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

1.1 Product identifier

Trade name	:	Crude Acetophenone
REACH Registration Number	:	01-2119956152-41-0001
EC-No.	:	309-849-4

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

Use of the Substance/Mixture	:	Manufacture, Industrial use as intermediate under strictly controlled conditions

1.3 Details of the supplier of the safety data sheet

Manufacturer	:	Borealis Polymers Oy P.O.Box 330, FI-06101 Porvoo, Finland Telephone: +358 9 394900
Supplier	:	Borealis AG Trabrennstrasse 6-8, 1020 Vienna, Austria Telephone: +43 1 22400 0
E-mail address	:	sds@borealisgroup.com

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 4	H332: Harmful if inhaled.
Acute toxicity, Category 4	H312: Harmful in contact with skin.
Skin corrosion, Category 1B	H314: Causes severe skin burns and eye damage.
Skin sensitisation, Category 1	H317: May cause an allergic skin reaction.
Germ cell mutagenicity, Category 2	H341: Suspected of causing genetic defects.
Specific target organ toxicity - repeated	H373: May cause damage to organs through

exposure, Category 2	prolonged or repeated exposure.
Aspiration hazard, Category 1	H304: May be fatal if swallowed and enters airways.
Long-term (chronic) aquatic hazard, Category 2	H411: Toxic to aquatic life with long lasting effects.

2.2 Label elements

Labelling (REGULATION (EC) No 1272/2008)

Hazard pictograms :

Signal word : Warning

Hazard statements :
H302 + H312 + H332 Harmful if swallowed, in contact with skin or if inhaled.
H314 Causes severe skin burns and eye damage.
H317 May cause an allergic skin reaction.
H341 Suspected of causing genetic defects.
H373 May cause damage to organs through prolonged or repeated exposure.
H304 May be fatal if swallowed and enters airways.
H411 Toxic to aquatic life with long lasting effects.

Precautionary statements :

Prevention:

P260 Do not breathe mist or vapours.
P280 Wear protective gloves/ protective clothing/ eye protection/ face protection/ hearing protection.
P273 Avoid release to the environment.

Response:

P301 + P330 + P331 + P310 IF SWALLOWED: Rinse mouth. Do NOT induce vomiting. Immediately call a POISON CENTER/ doctor.
P303 + P361 + P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water.
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.
P391 Collect spillage.

Additional Labelling

After contact with skin, wash immediately with plenty of polyethylene glycol (in disposable cloths) and with plenty of water.

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.

Ecological information: The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

Toxicological information: The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

SECTION 3: Composition/information on ingredients

3.1 Substances

EC-No. : 309-849-4

Components

Chemical name	CAS-No. EC-No.	Concentration (% w/w)	M-Factor, SCL, ATE
Substance of unknown or variable composition, complex reaction products or biological material (UVCB) :			
Benzene, (1-methylethyl)-, oxidized, cumene residues, acetophenone fraction	101316-44-3 309-849-4	100	
Contains :			
acetophenone	98-86-2 202-708-7	>= 50 - < 80	
phenol	108-95-2 203-632-7	>= 5 - < 25	specific concentration limit Skin Corr. 1B; H314 >= 3 % Skin Irrit. 2; H315 1 - < 3 % Eye Irrit. 2; H319 1 - < 3 %
4-methyl-2,4-diphenyl-1-pentene	6362-80-7 228-846-8	>= 0,1 - < 3	
4-(1-methyl-1-phenylethyl)phenol	599-64-4 209-968-0	>= 0,1 - < 3	

mix-cresol	1319-77-3 215-293-2	>= 0,1 - < 3	
hydratropaldehyde	93-53-8 202-255-5	>= 0,1 - < 3	

SECTION 4: First aid measures

4.1 Description of first aid measures

General advice : Plan first aid action before beginning work with this product.
First aider needs to protect himself.
Move the victim to fresh air.
Keep at rest.
Remove contaminated clothing and shoes.
If unconscious, place in recovery position and seek medical advice.
Keep available:
Eye wash bottle with pure water and disposable cloths in polyethylene glycol at the workplace and in vehicles.
In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).

If inhaled : Remove from exposure.
Keep warm and at rest and provide fresh air.
Give oxygen or artificial respiration if needed.
Immediate medical attention is required.

In case of skin contact : Take off all contaminated clothing immediately.
Wash off with polyethylene glycol (in disposable cloths) and with plenty of water.
Keep on washing until medical assistance is obtained and skin is not white.
Immediate medical attention is required.

In case of eye contact : Rinse immediately with plenty of water, also under the eyelids, for at least 30 minutes.
If easy to do, remove contact lens, if worn.
Continue rinsing eyes during transport to hospital.

If swallowed : Rinse mouth.
Drink plenty of water.
Do NOT induce vomiting.
Immediate medical attention is required.

4.2 Most important symptoms and effects, both acute and delayed

Symptoms : Symptoms of poisoning:
Vomiting
Convulsions
Irregular cardiac activity
Unconsciousness
Breathing difficulties
Death.

Inhalation:
Irritation
Shortness of breath
Lung oedema

Skin contact:
Skin disorders
Corrosion
Dermatitis
Necrosis
Death.

Ingestion:
Aspiration may cause pulmonary oedema and pneumonitis.
Severe irritation
corrosive effects
acute lethal effects

Risks : Symptoms may be delayed.
Harmful if swallowed, in contact with skin or if inhaled.
May be fatal if swallowed and enters airways.
May cause an allergic skin reaction.
Causes serious eye damage.
Suspected of causing genetic defects.
May cause damage to organs through prolonged or repeated exposure.
Causes severe burns.

4.3 Indication of any immediate medical attention and special treatment needed

Treatment : There is no specific antidote available.
After contact with skin, wash immediately with plenty of polyethylene glycol (in disposable cloths) and with plenty of water.
In the case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
If ingested, irrigate the stomach using activated charcoal in addition.

SECTION 5: Firefighting measures

5.1 Extinguishing media

Suitable extinguishing media	:	Dry powder Carbon dioxide (CO2) Alcohol-resistant foam Water mist
Unsuitable extinguishing media	:	High volume water jet

5.2 Special hazards arising from the substance or mixture

Specific hazards during firefighting	:	Flammable. Vapours are heavier than air and may spread along floors. Vapours may form explosive mixtures with air. Burning produces noxious and toxic fumes. See chapter 10.

5.3 Advice for firefighters

Special protective equipment for firefighters	:	Wear self-contained breathing apparatus and protective suit.
Further information	:	Keep people away from and upwind of spill/leak. Keep away from heat and sources of ignition. Observe the risk of explosion. Cool containers/tanks with water spray. Collect contaminated fire extinguishing water separately. This must not be discharged into drains. Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Remove all sources of ignition.
Keep people away from and upwind of spill/leak.
Do not breathe vapours.
Avoid all contact with the product.
Use personal protective equipment.
Ensure adequate ventilation.
Attempt to stop leakage without personal risk.

6.2 Environmental precautions

Should not be released into the environment.
Prevent product from entering drains.
If the product contaminates rivers and lakes or drains inform respective authorities.

6.3 Methods and material for containment and cleaning up

Contain spillage, and then collect with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and place in container for disposal according to local / national regulations (see section 13).
Clean thoroughly.

6.4 Reference to other sections

For personal protection see section 8.
For disposal considerations see section 13.

SECTION 7: Handling and storage

7.1 Precautions for safe handling

Advice on safe handling	:	This substance should be handled under strictly controlled conditions as specified in REACH regulation article 18(4). Site documentation to support safe handling arrangements in accordance with risk-based management system should be available at each manufacturing site. During the whole lifecycle all necessary measures should be undertaken to minimize emissions and any resulting exposure. Use product only in closed system. To be handled by trained personnel only. Where there is potential for exposure: Restrict access to authorised persons. Avoid and prevent all spillage, contact and exposure. Avoid inhalation of vapour or mist. Ensure adequate ventilation.
Advice on protection against fire and explosion	:	Keep away from sources of ignition - No smoking. Take precautionary measures against static discharges. To avoid ignition of vapours by static electricity discharge, all metal parts of the equipment must be grounded.
Hygiene measures	:	Avoid contact with skin and eyes. Take off immediately all contaminated clothing. When using do not eat, drink or smoke. Keep away from food, drink and animal feedingstuffs. Clear up spills immediately and dispose of waste safely. Wash hands before breaks and immediately after handling the product. Use a high fat protective cream after cleaning skin.

7.2 Conditions for safe storage, including any incompatibilities

Requirements for storage areas and containers	:	Keep locked up or in an area accessible only to qualified or authorised persons. To prevent leaks or spillages from spreading, provide a suitable liquid retention system. Keep container tightly closed and in a well-ventilated place. Protect from sunlight.
Further information on storage conditions	:	Keep locked up or in an area accessible only to qualified or authorised persons. Ensure that eye flushing systems and safety showers are located close to the working place.
Advice on common storage	:	Keep away from food, drink and animal feedingstuffs. Keep away from incompatible materials. See chapter 10.
Packaging material	:	Suitable material: Stainless steel Unsuitable material: Aluminium, Lead, Copper, Copper alloys, Zinc, Unlined steel, Carbon steel

7.3 Specific end use(s)

Specific use(s)	:	Intermediate For industrial use only.

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

Occupational Exposure Limits

Components	CAS-No.	Value type (Form of exposure)	Control parameters	Basis
phenol	108-95-2	TWA	2 ppm 8 mg/m3	2009/161/EU
Further information	Identifies the possibility of significant uptake through the skin, Indicative			
		STEL	4 ppm 16 mg/m3	2009/161/EU
Further information	Identifies the possibility of significant uptake through the skin, Indicative			

Derived No Effect Level (DNEL) according to Regulation (EC) No. 1907/2006:

Substance name	End Use	Exposure routes	Potential health effects	Value
phenol	Workers	Inhalation	Long-term systemic effects	8 mg/m3
			Acute local effects	16 mg/m3
	Workers	Skin contact	Long-term systemic	1,23 mg/kg

			effects	bw/d
	Consumers	Inhalation	Long-term systemic effects	1,32 mg/m3
	Consumer use	Dermal	Long-term systemic effects	0,4 mg/kg bw/day
	Consumer use	Oral	Long-term systemic effects	0,4 mg/kg bw/day
phenol	Workers	Inhalation	Long-term systemic effects	8 mg/m3
			Acute local effects	16 mg/m3
	Workers	Skin contact	Long-term systemic effects	1,23 mg/kg bw/d
	Consumers	Inhalation	Long-term systemic effects	1,32 mg/m3
	Consumer use	Dermal	Long-term systemic effects	0,4 mg/kg bw/day
	Consumer use	Oral	Long-term systemic effects	0,4 mg/kg bw/day

Predicted No Effect Concentration (PNEC) according to Regulation (EC) No. 1907/2006:

Substance name	Environmental Compartment	Value
phenol	Fresh water	0,008 mg/l
	Marine water	0,001 mg/l
	Fresh water sediment	0,091 mg/kg dwt
	Marine sediment	0,009 mg/kg dwt
	Soil	0,136 mg/kg dwt
	Intermittent use/release	0,031 mg/l
	Sewage treatment plant	2,1 mg/l

8.2 Exposure controls

Engineering measures

This substance should be handled under strictly controlled conditions as specified in REACH regulation article 18(4). Site documentation to support safe handling arrangements in accordance with risk-based management system should be available at each manufacturing site. During the whole lifecycle all necessary measures should be undertaken to minimize emissions and any resulting exposure.
Ensure safe systems of work or equivalent arrangements are in place to manage risks.
Regularly inspect, test and maintain all control measures.

Personal protective equipment

Eye protection : Wear goggles and if needed face-shield.
Use eye protection according to EN 166.

Hand protection
Material : thick PVC
Break through time : > 480 min

Material : Neoprene
Break through time : 140 min

Material	:	polyvinylchloride (PVC)
Break through time	:	75 min
Remarks	:	Protective gloves complying with EN 374. Please observe the instructions regarding permeability and breakthrough time which are provided by the supplier of the gloves. Also take into consideration the specific local conditions under which the product is used, such as the danger of cuts, abrasion, and the contact time.
Skin and body protection	:	Wear suitable protective clothing. Safety shoes according to EN 345-347. If splashes are likely to occur: Complete suit protecting against chemicals
Respiratory protection	:	In case of insufficient ventilation, wear suitable respiratory equipment. Respirator with combination filter for vapour/particulate (EN 141)
Filter type	:	ABEK-P3-filter
Protective measures	:	Provide specific activity training to operators to minimise exposures. Avoid exposure - obtain special instructions before use. Ensure that eye flushing systems and safety showers are located close to the working place. Consider the need for risk based health surveillance.

Environmental exposure controls

General advice	:	Should not be released into the environment. Prevent product from entering drains. If the product contaminates rivers and lakes or drains inform respective authorities.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Physical state	:	viscous liquid
Colour	:	yellow
Odour	:	No information available.
Odour Threshold	:	This information is not available.
Melting point/range	:	-25 - 10 °C

Boiling point/boiling range	:	No data available
Upper explosion limit / Upper flammability limit	:	9,0 %(V) phenol
Lower explosion limit / Lower flammability limit	:	1,3 %(V) phenol
Flash point	:	81,5 °C(1.013 hPa)
Auto-ignition temperature	:	525 °C
Decomposition temperature	:	No data available
pH	:	No data available
Viscosity		
Viscosity, dynamic	:	2 mPa.s (40 °C)
Viscosity, kinematic	:	No data available
Solubility(ies)		
Water solubility	:	5.500 mg/l Acetophenone
Solubility in other solvents	:	No data available
Partition coefficient: n-octanol/water	:	log Pow: 1,58 Acetophenone
Vapour pressure	:	25,2 Pa (25 °C) Method: OECD Test Guideline 104 171 Pa (50 °C) Method: OECD Test Guideline 104
Relative density	:	1,04 (20 °C)
Relative vapour density	:	No data available

9.2 Other information

Explosives	:	Not applicable
Oxidizing properties	:	Not applicable
Flammability (liquids)	:	The product is not flammable.

Self-ignition	:	525 °C
Evaporation rate	:	No data available
Surface tension	:	61,3 mN/m, 20 °C

SECTION 10: Stability and reactivity

10.1 Reactivity

No dangerous reaction known under conditions of normal use.

10.2 Chemical stability

May attack many plastics, rubbers and coatings.
hygroscopic

10.3 Possibility of hazardous reactions

Hazardous reactions : No dangerous reaction known under conditions of normal use.
Vapours may form explosive mixtures with air.

10.4 Conditions to avoid

Conditions to avoid : Exposure to air.
Exposure to sunlight.
Keep away from heat and sources of ignition.
No decomposition if used as directed.

10.5 Incompatible materials

Materials to avoid : Oxidizing agents
Aldehydes
Isocyanates
Nitrites
Nitride
Friedel-Crafts catalysts
Metals

10.6 Hazardous decomposition products

Heating or fire can release toxic and corrosive gases.
Under fire conditions:
Carbon monoxide
Carbon dioxide (CO2)

SECTION 11: Toxicological information

11.1 Information on hazard classes as defined in Regulation (EC) No 1272/2008

Acute toxicity

Harmful if swallowed, in contact with skin or if inhaled.

Components:

acetophenone:

Acute oral toxicity	:	LD50 (Rat, male and female): 2.081 mg/kg Method: OECD Test Guideline 401

phenol:

Acute oral toxicity	:	LD50 (Rat): 340 mg/kg Method: OECD Test Guideline 401 LDLo (Humans): 140 mg/kg
Acute inhalation toxicity	:	LC50 (Rat): > 900 mg/m3 Exposure time: 8 h Test atmosphere: dust/mist Symptoms: Irritation of mucous membranes, Shortness of breath, Respiratory disorders Remarks: Toxic. Danger of serious damage to health by prolonged exposure.
Acute dermal toxicity	:	LD50 (Rat): 660 mg/kg Method: OECD Test Guideline 402

Skin corrosion/irritation

Causes severe burns.

Components:

acetophenone:

Method	:	OECD Test Guideline 404
Result	:	No skin irritation

phenol:

Remarks	:	Exposure quickly causes a strong corrosive action upon all body tissue. Possible risk of irreversible effects.

Serious eye damage/eye irritation

Causes serious eye damage.

Components:

acetophenone:

Method : OECD Test Guideline 405
Result : No eye irritation

phenol:
Species : Rabbit
Exposure time : 72 h
Method : OECD Test Guideline 405
Result : Corrosive

Respiratory or skin sensitisation

Skin sensitisation

May cause an allergic skin reaction.

Respiratory sensitisation

Based on available data, the classification criteria are not met.

Components:

acetophenone:
Result : Does not cause skin sensitisation.

Germ cell mutagenicity

Suspected of causing genetic defects.

Components:

acetophenone:
Genotoxicity in vitro : Test Type: reverse mutation assay
Method: OECD Test Guideline 471
Result: negative

: Test Type: In vitro gene mutation study in mammalian cells
Method: OECD Test Guideline 476
Result: negative

: Test Type: Chromosome aberration test in vitro
Method: OECD Test Guideline 473
Result: positive

Genotoxicity in vivo : Test Type: In vivo micronucleus test
Method: OECD Test Guideline 474
Result: negative

phenol:
Genotoxicity in vitro : Test Type: Ames test
Method: OECD Test Guideline 471
Result: negative

: Test Type: Chromosome aberration test in vitro
Result: positive

	:	Test Type: In vitro gene mutation study in mammalian cells Method: OECD Test Guideline 476 Result: positive
Genotoxicity in vivo	:	Test Type: in vivo assay Method: Mutagenicity (micronucleus test) Result: weak positive
Germ cell mutagenicity-Assessment	:	In vitro tests showed mutagenic effects, Suspected of causing genetic defects.

Carcinogenicity

Based on available data, the classification criteria are not met.

Components:

phenol:

Remarks	:	Animal testing did not show any carcinogenic effects. IARC: (International Agency for Research on Cancer) Group 3: Not classifiable as to its carcinogenicity to humans

Reproductive toxicity

Based on available data, the classification criteria are not met.

Components:

phenol:

Effects on fertility	:	Remarks: No known effect.

STOT - single exposure

Based on available data, the classification criteria are not met.

STOT - repeated exposure

May cause damage to organs through prolonged or repeated exposure.

Repeated dose toxicity

Components:

phenol:

Species	:	Rat
NOAEL	:	300 mg/kg, bw/d
Application Route	:	Oral
Remarks	:	Systemic effects Subchronic toxicity
Remarks	:	Prolonged exposure may cause chronic effects: disorder of nervous system, injuries to liver and kidneys. Repeated skin contact:

dermatitis,
disorder of pigmentation.

Aspiration toxicity

May be fatal if swallowed and enters airways.

11.2 Information on other hazards

Endocrine disrupting properties

Product:

Assessment	:	The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

Experience with human exposure

Components:

phenol:

General Information	:	Absorbs rapidly into the body by inhalation, skin contact and oral intake.

Further information

Product:

Remarks	:	Symptoms may be delayed.

SECTION 12: Ecological information

12.1 Toxicity

Components:

acetophenone:

Toxicity to daphnia and other aquatic invertebrates	:	LC50 (Daphnia magna (Water flea)): 528 mg/l Exposure time: 48 h
Toxicity to algae/aquatic plants	:	EC50 : 40 - 86 mg/l Exposure time: 72 h Test Type: Growth inhibition

phenol:

Toxicity to fish	:	Remarks: Toxic to aquatic life with long lasting effects.

LC50 (Oncorhynchus mykiss (rainbow trout)): 8,9 mg/l
Exposure time: 96 h
Test substance: phenol

Toxicity to daphnia and other aquatic invertebrates : EC50 (Ceriodaphnia dubia (water flea)): 3,1 mg/l
Exposure time: 48 h
Test substance: phenol

Toxicity to algae/aquatic plants : EC50 (Pseudokirchneriella subcapitata (green algae)): 61,1 mg/l
Exposure time: 96 h
Test substance: phenol

EC50 (Entomoneis cf punctulata (diatom)): 76 mg/l
Exposure time: 72 h
Test substance: phenol

EC50 (Lemna minor (duckweed)): 61,82 mg/l
Exposure time: 7 d
Test substance: phenol

Toxicity to fish (Chronic toxicity) : NOEC: 0,077 mg/l
Exposure time: 60 d
Species: Cirrhina mrigala
Test substance: phenol

Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) : EC10: 0,46 mg/l
Exposure time: 16 d
Species: Daphnia magna (Water flea)
Test substance: phenol

12.2 Persistence and degradability

Components:

acetophenone:
Biodegradability : Result: Readily biodegradable.
Method: OECD Test Guideline 301C

phenol:
Biodegradability : activated sludge
Result: Readily biodegradable.
Biodegradation: 62 %
Method: OECD Test Guideline 301C
Test substance: phenol

Test Type: anaerobic
activated sludge
Result: Readily biodegradable.
Biodegradation: 80,1 %

Method: ECETOC method
Test substance: phenol

Water
Result: Readily biodegradable.
Biodegradation: 86 - 96 %
Test substance: phenol

Chemical Oxygen Demand (COD)	:	2.300 mg/g Test substance: phenol
ThOD	:	2,26 mg/l Test substance: phenol
Photodegradation	:	Test substance: phenol Remarks: Estimated atmospheric lifetime: 14h Photodegradable.

12.3 Bioaccumulative potential

Components:

acetophenone:

Partition coefficient: n-octanol/water	:	log Pow: 1,58 Remarks: Acetophenone

phenol:

Bioaccumulation	:	Species: Danio rerio (zebra fish) Bioconcentration factor (BCF): 17,5 Elimination: yes Test substance: phenol Method: OECD Test Guideline 305E Remarks: Bioaccumulation not expected.

12.4 Mobility in soil

Components:

phenol:

Mobility	:	Medium: Air Remarks: 1%
	:	Medium: Water Remarks: 98.5%, The product evaporates slowly., The product is soluble in water.
	:	Medium: Soil Remarks: 0.5%, High mobility

12.5 Results of PBT and vPvB assessment

Product:

Assessment	:	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..

12.6 Endocrine disrupting properties

Product:

Assessment	:	The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

12.7 Other adverse effects

No data available

SECTION 13: Disposal considerations

13.1 Waste treatment methods

Product	:	Dispose of as hazardous waste in compliance with local and national regulations. Where possible recycling is preferred to disposal or incineration. European waste code: 07 01 99 (wastes not otherwise specified (basic organic chemicals))
Contaminated packaging	:	Dispose of as hazardous waste in compliance with local and national regulations. Reuse or recycle if not contaminated.

SECTION 14: Transport information

14.1 UN number or ID number

ADR	:	UN 2821
IMDG	:	UN 2821

14.2 UN proper shipping name

ADR	:	PHENOL SOLUTION
IMDG	:	PHENOL SOLUTION

14.3 Transport hazard class(es)

ADR	:	6.1
IMDG	:	6.1

14.4 Packing group

ADR

Packing group	:	III
Classification Code	:	T1
Hazard Identification Number	:	60
Labels	:	6.1
Tunnel restriction code	:	(E)

IMDG

Packing group	:	III
Labels	:	6.1
EmS Code	:	F-A, S-A

14.5 Environmental hazards

ADR

Environmentally hazardous	:	yes

IMDG

Marine pollutant	:	yes

IATA (Cargo)

Environmentally hazardous	:	yes

14.6 Special precautions for user

The transport classification(s) provided herein are for informational purposes only, and solely based upon the properties of the unpackaged material as it is described within this Safety Data Sheet. Transportation classifications may vary by mode of transportation, package sizes, and variations in regional or country regulations.

14.7 Maritime transport in bulk according to IMO instruments

Not applicable for product as supplied.

SECTION 15: Regulatory information

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

Seveso III: Directive 2012/18/EU of the European Parliament and of the Council on the control of major-accident hazards involving dangerous substances.

Category		Quantity 1	Quantity 2
E2	ENVIRONMENTAL HAZARDS	200 t	500 t

Other regulations:

Take note of Directive 98/24/EC on the protection of the health and safety of workers from the risks related to chemical agents at work.
Take note of Dir 94/33/EC on the protection of young people at work.
Take note of Dir 92/85/EEC on the safety and health at work of pregnant workers.

15.2 Chemical safety assessment

A Chemical Safety Assessment is not required for this substance.

SECTION 16: Other information

Full text of other abbreviations

2009/161/EU	:	Europe. COMMISSION DIRECTIVE 2009/161/EU establishing a third list of indicative occupational exposure limit values in implementation of Council Directive 98/24/EC and amending Commission Directive 2000/39/EC
2009/161/EU / TWA	:	Limit Value - eight hours
2009/161/EU / STEL	:	Short term exposure limit

Further information

Training advice	:	Provide adequate information, instruction and training for operators. Regular trainings of all employees which are involved in the transport of dangerous goods (according to chapter 1.3 ADR).
Other information	:	Issued according to Regulation (EC) No 1907/2006, Annex II, and its amendments.
Issuer	:	Borealis, Group Product Stewardship / Mikaela Eriksson.
Sources of key data used to compile the Safety Data Sheet	:	REACH Registration Dossier Phenol. P&D-REACH Consortium, 2021 International Chemical Safety Card, Phenol, October 2001 (http://www.inchem.org/documents/icsc/icsc/eics0070.htm) IPCS Environmental Health Criteria 161, WHO, 1994 (www.inchem.org/documents/ehc/ehc/ehc161.htm) Environment Guide 71; Environmental properties of chemicals, Finnish Environment Institute, Helsinki 2000

Classification of the mixture:		**Classification procedure:**
Acute Tox. 4	H302	Calculation method
Acute Tox. 4	H332	Calculation method
Acute Tox. 4	H312	Calculation method
Skin Corr. 1B	H314	Calculation method
Skin Sens. 1	H317	
Muta. 2	H341	Calculation method
STOT RE 2	H373	Calculation method
Asp. Tox. 1	H304	
Aquatic Chronic 2	H411	

Disclaimer

To the best of our knowledge, the information contained herein is accurate and reliable as of the date of publication; however we do not assume any liability whatsoever for the accuracy and completeness of such information.

Borealis makes no warranties which extend beyond the description contained herein. Nothing herein shall constitute any warranty of merchantability or fitness for a particular purpose.

It is the customer's responsibility to inspect and test our products in order to satisfy itself as to the suitability of the products for the customer's particular purpose. The customer is responsible for the appropriate, safe and legal use, processing and handling of our products.

No liability can be accepted in respect of the use of Borealis' products in conjunction with other materials. The information contained herein relates exclusively to our products when not used in conjunction with any third party materials.