Toxicological profile for

Hydrocarbon resin

This ingredient has been assessed to determine potential human health effects for the consumer. It was considered not to increase the inherent toxicity of the product and thus is acceptable under conditions of intended use.

1. Name of substance and physico-chemical properties

1.1. IUPAC systematic name

No data available to us at this time.

1.2. Synonyms

Distillates (petroleum), heavy thermal cracked, polymd., hydrogenated (PubChem); PETROLEUM HYDROCARBON RESINS (HYDROGENATED); Aromatic petroleum hydrocarbon resin, hydrogenated (FDA, 2025)

1.3. Molecular formula

Unspecified

1.4. Structural Formula

No data available to us at this time.

1.5. Molecular weight (g/mol)

No data available to us at this time.

1.6. CAS registration number

88526-47-0

1.7. Properties

1.7.1. Melting point

(°C): No data available to us at this time.

1.7.2. Boiling point

(°C): No data available to us at this time.

1.7.3. Solubility

No data available to us at this time.

1.7.4. pKa

No data available to us at this time.

1.7.5. Flashpoint

(°C): No data available to us at this time.

1.7.6. Flammability limits (vol/vol%)

No data available to us at this time.

1.7.7. (Auto)ignition temperature

(°C): No data available to us at this time.

1.7.8. Decomposition temperature

(°C): No data available to us at this time.

1.7.9. Stability

No data available to us at this time.

1.7.10. Vapor pressure

No data available to us at this time.

1.7.11. log Kow

No data available to us at this time.

2. General information

2.1. Exposure

No data available to us at this time.

2.2. Combustion products

No data available to us at this time.

2.3. Ingredient(s) from which it originates

Produced by the catalytic polymerization of aromatic substituted olefins from distillates of cracked petroleum stocks with a boiling point no greater than 220°C and the subsequent catalytic hydrogenation of the resulting aromatic petroleum hydrocarbon resin (FDA, 2025).

3. Status in legislation and other official guidance

Included on the FDA's List of Indirect Additives Used in Food Contact Substances and covered under 21 CFR sections 176.170 (Components of paper and paperboard in contact with aqueous and fatty foods) and 177.1520 (Olefin polymers) (FDA, 2025).

Distillates (petroleum), heavy thermal cracked, polymd., hydrogenated (CAS RN 88526-47-0) are listed in the 2024 US EPA Toxic Substances Control Act (TSCA) inventory, 2024 CDR TSCA Inv, TSCA Exemption under CDR (flag XU) and also in the US EPA 2024 CDR Full Exempt list.

US EPA Substance Registry Services (SRS).

Distillates (petroleum), heavy thermal cracked, polymd, hydrogenated (CAS RN 88526-47-0) are not classified for packaging and labelling under Regulation (EC) No. 1272/2008 (ECHA, 2025).

Distillates (petroleum), heavy thermal cracked, polymd, hydrogenated (CAS RN 88526-47-0) is not registered under REACH. (ECHA, undated)

4. Metabolism/Pharmacokinetics

4.1. Metabolism/metabolites

No data available to us at this time.

4.2. Absorption, distribution and excretion

No data available to us at this time.

4.3. Interactions

No data available to us at this time.

5. Toxicity

5.1. Single dose toxicity

No data available to us at this time.

5.2. Repeated dose toxicity

From a 90-day oral rat study including an in utero exposure phase with Arkon M-90 (hydrogenated hydrocarbon resin) a NOAEL of 36000 ppm in the diet could be established.

As taken from SCF (2003).

5.3. Reproduction toxicity

No data available to us at this time.

5.4. Mutagenicity

Hydrocarbon resin, described as “Aromatic petroleum hydrocarbon, hydrogenated or Resin A composed of: 14–32% styrene and substituted styrenes, 10–20% vinyl toluene, 2–8% indenes and substituted indenes and the remainder a wide variety of non-polymerizable hydrocarbons” was tested for mutagenicity in a bacterial reverse mutation (Ames) assay using Salmonella typhimurium and Escherichia coli, and in a cytogenicity assay on Chinese hamster ovary cells. Both tests gave a negative result with and without metabolic activation (Nelson et al., 2011).

Arkon M-90 (hydrogenated hydrocarbon resin) was tested negative in assays for the induction of gene mutations in bacteria and mammalian cells and in a chromosomal aberration assay in CHO cells. With respect to the polymeric nature of the test substance the result of the chromosomal aberration assay could be accepted, even if the test protocol was not in full accordance with the guidelines.

As taken from SCF (2003).

5.5. Cytotoxicity

No data available to us at this time.

5.6. Carcinogenicity

No data available to us at this time.

5.7. Irritation/immunotoxicity

No data available to us at this time.

5.8. All other relevant types of toxicity

No data available to us at this time.

6. Functional effects on

6.1. Broncho/pulmonary system

No data available to us at this time.

6.2. Cardiovascular system

No data available to us at this time.

6.3. Nervous system

No data available to us at this time.

6.4. Other organ systems, dependent on the properties of the substance

No data available to us at this time.

7. Addiction

JTI is not aware of any information that demonstrates that this ingredient has any addictive effect.

8. Burnt ingredient toxicity

No data available to us at this time.

9. Heated/vapor emissions toxicity

No data available to us at this time.

10. Ecotoxicity

10.1. Environmental fate

Hydrocarbon resins are used to modify polymer products to achieve desired functional properties for a diverse range of products. These complex hydrocarbon-based mixtures are typically poorly soluble in water. However, resins may leach lower-molecular-weight monomers or impurities upon contact with water, thus posing a potential hazard to the aquatic environment. The bioavailability and toxicity of leachable constituents of four solid and three liquid resins were evaluated by analyzing water-accommodated fractions prepared with each resin, using biomimetic solid phase microextraction (SPME) techniques. Liquid resins exhibited concentrations of bioavailable constituents that were sufficiently elevated to cause acute toxicity to the aquatic organism Daphnia magna. All solid resins exhibited lower bioavailable concentrations of leachable constituents that were unlikely to pose an aquatic toxicity concern. Since observed toxicity of both resin types was generally consistent with bioavailable concentrations determined using SPME fiber measurements, it is concluded that this approach provides a convenient in vitro screening tool that can help reduce

the use of animal testing in environmental hazard assessment of complex hydrocarbon-based substances.

Woods RW; Letinski DJ; Febbo EJ; Dzamba CL; Connelly MJ; Parkerton TF. Ecotoxicol Environ Saf. 2007, Feb; 66(2):159-68. [Ecotoxicology and environmental safety] [PubMed] available at http://www.ncbi.nlm.nih.gov/pubmed/16469379?dopt=AbstractPlus

10.2. Aquatic toxicity

No data available to us at this time.

10.3. Sediment toxicity

No data available to us at this time.

10.4. Terrestrial toxicity

No data available to us at this time.

10.5. All other relevant types of ecotoxicity

No data available to us at this time.

11. References

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- ECHA (undated). European Chemicals Agency. Information on Chemicals. Available at:https://echa.europa.eu/information-on-chemicals/registered-substances
- FDA (2025). US Food and Drug Administration. Inventory of Food Contact Substances Listed in 21 CFR. Last updated 13 February 2025. Available at:https://www.cfsanappsexternal.fda.gov/scripts/fdcc/index.cfm?set=IndirectAdditives
- Nelson CP, Patton GW, Arvidson K, Lee H and Twaroski ML (2011). Assessing the toxicity of polymeric food-contact substances. Food Chem. Toxicol. 49, 1877-1897.
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12. Other information

- Commission (2005). Provisional list of monomers and additives notified to European Commission as substances which may be used in the manufacture of plastics or coatings

intended to come into contact with foodstuffs. Synoptic Document (updated to June 2005). Additives (pages 114-297). Available at:http://www.contactalimentaire.com/fileadmin/ImageFichier_Archive/contact_alimentaire/Fichiers_Documents/Avis_de_AESA/synoptic_doc_en_-_version_June_2005.pdf

- EFSA (2005). Opinion of the Scientific Panel on food additives, flavourings, processing aids and materials in contact with food (AFC) on a request related to a 9th list of substances for food contact materials. (Question No. EFSA-Q-2004-071, EFSA-Q-2004-094, EFSA-Q-2003-214, EFSA-Q-2003-222). (Adopted on 29 June 2005).http://www.efsa.eu.int/science/afc/afc_opinions/cati ndex_en.htm EFSA Journal 248, 1.
- EFSA (2006). Opinion of the Scientific Panel on Food Additives, Flavourings, Processing Aids and Materials in contact with food (AFC) on a request related to a 13th list of substances for food contact materials. (Question No. EFSA-Q-2005-229, EFSA-Q-2006-074, EFSA-Q-2005-111, EFSA-Q-2006-138, EFSA-Q-2006-022, EFSA-Q-2006-058, EFSA-Q-2004-057, EFSA-Q-2004-056, EFSA-Q-2005-228, EFSA-Q-2006-075. (Adopted on 29 November 2006).http://www.efsa.eu.int/science/afc/afc_opinions/ej41 8-217_13FCM_list.html EFSA Journal 418-427, 1.
- Scientific Committee on Food (2000). Opinion on the 11th additional list of monomers and additives for food contact materials (expressed on 19 October 2000). SCF/CS/PM/GEN/M83.

13. Last audited

August 2025

SAFETY DATA SHEET

Version #: 01
Issue date: 19-February-2024
Revision date: -
Supersedes date: -

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

1.1. Product identifier

Name of the substance	Alicyclic hydrocarbon resin
Trade name of the substance	ARKON P-
Identification number	- - (EC number)
Registration number	-
Synonyms	None.

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

Identified uses	Adhesive.
Uses advised against	Uses other than the recommended use.

1.3. Details of the supplier of the safety data sheet

Supplier	Chiba Arkon Production, Ltd.
Address	2, Goi Minami Kaigan, Ichihara-shi, Chiba, 290-0045, Japan
Telephone number	+81 436-25-3558
Supplier (EU)	Arakawa Europe GmbH
Address	Alfred-Herrhausen-Allee 3-5, 65760 Eschborn, Germany
Telephone number	+49-6196-50383-0

1.4. Emergency telephone number +81 436-25-3558

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

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

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

2.2. Label elements

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

Contains:	Alicyclic hydrocarbon resin
Hazard pictograms	None.
Signal word	None.
Hazard statements	The substance does not meet the criteria for classification.

Precautionary statements

Prevention	Not assigned.
Response	Not assigned.
Storage	Not assigned.
Disposal	Not assigned.

Supplemental information on the label None.

2.3. Other hazards May form explosible dust-air mixture if dispersed. This substance does not meet vPvB / PBT criteria of Regulation (EC) No 1907/2006, Annex XIII. The substance is not included in the list established in accordance with REACH Article 59(1) for having endocrine disrupting properties. The substance is not considered to have endocrine disrupting properties in accordance with the criteria set out in Commission Delegated Regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605.

SECTION 3: Composition/information on ingredients

3.1. Substances

General information

Chemical name	%	CAS-No. / EC No.	REACH Registration No.	Index No.	Notes
Alicyclic hydrocarbon resin		- - * - -	-	-	

Classification: -

Composition comments * Alternative CAS number: - - (& Q X P E H U
All concentrations are in percent by weight.

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 Do not rub eyes. 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 Dusts may irritate the respiratory tract, skin and eyes.

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

SECTION 5: Firefighting measures

General fire hazards May form explosible dust-air mixture if dispersed.

5.1. Extinguishing media

Suitable extinguishing media Avoid high pressure media which could cause the formation of a potentially explosible dust-air mixture. Water fog. Foam. Dry chemical powder. Carbon dioxide (CO2). Apply extinguishing media carefully to avoid creating airborne dust.

Unsuitable extinguishing media Do not use water jet as an extinguisher, as this will spread the fire.

5.2. Special hazards arising from the substance or mixture Explosion hazard: Avoid generating dust; fine dust dispersed in air in sufficient concentrations and in the presence of an ignition source is a potential dust explosion hazard. During fire, gases hazardous to health may be formed.

5.3. Advice for firefighters

Special protective equipment for firefighters Self-contained breathing apparatus and full protective clothing must be worn in case of fire.

Special fire fighting procedures In case of fire and/or explosion do not breathe fumes. Move containers from fire area if you can do so without risk.

Specific methods Use standard firefighting procedures and consider the hazards of other involved materials.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

For non-emergency personnel Dust deposits should not be allowed to accumulate on surfaces, as these may form an explosive mixture if they are released into the atmosphere in sufficient concentration.

For emergency responders Keep unnecessary personnel away. Use only non-sparking tools. Ensure adequate ventilation. Local authorities should be advised if significant spillages cannot be contained. 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 Eliminate all ignition sources (no smoking, flares, sparks, or flames in immediate area). Take precautionary measures against static discharge. Use only non-sparking tools. Avoid dispersal of dust in the air (i.e., clearing dust surfaces with compressed air). Collect dust using a vacuum cleaner equipped with HEPA filter. Stop the flow of material, if this is without risk. The product is insoluble in water.

Large Spills: Wet down with water and dike for later disposal. Shovel the material into waste container. Following product recovery, flush area with water.

Small Spills: Sweep up or vacuum up spillage and collect in suitable container for disposal.

Never return spills to original containers for re-use.

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

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Minimise dust generation and accumulation. Avoid significant deposits of material, especially on horizontal surfaces, which may become airborne and form combustible dust clouds and may contribute to secondary explosions. Routine housekeeping should be instituted to ensure that dusts do not accumulate on surfaces. Dry powders can build static electricity charges when subjected to the friction of transfer and mixing operations. Provide adequate precautions, such as electrical grounding and bonding, or inert atmospheres. Keep away from heat/sparks/open flames/hot surfaces. - No smoking. Combustible dust clouds may be created where operations produce fine material (dust). Handling and processing operations should be conducted in accordance with 'best practices' (e.g. NFPA-654). Explosion-proof general and local exhaust ventilation. Wear appropriate personal protective equipment. Observe good industrial hygiene practices.

7.2. Conditions for safe storage, including any incompatibilities

Keep containers tightly closed in a dry, cool and well-ventilated place. Store away from incompatible materials (see section 10 of the SDS).

7.3. Specific end use(s)

Observe industrial sector guidance on best practices.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Occupational exposure limits

Ireland. OELVs, Schedules 1 & 2, Code of Practise for Chemical Agents and Carcinogens Regulations

Additional components	Type	Value	Form
Dust	TWA	4 mg/m3	Respirable dust.
		10 mg/m3	Total inhalable dust.

Biological limit values

No biological exposure limits noted for the ingredient(s).

Recommended monitoring procedures

Follow standard monitoring procedures.

Derived no effect levels (DNELs)

Not available.

Predicted no effect concentrations (PNECs)

Not available.

8.2. Exposure controls

Appropriate engineering controls

Explosion-proof general and local exhaust ventilation. Good general ventilation 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. It is recommended that all dust control equipment such as local exhaust ventilation and material transport systems involved in handling of this product contain explosion relief vents or an explosion suppression system or an oxygen-deficient environment. Ensure that dust-handling systems (such as exhaust ducts, dust collectors, vessels, and processing equipment) are designed in a manner to prevent the escape of dust into the work area (i.e., there is no leakage from the equipment). Use only appropriately classified electrical equipment and powered industrial trucks.

Individual protection measures, such as personal protective equipment

General information

Use personal protective equipment as required. 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). Eye protection should meet standard EN 166.

Skin protection

- Hand protection

Wear suitable gloves tested to EN374. The most suitable glove must be chosen in consultation with the gloves supplier, who can inform about the breakthrough time of the glove material.

- Other

Wear suitable protective clothing.

Respiratory protection

If engineering controls do not maintain airborne concentrations below recommended exposure limits (where applicable) or to an acceptable level (in countries where exposure limits have not been established), an approved respirator must be worn. Follow guidance on selection, use, care and maintenance in accordance with EN 529.

Thermal hazards

Wear appropriate thermal protective clothing, when necessary.

Hygiene measures

When using, do not eat, drink or smoke. 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

Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. Fume scrubbers, filters or engineering modifications to the process equipment may be necessary to reduce emissions to acceptable levels.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	Solid.
Form	Pellets.
Colour	Colourless.
Odour	Odourless.
Melting point/freezing point	- °C (- 2 °F)
Boiling point or initial boiling point and boiling range	Property has not been measured.
Flammability	Will burn if involved in a fire.
Upper/lower flammability or explosive limits	
Explosive limit - lower (%)	Property has not been measured.
Explosive limit – upper (%)	Property has not been measured.
Flash point	2 °C (. °F) Cleveland open cup
Auto-ignition temperature	Property has not been measured.
Decomposition temperature	Property has not been measured.
pH	Property has not been measured.
Kinematic viscosity	Not applicable.
Solubility	
Solubility (water)	Insoluble.
Solubility (other)	Soluble in: Toluene Soluble in: Xylene
Partition coefficient (n-octanol/water) (log value)	Property has not been measured.
Vapour pressure	Not applicable.
Density and/or relative density	
Relative density	Property has not been measured.
Vapour density	Not applicable.
Particle characteristics	Property has not been measured.

9.2. Other information

9.2.1. Information with regard to physical hazard classes	No relevant additional information available.
9.2.2. Other safety characteristics	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	Keep away from heat, sparks and open flame. Contact with incompatible materials. Minimise dust generation and accumulation.
10.5. Incompatible materials	Strong oxidising agents.
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	Dust may irritate respiratory system.
Skin contact	Dust or powder may irritate the skin.
Eye contact	Dust may irritate the eyes.
Ingestion	Expected to be a low ingestion hazard.
Symptoms	Dusts may irritate the respiratory tract, skin and eyes.

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

Acute toxicity	Not known.
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.

11.2. Information on other hazards

Endocrine disrupting properties	This substance does not have endocrine disrupting properties with respect to human health, as it does not meet the assessment criteria laid out in Regulations (EC) No 1907/2006, (EU) No 2017/2100 and (EU) 2018/605.
Other information	Not available.

SECTION 12: Ecological information

12.1. Toxicity	Due to partial or complete lack of data the classification for hazardous to the aquatic environment, is not possible.
12.2. Persistence and degradability	No data is available on the degradability of this substance.
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	This substance does not meet vPvB / PBT criteria of Regulation (EC) No 1907/2006, Annex XIII.
12.6. Endocrine disrupting properties	This substance does not have endocrine disrupting properties with respect to the environment, as it does not meet the assessment criteria laid out in Regulations (EC) No 1907/2006, (EU) No 2017/2100 and (EU) 2018/605.
12.7. Other adverse effects	No data available.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Residual waste	Dispose of in accordance with local regulations. Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe manner.
Contaminated packaging	Since emptied containers may retain product residue, follow label warnings even after container is emptied. Empty containers should be taken to an approved waste handling site for recycling or disposal.
EU waste code	The Waste code should be assigned in discussion between the user, the producer and the waste disposal company.
Disposal methods/information	Collect and reclaim or dispose in sealed containers at licensed waste disposal site. Discourage sewage disposal. Waste should not be disposed of by release to sewers. Dispose of contents/container in accordance with local/regional/national/international regulations.
Special precautions	Dispose in accordance with all applicable regulations.

SECTION 14: Transport information

ADR

14.1. UN number	Not regulated as dangerous goods.
14.2. UN proper shipping name	Not regulated as dangerous goods.

14.3. Transport hazard class(es)

Class	Not assigned.

Subsidiary risk -
Hazard No. (ADR) Not assigned.
Tunnel restriction code Not assigned.
14.4. Packing group -
14.5. Environmental hazards No.
14.6. Special precautions for user Not assigned.

RID

14.1. UN number Not regulated as dangerous goods.
14.2. UN proper shipping name Not regulated as dangerous goods.
14.3. Transport hazard class(es)
Class Not assigned.
Subsidiary risk -
14.4. Packing group -
14.5. Environmental hazards No.
14.6. Special precautions for user Not assigned.

ADN

14.1. UN number Not regulated as dangerous goods.
14.2. UN proper shipping name Not regulated as dangerous goods.
14.3. Transport hazard class(es)
Class Not assigned.
Subsidiary risk -
14.4. Packing group -
14.5. Environmental hazards No.
14.6. Special precautions for user Not assigned.

IATA

14.1. UN number Not regulated as dangerous goods.
14.2. UN proper shipping name Not regulated as dangerous goods.
14.3. Transport hazard class(es)
Class Not assigned.
Subsidiary risk -
14.4. Packing group -
14.5. Environmental hazards No.
14.6. Special precautions for user Not assigned.

IMDG

14.1. UN number Not regulated as dangerous goods.
14.2. UN proper shipping name Not regulated as dangerous goods.
14.3. Transport hazard class(es)
Class Not assigned.
Subsidiary risk -
14.4. Packing group -
14.5. Environmental hazards
Marine pollutant No.
EmS Not assigned.
14.6. Special precautions for user Not assigned.

14.7. Maritime transport in bulk according to IMO instruments 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. 1005/2009 on substances that deplete the ozone layer, Annex I and II, as amended

Not listed.

Regulation (EU) 2019/1021 On persistent organic pollutants (recast), as amended

Not listed.

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

Not listed.

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

Not listed.

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

Not listed.

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

Not listed.

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

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

Not listed.

Authorisations

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

Not listed.

Restrictions on use

Regulation (EC) No. 1907/2006, REACH Annex XVII Substances subject to restriction on marketing and use, as amended - Conditions of restriction given for the associated entry number should be considered

Not listed.

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

Not listed.

Regulation 2019/1148 on Marketing and Use of Explosive Precursors, Annex I, as amended

Not listed.

Regulation 2019/1148 on Marketing and Use of Explosive Precursors, Annex II, as amended

Not listed.

Other regulations	The product is classified and labelled in accordance with Regulation (EC) 1272/2008 (CLP Regulation) as amended. This Safety Data Sheet complies with the requirements of Regulation (EC) No 1907/2006, as amended.
National regulations	Follow national regulation for work with chemical agents in accordance with Directive 98/24/EC, as amended.
15.2. Chemical safety assessment	No Chemical Safety Assessment has been carried out.

SECTION 16: Other information

List of abbreviations

ADN: European Agreement Concerning the International Carriage of Dangerous Goods by Inland Waterways.
ADR: Agreement concerning the International Carriage of Dangerous Goods by Road.
CAS: Chemical Abstract Service.
CEN: European Committee for Standardization.
IATA: International Air Transport Association.
IMDG: International Maritime Dangerous Goods.
IMO: International Maritime Organization.
PBT: Persistent, bioaccumulative and toxic.
RID: Regulations concerning the International Carriage of Dangerous Goods by Rail.
STEL: Short term exposure limit.
TWA: Time Weighted Average.
vPvB: Very persistent and very bioaccumulative.

References	Not available.
Information on evaluation method leading to the classification of mixture	Not applicable.
Full text of any statements, which are not written out in full under sections 2 to 15	None.
Training information	Follow training instructions when handling this material.
Further information	Refer to: OSHA 3371-08 2009, Hazard Communication Guidance for Combustible Dusts NFPA 654, Standard for the Prevention of Fire and Dust Explosions from the Manufacturing, Processing, and Handling of Combustible Particulate Solids
Disclaimer	The information in the sheet was written based on the best knowledge and experience currently available.