefighting measures**

**5.1 Extinguishing media**

- Suitable extinguishing media** : Use an extinguishing agent suitable for the surrounding fire.
- Unsuitable extinguishing media** : None identified.

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

- Hazards from the substance or mixture** : In a fire or if heated, a pressure increase will occur and the container may burst.
- Hazardous combustion products** : Decomposition products may include the following materials: nitrogen oxides, sulfur oxides, phosphorus oxides, Avoid breathing dusts, vapors or fumes from burning materials., In case of inhalation of decomposition products in a fire, symptoms may be delayed.

**5.3 Advice for firefighters**

- Special protective actions for** : Promptly isolate the scene by removing all persons from the

- fire-fighters** : vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training.
- Special protective equipment for fire-fighters** : Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

**SECTION 6: Accidental release measures**

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

- For non-emergency personnel** : No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Do not breathe vapor or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment (see Section 8).
- For emergency responders** : If specialized clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".

- 6.2 Environmental precautions** : Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).

**6.3 Methods and materials for containment and cleaning up**

- Small spill** : Stop leak if without risk. Move containers from spill area. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.
- Large spill** : Stop leak if without risk. Move containers from spill area. Approach release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Wash spillages into an effluent treatment plant or proceed as follows. Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations (see Section 13). Dispose of via a licensed waste disposal contractor. Contaminated absorbent material may pose the same hazard as the spilled product. Note: see Section 1 for emergency contact information and Section 13 for waste disposal.

- 6.4 Reference to other sections** : See Section 1 for emergency contact information. See Section 8 for information on appropriate personal protective equipment. See Section 13 for additional waste treatment information.

**SECTION 7: Handling and storage**

The information in this section contains generic advice and guidance. The list of Identified Uses in Section 1 should be consulted for any available use-specific information provided in the Exposure Scenario(s).

**7.1 Precautions for safe handling**

- Protective measures** : Put on appropriate personal protective equipment (see Section 8). Do not handle until all safety precautions have been read and understood. Do not get in eyes or on skin or clothing. Do not breathe vapor or mist. Do not ingest. If during normal use the material presents a respiratory hazard, use only with adequate ventilation or wear appropriate respirator. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Empty containers retain product residue and can be hazardous. Do not reuse container.
- Advice on general occupational hygiene** : Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.

**7.2 Conditions for safe storage, including any incompatibilities**

Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Store locked up. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination. Bund storage facilities to prevent soil and water pollution in the event of spillage.

**7.3 Specific end use(s)**

- Recommendations** : Not available.

**SECTION 8: Exposure controls/personal protection**

The information in this section contains generic advice and guidance. The list of Identified Uses in Section 1 should be consulted for any available use-specific information provided in the Exposure Scenario(s).

**8.1 Control parameters**

**Occupational exposure limits**

Product/ingredient name	Exposure limit values
propane-1,2-diol	<b>EH40/2005 WELs (1997-01-01).</b> TWA 474 mg/m3 150 ppm Form: Sum of vapor and particulates TWA 10 mg/m3 Form: only particles

- Recommended monitoring procedures** : If this product contains ingredients with exposure limits, personal, workplace atmosphere or biological monitoring may be required to determine the effectiveness of the ventilation or other control measures and/or the necessity to use respiratory protective equipment.

Reference should be made to appropriate monitoring standards. Reference to national guidance documents for methods for the determination of hazardous substances will also be required.

**DNELs/DMELs**

Product/ingredient name	Type	Exposure	Value	Population	Effects
N-(n-Butyl)thiophosphoric triamide	DNEL	Long term Inhalation	0.15 mg/m <sup>3</sup>	Workers	Systemic
	DNEL	Long term Dermal	0.17 mg/kg bw/day	Workers	Systemic

**PNECs**

No PNECs available.

**8.2 Exposure controls**

**Appropriate engineering controls** : If user operations generate dust, fumes, gas, vapor or mist, use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits.

**Individual protection measures**

**Hygiene measures** : A washing facility or water for eye and skin cleaning purposes should be present. Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Wash contaminated clothing before reusing.

**Eye/face protection** : Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts.  
**Recommended:** Tightly-fitting goggles, Europe:, CEN: EN166,

**Skin protection**

**Hand protection** : Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary. For general applications, we recommend gloves with a thickness typically greater than 0.35 mm. It should be emphasized that glove thickness is not necessarily a good predictor of glove resistance to a specific chemical, as the permeation efficiency of the glove will be dependent on the exact composition of the glove material.

**Body protection** : Personal protective equipment for the body should be selected based on the task being performed and the risks involved.

**Other skin protection** : Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved

by a specialist before handling this product.

**Respiratory protection** : In case of inadequate ventilation wear respiratory protection.  
**Recommended**  
 Filter P2  
 Europe:  
 EN 143

**Environmental exposure controls** : Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

**Personal protective equipment (Pictograms)** : 

## SECTION 9: Physical and chemical properties

The conditions of measurement of all properties are at standard temperature and pressure unless otherwise indicated.

### 9.1 Information on basic physical and chemical properties

**Appearance**

**Physical state** : Liquid  
**Color** : Red.,  
**Odor** : Strong.  
**Melting point/freezing point** : < 0 °C  
**Initial boiling point and boiling range** : Decomposes.

**Flammability** : Non-flammable.

**Upper/lower flammability or explosive limits** : **Lower:** Not determined  
**Upper:** Not determined

**Flash point** : 104 °C

<b>Auto-ignition temperature</b> :	<b>Ingredient name</b>	<b>Auto-ignition temperature</b>
	propane-1,2-diol	371.11 °C
		371 °C

**Decomposition temperature** : 133 °C

**pH** : 7.5 - 8.0 [Conc. (% w/w): 1,000 g/l ]

**Viscosity** : **Dynamic:** < 1,000 mPa.s  
**Kinematic:** Not determined

**Miscibility with water** : Miscible in water.

**Partition coefficient: n-octanol/water** : Not applicable.



- Vapor pressure** : 0.2 hPa @ 25 °C  
**Density** : 1.057 g/cm<sup>3</sup>
- Relative vapour density** : 2.6 [Air = 1]
- Explosive properties** : Non-explosive.  
**Oxidizing properties** : Non-oxidizer.  
 No oxidizing ingredients present.

**Particle characteristics**

- Median particle size** : Not applicable.

**9.2 Other information**

No additional information.

**SECTION 10: Stability and reactivity**

- 10.1 Reactivity** : No specific test data related to reactivity available for this product or its ingredients.
- 10.2 Chemical stability** : The product is stable.
- 10.3 Possibility of hazardous reactions** : Under normal conditions of storage and use, hazardous reactions will not occur.
- 10.4 Conditions to avoid** : Avoid contamination by any source including metals, dust and organic materials.
- 10.5 Incompatible materials** : No specific data.
- 10.6 Hazardous decomposition products** : Under normal conditions of storage and use, hazardous decomposition products should not be produced.

**SECTION 11: Toxicological information**

**11.1 Information on toxicological effects**

**Acute toxicity**

Product/ingredient name	Method	Species	Result	Exposure
propane-1,2-diol				
	LD50 Oral	Rat	22,000 mg/kg	Not applicable.
	LD50 Dermal	Rabbit	20,800 mg/kg	Not applicable.
N-(n-Butyl)thiophosphoric triamide				
	LD50 Oral	Rat	2,603 mg/kg	Not applicable.
	LD50 Dermal	Rabbit	> 5,000 mg/kg	Not applicable.

- Conclusion/Summary** : No known significant effects or critical hazards.

**Acute toxicity estimates**

Product/ingredient	Oral	Dermal	Inhalation	Inhalation	Inhalation
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name			(gases)	(vapors)	(dusts and mists)
propane-1,2-diol	22,000 mg/kg	20,800 mg/kg	N/A	N/A	N/A
N-(n-Butyl)thiophosphoric triamide	2,603 mg/kg	N/A	N/A	N/A	N/A

**Irritation/Corrosion**

**Conclusion/Summary**

- Skin** : No known significant effects or critical hazards.
- Eyes** : Causes serious eye damage.
- Respiratory** : No known significant effects or critical hazards.

**Sensitization**

**Conclusion/Summary**

- Skin** : No known significant effects or critical hazards.
- Respiratory** : No known significant effects or critical hazards.

**Mutagenicity**

- Conclusion/Summary** : No known significant effects or critical hazards.

**Carcinogenicity**

- Conclusion/Summary** : No known significant effects or critical hazards.

**Reproductive toxicity**

- Conclusion/Summary** : Suspected of damaging fertility or the unborn child.

- Information on the likely routes of exposure** : Not available.

**Potential acute health effects**

- Inhalation** : Vapor may be irritating to eyes and respiratory system. Exposure to decomposition products may cause a health hazard. Serious effects may be delayed following exposure.
- Ingestion** : May cause burns to mouth, throat and stomach.
- Skin contact** : No known significant effects or critical hazards.
- Eye contact** : Causes serious eye damage.

**Symptoms related to the physical, chemical and toxicological characteristics**

- Inhalation** : No specific data.
- Ingestion** : May cause burns to mouth, throat and stomach.
- Skin contact** : No specific data.
- Eye contact** : Adverse symptoms may include the following: pain, watering, redness

**Delayed and immediate effects and also chronic effects from short and long term exposure**

**Short term exposure**

**Potential immediate effects** : No known significant effects or critical hazards.

**Potential delayed effects** : No known significant effects or critical hazards.

**Long term exposure**

**Potential immediate effects** : No known significant effects or critical hazards.

**Potential delayed effects** : No known significant effects or critical hazards.

**Potential chronic health effects**

**Carcinogenicity** : No known significant effects or critical hazards.

**Mutagenicity** : No known significant effects or critical hazards.

**Reproductive toxicity** : Suspected of damaging fertility or the unborn child.

**Other effects** : No known significant effects or critical hazards.

**Other information** : Not available.

**SECTION 12: Ecological information**

**12.1 Toxicity**

Product/ingredient name	Method	Species	Result	Exposure
propane-1,2-diol				
	Acute LC50 Fresh water	Fish	40,613 mg/l	96 h
	OECD 202 Acute EC50 Fresh water	Daphnia	18,340 mg/l	48 h
N-(n-Butyl)thiophosphoric triamide				
	Acute LC50 Fresh water	Fish	> 100 mg/l	96 h
	Acute LC50 Fresh water	Daphnia	290 mg/l	48 h
	Acute EC50	Aquatic plants	280 mg/l	96 h

**Conclusion/Summary** : No known significant effects or critical hazards.

**12.2 Persistence and degradability**

**Conclusion/Summary** : No known significant effects or critical hazards.

**12.3 Bioaccumulative potential**

Product/ingredient name	LogPow	BCF	Potential
propane-1,2-diol	-0.92-1.070.085	Not applicable.	low

**Conclusion/Summary** : No known significant effects or critical hazards.

**12.4 Mobility in soil**

**Soil/water partition coefficient** : Not available.

(KOC)  
**Mobility** : Not available.

**12.5 Results of PBT and vPvB assessment**

This mixture does not contain any substances that are assessed to be a PBT or a vPvB.

**12.6 Other adverse effects** : No known significant effects or critical hazards.

**SECTION 13: Disposal considerations**

The information in this section contains generic advice and guidance. The list of Identified Uses in Section 1 should be consulted for any available use-specific information provided in the Exposure Scenario(s).

**13.1 Waste treatment methods**

**Product**

**Methods of disposal** : The generation of waste should be avoided or minimized wherever possible. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction.

**Hazardous waste** : Yes.

**Waste catalogue**

Waste code	Waste designation
06 10 02*	wastes containing hazardous substances

**Packaging**

**Methods of disposal** : The generation of waste should be avoided or minimized wherever possible. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible.

**Special precautions** : This material and its container must be disposed of in a safe way. Care should be taken when handling emptied containers that have not been cleaned or rinsed out. Empty containers or liners may retain some product residues. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

**SECTION 14: Transport information**

	ADR/RID	ADN	IMDG	IATA
<b>14.1 UN number</b>	Not regulated.	Not regulated.	Not regulated.	Not regulated.

<b>14.2 UN proper shipping name</b>	Not applicable.	Not applicable.	Not applicable.	Not applicable.
<b>14.3 Transport hazard class(es)</b>	Not applicable.	Not applicable.	Not applicable.	Not applicable.
<b>14.4 Packing group</b>	Not applicable.	Not applicable.	Not applicable.	Not applicable.
<b>14.5. Environmental hazards</b>	No.	No.	No.	No.

**14.6 Special precautions for user** : Transport within user's premises: Ensure that persons transporting the product know what to do in the event of an accident or spillage.

**14.7 Transport in bulk according to IMO instruments** **Proper shipping name** : Not listed.

## SECTION 15: Regulatory information

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

#### **UK (GB) /REACH**

##### **Annex XIV - List of substances subject to authorization**

###### **Annex XIV**

None of the components are listed.

###### **Substances of very high concern**

None of the components are listed.

###### **Ozone depleting substances**

None of the components are listed.

###### **Prior Informed Consent (PIC)**

None of the components are listed.

###### **Persistent Organic Pollutants**

None of the components are listed.

**EU Regulation (EC) No. 1907/2006 (REACH) Annex XVII - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles** : Applicable, Table 3.

###### **Seveso Directive**

This product is not controlled under the Seveso Directive.

#### **National regulations**

**Biocidal products regulation** : Not applicable.

#### **EU regulations**

**Notes** : To our knowledge no other country or state specific regulations are applicable.

**15.2 Chemical Safety Assessment** : Complete.

## SECTION 16: Other information

**Abbreviations and acronyms** :

- ATE = Acute Toxicity Estimate
- GB CLP = UK CLP (EC No 1272/2008) on the Classification, Labelling and Packaging of Substances and Mixtures as amended by (EU Exit) Regulations 2019 No. 720 and amendments
- DNEL = Derived No Effect Level
- DMEL = Derived Minimal Effect Level
- EUH statement = GB CLP-specific Hazard statement
- N/A = Not available
- PNEC = Predicted No Effect Concentration
- RRN = REACH Registration Number
- SGG = Segregation Group
- PBT = Persistent, Bioaccumulative and Toxic
- vPvB = Very Persistent and Very Bioaccumulative
- bw = Body weight

**Key data sources** :

- EU REACH ECHA/IUCLID5 CSR.
- National Institute for Occupational Safety and Health, U.S. Dept. of Health, Education, and Welfare, Reports and Memoranda Registry of Toxic Effects of Chemical Substances.
- Sphera Solutions Inc., 4777 Levy Street, St Laurent, Quebec HAR 2P9, Canada.

### Procedure used to derive the classification

Classification	Justification
Eye Dam. 1, H318	Calculation method
Repr. 2, H361	Calculation method

### Full text of abbreviated H statements

H318	Causes serious eye damage.
H361	Suspected of damaging fertility or the unborn child.

### Full text of classifications

Eye Dam. 1	SERIOUS EYE DAMAGE/ EYE IRRITATION - Category 1
Repr. 2	TOXIC TO REPRODUCTION - Category 2

**Revision comments** : The safety data sheet has been revised according to UK REACH Regulation SI 2019/758.

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**Prepared by** : Product Stewardship and Compliance (PSC).

|| Indicates information that has changed from previously issued version.

**Notice to reader**

To the best of our knowledge, the information provided in this Safety Data Sheet is accurate as at the date of its issue. The information it contains is being given for safety guidance purposes and relates only to the specific material and uses described in it. This information does not necessarily apply to that material when combined with other material(s) or when used otherwise than as described herein, since all materials may represent unknown hazards and should be used with caution. Final determination of the suitability of any material is the sole responsibility of the user.



**Annex to the extended Safety Data Sheet (eSDS) -  
Exposure Scenario/Safe Use Information:**

**Identification of the substance or mixture**

**Product definition** : Mixture

**Product name** : AMIPLUS 2.0 LIQUID

**Exposure Scenario/Safe Use Information** : Exposure Scenarios are not attached for corrosive or irritant hazards, relevant information on safe use is included in section 8. For each additional hazard resulting in classification relevant Exposure Scenarios are attached.





## Annex to the extended Safety Data Sheet (eSDS) - Exposure Scenario:

### Section 1 – Title

**Short title of the exposure scenario** : Yara - N-(n-Butyl)thiophosphoric triamide - Distribution, Formulation

**Identified use name** : Industrial distribution.  
Industrial USE to formulate chemical product mixtures.  
Industrial USE to formulate fertilisers product mixtures.

**Substance supplied to that use in form of** : In a mixture

### List of use descriptors

**Process Category** : PROC03, PROC04, PROC05, PROC08a, PROC08b, PROC09, PROC15

**Market sector by type of chemical product** : PC12

**Subsequent service life relevant for that use** : No.

**Number of the ES** : 08603-1/2019-01-08

### Section 2 – Exposure controls

#### **Contributing scenario controlling environmental exposure for: All**

As no environmental hazard was identified, no environmental-related exposure assessment and risk characterization was performed.

#### **Contributing scenario controlling worker exposure for:**

<b>Physical state</b>	: Solid
<b>Dust</b>	: Solid, low dustiness
<b>Frequency and duration of use</b>	: Unless otherwise stated. Use duration (h/d): < 8
<b>Area of use:</b>	: Indoor
<b>Ventilation control measures</b>	: Provide a good standard of general ventilation (not less than 3 to 5 air changes per hour).
<b>Organizational measures to prevent/limit releases, dispersion and exposure</b>	: Ensure operatives are trained to minimise exposures.
<b>Conditions and measures related to personal protection and hygiene</b>	
<b>Personal protection</b>	: Wear suitable gloves (tested to EN374) and eye protection. See Section 8 of the safety data sheet (personal protective equipment).

**Section 3 – Exposure estimation and reference to its source**

<b>Exposure estimation and reference to its source - Workers:</b>	
<b>Exposure assessment (human):</b>	: ECETOC TRA v3.0 Worker
<b>Exposure estimation and reference to its source</b>	: See Section 8 in SDS, DNEL.  Predicted exposures are not expected to exceed the DN(M)EL when the risk management measures/operational conditions outlined in section 2 are implemented.

Contributing scenario	General	Conc.	Duration	Protection efficiency (%)			RCR inhal.	RCR Dermal	Remark
				LEV	Respiratory	Dermal			
PROC03		100 %	< 8 h	90	0	95	0.047	0,02	[1], [2]
PROC04		100 %	< 8 h	90	0	95	0.233	0,202	[1], [2]
PROC05		100 %	< 8 h	90	0	95	0.233	0,403	[1], [2]
PROC08a		100 %	< 8 h	90	0	95	0.233	0,403	[1], [2]
PROC08b		100 %	< 8 h	95	0	95	0.023	0,202	[1], [2]
PROC09		100 %	< 8 h	90	0	95	0.047	0,202	[1], [2]
PROC15		100 %	< 8 h	90	0	95	0.047	0,01	[1], [2]

[1] Worker - inhalative, long-term - systemic

[2] Worker - dermal, long-term - systemic

**Section 4 – Guidance to DU to evaluate whether he works inside the boundaries set by the ES**

<b>Environment</b>	: Not applicable.
<b>Health</b>	: Guidance is based on assumed operating conditions which may not be applicable to all sites; thus, scaling may be necessary to define appropriate site-specific risk management measures. Scaling tool, scalable parameters and RCR is given in section 3. Scalable parameters: Duration, protection efficiency, Conc. RCR should not be exceeded.

**Abbreviations and acronyms**

<b>Process Category</b>	: PROC03 - Manufacture or formulation in the chemical industry in closed batch processes with occasional controlled exposure or processes with equivalent containment condition PROC04 - Chemical production where opportunity for exposure arises PROC05 - Mixing or blending in batch processes PROC08a - Transfer of substance or mixture (charging and discharging) at non-dedicated facilities PROC08b - Transfer of substance or mixture (charging and discharging) at dedicated facilities PROC09 - Transfer of substance or mixture into small containers (dedicated filling line, including weighing) PROC15 - Use as laboratory reagent
<b>Market sector by type of chemical product</b>	: PC12 - Fertilizers