# SAFETY DATA SHEET

## SECTION 1. IDENTIFICATION

**Product identifier used on the label**
: **THERM-A-GAP™ GEL20**

**Other means of identification :** GEL20

**Recommended use of the chemical and restrictions on use**
: Fully cured dispensable gel for use in gap filling.
Recommended restrictions: None Known.

**Chemical family** : Mixture.

**SDS number** : PHC-492

**Name, address, and telephone number of the manufacturer:**

**Parker Hannifin Corp.**
Chomerics Division
280 Yunqiao Rd, JinQiao E.P.Z.
Shanghai, China 201206

Manufacturer's Telephone # : (21) 2899-5000
**24 Hr. Emergency Tel #** : (21) 2899-5000

**Name, address, and telephone number of the supplier:**

Refer to manufacturer

## SECTION 2. HAZARDS IDENTIFICATION

**Classification of the chemical**

gel-dark blue Odorless.

Most important hazards: Occupational exposure to the substance or mixture may cause adverse effects. Refer also to TOXICOLOGICAL INFORMATION (Section 11).
Avoid release to the environment.

This material is not classified as hazardous under U.S. OSHA regulations (29CFR 1910.1200) (Hazcom 2012) and Canadian WHMIS regulations (Hazardous Products Regulations) (WHMIS 2015).

**Label elements**

*Hazard pictogram(s)*

None required under U.S. OSHA Hazcom 2012 and Canadian WHMIS 2015 regulations.

*Signal Word*

None required under OSHA HazCom2012 and 2015 Canadian WHMIS regulations.

*Hazard statement(s)*

None required under OSHA HazCom2012 and 2015 Canadian WHMIS regulations.

*Precautionary statement(s)*

None required under OSHA HazCom2012 and 2015 Canadian WHMIS regulations.

**Other hazards**

Other hazards which do not result in classification:

Toxic fumes may be released during a fire. Inhalation of fumes may result in metal fume fever, a flu-like illness.

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## SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Mixtures

| Chemical name | Common name and synonyms | CAS # | Concentration (% by weight) |
|---|---|---|---|
| **aluminum oxide** | Aluminum trioxide | 1344-28-1 | **80.0 - 100.0** |

The exact concentrations of the above listed chemicals are being withheld as a trade secret.

## SECTION 4. FIRST-AID MEASURES

**Description of first aid measures**

*Ingestion* : Do NOT induce vomiting. Rinse mouth. Never give anything by mouth to an unconscious person. Obtain medical attention if symptoms develop and persist.

*Inhalation* : If inhaled, move to fresh air. If breathing is difficult, give oxygen by qualified medical personnel only. If breathing has stopped, give artificial respiration. Get medical attention if irritation develops and persists.

*Skin contact* : For skin contact, wash with soap and water while removing contaminated clothing. Get medical attention if irritation develops and persists.

*Eye contact* : Rinse thoroughly with plenty of water, also under the eyelids. Remove contact lenses, if present and easy to do. Get medical attention if irritation develops and persists.

**Most important symptoms and effects, both acute and delayed**

: Direct eye contact may cause slight redness.

**Indication of any immediate medical attention and special treatment needed**

: Provide general supportive measures and treat symptomatically.

## SECTION 5. FIRE-FIGHTING MEASURES

**Extinguishing media**

*Suitable extinguishing media*

: Use media suitable to the surrounding fire such as water fog or fine spray, alcohol foams, carbon dioxide and dry chemical.

*Unsuitable extinguishing media*

: None known.

**Special hazards arising from the substance or mixture / Conditions of flammability**

: Toxic fumes may be released during a fire. The pressure in sealed containers can increase under the influence of heat.

**Flammability classification (OSHA 29 CFR 1910.106)**

: Not flammable.

**Hazardous combustion products**

: Carbon oxides; Metal oxides; Alcohol; Nitrogen oxides (NOx); Other unidentified organic compounds.

**Special protective equipment and precautions for firefighters**

*Protective equipment for fire-fighters*

: Firefighters must use standard protective equipment including flame retardant coat, helmet with face shield, gloves, rubber boots, and in enclosed spaces, SCBA. Firefighters should wear proper protective equipment and self-contained breathing apparatus with full face piece operated in positive pressure mode.

*Special fire-fighting procedures*

: Move containers from fire area if safe to do so. Cool closed containers exposed to fire with water spray. Do not allow run-off from fire fighting to enter drains or water courses. Dike for water control.

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## SECTION 6. ACCIDENTAL RELEASE MEASURES

**Personal precautions, protective equipment and emergency procedures**

: Keep people away from and upwind of spill/leak. Restrict access to area until completion of clean-up. Wear appropriate protective equipment. Refer to protective measures listed in sections 7 and 8.

**Environmental precautions** : Prevent product from entering drains, sewers, waterways and soil.

**Methods and material for containment and cleaning up**

: Ventilate the area. Remove all sources of ignition. Prevent further leakage or spillage if safe to do so. Contain and absorb spilled liquid with non-combustible, inert absorbent material (e.g. sand). Pick up and transfer to properly labeled containers.

Never return spills in original containers for re-use. Contaminated absorbent material may pose the same hazards as the spilled product. Contact the proper local authorities.
For waste disposal, see Section 13 of the SDS.

**Special spill response procedures**

: If a spill/release in excess of the EPA reportable quantity is made into the environment, immediately notify the national response center in the United States (phone: 1-800-424-8802). US CERCLA Reportable quantity (RQ): See section 15.

## SECTION 7. HANDLING AND STORAGE

**Precautions for safe handling**

: Use with adequate ventilation. Wear suitable protective equipment during handling. Avoid breathing dust, fume or vapors. Avoid contact with skin, eyes and clothing. Keep away from extreme heat and direct flame. Keep away from incompatibles. Keep containers closed when not in use. Wash thoroughly after handling.

**Conditions for safe storage** : Store in cool/well-ventilated place. Store locked up. Storage area should be clearly identified, clear of obstruction and accessible only to trained and authorized personnel. Inspect periodically for damage or leaks. Do not store near any incompatible materials (see Section 10).

**Incompatible materials** : Strong acids and oxidizing agents

## SECTION 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

**Exposure Limits:**

| Chemical Name | ACGIH TLV | | OSHA PEL | |
|---|---|---|---|---|
| | TWA | STEL | PEL | STEL |
| aluminum oxide | 1 mg/m³ (respirable) | N/Av | 15 mg/m³ (total dust); 5 mg/m³ (respirable) | N/Av |

**Exposure controls**

**Ventilation and engineering measures**

: Ensure adequate ventilation, especially in confined areas. Apply technical measures to comply with the occupational exposure limits. Good ventilation (typically 10 air changes per hour) should be sufficient to control airbourne levels. In case of insufficient ventilation wear suitable respiratory equipment.

**Respiratory protection** : If airbourne concentrations are above the permissible exposure limit or are not known, use NIOSH-approved respirators. Advice should be sought from respiratory protection specialists.

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| | | |
|---|---|---|
| **Skin protection** | : | Gloves impervious to the material are recommended. Advice should be sought from glove suppliers. Wear sufficient clothing to prevent skin contact. |
| **Eye / face protection** | : | If product is processed in a manner that generates dusts or fumes, wear as appropriate: Tightly fitting safety goggles; Safety glasses with side shields. |
| **Other protective equipment** | : | Ensure that eyewash stations and safety showers are close to the workstation location. Other equipment may be required depending on workplace standards. |
| **General hygiene considerations** | : | Avoid breathing dust, fume or vapors. Avoid contact with skin, eyes and clothing. Wash thoroughly after handling. Remove and wash contaminated clothing before re-use. Handle in accordance with good industrial hygiene and safety practice. |

## SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

| | | |
|---|---|---|
| **Appearance** | : | dark blue gel |
| **Odour** | : | None. |
| **Odour threshold** | : | N/Av |
| **pH** | : | N/Av |
| **Melting Point/Freezing point** | : | N/Av |
| **Initial boiling point and boiling range** | : | N/Av |
| **Flash point** | : | N/Av |
| **Flashpoint (Method)** | : | N/Av |
| **Evaporation rate (BuAe = 1)** | : | N/Av |
| **Flammability (solid, gas)** | : | Not applicable. |
| **Lower flammable limit (% by vol.)** | : | N/Av |
| **Upper flammable limit (% by vol.)** | : | N/Av |
| **Oxidizing properties** | : | None. |
| **Explosive properties** | : | Not explosive |
| **Vapour pressure** | : | N/Av |
| **Vapour density** | : | N/Av |
| **Relative density / Specific gravity** | : | > 1 |
| **Solubility in water** | : | Insoluble. |
| **Other solubility(ies)** | : | N/Av |
| **Partition coefficient: n-octanol/water or Coefficient of water/oil distribution** | : | N/Av |
| **Auto-ignition temperature** | : | N/Av |
| **Decomposition temperature** | : | N/Av |
| **Viscosity** | : | N/Av |
| **Volatiles (% by weight)** | : | N/Av |
| **Volatile organic Compounds (VOC's)** | : | N/Av |
| **Absolute pressure of container** | : | N/Ap |
| **Flame projection length** | : | N/Ap |
| **Other physical/chemical comments** | : | No additional information. |

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## SECTION 10. STABILITY AND REACTIVITY

**Reactivity** : Not normally reactive.

**Chemical stability** : Stable under normal conditions.

**Possibility of hazardous reactions**

: Hazardous polymerization does not occur. No dangerous reaction known under conditions of normal use.

**Conditions to avoid** : Direct sources of heat. Do not use in areas without adequate ventilation. Avoid contact with incompatible materials.

**Incompatible materials** : Strong oxidizing agents; Strong acids; Strong bases

**Hazardous decomposition products**

: None known, refer to hazardous combustion products in Section 5.

## SECTION 11. TOXICOLOGICAL INFORMATION

### Information on likely routes of exposure:

**Routes of entry inhalation** : YES

**Routes of entry skin & eye** : YES

**Routes of entry Ingestion** : YES

**Routes of exposure skin absorption**

: NO

### Potential Health Effects:

**Signs and symptoms of short-term (acute) exposure**

*Sign and symptoms Inhalation*

: Mild respiratory irritant Inhalation of fumes may result in metal fume fever, a flu-like illness. Symptoms of metal fume fever may include fever, fatigue, vomiting, muscle aches and shortness of breath.

*Sign and symptoms ingestion*

: Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea.

*Sign and symptoms skin* : Direct skin contact may cause slight or mild, transient irritation.

*Sign and symptoms eyes* : Direct eye contact may cause slight or mild, transient irritation.

**Potential Chronic Health Effects**

: If dusts are formed, inhalation may cause adverse lung effects. Repeated or prolonged inhalation of fine dusts may cause an increase in mucous production.

**Mutagenicity** : No data available to indicate product or any components present at greater than 0.1% are mutagenic or genotoxic.

**Carcinogenicity** : No components are listed as carcinogens by ACGIH, IARC, OSHA or NTP.

**Reproductive effects & Teratogenicity**

: This product is not expected to cause reproductive or developmental effects.

**Sensitization to material** : Not expected to be a skin or respiratory sensitizer.

**Specific target organ effects** : According to the classification criteria of U.S. OSHA regulations (29CFR 1910.1200) (Hazcom 2012) and Canadian WHMIS regulations (Hazardous Products Regulations) (WHMIS 2015), this product is not expected to cause target organ toxicity through single or repeated exposures.

**Medical conditions aggravated by overexposure**

: None known.

**Synergistic materials** : None known.

**Toxicological data** : There is no available data for the product itself, only for the ingredients. See below for individual ingredient acute toxicity data.

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| Chemical name | $LC_{50}$(4hr) inh, rat | $LD_{50}$ (Oral, rat) | $LD_{50}$ (Rabbit, dermal) |
|---|---|---|---|
| aluminum oxide | >2.3 mg/L (dust) (no deaths) | > 2000 mg/kg (No mortality) | N/Av |

**Other important toxicological hazards**
: None known or reported by the manufacturer.

## SECTION 12. ECOLOGICAL INFORMATION

**Ecotoxicity** : Not expected to be harmful to aquatic organisms. However, this does not exclude the possibility that large or frequent spills can have a harmful or damaging effect on the environment. See the following tables for individual ingredient ecotoxicity data.

***Ecotoxicity data:***

| Ingredients | CAS # | Toxicity to Fish | | |
|---|---|---|---|---|
| | | LC50 / 96h | NOEC / 21 day | M Factor |
| aluminum oxide | 1344-28-1 | > 100 mg/L (Brown trout) | N/Av | None. |

| Ingredients | CAS # | Toxicity to Daphnia | | |
|---|---|---|---|---|
| | | EC50 / 48h | NOEC / 21 day | M Factor |
| aluminum oxide | 1344-28-1 | > 100 mg/L (Daphnia magna) | N/Av | None. |

| Ingredients | CAS # | Toxicity to Algae | | |
|---|---|---|---|---|
| | | EC50 / 96h or 72h | NOEC / 96h or 72h | M Factor |
| aluminum oxide | 1344-28-1 | > 100 mg/L/72hr (Green algae) | N/Av | None. |

**Persistence and degradability**
: The product itself has not been tested.

**Bioaccumulation potential** : The product itself has not been tested.

| Components | Partition coefficient n-octanol/water (log Kow) | Bioconcentration factor (BCF) |
|---|---|---|

**Mobility in soil** : The product itself has not been tested.

**Other Adverse Environmental effects**
: No other adverse environmental effects (e.g. ozone depletion, photochemical ozone creation potential, endocrine disruption, global warming potential) are expected from this component.

## SECTION 13. DISPOSAL CONSIDERATIONS

**Handling for Disposal** : Collect and reclaim or dispose in sealed containers at licensed waste disposal site.

**Methods of Disposal** : Dispose in accordance with all applicable federal, state, territory and local regulations.

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**RCRA** : If this product, as supplied, becomes a waste in the United States, it may meet the criteria of a hazardous waste as defined under RCRA, Title 40 CFR 261. It is the responsibility of the waste generator to determine the proper waste identification and disposal method. For disposal of unused or waste material, check with local, state and federal environmental agencies.

## SECTION 14. TRANSPORT INFORMATION

| Regulatory Information | UN Number | UN proper shipping name | Transport hazard class(es) | Packing Group | Label |
|---|---|---|---|---|---|
| 49CFR/DOT | None. | Not regulated. | not regulated | none |  |
| **49CFR/DOT Additional information** | None. | | | | |
| ICAO/IATA | None. | Not regulated. | not regulated | none |  |
| **ICAO/IATA Additional information** | None. | | | | |
| IMDG | None. | Not regulated. | not regulated | none |  |
| **IMDG Additional information** | None. | | | | |
| TDG | None. | Not regulated. | not regulated | none |  |
| **TDG Additional information** | None. | | | | |

**Special precautions for user** : Appropriate advice on safety must accompany the package.

**Environmental hazards** : This product does not meet the criteria for an environmentally hazardous mixture, according to the IMDG Code.

**Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code**

: Not applicable.

## SECTION 15 - REGULATORY INFORMATION

**US Federal Information:**

Components listed below are present on the following U.S. Federal chemical lists:

| Ingredients | CAS # | TSCA Inventory | CERCLA Reportable Quantity(RQ) (40 CFR 117.302): | SARA TITLE III: Sec. 302, Extremely Hazardous Substance, 40 CFR 355: | SARA TITLE III: Sec. 313, 40 CFR 372, Specific Toxic Chemical | |
|---|---|---|---|---|---|---|
| | | | | | Toxic Chemical | de minimus Concentration |
| aluminum oxide | 1344-28-1 | Yes | None. | None. | Yes | No |

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SARA TITLE III: Sec. 311 and 312 SDS Requirements, 40 CFR 370 Hazard Classes: Not a hazard under normal conditions of use. Under SARA Sections 311 and 312, the EPA has established threshold quantities for the reporting of hazardous chemicals. The current thresholds are 500 pounds or the threshold planning quantity (TPQ), whichever is lower, for extremely hazardous substances and 10,000 pounds for all other hazardous chemicals.

**US State Right to Know Laws:**

The following chemicals are specifically listed by individual States:

| Ingredients | CAS # | California Proposition 65 | | State "Right to Know" Lists | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | Listed | Type of Toxicity | CA | MA | MN | NJ | PA | RI |
| aluminum oxide | 1344-28-1 | No | N/Ap | Yes | Yes | Yes | Yes | Yes | Yes |

**Canadian Information:**
Canadian Environmental Protection Act (CEPA) information: All ingredients listed appear on the Domestic Substances List (DSL).

**International Information:**

Components listed below are present on the following International Inventory list:

| Ingredients | CAS # | European EINECs | Australia AICS | Philippines PICCS | Japan ENCS | Korea KECI/KECL | China IECSC | NewZealand IOC |
|---|---|---|---|---|---|---|---|---|
| aluminum oxide | 1344-28-1 | 215-691-6 | Present | Present | (1)-23 | KE-01012 | Present | May be used as a single component chemical under an appropriate group standard. |

## SECTION 16. OTHER INFORMATION

**Legend** : ACGIH: American Conference of Governmental Industrial Hygienists
AICS: Australian Inventory of Chemical Substances
CAS: Chemical Abstract Services
CERCLA: Comprehensive Environmental Response, Compensation, and Liability Act of 1980
CFR: Code of Federal Regulations
DOT: Department of Transportation
EC50: Effective Concentration 50%
ENCS: Existing and New Chemical Substances
EPA: Environmental Protection Agency
IARC: International Agency for Research on Cancer
IECSC: Inventory of Existing Chemical Substances
IMDG: International Maritime Dangerous Goods
IOC: Inventory of Chemicals
KECI: Korean Existing Chemicals Inventory
KECL: Korean Existing Chemicals List
LC: Lethal Concentration
LD: Lethal Dose
N/Ap: Not Applicable
N/Av: Not Available
NIOSH: National Institute of Occupational Safety and Health

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NOEC: No observable effect concentration
NTP: National Toxicology Program
OECD: Organisation for Economic Co-operation and Development
OSHA: Occupational Safety and Health Administration
PEL: Permissible exposure limit
PICCS: Philippine Inventory of Chemicals and Chemical Substances
SARA: Superfund Amendments and Reauthorization Act
SDS: Safety Data Sheet
STEL: Short Term Exposure Limit
TLV: Threshold Limit Values
TSCA: Toxic Substance Control Act
TWA: Time Weighted Average

**References** : 1. ACGIH, Threshold Limit Values for Chemical Substances and Physical Agents & Biological Exposure Indices
2. ECHA - European Chemical Agency
3. Canadian Centre for Occupational Health and Safety, CCInfoWeb databases
4. Safety Data Sheets from manufacturer.
5. US EPA Title III List of Lists
6. California Proposition 65 List
7. OECD - The Global Portal to Information on Chemical Substances - eChemPortal

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**Other special considerations for handling**
: Provide adequate information, instruction and training for operators.

| | |
|---|---|
| **Prepared for:**<br>Parker Hannifin Corp.<br>Chomerics Division | |
| **Prepared by:**<br>ICC The Compliance Center Inc.<br>Telephone: (888) 442-9628 (U.S.): (888) 977-4834 (Canada)<br>http://www.thecompliancecenter.com | |

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