

Thermo Fisher Scientific Cork Ltd.

New Product - EPA Notification

“Project Max”

04 September 2020

Priority: Urgent – COVID 19 Related

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1.0 Introduction

Thermo Fisher Scientific Cork Ltd. is planning the introduction of a new product to the Cork site.

The priority of this notification is urgent as it relates to the proposed manufacture of product related to the current Covid 19 pandemic. It is proposed to commence Stage 1 manufacturing week commencing 27th September 2020.

This request for approval in accordance with Condition 1.4 is in keeping with the guidelines from the EPA¹ on seeking alterations which state that:

“An activity or process at an installation solely for research, development or testing of new products and processes are excluded and may be considered and approved by OEE. New products or processes at an installation adequately controlled by the conditions of the licence may be considered and approved by OEE.”

The proposed product will be manufactured in 5 Stages. The process is similar to many current and previous process stages manufactured at the Cork facility. Many of the common bulk solvents are being used and standard unit operations are being employed in existing infrastructure and buildings (Buildings 1, 2, 3, 4 and 6). No changes to site management, infrastructure or control is required.

Within the existing buildings, the process uses existing modules and associated vent lines, drainage lines and abatement measures.

See Figure 1.1 for Site Layout and locations of the proposed process stages, some stages will be carried out simultaneously in parallel buildings. In terms of environmental operation and compliance, this process does not require a new main or minor emission point and can be readily facilitated and controlled within the existing Conditions and limits of the sites IE Licence.

¹ <https://www.epa.ie/pubs/advice/licence/Licence%20Alteration%20Guidance%20rev%20MOC%2021-06-19.pdf>

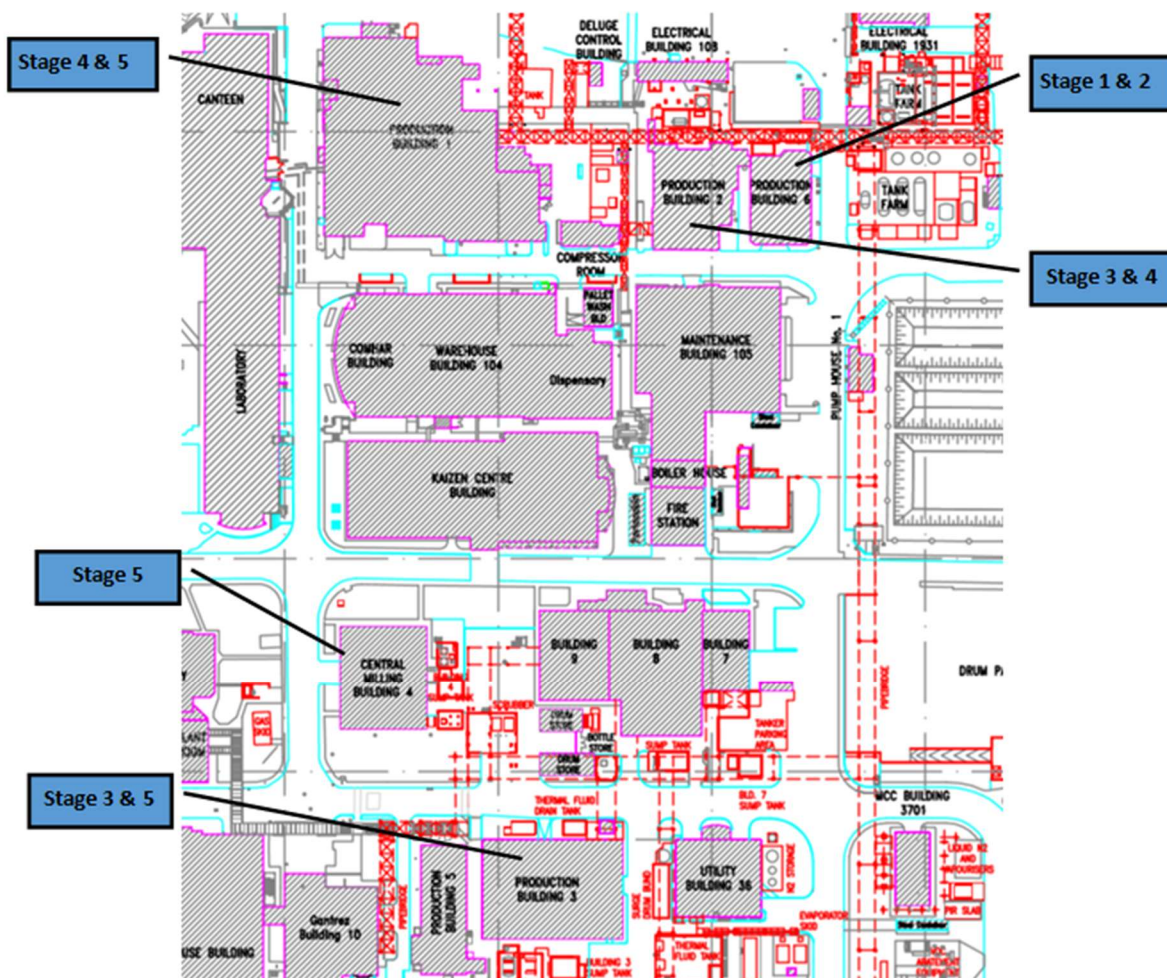


Figure 1.1 Site Layout and Location of Proposed Process Stages for Project Max

2.0 Process Description

Overview

As outlined above, there is no change to the range of processes to be carried out on site. The proposed product will be generated through a series of five stages, with each stage comprising a number of unit operations.

The following main unit operations will occur in the proposed process stages:

- Charging of solvent and reagents
- Mixing in standard vessels
- Chemical reaction
- Distillation
- Separation

- Drying in filter dryer
- Milling
- Storage of final product in product warehouse

Raw materials as per outlined in Table 2.1 will be subjected to various physical and chemical changes in order to produce the required chemical in the correct form. As a result, solid, liquid and gaseous emissions are generated. These emissions are subjected to physical and chemical treatment to remove any environmentally sensitive substances in accordance with IE Licence Reg. No. P0004-05 prior to discharge from the facility.

No changes to the existing abatement, treatment or recovery systems are required.

The associated environmental emissions are outlined in Figure 2.1.

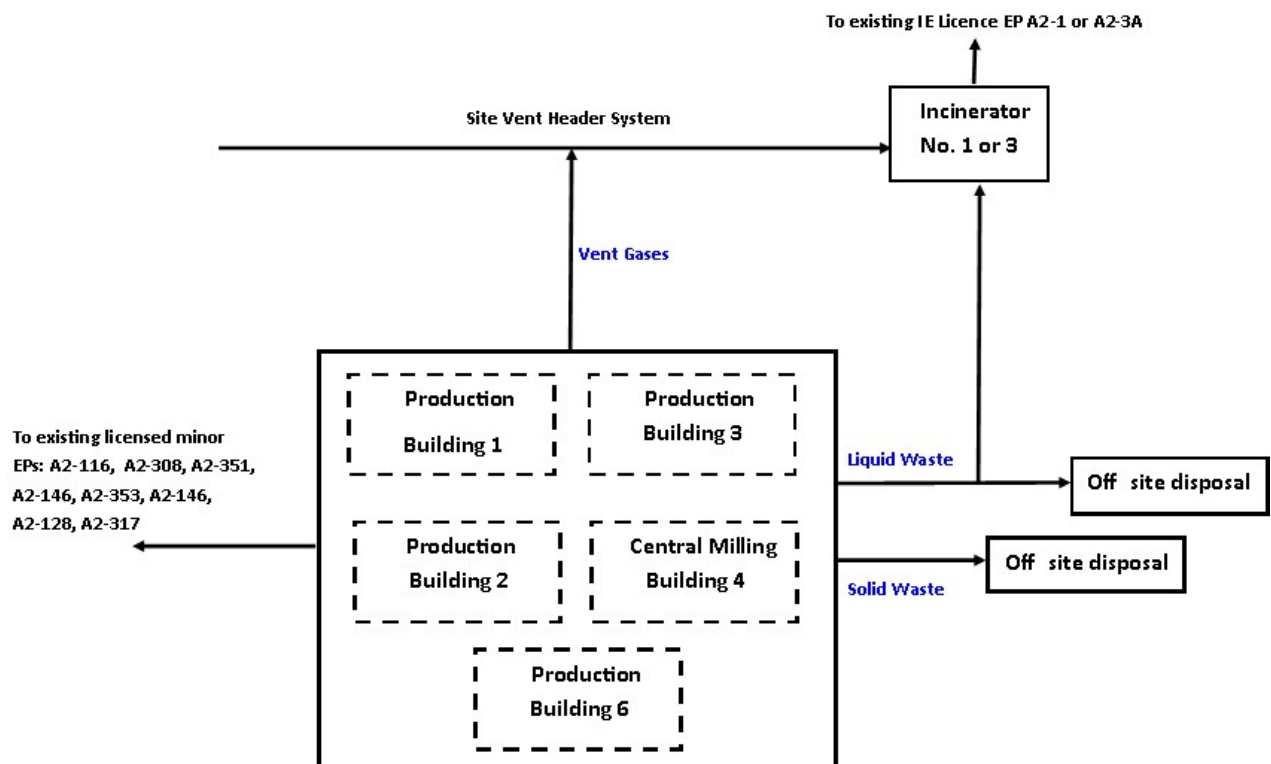


Figure 2.1 Project Max Associated Environmental Emissions

Table 2.1 Raw Materials Associated with the New Process

Raw Material	New or Existing to site	SDS Hazard Phrases (Further details in attachment for new chemicals)
Stage 1		
Acetone	Existing	H225, H319, H336
Uridine	New	NA
Sulphuric Acid	Existing	H290,H314,H318
Triethylamine	Existing	H225, H302, H331, H311, H314, H318, H335
Heptane	Existing	H304, H315. H225,H410, H336, H400
MK-4482 Acetonnide Seed	New	H372
Dimethoxypropane (DMP)	New	H225, H319
Methyl tert-butyl ether (MtBE)	Existing	H225,H315
Intermediate 1	New	H317
Stage 2		
Ethyl Acetate	Existing	H225, H319, H336
Isobutyric Anhydride	New	H301, H311, H314
N,N-dimethyl-4-pyridylamine (DMAP)	Existing	H301, H310, H315, H319, H335
Acetonitrile	Existing	H302, H312, H319, H225, H332
Triethylamine	Existing	H225, H302, H331, H311, H314, H318, H335
Intermediate 1	New	H317
Intermediate 2	New	H225, H302, H312, H332, H319, H317
Stage 3		
Diisopropylethylamine (DIPEA)	Existing	H225, H302, H331, H318, H335
Phosphorus(V)oxychloride (POCl ₃)	New	H302, H314, H330, H372
Acetonitrile	Existing	H302, H312, H319, H225, H332
Triazole	New	H302, H319, H361d
Intermediate 2	New	H225, H302, H312, H332, H319, H317
Intermediate 3	New	NA
Stage 4		
50% Hydroxylamine (aq)	New	H290, H318, H315, H317, H373, H335, H351, H302, H312, H400
Acetonitrile	Existing	H302, H312, H319, H225, H332
Intermediate 3	New	NA
Intermediate 4	New	NA
Stage 5		
Intermediate 4	New	NA
Hydrochloric Acid (HCl) (~37 wt%)	Existing	H314, H335
Acetonitrile	Existing	H302, H312, H319, H225, H332
Ethyl Acetate	Existing	H225, H319, H336
Methyl tert-butyl ether (MtBE)	Existing	H315, H225
Sodium Carbonate (~13.1%)	Existing	H319
Sodium Sulphate (22 wt%)	Existing	NA
Product MK-4482	New	H372

3.0 Emissions

3.1. Emissions to Atmosphere

There are no new main or minor emission points to atmosphere. As outlined above, the process will use existing modules and associated vent lines and abatement measures. As illustrated in Figure 2.1, all organic vapours from the process will be vented to the onsite abatement system incinerator IN1931 or incinerator IN1951 (Licensed emission points A2-1 and A2-3A) via each buildings vent header system.

Venting from dust handling activities such as solids charging, solids dig out, filters, dryers and from milling will be double HEPA filtered and routed to existing IE Licenced minor emission points A2-116, A2-308, A2-351, A2-146, A2-353, A2-146, A2-128, A2-317.

3.1.1 Parameters from the Process

Parameters expected to arise in the emissions to air from the new process before it reaches the onsite abatement system (incinerator IN1931/ incinerator IN1951 (Licensed emission points A2-1/A2-3A)) are outlined in the following Table 3.1 along with the associated BAT mass flow thresholds.

Table 3.1 Parameters from the proposed new process

Parameter	BAT Mass Flow Threshold (g/hr) ²
Stage 1	
Traces of Acetone	500 (TOC as C)
Traces of heptane and dimethoxy propane	500 (TOC as C)
Stage 2	
Traces of Ethyl acetate	500 (TOC as C)
Traces of trimethylamine, isobutyric anhydride and acetonitrile	100 Organic Substances (Class I) 500 (TOC as C)
Stage 3	
Traces of Acetonitrile	500 (TOC as C)

² <https://www.epa.ie/pubs/advice/bat/BAT%20Guidance%20Note%20Pesticides%20Pharmaceuticals%20&%20Speciality%20Organic%20Chemicals.pdf>

Traces of Diisopropylethylamine (DIPEA), Hydrogen Chloride, Phosphorus(V)oxychloride (POCl ₃)	500 (TOC as C) 150 Gaseous Inorganic Substances Class III
Stage 4	
Traces of Acetonitrile	500 (TOC as C)
Traces of hydroxylamine decomposition gases (i.e. mixtures of nitrogen, ammonia, and nitrous oxides)	150 Gaseous Inorganic Substances Class III 1800 Gaseous Inorganic Substances
Stage 5	
Traces of Acetonitrile	500 (TOC as C)
CO ₂	NA
HCl vapours	150 Gaseous Inorganic Substances Class III
Traces Ethyl acetate and Methyl tert-butyl ether (MTBE)	500 (TOC as C)

It is assumed the maximum concentrations are above the relevant BAT threshold values and appropriate abatement in the form of incineration is being employed. As this is a batch process, gaseous emissions from this process to the vent header system and incineration are not continuous.

It is not possible to estimate the pre-abatement particulate emissions concentrations for the minor emission points from the dust handling activities:

- Stage 1: A2-116
- Stage 2: A2-116
- Stage 3: A2-308, A2-351, A2-146
- Stage 4: A2-353, A2-146
- Stage 5: A2-128, A2-317

There is no change in the dust handling activities and the same abatement measures (double HEPA filtration with >99.99% removal efficiencies) will be in place as for all particulate emission points attached to the processes on site.

In both incinerators on site (A2-1 and A2-3A) waste liquids and vent gases are incinerated at a temperature of 1150°C, in 5% excess oxygen and a two second residence time to ensure complete destruction of all organic components to CO₂ and H₂O. The following ELVs and continuous monitoring are in place within the IE Licence for both incinerators to address combustion products from all wastes incinerated.

Parameter	Units	Half Hour Average		Daily Average	10 minute average
Carbon monoxide (CO) ^{Note 1}	mg/m ³	100		50	150 [*]
		A	B		
Total dust	mg/m ³	30	10	10	-
Volatile organic compounds expressed as total organic carbon	mg/m ³	20	10	10	-
Hydrogen chloride (HCl)	mg/m ³	60	10	10	-
Hydrogen fluoride (HF)	mg/m ³	4	2	1	-
Hydrogen bromide (HBr)	mg/m ³	5	3	2	-
Sulphur dioxide (SO ₂)	mg/m ³	200	50	50	-
Oxides of Nitrogen (NO and NO ₂ expressed as NO ₂)	mg/m ³	400	200	200	-

Parameter	Emission Limit Value	
Cadmium (as Cd) + thallium (as Tl), and their compounds ^{Note 2}	30minute – 8 hour sample	Total 0.05 mg/m ³
Mercury (as Hg) and its compounds ^{Note 2}	30minute – 8 hour sample	0.05 mg/m ³
Antimony (as Sb), arsenic (as As), lead (as Pb), chromium (as Cr), cobalt (as Co), copper (as Cu), manganese (as Mn), nickel (as Ni), and vanadium (as V) and their compounds ^{Note 2}	30minute – 8 hour sample	Total 0.5 mg/m ³
Dioxins/furans (TEQ) ^{Note 3}	6 – 8 hour sample	0.1 ng/m ³

No additional combustion products are expected from the burning of liquid wastes and vent gases from the proposed process.

For the minor emission points A2-116, A2-308, A2-351, A2-146, A2-353, A2-146, A2-128, A2-317, the following ELVs are in place as per IE licence requirements and monitoring is completed annually.

Parameter	Emission Limit Value
Total Particulates	1 mg/m ³
Pharmaceutical dust - as active ingredient	0.15 mg/ m ³ at a mass flow >1 g/hour.

3.2. Aqueous Emissions

As illustrated in Figure 2.1, aqueous waste will be routed to:

- either of the on-site incinerators IN1931/IN1951 which includes Licensed air emission points A2-1/A2-3A and internal aqueous emission point W1.
- Or offsite to an approved and permitted hazardous waste facility

Table 3.2 provides an overview of the constituents of the aqueous waste.

Table 3.2 Liquid Waste Stream to On Site Incinerator

Stage	Waste Stream	Approx. L per batch	Approx. composition	Treatment
Stage 1	Mother Liquors & wash	4,378	Major constituent Acetone plus MeOH, triethylamine, TEA sulphate, Dimethoxy propane, TEA Sulphate, Dimethoxy propane, MTBE	On site incineration
Stage 2	Aqueous separations & distillations	9,050	Major constituent water plus ethyl acetate, acetonitrile Butyrate salt, DMAP, triethylamine	On site incineration
Stage 3, Bld 2, Module 2	Distillation, filtration & wash	5708	Acetonitrile\water\DIPEA	On site incineration
Stage 3, Bld 3, Module 1	Distillation, filtration & wash	3350	Acetonitrile\water\DIPEA	On site incineration
Stage 4, Bld 2, Module 3	Mother liquor & cake wash	7,523	Acetonitrile, Water	Offsite to Indaver
Stage 4, Bld 1, Module 33	Mother liquor & cake wash	6,123	Acetonitrile, Water	Offsite to Indaver
Stage 5, Bld 3, Module 2	Distillation, Separation, Mother Liquors and wash	33,884.50	Ethyl acetate (EtAc) mainly, MTBE, sodium sulfate, water, MeCN	On site incineration
Stage 5, Bld 1, Module 32	Distillation, Separation, Mother Liquors and wash	14,739.8	Ethyl acetate (EtAc) mainly, MTBE, sodium sulfate, water, MeCN	On site incineration

3.3. Emissions to Sewer

There are no emissions to sewer from the Thermo Fisher site.

4 Solid Waste Generation and Disposal

All solid waste will be sent off site for incineration, in line with existing site procedures and IE Licence Requirements.

Table 4.1 Solid Waste

<u>Solid Waste Material</u>	Quantity (kg)	Further Treatment	Recovery / Reuse / Recycle	Final Disposal
Bags/liners etc.	2.5 drums approx. per batch Or approx. 62 drums per week	n/a	n/a	Off site incineration

5. SDS Hazardous Data for List of new chemicals, raw materials and products to site

Item	H Phrase
Uridine CAS 58-96-8	SECTION 2: Hazards identification 2.1 Classification of the substance or mixture Not a hazardous substance or mixture according to Regulation (EC) No. 1272/2008. 2.2 Label elements Not a hazardous substance or mixture according to Regulation (EC) No. 1272/2008. 2.3 Other hazards This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.
Dimethoxypropane (DMP) CAS 77-76-9	SECTION 2: Hazards identification 2.1 Classification of the substance or mixture Classification according to Regulation (EC) No 1272/2008 Flammable liquids (Category 2), H225 Eye irritation (Category 2), H319 For the full text of the H-Statements mentioned in this Section, see Section 16. 2.2 Label elements Labelling according Regulation (EC) No 1272/2008 Pictogram  Signal word Danger Hazard statement(s) H225 Highly flammable liquid and vapour. H319 Causes serious eye irritation. Precautionary statement(s) P210 Keep away from heat/sparks/open flames/hot surfaces. No smoking. P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Supplemental Hazard Statements none 2.3 Other hazards - none

Isobutyric Anhydride CAS 97-72-3	SECTION 2: Hazards identification 2.1 Classification of the substance or mixture Classification according to Regulation (EC) No 1272/2008 Acute toxicity, Oral (Category 3), H301 Acute toxicity, Dermal (Category 3), H311 Skin corrosion (Sub-category 1B), H314 For the full text of the H-Statements mentioned in this Section, see Section 16. 2.2 Label elements Labelling according Regulation (EC) No 1272/2008 Pictogram  Signal word Danger Hazard statement(s) H301 + H311 Toxic if swallowed or in contact with skin. H314 Causes severe skin burns and eye damage. Precautionary statement(s) P280 Wear protective gloves/ protective clothing/ eye protection/ face protection. P301 + P310 + P330 IF SWALLOWED: Immediately call a POISON CENTER/doctor. Rinse mouth. P301 + P330 + P331 IF SWALLOWED: Rinse mouth. Do NOT induce vomiting. P303 + P361 + P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water. P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Supplemental Hazard Statements none 2.3 Other hazards This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.
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Triazole

CAS 288-88-0

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Classification (REGULATION (EC) No 1272/2008)

Acute toxicity, Category 4	H302: Harmful if swallowed.
Eye irritation, Category 2	H319: Causes serious eye irritation.
Reproductive toxicity, Category 2	H361d: Suspected of damaging the unborn child.

2.2 Label elements

Labelling (REGULATION (EC) No 1272/2008)

Hazard pictograms	: 
Signal word	: Warning
Hazard statements	: H302 Harmful if swallowed. H319 Causes serious eye irritation. H361d Suspected of damaging the unborn child.
Precautionary statements	: Prevention: P201 Obtain special instructions before use. P202 Do not handle until all safety precautions have been read and understood. P264 Wash skin thoroughly after handling. P270 Do not eat, drink or smoke when using this product. P280 Wear protective gloves/ protective clothing/ eye protection/ face protection. Response: P301 + P312 + P330 IF SWALLOWED: Call a POISON CENTER/doctor if you feel unwell. Rinse mouth. P308 + P313 IF exposed or concerned: Get medical advice/ attention. P337 + P313 If eye irritation persists: Get medical advice/ attention. Storage: P405 Store locked up. Disposal: P501 Dispose of contents/ container to an approved waste disposal plant.

2.3 Other hazards

This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

Hydroxylamine 50%

SECTION 2: Hazards Identification

2.1. Classification of the substance or mixture

According to Regulation (EC) No 1272/2008 (CLP)

Met. Corr. 1
Acute Tox. 4 (oral)
Acute Tox. 4 (dermal)
Skin Corr./Irrit. 2
Eye Dam./Irrit. 1
Skin Sens. 1
Carc. 2
STOT SE 3 (irritating to respiratory system)
STOT RE 2
Aquatic Acute 1

H290, H318, H315, H317, H373, H335, H351, H302 + H312, H400

For the classifications not written out in full in this section the full text can be found in section 16.

2.2. Label elements

Globally Harmonized System, EU (GHS)

Pictogram:



Signal Word:
Danger

Hazard Statement:

H290	May be corrosive to metals.
H318	Causes serious eye damage.
H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
H373	May cause damage to organs through prolonged or repeated exposure.
H335	May cause respiratory irritation.
H351	Suspected of causing cancer.
H302 + H312	Harmful if swallowed or in contact with skin
H400	Very toxic to aquatic life.

Precautionary Statements (Prevention):

	P280 Wear protective gloves/protective clothing/eye protection/face protection. P201 Obtain special instructions before use. P273 Avoid release to the environment. P260 Do not breathe dust/gas/mist/vapours. P271 Use only outdoors or in a well-ventilated area. P202 Do not handle until all safety precautions have been read and understood. P272 Contaminated work clothing should not be allowed out of the workplace. P270 Do not eat, drink or smoke when using this product. P264 Wash with plenty of water and soap thoroughly after handling. P234 Keep only in original packaging. Precautionary Statements (Response): P310 Immediately call a POISON CENTER, doctor/physician or emergency number 112. P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. P304 + P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing. P303 + P362 IF ON SKIN (or hair): Wash with plenty of soap and water. P301 + P312 IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell. P330 Rinse mouth. P362 + P364 Take off contaminated clothing and wash it before reuse. P332 + P313 If skin irritation occurs: Get medical advice/attention. P391 Collect spillage. P390 Absorb spillage to prevent material damage. Precautionary Statements (Storage): P403 + P233 Store in a well-ventilated place. Keep container tightly closed. P405 Store locked up. P406 Store in corrosive resistant container with a resistant inner liner. Precautionary Statements (Disposal): P501 Dispose of contents/container to hazardous or special waste collection point. <u>According to Regulation (EC) No 1272/2008 (CLP)</u> Hazard determining component(s) for labelling: Hydroxylamine 2.3. Other hazards <u>According to Regulation (EC) No 1272/2008 (CLP)</u> If applicable information is provided in this section on other hazards which do not result in classification but which may contribute to the overall hazards of the substance or mixture. The crystallized product is capable of explosion when heated. The product may decompose under the release of large gas amounts if processed in proper - containers may burst. Further possible risks to man and the environment, eg as a result of decomposition and/or reaction products, are to be taken from the corresponding sections of this safety data sheet.
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Phosphorus(V)

oxychloride (POCL₃)

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Classification (REGULATION (EC) No 1272/2008)

Acute toxicity, Category 4	H302: Harmful if swallowed.
Acute toxicity, Category 2	H330: Fatal if inhaled.
Skin corrosion, Sub-category 1A	H314: Causes severe skin burns and eye damage.
Serious eye damage, Category 1	H318: Causes serious eye damage.
Specific target organ toxicity - repeated exposure, Category 1	H372: Causes damage to organs through prolonged or repeated exposure.

2.2 Label elements

Labelling (REGULATION (EC) No 1272/2008)

Hazard pictograms	: 
Signal word	: Danger
Hazard statements	: H302 Harmful if swallowed. H314 Causes severe skin burns and eye damage. H330 Fatal if inhaled. H372 Causes damage to organs through prolonged or repeated exposure.
Supplemental Hazard Statements	: EUH014 Reacts violently with water. EUH029 Contact with water liberates toxic gas.
Precautionary statements	: Prevention: P260 Do not breathe dust/ fume/ gas/ mist/ vapours/ spray. P280 Wear protective gloves/ protective clothing/ eye protection/ face protection. P284 Wear respiratory protection. Response: P301 + P330 + P331 IF SWALLOWED: Rinse mouth. Do NOT induce vomiting. P303 + P361 + P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water. P304 + P340 + P310 IF INHALED: Remove person to fresh air and keep comfortable for breathing. Immediately call a POISON CENTER/doctor. P305 + P351 + P338 + P310 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER/doctor. P314 Get medical advice/ attention if you feel unwell. Storage: P403 + P233 Store in a well-ventilated place. Keep container tightly closed. Disposal: P501 Dispose of contents/ container to an approved waste disposal plant.

Intermediate 1

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification according to Regulation (EC) No. 1272/2008 [CLP]

Skin sensitisation, Category 1

H317

Full text of H statements : see section 16

Adverse physicochemical, human health and environmental effects

May cause an allergic skin reaction.

2.2. Label elements

Labelling according to Regulation (EC) No. 1272/2008 [CLP]

Hazard pictograms (CLP)



GHS07

Signal word (CLP)

: Warning

Hazard statements (CLP)

: H317 - May cause an allergic skin reaction.

Precautionary statements (CLP)

: P261 - Avoid breathing dust.

P280 - Wear protective gloves, protective clothing.

P302+P352 - IF ON SKIN: Wash with plenty of water.

P333+P313 - If skin irritation or rash occurs: Get medical advice/attention.

P362+P364 - Take off contaminated clothing and wash it before reuse.

2.3. Other hazards

PBT: not yet assessed

vPvB: not yet assessed

Intermediate 2

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification according to Regulation (EC) No. 1272/2008 [CLP]

Flammable liquids, Category 2	H225
Acute toxicity (oral), Category 4	H302
Acute toxicity (dermal), Category 4	H312
Acute toxicity (inhalation:dust,mist) Category 4	H332
Serious eye damage/eye irritation, Category 2	H319
Skin sensitisation, Category 1	H317

Full text of H statements : see section 16

Adverse physicochemical, human health and environmental effects

Highly flammable liquid and vapour. Harmful if swallowed. Harmful in contact with skin. Harmful if inhaled. Causes serious eye irritation. May cause an allergic skin reaction.

2.2. Label elements

Labelling according to Regulation (EC) No. 1272/2008 [CLP]

Hazard pictograms (CLP)



GHS02

GHS07

Signal word (CLP)

: Danger

Hazardous ingredients

: Acetonitrile

Hazard statements (CLP)

: H225 - Highly flammable liquid and vapour.
H302+H312+H332 - Harmful if swallowed, in contact with skin or if inhaled.
H317 - May cause an allergic skin reaction.
H319 - Causes serious eye irritation.

Precautionary statements (CLP)

: P210 - Keep away from sparks, open flames, hot surfaces, heat. No smoking.
P261 - Avoid breathing dust.
P264 - Wash hands thoroughly after handling.
P270 - Do not eat, drink or smoke when using this product.
P280 - Wear protective gloves, protective clothing, eye protection.
P301+P312 - IF SWALLOWED: Call a POISON CENTER, doctor if you feel unwell.
P302+P352 - IF ON SKIN: Wash with plenty of water.
P304+P340 - IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P333+P313 - If skin irritation or rash occurs: Get medical advice/attention.
P337+P313 - If eye irritation persists: Get medical advice/attention.

2.3. Other hazards

PBT: not yet assessed

vPvB: not yet assessed

Intermediate 3

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification according to Regulation (EC) No. 1272/2008 [CLP]

Not classified

Adverse physicochemical, human health and environmental effects

No additional information available

2.2. Label elements

Labelling according to Regulation (EC) No. 1272/2008 [CLP]

No labelling applicable

2.3. Other hazards

PBT: not yet assessed

vPvB: not yet assessed

Intermediate 4

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification according to Regulation (EC) No. 1272/2008 [CLP]

Not classified

Adverse physicochemical, human health and environmental effects

No additional information available

2.2. Label elements

Labelling according to Regulation (EC) No. 1272/2008 [CLP]

No labelling applicable

2.3. Other hazards

PBT: not yet assessed

vPvB: not yet assessed

MK-4482

No CAS Assigned

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Classification (REGULATION (EC) No 1272/2008)

Specific target organ toxicity - repeated exposure, Category 1, Gastrointestinal tract

H372: Causes damage to organs through prolonged or repeated exposure if swallowed.

2.2 Label elements

Labelling (REGULATION (EC) No 1272/2008)

Hazard pictograms :



Signal word : Danger

Hazard statements : H372 Causes damage to organs (Gastrointestinal tract) through prolonged or repeated exposure if swallowed.

Precautionary statements : Prevention:

P264 Wash skin thoroughly after handling.

P270 Do not eat, drink or smoke when using this product.

Response:

P314 Get medical advice/ attention if you feel unwell.

2.3 Other hazards

Dust contact with the eyes can lead to mechanical irritation.

Contact with dust can cause mechanical irritation or drying of the skin.

May form explosive dust-air mixture during processing, handling or other means.