SAFETY DATA SHEET

in accordance with 1907/2006/EC (REACH, as amended by 453/2010/EC) and 29 CFR 1910.1200

Revision date: 13 May 2015 **Initial date of issue:** 12 July 2007 **SDS No.** 283B-11

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

1.1. Product identifier

787 Sliding Paste (Bulk)

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

High viscosity, solid lubricating paste for high temperature and extreme pressure use.

1.3. Details of the supplier of the safety data sheet

Company:
A.W. CHESTERTON COMPANY
860 Salem Street
Groveland, MA 01834-1507, USA
Tel.: +1 978-469-6446 Fax: +1 978-469-6785
(Mon. - Fri. 8:30 - 5:00 PM EST)
SDS requests: www.chesterton.com
E-mail (SDS questions): ProductMSDSs@chesterton.com
E-mail: customer.service@chesterton.com

Supplier:

1.4. Emergency telephone number

24 hours per day, 7 days per week
Call Infotrac: 1-800-535-5053
Outside N. America: +1 352-323-3500 (collect)

SECTION 2: HAZARDS IDENTIFICATION

2.1. Classification of the substance or mixture

2.1.1. Classification according to Regulation (EC) No 1272/2008 [CLP] / 29 CFR 1910.1200 / WHMIS 2015 / GHS

Eye Dam. 1, H318
Skin Irrit. 2, H315

2.1.2. Classification according to Directives 1999/45/EC and 1975/324/EEC

This product does not meet the criteria for classification in any danger category according to Directive 1999/45/EC on classification, packaging and labelling of dangerous preparations.

2.1.3. Classification according to WHMIS 1988

D2A: Very toxic materials causing other effects; D2B: Toxic materials causing other effects

2.1.4. Australian statement of hazardous nature

Not classified as hazardous according to criteria of Safe Work Australia.

2.1.5. Additional information

For full text of H-statements and R-phrases: see SECTIONS 2.2 and 16.

2.2. Label elements

Labelling according to Regulation (EC) No 1272/2008 [CLP] / 29 CFR 1910.1200 / WHMIS 2015 / GHS

Hazard pictograms:

Signal word: Danger

Hazard statements:

H318	Causes serious eye damage.
H315	Causes skin irritation.

Precautionary statements:	P280	Wear protective gloves and eye/face protection.
	P305/351/338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
	P310	Immediately call a POISON CENTER or doctor/physician.
	P302/352	IF ON SKIN: Wash with plenty of soap and water.
	P332/313	If skin irritation occurs: Get medical advice/attention.
	P362/364	Take off contaminated clothing and wash it before reuse.

Supplemental information: None

2.3. Other hazards

None expected in industrial use. Do not use on oxygen systems. The Graphite, Talc and Molybdenum Disulfide listed do not separate from the mixture or become airborne, therefore do not present a hazard in normal use.

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

3.2. Mixtures

Hazardous Ingredients[1]	% Wt.	CAS No./ EC No.	REACH Reg. No.	Classification (CLP/GHS)	Classification (67/548/EEC)
Boric acid	3-< 5.5	10043-35-3 233-139-2	01-211948 6683-25	Repr. 1B, H360FD	Repr. Cat. 2; R60-61
Polyoxyethylene oleyl ether phosphate	1-4.9	39464-69-2 Polymer	NA	Eye Dam. 1, H318 Skin Irrit. 2, H315	Xi: R38-41
Methanol	0.1-0.5	67-56-1 200-659-6	01-211943 3307-44	Flam. Liq. 2, H225 Acute Tox. 3, H331, H311, H301 STOT SE 1, H370	F; R11 T; R23/24/25-39/23/24/25
Other ingredients:					
Graphite	20-30	7782-42-5 231-955-3	01-211948 6977-12	Not classified*	Not classified
Talc	10-15	14807-96-6 238-877-9	NA	Not classified*	Not classified
Molybdenum Disulfide	1-5	1317-33-5 215-263-9	NA	Not classified*	Not classified

Indications of danger acc. to 67/548/EEC: F: Highly flammable; T: Toxic; Xi: Irritant
*Substance with a workplace exposure limit.
For full text of H-statements and R-phrases: see SECTION 16.

[1] Classified according to: * 29 CFR 1910.1200, 1915, 1916, 1917, Mass. Right-to-Know Law (ch. 40, M.G.L..O. 111F), California Proposition 65
* 1272/2008/EC, 67/548/EEC, 99/45/EC, REACH
* WHMIS 2015
* Safe Work Australia [NOHSC: 1008 (2004)]

SECTION 4: FIRST AID MEASURES

4.1. Description of first aid measures

Inhalation: Remove to fresh air. If not breathing, administer artificial respiration. Contact physician.

Skin contact: Wash skin with soap and water. Contact physician if irritation persists.

Eye contact: Flush eyes for at least 15 minutes with large amounts of water. Contact physician if irritation persists.

Ingestion: Do not induce vomiting. Contact physician immediately.

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

Direct contact can cause severe eye irritation, possibly burns and skin irritation. High vapor concentrations may irritate eyes, respiratory tract and possibly cause dizziness and nausea.

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

Treat symptoms.

SECTION 5: FIRE-FIGHTING MEASURES

5.1. Extinguishing media

Suitable extinguishing media: Carbon Dioxide, dry chemical, foam, water fog

Unsuitable extinguishing media: Water jets

5.2. Special hazards arising from the substance or mixture

None

5.3. Advice for firefighters

Cool exposed containers with water. Recommend Firefighters wear self-contained breathing apparatus.

Flammability Classification: not determined

HAZCHEM Emergency Action Code: 2 Z

SECTION 6: ACCIDENTAL RELEASE MEASURES

6.1. Personal precautions, protective equipment and emergency procedures

Evacuate area. Provide adequate ventilation. Utilize exposure controls and personal protection as specified in Section 8.

6.2. Environmental Precautions

No special requirements.

6.3. Methods and material for containment and cleaning up

Contain spill to a small area. Pick up with absorbent material (sand, sawdust, clay, etc.) and place in a suitable container for disposal. Use caution - floor may be slippery where spill has occurred.

6.4. Reference to other sections

Refer to section 13 for disposal advice.

SECTION 7: HANDLING AND STORAGE

7.1. Precautions for safe handling

No special precautions. Wash before eating, drinking or smoking.

7.2. Conditions for safe storage, including any incompatibilities

Store in a cool, dry area.

7.3. Specific end use(s)

High viscosity, solid lubricating paste for high temperature and extreme pressure use. Refer to the product instructions and product data sheet for more detailed application information.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1. Control parameters

Occupational exposure limit values

Ingredients	OSHA PEL[1]		ACGIH TLV[2]		UK WEL[3]		AUSTRALIA ES[4]	
	ppm	mg/m^3	ppm	mg/m^3	ppm	mg/m^3	ppm	mg/m^3
Boric acid	(resp)	10 3	(inhal) (inhal)	2 STEL: 6	–	–	–	–
Polyoxyethylene oleyl ether phosphate	–	–	–	–	–	–	–	–
Methanol	200	260	200 (skin) STEL: 250	262 328	200 STEL: 250	266 STEL: 333	200 (skin) STEL: 250	262 328
Graphite	(resp)	15 mppcf	(resp)	2	(resp) (inhal)	4 10	(resp)	3
Talc	(resp)	20 mppcf	(resp)	2	(resp)	1	(resp)	2.5
Molybdenum Disulfide	–	15	(inhal) (resp)	10 3	–	–	–	10

[1] United States Occupational Health & Safety Administration permissible exposure limits.
[2] American Conference of Governmental Industrial Hygienists threshold limit values.
[3] EH40 Workplace exposure limits, Health & Safety Executive
[4] Adopted National Exposure Standards for Atmospheric Contaminants in the Occupational Environment [NOHSC:1003].

8.2. Exposure controls

8.2.1. Engineering measures

No special requirements. If exposure limits are exceeded, provide adequate ventilation.

8.2.2. Individual protection measures

Respiratory protection: Not normally needed. If exposure limits are exceeded, use approved organic vapor respirator (e.g., EN filter type A-P2).

Protective gloves: Chemical resistant gloves (e.g., natural rubber, neoprene or PVC)

Eye and face protection: Safety goggles.

Other: None

8.2.3. Environmental exposure controls

Refer to sections 6 and 12.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

9.1. Information on basic physical and chemical properties

Physical state	paste	**Odour**	mild odor
Colour	dark gray	**Odour threshold**	not determined
Initial boiling point	not determined	**Vapour pressure @ 20°C**	not determined
Melting point	not applicable	**% Aromatics by weight**	< 1%
% Volatile (by volume)	< 2%	**pH**	not applicable
Flash point	127°C (260°F)	**Relative density**	1.3 kg/l
Method	PM Closed Cup	**Weight per volume**	10.8 lbs/gal.
Viscosity	148K cps @ 25°C	**Coefficient (water/oil)**	< 1
Autoignition temperature	> 200°C (> 392°F)	**Vapour density (air=1)**	> 1
Decomposition temperature	not determined	**Rate of evaporation (ether=1)**	< 1
Upper/lower flammability or explosive limits	not determined	**Solubility in water**	insoluble
Flammability (solid, gas)	not applicable	**Oxidising properties**	not determined
Explosive properties	not determined		

9.2. Other information

None

SECTION 10: STABILITY AND REACTIVITY

10.1. Reactivity

Refer to sections 10.3 and 10.5.

10.2. Chemical stability

Stable

10.3. Possibility of hazardous reactions

No dangerous reactions known under conditions of normal use.

10.4. Conditions to avoid

Temperatures above 200°C (392°F).

10.5. Incompatible materials

Strong oxidizers like liquid Chlorine and concentrated Oxygen.

10.6. Hazardous decomposition products

Carbon Monoxide, Carbon Dioxide and other toxic fumes.

SECTION 11: TOXICOLOGICAL INFORMATION

11.1. Information on toxicological effects

Primary route of exposure under normal use: Inhalation, skin and eye contact.

Acute toxicity -

Oral: ATE-mix, oral: 30303 mg/kg

Substance	Test	Result
Graphite	LD50, rat	> 2000 mg/kg
Boric acid	LD50, rat	2660 mg/kg
Polyoxyethylene oleyl ether phosphate	LD50, rat	42300 mg/kg
Molybdenum Disulfide	LD50, rat	> 5000 mg/kg
Methanol	LD50, rat	5628 mg/kg
Methanol	Human lethal dose	143 mg/kg

Dermal: ATE-mix, dermal: 90909 mg/kg

Substance	Test	Result
Boric acid	LD50, rabbit	> 2000 mg/kg
Molybdenum Disulfide	LD50, rat	> 16000 mg/kg
Methanol	LD50, rabbit	17100 mg/kg

Inhalation: High vapor concentrations may irritate eyes, respiratory tract and possibly cause dizziness and nausea. ATE-mix, inhalable: 909.1 mg/l

Substance	Test	Result
Graphite	LC50 rat, 4 h	> 2 mg/l (dust)
Boric acid	LC50 rat, 4 h	> 2 mg/l

Skin corrosion/irritation: Direct skin contact can cause irritation.

Substance	Test	Result
Graphite	Skin irritation, rabbit	Not irritating
Boric acid	Skin irritation, rabbit	Slightly irritating
Polyoxyethylene oleyl ether phosphate	Skin irritation, rabbit	Irritating
Molybdenum Disulfide	Skin irritation, rabbit	Not irritating
Methanol	Skin irritation, rabbit	Not irritating

Serious eye damage/ irritation: Direct contact can cause severe eye irritation, possibly burns.

Substance	Test	Result
Graphite	Eye irritation, rabbit	Not irritating
Boric acid	Eye irritation, rabbit	Not irritating
Polyoxyethylene oleyl ether phosphate	Eye irritation, rabbit	Severe irritation
Methanol	Eye irritation, rabbit	Not irritating

Respiratory or skin sensitisation:

Substance	Test	Result
Graphite	Skin sensitization, (OECD 429) mouse	Not sensitizing
Boric acid	Skin sensitization, (OECD 406) guinea pig	Not sensitizing
Molybdenum Disulfide	Skin sensitization, (OECD 406)	Not sensitizing
Methanol	Skin sensitization, guinea pig	Not sensitizing

Germ cell mutagenicity: Graphite, Boric acid, Molybdenum Disulfide, Methanol: based on available data, the classification criteria are not met. Talc, Ames test: negative.

Carcinogenicity: As per 29 CFR 1910.1200 (Hazard Communication), this product contains no carcinogens as listed by the National Toxicology Program (NTP), the International Agency for Research on Cancer (IARC), the Occupational Safety and Health Administration (OSHA) or Regulation (EC) No 1272/2008.

Reproductive toxicity: Graphite: based on available data, the classification criteria are not met. Boric Acid is embryotoxic and/or fetotoxic in animals. Methanol: data lacking.

STOT-single exposure: No data available

STOT-repeated exposure: Prolonged, excessive inhalation of Graphite dust has caused emphysema and pneumoconiosis. Repeated or prolonged inhalation of Talc dust may cause chronic cough, shortness of breath, scarring of the lungs (pulmonary fibrosis) and mild symptomatic pneumoconiosis. The Graphite and Talc listed do not separate from the mixture or become airborne, therefore do not present a hazard in normal use. Graphite, Methanol: based on available data, the classification criteria are not met.

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

Other information: None known

SECTION 12: ECOLOGICAL INFORMATION

Ecotoxicological data have not been determined specifically for this product. The information given below is based on a knowledge of the components and the ecotoxicology of similar substances.

12.1. Toxicity

This product is expected to exhibit low toxicity to aquatic and soil organisms. Graphite: 96 h LC50 (fish) > 100 mg/l. Talc: 24 h LC50 (fish) > 100 g/l.

12.2. Persistence and degradability

Graphite, Boric acid, Talc, Molybdenum Disulfide: inorganic substances. Methanol: readily biodegradable.

12.3. Bioaccumulative potential

Boric acid: not expected to bioaccumulate (log Kow <1). Graphite, Molybdenum Disulfide, Methanol: not expected to bioaccumulate.

12.4. Mobility in soil

Insoluble in water. In determining environmental mobility, consider the product's physical and chemical properties (see Section 9).

12.5. Results of PBT and vPvB assessment

Not available

12.6. Other adverse effects

None known

SECTION 13: DISPOSAL CONSIDERATIONS

13.1. Waste treatment methods

Incinerate absorbed material with a properly licensed facility. Check local, state and national/federal regulations and comply with the most stringent requirement. Not classified as hazardous according to 2008/98/EC.

European List of Wastes code: Not determined

SECTION 14: TRANSPORT INFORMATION

14.1. UN number

ADR/RID/ADN/IMDG/ICAO:	NOT APPLICABLE
TDG:	NOT APPLICABLE
US DOT:	NOT APPLICABLE

14.2. UN proper shipping name

ADR/RID/ADN/IMDG/ICAO:	NON-HAZARDOUS, NON REGULATED
TDG:	NON-HAZARDOUS, NON REGULATED
US DOT:	NON-HAZARDOUS, NON REGULATED

14.3. Transport hazard class(es)

ADR/RID/ADN/IMDG/ICAO:	NOT APPLICABLE
TDG:	NOT APPLICABLE
US DOT:	NOT APPLICABLE

14.4. Packing group

ADR/RID/ADN/IMDG/ICAO:	NOT APPLICABLE
TDG:	NOT APPLICABLE
US DOT:	NOT APPLICABLE

14.5. Environmental hazards

NOT APPLICABLE

14.6. Special precautions for user

NOT APPLICABLE

14.7. Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code

NOT APPLICABLE

14.8. Other information

NOT APPLICABLE

SECTION 15: REGULATORY INFORMATION

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

15.1.1. EU regulations

Authorisations under Title VII: Not applicable

Restrictions under Title VIII: None

Other EU regulations: None

15.1.2. National regulations

US EPA SARA TITLE III

312 Hazards: **313 Chemicals:**
Immediate None
Delayed

Hazardous Materials Identification System (HMIS)

4 = Severe Hazard
3 = Serious Hazard
2 = Moderate Hazard
1 = Slight Hazard
0 = Minimal Hazard
* = See Section 8

HEALTH	**2**
FLAMMABILITY	**1**
PHYSICAL HAZARD	**1**
Personal Protection	*****

Other national regulations: WARNING: This product contains a chemical(s) known to the State of California to cause birth defects or other reproductive harm (Methanol).

15.2. Chemical safety assessment

No Chemical Safety Assessment has been carried out for this substance/mixture by the supplier.

SECTION 16: OTHER INFORMATION

Abbreviations and acronyms:
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
ATE: Acute Toxicity Estimate
BCF: Bioconcentration Factor
CLP: Classification Labelling Packaging Regulation (1272/2008/EC)
ES: Exposure Standard
GHS: Globally Harmonized System
ICAO: International Civil Aviation Organization
IMDG: International Maritime Dangerous Goods
LC50: Lethal Concentration to 50 % of a test population
LD50: Lethal Dose to 50% of a test population
LOEL: Lowest Observed Effect Level
N/A: Not Applicable
NA: Not Available
NOAEL: No Observed Adverse Effect Level
NOEL: No Observed Effect Level
OECD: Organization for Economic Co-operation and Development
PBT: Persistent, Bioaccumulative and Toxic substance
(Q)SAR: Quantitative Structure-Activity Relationship
REACH: Registration, Evaluation, Authorisation and Restriction of Chemicals Regulation (1907/2006/EC)
RID: Regulations concerning the International Carriage of Dangerous Goods by Rail
SDS: Safety Data Sheet
STEL: Short Term Exposure Limit
STOT: Specific Target Organ Toxicity
TDG: Transportation of Dangerous Goods (Canada)
US DOT: United States Department of Transportation
vPvB: very Persistent and very Bioaccumulative substance
WEL: Workplace Exposure Limit
WHMIS: Workplace Hazardous Materials Information System
Other abbreviations and acronyms can be looked up at www.wikipedia.org.

Key literature references and sources for data:
Commission de la santé et de la sécurité du travail (CSST)
Chemical Classification and Information Database (CCID)
European Chemicals Agency (ECHA) - Information on Chemicals
Hazardous Substances Information System (HSIS)
National Institute of Technology and Evaluation (NITE)
Swedish Chemicals Agency (KEMI)
U.S. National Library of Medicine Toxicology Data Network (TOXNET)

Procedure used to derive the classification for mixtures according to Regulation (EC) No 1272/2008:

Classification	Classification procedure
Eye Dam. 1, H318	Calculation method
Skin Irrit. 2, H315	Calculation method

Relevant H-statements: H225: Highly flammable liquid and vapour.
H301: Toxic if swallowed.
H311: Toxic in contact with skin.
H318: Causes serious eye damage.
H315: Causes skin irritation.
H331: Toxic if inhaled.
H360FD: May damage fertility. May damage the unborn child.
H370: Causes damage to organs.

Relevant R-phrases: R11: Highly flammable.
R23/24/25: Toxic by inhalation, in contact with skin and if swallowed.
R38: Irritating to skin.
R39/23/24/25: Toxic: danger of very serious irreversible effects through inhalation, in contact with skin and if swallowed.
R41: Risk of serious damage to eyes.
R60: May impair fertility.
R61: May cause harm to the unborn child.

Hazard pictogram names: Corrosion

Changes to the SDS in this revision: Sections 2.1, 2.2, 4, 8.1, 8.2.2, 11, 15, 16.

Further information: None

This information is based solely on data provided by suppliers of the materials used, not on the mixture itself. No warranty is expressed or implied regarding the suitability of the product for the user's particular purpose. The user must make their own determination as to suitability.