SAFETY DATA SHEET

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

Product identifier

Trade name or designation of the mixture	Hi-Flow 330P (1.0, 1.5, 2.0)
Registration number	-
Synonyms	None.
Date of first issue	14-February-2012
Version number	01
Revision date	-
Supersedes date	-

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

Identified uses	Electrical insulation and heat conduction
Uses advised against	None known.

Details of the supplier of the safety data sheet

Manufacturer/Supplier	The Bergquist Company
Address:	18930 West 78th Street Chanhassen, MN. 55317
Non-Emergency calls:	1-800-347-4572
Contact person:	M-SDSadmin@BergquistCompany.com

Chemical Emergency

Call CHEMTREC Day or Night

Within USA and Canada:	1-800-424-9300
Outside USA and Canada:	+1 703-527-3887 (Collect Calls Accepted)

Section 2: Hazards identification

Classification of the substance or mixture

Classification according to Directive 67/548/EEC or 1999/45/EC as amended

This preparation is not classified as dangerous according to Directive 1999/45/EC and its amendments.

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

This mixture does not meet the criteria for classification according to Regulation (EC) 1272/2008 as amended.

Hazard summary

Physical hazards	Not classified for physical hazards.
Health hazards	Not classified for health hazards.
Environmental hazards	Not classified for hazards to the environment.
Specific hazards	Elevated temperatures or mechanical action may form dust and fumes which may be irritating to the respiratory tract.
Main symptoms	The ingredients are encapsulated within the synthetic wax matrix. Under normal conditions of intended use, this material does not pose a risk to health.

Label elements

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

Hazard statements	The mixture does not meet the criteria for classification.

Precautionary statements

Prevention	Observe good industrial hygiene practices.
Response	Wash thoroughly after handling.
Storage	Store away from incompatible materials.
Disposal	Dispose of contents/container in accordance with local/regional/national/international regulations.

Supplemental label information	None.
Other hazards	Not a PBT or vPvB substance or mixture.

Section 3: Composition/information on ingredients

Mixture

The components are not hazardous or are below required disclosure limits.

Section 4: First aid measures

General information If you feel unwell, seek medical advice (show the label where possible).

Description of first aid measures

Inhalation Move to fresh air. Get medical attention if symptoms occur.

Skin contact Wash skin with soap and water. Get medical attention if irritation persists after washing.

Eye contact Flush thoroughly with water. If irritation occurs, get medical assistance.

Ingestion Rinse mouth thoroughly with water and give large amounts of milk or water to people not unconscious. Do not give anything by mouth to an unconscious person. Get medical attention if any discomfort occurs.

Most important symptoms and effects, both acute and delayed Under normal conditions of intended use, this material does not pose a risk to health.

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

Section 5: Firefighting measures

General fire hazards This product is not flammable.

Extinguishing media

Suitable extinguishing media Use fire-extinguishing media appropriate for surrounding materials.

Unsuitable extinguishing media None known.

Special hazards arising from the substance or mixture None known.

Advice for firefighters

Special protective equipment for firefighters Self-contained breathing apparatus and full protective clothing must be worn in case of fire. Selection of respiratory protection for firefighting: follow the general fire precautions indicated in the workplace.

Special firefighting procedures Move containers from fire area if you can do so without risk. In the event of fire, wear self-contained breathing apparatus.

Section 6: Accidental release measures

Personal precautions, protective equipment and emergency procedures

For non-emergency personnel Avoid contact with skin and eyes. See Section 8 for personal protective equipment.

For emergency responders Keep unnecessary personnel away.

Environmental precautions Environmental manager must be informed of all major spillages.

Methods and material for containment and cleaning up Avoid generation and spreading of dust. For waste disposal, see Section 13.

Never return spills to original containers for re-use. Sweep up or gather material and place in appropriate container for disposal. Avoid dust formation.

Reference to other sections For personal protection, see section 8.
For waste disposal, see section 13.

Section 7: Handling and storage

Precautions for safe handling Avoid generation and spreading of dust. Avoid inhalation and contact with skin and eyes. Wear protective equipment, gloves and appropriate clothing to prevent skin contact. Observe good industrial hygiene practices.

Conditions for safe storage, including any incompatibilities Store in a dry place. Keep away from ignition, flame and heat sources. Store away from incompatible materials.

Specific end use(s) Electrical insulation and heat conduction

Section 8: Exposure controls/personal protection

Control parameters

Occupational exposure limits

Austria. MAK List

Components	Type	Value	Form
Aluminium oxide (1344-28-1)	MAK	5 mg/m3	Respirable fraction.
		5 mg/m3	Respirable fume.
		10 mg/m3	Inhalable fraction.

Austria. MAK List

Components	Type	Value	Form
	STEL	20 mg/m3	Inhalable fraction.
		10 mg/m3	Respirable fume.
		10 mg/m3	Respirable fraction.

Belgium. Exposure Limit Values.

Components	Type	Value
Aluminium oxide (1344-28-1)	TWA	10 mg/m3

Bulgaria. OELs. Regulation No 13 on protection of workers against risks of exposure to chemical agents at work

Components	Type	Value	Form
Aluminium oxide (1344-28-1)	TWA	10 mg/m3	Dust.
		1,5 mg/m3	Respirable fraction.

Czech Republic. OELs. Government Decree 361

Components	Type	Value	Form
Aluminium oxide (1344-28-1)	TWA	0,1 mg/m3	Respirable dust.

Denmark. Exposure Limit Values

Components	Type	Value	Form
Aluminium oxide (1344-28-1)	TLV	5 mg/m3	Total
		2 mg/m3	Respirable.

Estonia. OELs. Occupational Exposure Limits of Hazardous Substances. (Annex of Regulation No. 293 of 18 September 2001)

Components	Type	Value	Form
Aluminium oxide (1344-28-1)	TWA	4 mg/m3	Respirable dust.
		10 mg/m3	Total dust.

France. Threshold Limit Values (VLEP) for Occupational Exposure to Chemicals in France, INRS ED 984

Components	Type	Value
Aluminium oxide (1344-28-1)	VME	10 mg/m3

Germany. DFG MAK List (advisory OELs). Commission for the Investigation of Health Hazards of Chemical Compounds in the Work Area (DFG)

Components	Type	Value	Form
Aluminium oxide (1344-28-1)	TWA	4 mg/m3	Inhalable dust.
		1,5 mg/m3	Respirable dust.

Germany. TRGS 900, Limit Values in the Ambient Air at the Workplace

Components	Type	Value	Form
Aluminium oxide (1344-28-1)	AGW	3 mg/m3	Respirable dust.
		10 mg/m3	Inhalable dust.

Greece. OELs (Decree No. 90/1999, as amended)

Components	Type	Value	Form
Aluminium oxide (1344-28-1)	TWA	5 mg/m3	Inhalable
		10 mg/m3	Respirable.

Hungary. OELs. Joint Decree on Chemical Safety of Workplaces

Components	Type	Value	Form
Aluminium oxide (1344-28-1)	TWA	6 mg/m3	Respirable.

Iceland. OELs. Regulation 154/1999 on occupational exposure limits

Components	Type	Value
Aluminium oxide (1344-28-1)	TWA	10 mg/m3

Ireland. Occupational Exposure Limits

Components	Type	Value	Form
Aluminium oxide (1344-28-1)	TWA	4 mg/m3	Respirable dust.
		10 mg/m3	Total inhalable dust.

Italy. OELs

Components	Type	Value	Form
Aluminium oxide (1344-28-1)	TWA	1 mg/m3	Respirable fraction.

Latvia. OELs. Occupational exposure limit values of chemical substances in work environment

Components	Type	Value	Form
Aluminium oxide (1344-28-1)	TWA	6 mg/m3	Decomposition aerosol.
		4 mg/m3	

Lithuania. OELs. Limit Values for Chemical Substances, General Requirements (Hygiene Norm HN 23:2007)

Components	Type	Value	Form
Aluminium oxide (1344-28-1)	TWA	5 mg/m3	Inhalable fraction.
		2 mg/m3	Respirable fraction.

Norway. Administrative Norms for Contaminants in the Workplace

Components	Type	Value
Aluminium oxide (1344-28-1)	TLV	10 mg/m3

Poland. MACs. Minister of Labour and Social Policy Regarding Maximum Allowable Concentrations and Intensities in Working Environment

Components	Type	Value	Form
Aluminium oxide (1344-28-1)	TWA	2,5 mg/m3	Fume, total dust.
		1,2 mg/m3	Respirable dust and/or fume.

Portugal. VLEs. Norm on occupational exposure to chemical agents (NP 1796)

Components	Type	Value
Aluminium oxide (1344-28-1)	TWA	10 mg/m3

Romania. OELs. Protection of workers from exposure to chemical agents at the workplace

Components	Type	Value	Form
Aluminium oxide (1344-28-1)	STEL	5 mg/m3	Aerosol
		1,2 ppm	Aerosol
	TWA	2 mg/m3	Aerosol
		0,5 ppm	Aerosol

Slovakia. OELs. Decree of the government of the Slovak Republic concerning protection of health in work with chemical agents

Components	Type	Value	Form
Aluminium oxide (1344-28-1)	TWA	4 mg/m3	Inhalable fraction.
		1,5 mg/m3	Respirable fraction.
		0,1 mg/m3	

Spain. Occupational Exposure Limits

Components	Type	Value
Aluminium oxide (1344-28-1)	TWA	10 mg/m3

Sweden. Occupational Exposure Limit Values

Components	Type	Value	Form
Aluminium oxide (1344-28-1)	TWA	5 mg/m3	Total dust.
		2 mg/m3	Respirable dust.

Switzerland. SUVA Grenzwerte am Arbeitsplatz

Components	Type	Value	Form
Aluminium oxide (1344-28-1)	STEL	24 mg/m3	Fume and respirable dust.
	TWA	3 mg/m3	Respirable dust.
		3 mg/m3	Fume and respirable dust.

UK. EH40 Workplace Exposure Limits (WELs)

Components	Type	Value	Form
Aluminium oxide (1344-28-1)	TWA	4 mg/m3	Respirable dust.
		10 mg/m3	Inhalable dust.

Recommended monitoring procedures Follow standard monitoring procedures.

DNEL

Components	Type	Route	Value	Form
Aluminium oxide (1344-28-1)	Workers	Inhalation	15,63 mg/m3	Long term exposure local effects

PNEC

Components	Type	Route	Value
Aluminium oxide (1344-28-1)	Aqua (freshwater)	Not applicable	74,9 µg/l
	Sewage Treatment Plant	Not applicable	20 mg/l

Exposure controls

Appropriate engineering controls The listed ingredients in section 3 and 8 are encapsulated within the synthetic wax matrix, therefore no exposure to these materials is expected during normal use/handling of this product. The exposure limits listed are provided for safety reasons. Use process enclosures, local exhaust ventilation, or other engineering controls to control airborne levels below recommended exposure limits.

Individual protection measures, such as personal protective equipment

General information Use personal protective equipment as required. Personal protective equipment should be chosen according to the CEN standards and in discussion with the supplier of the personal protective equipment.

Eye/face protection Risk of contact: Wear approved safety goggles.

Skin protection

- Hand protection Use suitable protective gloves if risk of skin contact. Suitable gloves can be recommended by the glove supplier.

- Other If prolonged or repeated contact is likely, chemical resistant clothing is recommended.

Respiratory protection In case of inadequate ventilation, use respiratory protection. Use respiratory equipment with combination filter, type A2/P2.

Thermal hazards Wear appropriate thermal protective clothing, when necessary.

Hygiene measures 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. Discard contaminated clothing and footwear that cannot be cleaned.

Environmental exposure controls Environmental manager must be informed of all major releases.

Section 9: Physical and chemical properties

Information on basic physical and chemical properties

Physical state Solid.

Form Solid.

Colour Gold.

Odour Slight.

Odour threshold Not available.

pH Not applicable.

Melting point/freezing point Not available.

Boiling point, initial boiling point, and boiling range Not applicable.

Flash point Not applicable.

Auto-ignition temperature Not applicable.

Flammability (solid, gas) Not applicable.

Flammability limit - lower (%) None.

Flammability limit - upper (%) None.

Oxidising properties Not applicable.

Explosive properties Not explosive.

Explosive limit Not applicable.

Vapour pressure Not applicable.

Vapour density	Not applicable.
Evaporation rate	Not applicable.
Relative density	(1,0=2,02), (1,5=2,19), (2,0=2,34)
Solubility (water)	Insoluble in water.
Partition coefficient (n-octanol/water)	Not available.
Decomposition temperature	Not available.
Viscosity	Not applicable.
Percent volatile	Not available.
Other information	No relevant additional information available.

Section 10: Stability and reactivity

Reactivity	The product is non reactive under normal conditions of use, storage and transport.
Chemical stability	Stable at normal conditions.
Possibility of hazardous reactions	Hazardous polymerisation does not occur.
Conditions to avoid	None known.
Incompatible materials	Strong oxidising agents.
Hazardous decomposition products	Carbon oxides. Metal oxides.

Section 11: Toxicological information

General information	Not available.

Information on likely routes of exposure

Ingestion	Ingestion of dusts generated during working operations may cause nausea and vomiting.
Inhalation	Elevated temperatures or mechanical action may form dust and fumes which may be irritating to the mucous membranes and respiratory tract.
Skin contact	Prolonged skin contact may cause temporary irritation.
Eye contact	Elevated temperatures or mechanical action may form dust and fumes which may be irritating to the eye.
Symptoms	Under normal conditions of intended use, this material does not pose a risk to health.

Information on toxicological effects

Acute toxicity	Under normal conditions of intended use, this material does not pose a risk to health.
Skin corrosion/irritation	Prolonged skin contact may cause temporary irritation.
Serious eye damage/eye irritation	Elevated temperatures or mechanical action may form dust and fumes which may be irritating to the eye.
Respiratory sensitisation	No data available.
Skin sensitisation	No data available.
Germ cell mutagenicity	No data available.
Carcinogenicity	No data available.
Reproductive toxicity	No data available.
Specific target organ toxicity - single exposure	No data available.
Specific target organ toxicity - repeated exposure	No data available.
Aspiration hazard	No data available.
Mixture versus substance information	Chronic effects are not expected when this product is used as intended.
Other information	Not available.

Section 12: Ecological information

Toxicity	No toxicity data noted for the ingredient(s).
Persistence and degradability	The degradability of the product has not been stated.
Bioaccumulative potential	The product does not contain any substances expected to be bioaccumulating.
Mobility	Not available.

Environmental fate - Partition coefficient	Not available.
Mobility in soil	Not available.
Results of PBT and vPvB assessment	Not available.
Other adverse effects	The product is not classified as environmentally hazardous. However, this does not exclude the possibility that large or frequent spills can have a harmful or damaging effect on the environment.

Section 13: Disposal considerations

Waste treatment methods

Residual waste	Dispose of in accordance with local regulations.
Contaminated packaging	Since emptied containers retain product residue, follow label warnings even after container is emptied.
EU waste code	16 05 09

Section 14: Transport information

ADR

The product is not covered by international regulation on the transport of dangerous goods.

RID

The product is not covered by international regulation on the transport of dangerous goods.

ADN

The product is not covered by international regulation on the transport of dangerous goods.

IATA

The product is not covered by international regulation on the transport of dangerous goods.

IMDG

The product is not covered by international regulation on the transport of dangerous goods.

Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code	No information available.

Section 15: Regulatory information

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

EU regulations

Regulation (EC) No. 2037/2000 on substances that deplete the ozone layer, Annex I

Not listed.

Regulation (EC) No. 2037/2000 on substances that deplete the ozone layer, Annex II

Not listed.

Regulation (EC) No. 850/2004 on persistent organic pollutants, Annex I

Not listed.

Regulation (EC) No. 689/2008 concerning the export and import of dangerous chemicals, Annex I, part 1

Not listed.

Regulation (EC) No. 689/2008 concerning the export and import of dangerous chemicals, Annex I, part 2

Not listed.

Regulation (EC) No. 689/2008 concerning the export and import of dangerous chemicals, Annex I, part 3

Not listed.

Regulation (EC) No. 689/2008 concerning the export and import of dangerous chemicals, Annex V

Not listed.

Directive 96/61/EC concerning integrated pollution prevention and control (IPPC): Article 15, European Pollution Emission Registery (EPER)

Not listed.

Regulation (EC) No. 1907/2006, REACH Article 59(1). Candidate List

Not listed.

Other regulations	The product does not need to be labelled in accordance with EC directives or respective national laws. This Safety Data Sheet complies with the requirements of Regulation (EC) No 1907/2006.
National regulations	Follow national regulation for work with chemical agents.
Chemical safety assessment	No Chemical Safety Assessment has been carried out.

Section 16: Other information

List of abbreviations	DNEL: Derived No-Effect Level. PNEC: Predicted No-Effect Concentration. PBT: Persistent, bioaccumulative and toxic. vPvB: Very Persistent and very Bioaccumulative.
References	Registry of Toxic Effects of Chemical Substances (RTECS) HSDB® - Hazardous Substances Data Bank
Information on evaluation method leading to the classification of mixture	The mixture is classified based on test data for physical hazards. The classification for health and environmental hazards is derived by a combination of calculation methods and test data, if available. For details, refer to Sections 9, 11 and 12.
Full text of any statements or R-phrases and H-phrases under Sections 2 to 15	None.
Training information	Follow training instructions when handling this material.
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