

	SIGACHI INDUSTRIES PVT. LTD.	Document No.: SDS/MCC.03
	SAFETY DATA SHEET	
	Product : Microcrystalline Cellulose	Reviewed On: 17.09.2016
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	<ul style="list-style-type: none"> • Special hazards arising from the substance or mixture : No further relevant information available. • Advice for firefighters Use protective equipment against the hazard of heat. Do not breathe smoke/gas generated. 								
06	ACCIDENTAL RELEASE MEASURES								
	<ul style="list-style-type: none"> • Personal precautions, protective equipment and emergency procedures: Evacuate personnel to safe area. Provide adequate ventilation. • Environmental precautions : Reduce airborne dust and prevent scattering by moistening with water. • Methods and material for containment and cleaning up : Pick up mechanically. Sweep up the spilled material. Wash spilled area with soap and water. • Reference to other sections: See Section 7 for information on safe handling. See Section 8 for information on personal protection equipment. See Section 13 for disposal information. 								
07	HANDLING AND STORAGE								
	<ul style="list-style-type: none"> • Handling: Precautions for safe handling : To be handled as per labeled instruction Information about protection against explosions and fires: No special measures required. • Conditions for safe storage, including any incompatibilities Storage: Store in a dry and ventilated area. Requirements to be met by storerooms and receptacles: Keep unexposed Information about storage in one common storage facility: No special measures required. Further information about storage conditions: Store protected from light and moisture • Specific end use(s) : As food additive, pharma excipient 								
08	Exposure controls / personal protection								
	<ul style="list-style-type: none"> • Additional information about design of technical systems: No further data; See item 7. • Control parameters <table border="1" data-bbox="248 1125 1403 1283"> <thead> <tr> <th colspan="2">Components with limit values that require monitoring at the workplace:</th> </tr> </thead> <tbody> <tr> <td>PEL</td> <td>Long-term value: 15* 5** mg/m³ , *total dust **Respirable fraction</td> </tr> <tr> <td>REL</td> <td>Long-term value: 10* 5** mg/m³ , *total dust **Respirable fraction</td> </tr> <tr> <td>TLV</td> <td>Long-term value: 10 mg/m³</td> </tr> </tbody> </table> <ul style="list-style-type: none"> • Exposure controls : Prevent from dusting. • Personal protective equipment: Nose mask, safety glasses, Gloves • General protective and hygienic measures: The usual precautionary measures for handling chemicals should be followed. • Breathing equipment: Nose mask to prevent inhale of dusting. Protection of hands: Gloves should be used. Replace the gloves considering the penetration times, rates of diffusion and the degradation • Material of gloves: The glove material has to be impermeable and resistant to the substance. • Penetration time of glove material The exact break through time has to be decided by the user of the protective gloves and has to be observed. • Eye protection: Use safety glasses while handling. 	Components with limit values that require monitoring at the workplace:		PEL	Long-term value: 15* 5** mg/m ³ , *total dust **Respirable fraction	REL	Long-term value: 10* 5** mg/m ³ , *total dust **Respirable fraction	TLV	Long-term value: 10 mg/m ³
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09	PHYSICAL AND CHEMICAL PROPERTIES								
	<ul style="list-style-type: none"> • Information on basic physical and chemical properties • General Information • Appearance: • Form: Powder • Color: White to off white • Odor: Odorless • Odor threshold: Not determined. • pH-value at 20 °C (68 °F): Between 5 and 7.5 (10% solids dispersion in water for E460 Between 5 and 7.5 (12.5% solids dispersion in water for pharmacopoeia) 								

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	<ul style="list-style-type: none"> • Change in condition • Melting point/Melting range : Not available • Boiling point/Boiling range : Undetermined. • Flash point : Not applicable. • Flammability (solid, gaseous): Product is not flammable. • Ignition temperature : 340 °C (644 °F) • Decomposition temperature : > 260°C • Auto igniting : Not determined. • Danger of explosion : Product does not present an explosion hazard. • Explosion limits: Lower : Not determined.Upper :Not determined.Vapor pressure :Not applicable. • Density : 0.25 – 0.5 g/ml • Relative density : Not determined. • Vapour density : Not applicable. • Evaporation rate : Not applicable. • Solubility in / Miscibility with Water :Soluble in ammonical copper tetramine solution / Insoluble. • Partition coefficient (n-octanol/water): Not determined. • Viscosity:Dynamic :Not applicable.Kinematic :Not applicable. • Organic solvents : 0.0 % • Solids content : 100.0 % • Other information: No further relevant information available.
10	STABILITY AND REACTIVITY
	<ul style="list-style-type: none"> • Reactivity : No information known • Chemical stability: Stable under recommended storage condition • Thermal decomposition / conditions to be avoided:No decomposition if used according to specifications. • Possibility of hazardous reactions : No dangerous reactions known. • Conditions to avoid : Avoid exposure to light and moisture • Incompatible materials: Strong oxidizers, water • Hazardous decomposition products: May emit toxic fumes under fire conditions.
11	TOXICOLOGICAL INFORMATION
	<ul style="list-style-type: none"> • Information on toxicological effects • Acute toxicity:LD50 Oral rat > 5 g/kg , LD50 Dermal rabbit > 2 g/kg, LC50 inhalation >5.8 g/Kg. • Primary irritant effect: • On the skin: No irritant effect. • On the eye: No irritating effect. • Sensitization: No sensitizing effects known. • Additional toxicological information: Microcrystalline cellulose is negative in the Ames mutagenicity assay, and caused no chromosome damage in the mouse micronucleus assay. Microcrystalline cellulose is considered an inert dust, which is not toxic to the lung when exposures are properly controlled. No adverse effect if administered as diet. No adverse human effects are known. • Carcinogenic categories • IARC (International Agency for Research on Cancer) :Substance is not listed. • NTP (National Toxicology Program) : Substance is not listed.
12	ECOLOGICAL INFORMATION
	<ul style="list-style-type: none"> • Toxicity • Aquatic toxicity : No further relevant information available. • Persistence and degradability: No further relevant information available. • Behavior in environmental systems: • Bioaccumulative potential : No further relevant information available.

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	<ul style="list-style-type: none"> • Mobility in soil : Easily biodegradable • Additional ecological information: Results of PBT and vPvB assessment PBT(Persistent, bioaccumulative and toxic):Not applicable. vPvB(Very persistent and Very bioaccumulative): Not applicable. • Other adverse effects : No further relevant information available. 								
13	DISPOSAL CONSIDERATION								
	<ul style="list-style-type: none"> • Waste treatment methods Recommendation: Dispose of waste in compliance with all applicable local laws. • Un-cleaned packaging: Recommendation: Disposal must be made according to official regulations. • Recommended cleansing agent:Water, if necessary with cleansing agents. • Disposal Method :No special disposal methods are suggested. It is the user's responsibility to comply with all applicable local, state, and federal laws, rules, regulations and standards. 								
14	TRANSPORT INFORMATION								
	<table border="1"> <tr><td>UN-Number : DOT, ADR, ADN, IMDG, IATA : Not regulated</td></tr> <tr><td>UN proper shipping name : DOT, ADR, ADN, IMDG, IATA : Not regulated</td></tr> <tr><td>Transport hazard class(es) :DOT, ADR, ADN, IMDG, IATA Class : Not regulated</td></tr> <tr><td>Packing group : DOT, ADR, IMDG, IATA : Not regulated</td></tr> <tr><td>Environmental hazards:Marine pollutant:No</td></tr> <tr><td>Special precautions for user : Not applicable.</td></tr> <tr><td>Transport in bulk according to Annex II ofMARPOL73/78 and the IBC Code : Not applicable.</td></tr> <tr><td>UN "Model Regulation": ---</td></tr> </table>	UN-Number : DOT, ADR, ADN, IMDG, IATA : Not regulated	UN proper shipping name : DOT, ADR, ADN, IMDG, IATA : Not regulated	Transport hazard class(es) :DOT, ADR, ADN, IMDG, IATA Class : Not regulated	Packing group : DOT, ADR, IMDG, IATA : Not regulated	Environmental hazards:Marine pollutant: No	Special precautions for user : Not applicable.	Transport in bulk according to Annex II ofMARPOL73/78 and the IBC Code : Not applicable.	UN "Model Regulation": ---
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15	REGULATORY INFORMATION								
	<ul style="list-style-type: none"> • Safety, health and environmental regulations/legislation specific for the substance or mixture • SARA (Safety analysis risk assessment) Section 355 (extremely hazardous substances): Substance is not listed. Section 313 (Specific toxic chemical listings): Substance is not listed. • E numbers : E460 • Proposition 65 Chemicals known to cause cancer: Substance is not listed. Chemicals known to cause reproductive toxicity for females: Substance is not listed. Chemicals known to cause reproductive toxicity for males: Substance is not listed. Chemicals known to cause developmental toxicity: Substance is not listed. • Carcinogenic categories • EPA (Environmental Protection Agency): Substance is not listed. • TLV (Threshold Limit Value established by ACGIH): Substance is not listed. • NIOSH-Ca (National Institute for Occupational Safety and Health): Substance is not listed. • OSHA-Ca (Occupational Safety & Health Administration): Substance is not listed. • Substances of very high concern (SVHC) according to the REACH regulations EC 1907/2006 for the manufacturing, placing on the market and use must be observed. : Substance is not listed. <p>GHS label elements : Refer to item 02. Chemical safety assessment: A Chemical Safety Assessment has not been carried out.</p>								
16	OTHER INFORMATION								
	<p>This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.</p> <p>Department issuing SDS: Product safety department Date of preparation / last revision : 21.10.2015 / 17.09.2016 Abbreviations and acronyms: Given at the place ADR: European Agreement concerning the International Carriage of Dangerous Goods by Road ACGIH: American Conference of Governmental Industrial Hygienists</p>								