

SAFETY DATA SHEET

MicroPRefs® Polystyrene tablet (50-300 µm)

SECTION 1: Identification

1.1. Product identifier

Trade name

MicroPRefs® Polystyrene tablet (50-300 µm)

Product no.

15248.X-50/300-TAB

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

Relevant identified uses of the substance or mixture

Laboratory use

Restricted to professional users.

Uses advised against

None known.

1.3. Details of the supplier of the safety data sheet

Company and address

Chiron AS

Arkitekt Ebbells veg 22, Bygg-D

N-7041 TRONDHEIM

Contact person

Solveig Bye Hauge

E-mail

quality@chiron.no

SDS date

4/9/2024

SDS Version

1.0

1.4. Emergency telephone number

Contact the poison control at 1-800-222-1222 (24/7) or use the webPOISONCONTROL® (triage.webpoisoncontrol.org) to get specific guidance for your case

See also section 4 "First aid measures".

SECTION 2: Hazard(s) identification

OSHA/HCS status

This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200)

2.1. Classification of the substance or mixture

Eye Irrit. 2; H319, Causes serious eye irritation.

2.2. Label elements

Hazard pictogram(s)



Signal word

Warning

Hazard statement(s)

Causes serious eye irritation. (H319)

Precautionary statement(s)

General

-

Conforms to OSHA Hazard Communication Standard (HCS) (29 CFR 1910.1200 / revised 2012)

Prevention

Wear eye protection/protective gloves/protective clothing. (P280)

Response

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do.

Continue rinsing. (P305+P351+P338)

If eye irritation persists: Get medical advice/attention. (P337+P313)

Storage

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Disposal

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Additional labelling

Not applicable.

2.3. Other hazards

Additional warnings

This mixture/product does not contain any substances known to fulfil the criteria for PBT and vPvB classification.

SECTION 3: Composition/Information on Ingredients

3.1. Substances

Not applicable. This product is a mixture.

3.2. Mixtures

Product/substance	Identifiers	% w/w	Classification	Note
Lactose	CAS No.: Confidential	30-70%		
Sodium bicarbonate	CAS No.: Confidential	30-70%		
Citric acid	CAS No.: Confidential	5-30%	Eye Irrit. 2, H319 STOT SE 3, H335	
Benzoic acid	CAS No.: Confidential	1-10%	Eye Irrit. 2, H319	
MicroPRefs® Polystyrene (50-300 µm)	CAS No.: 9003-53-6	<0.05%	STOT RE 2, H373	

Where the concentration of an ingredient is expressed as a range the exact concentration has been withheld as a trade secret.

See full text of H-phrases in section 16. Occupational exposure limits are listed in section 8, if these are available.

Other information

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SECTION 4: First-aid measures

4.1. Description of first aid measures

General information

If breathing is irregular, drowsiness, loss of consciousness or cramps: Call 911 and give immediate treatment (first aid).

Contact a doctor if in doubt about the injured person's condition or if the symptoms persist. Never give an unconscious person water or other drink.

Inhalation

Upon breathing difficulties or irritation of the respiratory tract: Bring the person into fresh air and stay with him/her.

Skin contact

Upon irritation: rinse with water. In the event of continued irritation, seek medical assistance.

Eye contact

If in eyes: Flush eyes immediately with plenty of water or isotonic water (20-30 °C) for at least 5 minutes and

continue until irritation stops. Remove contact lenses. Make sure to flush under upper and lower eyelids. If irritation continues, contact a doctor. Continue flushing during transport.

Ingestion

If the person is conscious, rinse the mouth with water and stay with the person. Never give the person anything to drink.

In case of malaise, seek medical advice immediately and bring the safety data sheet or label from the product. Do not induce vomiting, unless recommended by the doctor. Have the person lean forward with head down to avoid inhalation of or choking on vomited material.

Burns

Not applicable.

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

Irritation effects: This product contains substances, which may cause irritation upon exposure to skin, eyes or lungs. Exposure may result in an increased absorption potential of other hazardous substances at the area of exposure.

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

If eye irritation persists: Get medical advice/attention.

Information to medic

Bring this safety data sheet or the label from this product.

SECTION 5: Fire-fighting measures

5.1. Extinguishing media

Suitable extinguishing media: Alcohol-resistant foam, carbon dioxide, powder, water mist.

Unsuitable extinguishing media: Waterjets should not be used, since they can spread the fire.

5.2. Special hazards arising from the substance or mixture

Fire will result in dense smoke. Exposure to combustion products may harm your health. Closed containers, which are exposed to fire, should be cooled with water. Do not allow fire-extinguishing water to enter the sewage system and nearby surface waters.

If the product is exposed to high temperatures, e.g. in the event of fire, dangerous decomposition compounds are produced. These are:

Carbon oxides (CO / CO₂)

Some metal oxides

5.3. Advice for firefighters

Wear self-contained breathing apparatus and protective clothing to prevent contact. Upon direct exposure contact the Poison Help Line on 1-800-222-1222 (24/7) in order to obtain further advice.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Contaminated areas may be slippery.

6.2. Environmental precautions

Avoid discharge to lakes, streams, sewers, etc.

Keep unauthorized persons away from the spill

6.3. Methods and material for containment and cleaning up

Limit spillage and collect using granular absorbent or similar materials, and dispose of it in accordance with the regulations on dangerous waste.

Limit spillage, sweep up and shovel into appropriate containers for disposal. Store in suitable, closed containers for disposal.

Wherever possible cleaning should be performed with normal cleaning agents. Avoid use of solvents.

6.4. Reference to other sections

See section 13 "Disposal considerations" on handling of waste.

See section 8 "Exposure controls/personal protection" for protective measures.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Smoking, drinking and consumption of food is not allowed in the work area.

See section 8 "Exposure controls/personal protection" for information on personal protection.

7.2. Conditions for safe storage, including any incompatibilities

Conforms to OSHA Hazard Communication Standard (HCS) (29 CFR 1910.1200 / revised 2012)

Recommended storage material

Keep only in original packaging.

Storage temperature

Dry, cool and well ventilated
 Protect from moisture.
 Protect from sunlight.
 Room temperature 15 to 25°C

Incompatible materials

Plastic

7.3. Specific end use(s)

This product should only be used for applications quoted in section 1.2.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

No substances are listed with a permissible exposure limit (ref: 29 CFR 1910.1000 TABLE Z-1)

8.2. Exposure controls

Apply general control to prevent unnecessary exposure

General recommendations

Smoking, drinking and consumption of food is not allowed in the work area.

Exposure scenarios

There are no exposure scenarios implemented for this product.

Exposure limits

Occupational exposure limits have not been defined for the substances in this product.

Appropriate technical measures

Apply standard precautions during use of the product. Avoid inhalation of gas or dust.

Hygiene measures

In between use of the product and at the end of the working day all exposed areas of the body must be washed thoroughly. Pay special attention to hands, forearms and face.

Measures to avoid environmental exposure

No specific requirements.

Individual protection measures, such as personal protective equipment

Generally

Use only protective equipment with a recognized certification mark, e.g. the UL mark.

Respiratory Equipment

Work situation	Type	Class	Colour	Standards
In case of inadequate ventilation	S/SL	P2	White	EN149



Skin protection

Recommended	Type/Category	Standards
Dedicated work clothing should be worn.	-	-



Hand protection

Material	Glove thickness (mm)	Breakthrough time (min.)	Standards
Gloves	-	-	EN374



Eye protection

Type	Standards
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Safety glasses with side shields.	EN166
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SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state

Tablets

Colour

White

Odour

No data available

Odour threshold (ppm)

No data available

pH

No data available

Density (g/cm³)

No data available

Relative density

No data available

Kinematic viscosity

No data available

Particle characteristics

No data available

Phase changes

Melting point (°F)

No data available

Softening point/range (waxes and pastes) (°F)

Does not apply to solids.

Boiling point (°F)

No data available

Vapour pressure

No data available

Relative vapour density

No data available

Decomposition temperature (°F)

No data available

Data on fire and explosion hazards

Flash point (°F)

No data available

Flammability (°F)

No data available

Auto-ignition temperature (°F)

No data available

Explosion limits (% v/v)

No data available

Solubility

Solubility in water

Soluble

n-octanol/water coefficient (LogKow)

No data available

Solubility in fat (g/L)

No data available

9.2. Other information

Conforms to OSHA Hazard Communication Standard (HCS) (29 CFR 1910.1200 / revised 2012)

Evaporation rate (n-butylacetate = 100)

No data available

Other physical and chemical parameters

No data available.

Oxidizing properties

No data available

SECTION 10: Stability and reactivity

10.1. Reactivity

No data available.

10.2. Chemical stability

The product is stable under the conditions, noted in section 7 "Handling and storage".

10.3. Possibility of hazardous reactions

None known.

10.4. Conditions to avoid

Moisture

Storage in the open is not recommended.

10.5. Incompatible materials

Plastic

10.6. Hazardous decomposition products

The product is not degraded when used as specified in section 1.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity

Product/substance	Citric acid
Species:	Mouse
Route of exposure:	Oral
Test:	LD50
Result:	5400 mg/kgbw

Product/substance	Citric acid
Species:	Rat
Route of exposure:	Dermal
Test:	LD50
Result:	2000 mg/kgbw

Product/substance	Benzoic acid
Species:	Rat
Route of exposure:	Oral
Test:	LD50
Result:	2000 mg/kgbw

Product/substance	Benzoic acid
Species:	Rat
Route of exposure:	Inhalation
Test:	LC50 (4 hours)
Result:	12.2 mg/L

Product/substance	Benzoic acid
Species:	Rabbit
Route of exposure:	Dermal
Test:	LD50
Result:	2000 mg/kgbw

Skin corrosion/irritation

Product/substance	Citric acid
Result:	No adverse effect observed (Not irritating)

Conforms to OSHA Hazard Communication Standard (HCS) (29 CFR 1910.1200 / revised 2012)

Product/substance	Benzoic acid
Result:	No adverse effect observed (Not irritating)

Serious eye damage/irritation

Product/substance	Citric acid
Result:	Adverse effect observed (Irritating)

Product/substance	Benzoic acid
Result:	Adverse effect observed (Irritating)

Causes serious eye irritation.

Respiratory sensitisation

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

Skin sensitisation

Product/substance	Citric acid
Result:	No adverse effect observed (not sensitising)

Product/substance	Benzoic acid
Result:	No adverse effect observed (not sensitising)

Germ cell mutagenicity

Product/substance	Citric acid
Conclusion:	Adverse effect observed

Product/substance	Citric acid
Conclusion:	No adverse effect observed

Product/substance	Benzoic acid
Conclusion:	No adverse effect observed

Carcinogenicity

Product/substance	Benzoic acid
Species:	Rat
Route of exposure:	Oral
Test:	NOAEL
Result:	1000 mg/kg bw/day
Conclusion:	No adverse effect observed

Reproductive toxicity

Product/substance	Benzoic acid
Species:	Rat
Test:	NOAEL
Result:	175 - 500 mg/kg bw/day
Conclusion:	No adverse effect observed

STOT-single exposure

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

STOT-repeated exposure

Product/substance	Benzoic acid
Species:	Rat
Route of exposure:	Oral
Test:	NOAEL
Result:	1000 mg/kg bw/day
Conclusion:	No adverse effect observed

Product/substance	Benzoic acid
Species:	Rat
Route of exposure:	Inhalation
Test:	NOAEC
Result:	250 mg/m ³
Conclusion:	Adverse effect observed

Product/substance	Benzoic acid
Species:	Rabbit

Conforms to OSHA Hazard Communication Standard (HCS) (29 CFR 1910.1200 / revised 2012)

Route of exposure: Dermal
 Test: NOAEL
 Result: 2500 mg/kg bw/day
 Conclusion: No adverse effect observed

Aspiration hazard

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

Long term effects

Irritation effects: This product contains substances, which may cause irritation upon exposure to skin, eyes or lungs.
 Exposure may result in an increased absorption potential of other hazardous substances at the area of exposure.

Other information

None known.

SECTION 12: Ecological information

12.1. Toxicity

Product/substance Citric acid
 Species: Fish
 Duration: 96 hours
 Test: LC50
 Result: 100 mg/L

Product/substance Citric acid
 Species: Fish
 Duration: 48 hours
 Test: LC50
 Result: 440 - 760 mg/L

Product/substance Citric acid
 Species: Fish
 Duration: 48 hours
 Test: LC0
 Result: 200 - 620 mg/L

Product/substance Citric acid
 Species: Fish
 Duration: 96 hours
 Test: LC100
 Result: 1 g/L

Product/substance Citric acid
 Species: Fish
 Duration: 48 hours
 Test: LC100
 Result: 600 - 800 mg/L

Product/substance Citric acid
 Species: Crustacean
 Duration: 48 hours
 Test: EC50
 Result: 50 mg/L

Product/substance Citric acid
 Species: Crustacean
 Duration: 24 hours
 Test: LC50
 Result: 1.535 g/L

Product/substance Citric acid
 Species: Crustacean
 Duration: 24 hours
 Test: LC0

Conforms to OSHA Hazard Communication Standard (HCS) (29 CFR 1910.1200 / revised 2012)

Result: 1.206 g/L

Product/substance: Citric acid
 Species: Crustacean
 Duration: 24 hours
 Test: LC100
 Result: 2.083 g/L

Product/substance: Citric acid
 Species: Algae
 Compartment: Freshwater
 Test: EC10
 Result: 425 mg/L

Product/substance: Benzoic acid
 Species: Fish
 Duration: 96 hours
 Test: LC50
 Result: 484 mg/L

Product/substance: Benzoic acid
 Species: Fish
 Duration: 96 hours
 Test: NOEC
 Result: 392.5 mg/L

Product/substance: Benzoic acid
 Species: Crustacean
 Duration: 21 days
 Test: NOEC
 Result: 5.81 mg/L

Product/substance: Benzoic acid
 Species: Crustacean
 Duration: 21 days
 Test: LOEC
 Result: 5.81 mg/L

Product/substance: Benzoic acid
 Species: Crustacean
 Duration: 21 days
 Test: EC10
 Result: 5.81 mg/L

Product/substance: Benzoic acid
 Species: Crustacean
 Duration: 21 days
 Test: EC50
 Result: 5.81 mg/L

Product/substance: Benzoic acid
 Species: Algae
 Compartment: Freshwater
 Duration: 72 hours
 Test: EC50
 Result: 30.5 mg/L

Product/substance: Benzoic acid
 Species: Algae
 Compartment: Freshwater
 Duration: 72 hours
 Test: EC10
 Result: 6.5 mg/L

Conforms to OSHA Hazard Communication Standard (HCS) (29 CFR 1910.1200 / revised 2012)

Product/substance Benzoic acid
 Species: Bacteria
 Duration: 7 days
 Test: NOEC
 Result: 100 mg/L

12.2. Persistence and degradability

Product/substance Citric acid
 Compartment: Freshwater
 Result: 100 %
 Conclusion: Readily biodegradable

Product/substance Benzoic acid
 Result: 100 %
 Conclusion: Readily biodegradable

12.3. Bioaccumulative potential

Product/substance Benzoic acid
 Conclusion: No potential for bioaccumulation

12.4. Mobility in soil

No data available.

12.5. Results of PBT and vPvB assessment

This mixture/product does not contain any substances known to fulfil the criteria for PBT and vPvB classification.

12.6. Other adverse effects

None known.

SECTION 13: Disposal considerations

RCRA Hazardous waste ("P" and "U" list) (40 CFR 261)

None of the components are listed

Specific labelling

Contaminated packing

SECTION 14: Transport information

	14.1 UN / ID	14.2 UN proper shipping name	14.3 Hazard class(es)	14.4 PG*	14.5 Env**	Other information:
DOT	-	-	-	-	-	-
IMDG	-	-	-	-	-	-
IATA	-	-	-	-	-	-

* Packing group

** Environmental hazards

Additional information

Not dangerous goods according to DOT, IATA and IMDG.

14.6. Special precautions for user

Not applicable.

14.7. Transport in bulk according to Annex II of Marpol and the IBC Code

No data available.

SECTION 15: Regulatory information

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

15.2. U.S. Federal regulations

TSCA (the non-confidential portion)

Citric acid is listed

Conforms to OSHA Hazard Communication Standard (HCS) (29 CFR 1910.1200 / revised 2012)

Benzoic acid is listed

Clean Air Act

None of the components are listed

EPCRA Section 302

None of the components are listed

EPCRA Section 304

None of the components are listed

EPCRA section 313

None of the components are listed

CERCLA

None of the components are listed

State regulations

California / Prop. 65

None of the components are listed

Massachusetts / Right To Know Act

None of the components are listed

New Jersey / Right To Know Act

None of the components are listed

New York / Right To Know Act

None of the components are listed

Pennsylvania / Right To Know Act

None of the components are listed

15.4. Restrictions for application

Restricted to professional users.

15.5. Demands for specific education

No specific requirements.

15.6. Additional information

Not applicable.

15.7. Chemical safety assessment

No

15.8. Sources

OSHA Hazard Communication Standard (29 CFR 1910.1200)

SECTION 16: Other information

Full text of H-phrases as mentioned in section 3

H319, Causes serious eye irritation.

H335, May cause respiratory irritation.

H373, May cause damage to organs through prolonged or repeated exposure.

The full text of identified uses as mentioned in section 1

None known.

Abbreviations and acronyms

ACGIH = American Conference of Governmental Industrial Hygienists

ADN = European Provisions concerning the International Carriage of Dangerous Goods by Inland Waterway

ADR = The European Agreement concerning the International Carriage of Dangerous Goods by Road

ATE = Acute Toxicity Estimate

BCF = Bioconcentration Factor

CAS = Chemical Abstracts Service

CERCLA = Comprehensive Environmental Response Compensation and Liability Act

DOT = Department of Transportation

EINECS = European Inventory of Existing Commercial chemical Substances

EPCRA = Emergency Planning and Community Right-To-Know Act

GHS = Globally Harmonized System of Classification and Labelling of Chemicals

HCIS = Hazardous Chemical Information System

HNOC = Hazards Not Otherwise Classified

IARC = International Agency for Research on Cancer

IATA = International Air Transport Association

IMDG = International Maritime Dangerous Goods

LogPow = logarithm of the octanol/water partition coefficient

MARPOL = International Convention for the Prevention of Pollution From Ships, 1973 as modified by the Protocol of 1978. ("Marpol" = marine pollution)

NFPA = National Fire Protection Association

NIOSH = National Institute for Occupational Safety and Health

OECD = Organisation for Economic Co-operation and Development

OSHA = Occupational Safety and Health Administration

PBT = Persistent, Bioaccumulative and Toxic

RCRA = Resource Conservation and Recovery Act

RID = The Regulations concerning the International Carriage of Dangerous Goods by Rail

RRN = REACH Registration Number

SARA = Superfund Amendments and Reauthorization Act

SCL = A specific concentration limit.

STEL = Short-term exposure limits

STOT-RE = Specific Target Organ Toxicity - Repeated Exposure

STOT-SE = Specific Target Organ Toxicity - Single Exposure

TSCA = The Toxic Substances Control Act

TWA = Time weighted average

UN = United Nations

UVBC = Unknown or variable composition, complex reaction products or of biological materials

VOC = Volatile Organic Compound

vPvB = Very Persistent and Very Bioaccumulative

Additional information

The classification of the mixture in regard of health hazards is in accordance with the calculation methods given by HCS (29 CFR 1910.1200).

The safety data sheet is validated by

Stine Rapp

Other

A change (in proportion to the last essential change (first cipher in SDS version, see section 1)) is marked with a triangle.

The information in this safety data sheet applies only to this specific product (mentioned in section 1) and is not necessarily correct for use with other chemicals/products.

It is recommended to hand over this safety data sheet to the actual user of the product. Information in this safety data sheet cannot be used as a product specification.

Country-language: US-en