SAFETY DATA SHEET

DOW BENELUX B.V.

Safety Data Sheet according to Reg. (EU) 2020/878

Product name: CELLOSIZE™ Hydroxyethyl Cellulose EP-09 Europe

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DOW BENELUX B.V. encourages and expects you to read and understand the entire (M)SDS, as there is important information throughout the document. We expect you to follow the precautions identified in this document unless your use conditions would necessitate other appropriate methods or actions.

SECTION 1: IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

1.1 Product identifier
Product name: CELLOSIZE™ Hydroxyethyl Cellulose EP-09 Europe

1.2 Relevant identified uses of the substance or mixture and uses advised against
Identified uses: Thickener. Film former. Stabiliser. Protective colloid. Binder.

1.3 Details of the supplier of the safety data sheet
COMPANY IDENTIFICATION
DOW BENELUX B.V.
HERBERT H.DOWWEG 5
HOEK
4542 NM TERNEUZEN
NETHERLANDS

Customer Information Number: (31) 115 67 2626
SDSQuestion@dow.com

1.4 EMERGENCY TELEPHONE NUMBER
24-Hour Emergency Contact: 31-(0)115 694982
Local Emergency Contact: 00 32 3575 0330
In case of emergency, contact Belgium Poison Center: 070/245.245

SECTION 2: HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture

Classification according to Regulation (EC) No 1272/2008:
Not a hazardous substance or mixture according to Regulation (EC) No. 1272/2008.

2.2 Label elements

Labelling according to Regulation (EC) No 1272/2008:
Not a hazardous substance or mixture according to Regulation (EC) No. 1272/2008.

Supplemental information
EUH210 Safety data sheet available on request.

2.3 Other hazards
May form combustible dust concentrations in air.
This product contains no substances assessed to be PBT or vPvB at levels of 0.1% or higher.

Endocrine disrupting properties
Environment: 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.
Human Health: 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

3.2 Mixtures

This product is a mixture.

CASRN / EC-No. / Index-No.	REACH Registration Number	Concentration	Component	Classification: REGULATION (EC) No 1272/2008
CASRN 9004-62-0 **EC-No.** Polymer **Index-No.** –	–	>= 86,0 - <= 100,0 %	Hydroxyethyl Cellulose	Not classified Acute toxicity estimate Acute oral toxicity: > 5 000 mg/kg Acute dermal toxicity: > 2 000 mg/kg
CASRN 127-09-3 **EC-No.** 204-823-8 **Index-No.** –	–	<= 6,5 %	Sodium acetate	Not classified Acute toxicity estimate Acute oral toxicity: > 3 500 mg/kg Acute inhalation toxicity: > 30 mg/l, 1 Hour, dust/mist Acute dermal toxicity: > 10 000 mg/kg
CASRN 67-63-0 **EC-No.** 200-661-7 **Index-No.**	–	<= 3,0 %	Isopropanol	Flam. Liq. 2; H225 Eye Irrit. 2; H319 STOT SE 3; H336 (Central nervous system)

603-117-00-0				Acute toxicity estimate Acute oral toxicity: 5 840 mg/kg Acute inhalation toxicity: > 10000 ppm, 6 Hour, vapour Acute dermal toxicity: > 12 800 mg/kg

If present in this product, any not classified components disclosed above for which no country specific OEL value(s) is(are) indicated under Section 8, are being disclosed as voluntarily disclosed components.

For the full text of the H-Statements mentioned in this Section, see Section 16.

SECTION 4: FIRST AID MEASURES

4.1 Description of first aid measures
General advice:
First Aid responders should pay attention to self-protection and use the recommended protective clothing (chemical resistant gloves, splash protection). If potential for exposure exists refer to Section 8 for specific personal protective equipment.

Inhalation: Move person to fresh air and keep comfortable for breathing. If not breathing, give artificial respiration; if by mouth to mouth use rescuer protection (pocket mask, etc). If breathing is difficult, oxygen should be administered by qualified personnel. Call a physician or transport to a medical facility.

Skin contact: Wash off with plenty of water.

Eye contact: Flush eyes thoroughly with water for several minutes. Remove contact lenses after the initial 1-2 minutes and continue flushing for several additional minutes. If effects occur, consult a physician, preferably an ophthalmologist.

Ingestion: If swallowed, seek medical attention. Do not induce vomiting unless directed to do so by medical personnel.

4.2 Most important symptoms and effects, both acute and delayed:
Aside from the information found under Description of first aid measures (above) and Indication of immediate medical attention and special treatment needed (below), any additional important symptoms and effects are described in Section 11: Toxicology Information.

4.3 Indication of any immediate medical attention and special treatment needed
Notes to physician: Maintain adequate ventilation and oxygenation of the patient. Hemodialysis may be of benefit if substantial amounts have been ingested and the patient is showing signs of intoxication. Consider hemodialysis for patients with persistent hypotension or coma unresponsive to standard therapy (isopropanol levels >400 - 500 mg/dl). (Goldfrank, Toxicological Emergencies 7th ed., 2002; King, JAMA, 1970, 211:1855). No specific antidote. Treatment of exposure should be directed at the control of symptoms and the clinical condition of the patient.

SECTION 5: FIREFIGHTING MEASURES

5.1 Extinguishing media

Suitable extinguishing media: Water.. Dry chemical fire extinguishers.. Carbon dioxide fire extinguishers..

Unsuitable extinguishing media: No data available

5.2 Special hazards arising from the substance or mixture

Hazardous combustion products: During a fire, smoke may contain the original material in addition to combustion products of varying composition which may be toxic and/or irritating.. Combustion products may include and are not limited to:. Carbon monoxide.. Carbon dioxide.. Carbon oxides. Nitrogen oxides (NOx). Oxides of phosphorus.

Unusual Fire and Explosion Hazards: Do not permit dust to accumulate. When suspended in air dust can pose an explosion hazard. Minimize ignition sources. If dust layers are exposed to elevated temperatures, spontaneous combustion may occur.. Pneumatic conveying and other mechanical handling operations can generate combustible dust. To reduce the potential for dust explosions, electrically bond and ground equipment and do not permit dust to accumulate. Dust can be ignited by static discharge..

5.3 Advice for firefighters

Fire Fighting Procedures: Keep people away. Isolate fire and deny unnecessary entry.. Soak thoroughly with water to cool and prevent re-ignition.. Cool surroundings with water to localize fire zone.. Hand held dry chemical or carbon dioxide extinguishers may be used for small fires.. Dust explosion hazard may result from forceful application of fire extinguishing agents..

Special protective equipment for firefighters: Wear positive-pressure self-contained breathing apparatus (SCBA) and protective fire fighting clothing (includes fire fighting helmet, coat, trousers, boots, and gloves).. If protective equipment is not available or not used, fight fire from a protected location or safe distance..

SECTION 6: ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures: Isolate area. Keep unnecessary and unprotected personnel from entering the area. Spilled material may cause a slipping hazard. Use appropriate safety equipment. For additional information, refer to Section 8, Exposure Controls and Personal Protection.

6.2 Environmental precautions: Prevent from entering into soil, ditches, sewers, waterways and/or groundwater. See Section 12, Ecological Information.

6.3 Methods and materials for containment and cleaning up: Sweep up. Use care to minimize generation of airborne dust. Do not use water for cleanup. Collect in suitable and properly labeled containers. See Section 13, Disposal Considerations, for additional information.

6.4 Reference to other sections: References to other sections, if applicable, have been provided in the previous sub-sections.

SECTION 7: HANDLING AND STORAGE

7.1 Precautions for safe handling: Avoid contact with eyes. Wash thoroughly after handling. Good housekeeping and controlling of dusts are necessary for safe handling of product. No smoking, open flames or sources of ignition in handling and storage area. Electrically bond and ground all containers, personnel and equipment before transfer or use of material. Keep away from heat, sparks and flame. Powdered material may form explosive dust-air mixture. Keep container closed. Buildup of flammable/air mixtures is possible without adequate ventilation. Use only in well-ventilated areas. Ventilate shipping container before entering. See Section 8, EXPOSURE CONTROLS AND PERSONAL PROTECTION.

7.2 Conditions for safe storage, including any incompatibilities: Keep in a dry place. Store indoors. Store in a closed container. Store away from sources of heat or ignition. See Section 10 for more specific information.

7.3 Specific end use(s): See the technical data sheet on this product for further information.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 Control parameters
If exposure limits exist, they are listed below. If no exposure limits are displayed, then no values are applicable.

Component	Regulation	Type of listing	Value
Isopropanol	ACGIH	TWA	200 ppm
	Further information: A4: Not classifiable as a human carcinogen		
	ACGIH	STEL	400 ppm
	Further information: A4: Not classifiable as a human carcinogen		
	BE OEL	TLV 8 hr	500 mg/m3 200 ppm
	BE OEL	TLV 15 min	1 000 mg/m3 400 ppm

Biological occupational exposure limits

Components	CAS-No.	Control parameters	Biological specimen	Sampling time	Permissible concentration	Basis
Isopropanol	67-63-0	Acetone	Urine	End of shift at end of workweek	40 mg/l	ACGIH BEI

Recommended monitoring procedures
Monitoring of the concentration of substances in the breathing zone of workers or in the general workplace may be required to confirm compliance with the Occupational Exposure Limits and the adequacy of exposure controls. For some substances biological monitoring may also be appropriate. Validated exposure measurement methods should be applied by a competent person and samples should be analysed by an accredited laboratory.
Reference should be made to monitoring standards, such as the following: European Standard EN 689 (Workplace atmospheres - Guidance for the assessment of exposure by inhalation to chemical agents for comparison with limit values and measurement strategy); European Standard EN 14042

(Workplace atmospheres - Guide for the application and use of procedures for the assessment of exposure to chemical and biological agents); European Standard EN 482 (Workplace atmospheres - General requirements for the performance of procedures for the measurement of chemical agents). Reference to national guidance documents for methods for the determination of hazardous substances will also be required.
Examples of sources of recommended exposure measurement methods are given below or contact the supplier. Further national methods may be available.
National Institute of Occupational Safety and Health (NIOSH), USA: Manual of Analytical Methods.
Occupational Safety and Health Administration (OSHA), USA: Sampling and Analytical Methods.
Health and Safety Executive (HSE), United Kingdom: Methods for the Determination of Hazardous Substances.
Institut für Arbeitsschutz Deutschen Gesetzlichen Unfallversicherung (IFA), Germany.
L'Institut National de Recherche et de Securité, (INRS), France.

Derived No Effect Level
Sodium acetate
Workers

Acute systemic effects		***Acute local effects***		***Long-term systemic effects***		***Long-term local effects***	
Dermal	Inhalation	Dermal	Inhalation	Dermal	Inhalation	Dermal	Inhalation
72 mg/kg bw/day	6347,36 mg/m3	n.a.	n.a.	12 mg/kg bw/day	1057,9 mg/m3	n.a.	n.a.

Consumers

Acute systemic effects			***Acute local effects***		***Long-term systemic effects***			***Long-term local effects***	
Dermal	Inhalation	Oral	Dermal	Inhalation	Dermal	Inhalation	Oral	Dermal	Inhalation
n.a.	3103,45 mg/m3	36 mg/kg bw/day	36 mg/kg bw/day	n.a.	6 mg/kg bw/day	521,73 mg/m3	6 mg/kg bw/day	n.a.	n.a.

Isopropanol
Workers

Acute systemic effects		***Acute local effects***		***Long-term systemic effects***		***Long-term local effects***	
Dermal	Inhalation	Dermal	Inhalation	Dermal	Inhalation	Dermal	Inhalation
n.a.	n.a.	n.a.	n.a.	888 mg/kg bw/day	500 mg/m3	n.a.	n.a.

Consumers

Acute systemic effects			***Acute local effects***		***Long-term systemic effects***			***Long-term local effects***	
Dermal	Inhalation	Oral	Dermal	Inhalation	Dermal	Inhalation	Oral	Dermal	Inhalation
n.a.	n.a.	n.a.	n.a.	n.a.	319 mg/kg bw/day	89 mg/m3	26 mg/kg bw/day	n.a.	n.a.

Predicted No Effect Concentration
Sodium acetate

Compartment	**PNEC**
Fresh water	0,1 mg/l
Marine water	0,01 mg/l

Sewage treatment plant	0,72 g/L
Fresh water sediment	0,000402 mg/kg
Marine sediment	0,00004 mg/kg
Soil	0,000402 mg/kg

Isopropanol

Compartment	**PNEC**
Fresh water	140,9 mg/l
Marine water	140,9 mg/l
Intermittent use/release	140,9 mg/l
Fresh water sediment	552 mg/kg dry weight (d.w.)
Marine sediment	552 mg/kg dry weight (d.w.)
Sewage treatment plant	2251 mg/l
Soil	28 mg/kg dry weight (d.w.)
Oral	160 mg/kg

8.2 Exposure controls

Engineering controls: Use local exhaust ventilation, or other engineering controls to maintain airborne levels below exposure limit requirements or guidelines. If there are no applicable exposure limit requirements or guidelines, general ventilation should be sufficient for most operations. Local exhaust ventilation may be necessary for some operations.

Individual protection measures

Eye/face protection: Use safety glasses (with side shields). Safety glasses (with side shields) should be consistent with EN 166 or equivalent.

Skin protection

Hand protection: Chemical protective gloves should not be needed when handling this material. Consistent with general hygienic practice for any material, skin contact should be minimized.

Other protection: No precautions other than clean body-covering clothing should be needed.

Respiratory protection: Atmospheric levels should be maintained below the exposure guideline. When respiratory protection is required, use an approved air-purifying or positive-pressure supplied-air respirator depending on the potential airborne concentration. For emergency and other conditions where the exposure guideline may be exceeded, use an approved positive-pressure self-contained breathing apparatus or positive-pressure air line with auxiliary self-contained air supply. In confined or poorly ventilated areas, use an approved self-contained breathing apparatus or positive pressure air line with auxiliary self-contained air supply.

Use the following CE approved air-purifying respirator: Organic vapor cartridge with a particulate pre-filter, type AP2 (meeting standard EN 14387).

Environmental exposure controls

See SECTION 7: Handling and storage and SECTION 13: Disposal considerations for measures to prevent excessive environmental exposure during use and waste disposal.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties

Appearance	
Physical state	Powder
Color	White
Odor	Mild
Odor Threshold	No test data available
pH	5,5 - 8,0 Not applicable
Melting point/freezing point	
Melting point/range	No test data available
Freezing point	Not applicable
Boiling point or initial boiling point and boiling range	
Boiling point (760 mmHg)	Not applicable
Flash point	**closed cup** No test data available
Flammability (solid, gas)	May form combustible dust concentrations in air.
Flammability (liquids)	Not applicable, solid
Lower explosion limit	No test data available
Upper explosion limit	No test data available
Vapor Pressure	Not applicable
Relative Vapor Density (air = 1)	Not applicable
Relative Density (water = 1)	1,30 - 1,40 at 20 °C *Literature*
Solubility(ies)	
Water solubility	completely miscible
Partition coefficient: n-octanol/water	not determined
Auto-ignition temperature	> 400 °C *Literature*
Decomposition temperature	No test data available
Kinematic Viscosity	No test data available
Particle characteristics	
Particle size	not determined

9.2 Other information

Molecular weight	No test data available
Explosive properties	No data available
Oxidizing properties	No data available
Evaporation Rate (Butyl Acetate = 1)	Not applicable

NOTE: The physical data presented above are typical values and should not be construed as a specification.

SECTION 10: STABILITY AND REACTIVITY

10.1 Reactivity: No data available

10.2 Chemical stability: Thermally stable at typical use temperatures. Hygroscopic

10.3 Possibility of hazardous reactions: Polymerization will not occur.

10.4 Conditions to avoid: Avoid temperatures above 200°C (392°F) Exposure to elevated temperatures can cause product to decompose. Avoid static discharge. Avoid moisture.

10.5 Incompatible materials: Avoid contact with oxidizing materials.

10.6 Hazardous decomposition products: Decomposition products depend upon temperature, air supply and the presence of other materials..
Decomposition products can include and are not limited to: Formaldehyde. Acetaldehyde.

SECTION 11: TOXICOLOGICAL INFORMATION

Toxicological information appears in this section when such data is available.

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

Information on likely routes of exposure
Ingestion, Inhalation, Skin contact, Eye contact.

Acute toxicity (represents short term exposures with immediate effects - no chronic/delayed effects known unless otherwise noted)

Acute oral toxicity

Information for the Product:

Very low toxicity if swallowed. Harmful effects not anticipated from swallowing small amounts. Swallowing may result in gastrointestinal irritation.

As product: Single dose oral LD50 has not been determined.

Based on information for component(s):
LD50, Rat, > 8 700 mg/kg Estimated.

Information for components:

Hydroxyethyl Cellulose
LD50, Rat, > 5 000 mg/kg

Sodium acetate
LD50, Rat, > 3 500 mg/kg

Isopropanol
May cause central nervous system depression. Signs and symptoms of excessive exposure may include: Facial flushing. Low blood pressure. Irregular heartbeats. May cause nausea and vomiting.

LD50, Rat, 5 840 mg/kg OECD 401 or equivalent

Acute dermal toxicity

Information for the Product:

Prolonged skin contact is unlikely to result in absorption of harmful amounts.

As product: The dermal LD50 has not been determined.

Based on information for component(s):
LD50, > 2 000 mg/kg Estimated.

Information for components:

Hydroxyethyl Cellulose
The dermal LD50 has not been determined.

For similar material(s): LD50, Rabbit, > 2 000 mg/kg No deaths occurred at this concentration.

Sodium acetate
LD50, Rabbit, > 10 000 mg/kg

Isopropanol
LD50, Rabbit, > 12 800 mg/kg

Acute inhalation toxicity

Information for the Product:

Dust may cause irritation to upper respiratory tract (nose and throat). Mist may cause irritation of upper respiratory tract (nose and throat). Excessive exposure (400 ppm) to isopropanol may cause eye, nose and throat irritation. Incoordination, confusion, hypotension, hypothermia, circulatory collapse, respiratory arrest and death may follow a longer duration or higher levels. Observations in animals include middle ear lining damage upon exposure to vapors of isopropanol. However, the relevance of this to humans is unknown

As product: The LC50 has not been determined.

Information for components:

Hydroxyethyl Cellulose
The LC50 has not been determined.

Sodium acetate
LC50, Rat, 1 Hour, dust/mist, > 30 mg/l No deaths occurred at this concentration.

Isopropanol
LC50, Rat, male and female, 6 Hour, vapour, > 10000 ppm

Skin corrosion/irritation

Information for the Product:

Based on information for component(s):

Prolonged exposure not likely to cause significant skin irritation.

Information for components:

Hydroxyethyl Cellulose
Prolonged contact is essentially nonirritating to skin.

Sodium acetate
Prolonged exposure not likely to cause significant skin irritation.

Isopropanol
Prolonged exposure not likely to cause significant skin irritation.

Serious eye damage/eye irritation

Information for the Product:

Based on information for component(s):
May cause slight eye irritation.
May cause pain disproportionate to the level of irritation to eye tissues.

Information for components:

Hydroxyethyl Cellulose
Essentially nonirritating to eyes.

Sodium acetate
May cause slight eye irritation.
Corneal injury is unlikely.

Isopropanol
May cause pain disproportionate to the level of irritation to eye tissues.
May cause moderate eye irritation.
May cause moderate corneal injury.
Vapor may cause eye irritation experienced as mild discomfort and redness.
Vapor may cause lacrimation (tears).

Sensitization

Information for the Product:

For skin sensitization:
No relevant information found.

For respiratory sensitization:
No relevant data found.

Information for components:

Hydroxyethyl Cellulose
Did not cause allergic skin reactions when tested in humans.

For respiratory sensitization:

No relevant data found.

Sodium acetate
A similar material did not cause allergic skin reactions when tested in humans.

For respiratory sensitization:
No relevant data found.

Isopropanol
For skin sensitization:
No relevant data found.

For respiratory sensitization:
No relevant data found.

Specific Target Organ Systemic Toxicity (Single Exposure)

Information for the Product:

Evaluation of available data suggests that this material is not an STOT-SE toxicant.

Information for components:

Hydroxyethyl Cellulose
Available data are inadequate to determine single exposure specific target organ toxicity.

Sodium acetate
Evaluation of available data suggests that this material is not an STOT-SE toxicant.

Isopropanol
May cause drowsiness or dizziness.
Route of Exposure: Ingestion
Target Organs: Central nervous system

Aspiration Hazard

Information for the Product:

Based on physical properties, not likely to be an aspiration hazard.

Information for components:

Hydroxyethyl Cellulose
Based on physical properties, not likely to be an aspiration hazard.

Sodium acetate
Based on physical properties, not likely to be an aspiration hazard.

Isopropanol
Aspiration into the lungs may occur during ingestion or vomiting, resulting in rapid absorption and injury to other body systems.

Chronic toxicity (represents longer term exposures with repeated dose resulting in chronic/delayed effects - no immediate effects known unless otherwise noted)

Specific Target Organ Systemic Toxicity (Repeated Exposure)

Information for the Product:

For the minor component(s):
Isopropyl alcohol.
In animals, effects have been reported on the following organs:
Liver.
Kidney
Kidney effects have been observed in male rats. These effects are believed to be species specific and unlikely to occur in humans.
Observations in animals include:
Lethargy.

Information for components:

Hydroxyethyl Cellulose
Repeated ingestion of similar cellulosics by humans has not resulted in known significant adverse effects.

Sodium acetate
Based on available data, repeated exposures are not anticipated to cause significant adverse effects.

Isopropanol
In animals, effects have been reported on the following organs:
Kidney.
Liver.
Kidney effects have been observed in male rats. These effects are believed to be species specific and unlikely to occur in humans.
Observations in animals include:
Lethargy.

Carcinogenicity

Information for the Product:

Similar cellulosics did not cause cancer in long-term animal studies.

Information for components:

Hydroxyethyl Cellulose
Similar cellulosics did not cause cancer in long-term animal studies.

Sodium acetate
No relevant data found.

Isopropanol
Did not cause cancer in laboratory animals.

Teratogenicity

Information for the Product:

Isopropanol has been toxic to the fetus in laboratory animals at doses toxic to the mother.

Information for components:

Hydroxyethyl Cellulose
Similar cellulosics did not cause birth defects or other toxic effects to the fetus in laboratory animal studies.

Sodium acetate
For similar material(s): Did not cause birth defects or any other fetal effects in laboratory animals.

Isopropanol
Isopropanol has been toxic to the fetus in laboratory animals at doses toxic to the mother.

Reproductive toxicity

Information for the Product:

In animal studies, a similar cellulosic has been shown not to interfere with reproduction.

Information for components:

Hydroxyethyl Cellulose
In animal studies, a similar cellulosic has been shown not to interfere with reproduction.

Sodium acetate
In animal studies, a similar material has been shown not to interfere with reproduction.

Isopropanol
In animal studies, did not interfere with reproduction. In animal studies, did not interfere with fertility.

Mutagenicity

Information for the Product:

Similar cellulosics were negative in both in vitro and animal genetic toxicity studies.

Information for components:

Hydroxyethyl Cellulose
For similar material(s): In vitro genetic toxicity studies were negative. Animal genetic toxicity studies were negative.

Sodium acetate
In vitro genetic toxicity studies were negative. Animal genetic toxicity studies were negative.

Isopropanol

In vitro genetic toxicity studies were negative. Animal genetic toxicity studies were negative.

11.2 Information on other hazards

Endocrine disrupting properties

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.

Information for components:

Hydroxyethyl Cellulose
The substance is not considered to have endocrine disrupting properties according to REACH Article 57(f), Commission Regulation (EU) 2018/605 or Commission Delegated Regulation (EU) 2017/2100.

Sodium acetate
The substance is not considered to have endocrine disrupting properties according to REACH Article 57(f), Commission Regulation (EU) 2018/605 or Commission Delegated Regulation (EU) 2017/2100.

Isopropanol
The substance is not considered to have endocrine disrupting properties according to REACH Article 57(f), Commission Regulation (EU) 2018/605 or Commission Delegated Regulation (EU) 2017/2100.

SECTION 12: ECOLOGICAL INFORMATION

Ecotoxicological information appears in this section when such data is available.

12.1 Toxicity

Acute toxicity to fish
For the major component(s):
Not expected to be acutely toxic to aquatic organisms.
For the minor component(s):
Material is not classified as dangerous to aquatic organisms (LC50/EC50/IC50/LL50/EL50 greater than 100 mg/L in most sensitive species).

12.2 Persistence and degradability

Biodegradability: For the major component(s): No appreciable biodegradation is expected. For the minor component(s): Material is readily biodegradable. Passes OECD test(s) for ready biodegradability.

12.3 Bioaccumulative potential

Bioaccumulation: No data available for this product. Based on information for component(s): Bioconcentration potential is low (BCF < 100 or Log Pow < 3).

12.4 Mobility in soil

For the major component(s):
Expected to be relatively immobile in soil (Koc > 5000).

For the minor component(s):
Potential for mobility in soil is very high (Koc between 0 and 50).

12.5 Results of PBT and vPvB assessment

This mixture has not been assessed for persistence, bioaccumulation and toxicity (PBT).

12.6 Endocrine disrupting properties

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.

Hydroxyethyl Cellulose

The substance is not considered to have endocrine disrupting properties according to REACH Article 57(f), Commission Regulation (EU) 2018/605 or Commission Delegated Regulation (EU) 2017/2100.

Sodium acetate

The substance is not considered to have endocrine disrupting properties according to REACH Article 57(f), Commission Regulation (EU) 2018/605 or Commission Delegated Regulation (EU) 2017/2100.

Isopropanol

The substance is not considered to have endocrine disrupting properties according to REACH Article 57(f), Commission Regulation (EU) 2018/605 or Commission Delegated Regulation (EU) 2017/2100.

12.7 Other adverse effects

No data available

SECTION 13: DISPOSAL CONSIDERATIONS

13.1 Waste treatment methods

Any disposal practice must be in compliance with all local and national laws and regulations. Do not dump into any sewers, on the ground, or into any body of water.

The definitive assignment of this material to the appropriate EWC group and thus its proper EWC code will depend on the use that is made of this material. Contact the authorized waste disposal services.

SECTION 14: TRANSPORT INFORMATION

Classification for ROAD and Rail transport (ADR/RID):

14.1	**UN number or ID number**	Not applicable
14.2	**UN proper shipping name**	Not regulated for transport
14.3	**Transport hazard class(es)**	Not applicable
14.4	**Packing group**	Not applicable
14.5	**Environmental hazards**	Not considered environmentally hazardous based on

available data.

14.6 Special precautions for user No data available.

Classification for INLAND waterways (ADNR/ADN):
Consult your Dow contact before transporting by inland waterway

Classification for SEA transport (IMO-IMDG):

14.1	**UN number or ID number**	Not applicable
14.2	**UN proper shipping name**	Not regulated for transport
14.3	**Transport hazard class(es)**	Not applicable
14.4	**Packing group**	Not applicable
14.5	**Environmental hazards**	Not considered as marine pollutant based on available data.
14.6	**Special precautions for user**	No data available.
14.7	**Maritime transport in bulk according to IMO instruments**	Consult IMO regulations before transporting ocean bulk

Classification for AIR transport (IATA/ICAO):

14.1	**UN number or ID number**	Not applicable
14.2	**UN proper shipping name**	Do Not Ship. Consult a DG specialist
14.3	**Transport hazard class(es)**	Not applicable
14.4	**Packing group**	Not applicable
14.5	**Environmental hazards**	Not applicable
14.6	**Special precautions for user**	No data available.

Further information:
Do not ship by air. Refer to Section 7.
If shipped by sea, packaged product must be shipped in refrigerated containers.

This information is not intended to convey all specific regulatory or operational requirements/information relating to this product. Transportation classifications may vary by container volume and may be influenced by regional or country variations in regulations. Additional transportation system information can be obtained through an authorized sales or customer service representative. It is the responsibility of the transporting organization to follow all applicable laws, regulations and rules relating to the transportation of the material.

SECTION 15: REGULATORY INFORMATION

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

REACh Regulation (EC) No 1907/2006
This product contains only components that have been either registered, are exempt from registration, are regarded as registered or are not subject to registration according to Regulation (EC) No. 1907/2006 (REACH)., Polymers are exempted from registration under REACH. All relevant starting materials and additives have been either registered or are exempt from registration according to Regulation (EC) No. 1907/2006 (REACH)., The aforementioned indications of the REACH registration status are provided in good faith and believed to be accurate as of the effective date shown above. However, no warranty, express or implied, is given. It is the buyer´s/user´s responsibility to ensure that his/her understanding of the regulatory status of this product is correct.

Seveso III: Directive 2012/18/EU of the European Parliament and of the Council on the control of major-accident hazards involving dangerous substances.
Listed in Regulation: Not applicable

15.2 Chemical safety assessment
No Chemical Safety Assessment has been carried out for this substance/mixture.
Not applicable

SECTION 16: OTHER INFORMATION

Full text of H-Statements referred to under sections 2 and 3.

H225	Highly flammable liquid and vapour.
H319	Causes serious eye irritation.
H336	May cause drowsiness or dizziness.

Classification and procedure used to derive the classification for mixtures according to Regulation (EC) No 1272/2008
This product is not classified as dangerous according to EC criteria.

Revision
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Most recent revision(s) are noted by the bold, double bars in left-hand margin throughout this document.

Legend

ACGIH	USA. ACGIH Threshold Limit Values (TLV)
ACGIH BEI	ACGIH - Biological Exposure Indices (BEI)
BE OEL	Belgium. Occupational exposure limit values
STEL	Short-term exposure limit
TLV 15 min	Short term exposure limit
TLV 8 hr	Long term exposure limit
TWA	8-hour, time-weighted average
Eye Irrit.	Eye irritation
Flam. Liq.	Flammable liquids
STOT SE	Specific target organ toxicity - single exposure

Full text of other abbreviations

ADN - European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways; ADR - European Agreement concerning the International Carriage of Dangerous Goods by Road; AIIC - Australian Inventory of Industrial Chemicals; ASTM - American Society for the Testing of Materials; bw - Body weight; CLP - Classification Labelling Packaging Regulation; Regulation (EC) No 1272/2008; CMR - Carcinogen, Mutagen or Reproductive Toxicant; DIN - Standard of the German Institute for Standardisation; DSL - Domestic Substances List (Canada); ECHA - European Chemicals Agency; EC-Number - European Community number; ECx - Concentration associated with x% response; ELx - Loading rate associated with x% response; EmS - Emergency Schedule; ENCS - Existing and New Chemical Substances (Japan); ErCx - Concentration associated with x% growth rate response; GHS - Globally Harmonized System; GLP - Good Laboratory Practice; IARC - International Agency for Research on Cancer; IATA - International Air Transport Association; IBC - International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk; IC50 - Half maximal inhibitory concentration; ICAO - International Civil Aviation Organization; IECSC - Inventory of Existing Chemical Substances in China; IMDG - International Maritime Dangerous Goods; IMO - International Maritime Organization; ISHL - Industrial Safety and Health Law (Japan); ISO - International Organisation for Standardization; KECI - Korea Existing Chemicals Inventory; LC50 - Lethal Concentration to 50 % of a test population; LD50 - Lethal Dose to 50% of a test population (Median Lethal Dose); MARPOL - International Convention for the Prevention of Pollution from Ships; n.o.s. - Not Otherwise Specified; NO(A)EC - No Observed (Adverse) Effect Concentration; NO(A)EL - No Observed (Adverse) Effect Level; NOELR - No Observable Effect Loading Rate; NZIoC - New Zealand Inventory of Chemicals; OECD - Organization for Economic Co-operation and Development; OPPTS - Office of Chemical Safety and Pollution Prevention; PBT - Persistent, Bioaccumulative and Toxic substance; PICCS - Philippines Inventory of Chemicals and Chemical Substances; (Q)SAR - (Quantitative) Structure Activity Relationship; REACH - Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals; RID - Regulations concerning the International Carriage of Dangerous Goods by Rail; SADT - Self-Accelerating Decomposition Temperature; SDS - Safety Data Sheet; SVHC - Substance of Very High Concern; TCSI - Taiwan Chemical Substance Inventory; TECI - Thailand Existing Chemicals Inventory; TRGS - Technical Rule for Hazardous Substances; TSCA - Toxic Substances Control Act (United States); UN - United Nations; vPvB - Very Persistent and Very Bioaccumulative

Information Source and References
This SDS is prepared by Product Regulatory Services and Hazard Communications Groups from information supplied by internal references within our company.

DOW BENELUX B.V. urges each customer or recipient of this (M)SDS to study it carefully and consult appropriate expertise, as necessary or appropriate, to become aware of and understand the data contained in this (M)SDS and any hazards associated with the product. The information herein is provided in good faith and believed to be accurate as of the effective date shown above. However, no warranty, express or implied, is given. Regulatory requirements are subject to change and may differ between various locations. It is the buyer's/user's responsibility to ensure that his activities comply with all federal, state, provincial or local laws. The information presented here pertains only to the product as shipped. Since conditions for use of the product are not under the control of the manufacturer, it is the buyer's/user's duty to determine the conditions necessary for the safe use of this product. Due to the proliferation of sources for information such as manufacturer-specific (M)SDSs, we are not and cannot be responsible for (M)SDSs obtained from any source other than ourselves. If you have obtained an (M)SDS from another source or if you are not sure that the (M)SDS you have is current, please contact us for the most current version.
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