SAFETY DATA SHEET

| Section 1. Identification | | |
|---------------------------------|--|--|
| Product name | Braycote 248 | |
| SDS # | 451704 | |
| Historic SDS #: | 27059 | |
| Code | 451704-US03 | |
| Relevant identified uses | of the substance or mixture and uses advised against | |
| Product use | Grease for industrial applications. For specific application advice see appropriate Technical Data Sheet or consult our company representative. | |
| Manufacturer | Castrol Industrial North America, Inc. 150 W. Warrenville Road Naperville, IL 60563 | |
| Supplier | Castrol Industrial North America, Inc. 150 W. Warrenville Road Naperville, IL 60563 Product Information: +1-877-641-1600 | |
| EMERGENCY SPILL INFORMATION: | 1 (800) 424-9300 CHEMTREC (USA) | |

Section 2. Hazards identification

| OSHA/HCS status | This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200). |
|--------------------------|--|
| Classification of the | SERIOUS EYE DAMAGE - Category 1 |
| substance or mixture | SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) - Category 2 |
| GHS label elements | |
| Hazard pictograms | |
| Signal word | Danger |
| - | - |
| Hazard statements | Causes serious eye damage. May cause damage to organs. |
| Precautionary statements | |
| Prevention | Wear eye or face protection. Do not breathe vapor. Do not eat, drink or smoke when using this product. Wash hands thoroughly after handling. |
| Response | IF exposed or if you feel unwell: Call a POISON CENTER or physician. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER or physician. |
| Storage | Store locked up. |
| Disposal | Dispose of contents and container in accordance with all local, regional, national and international regulations. |
| | |

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Section 2. Hazards identification

| Hazards | not | otherwise |
|-----------|-----|-----------|
| classifie | d | |

Defatting to the skin. Note: High Pressure Applications Injections through the skin resulting from contact with the product at high pressure

constitute a major medical emergency.

See 'Notes to physician' under First-Aid Measures, Section 4 of this Safety Data Sheet.

Section 3. Composition/information on ingredients

Mixture

Highly refined mineral oil and additives Thickening agent.

Substance/mixture

| Ingredient name | CAS number | % |
|---|---------------------------------|----------------------------------|
| sulfonic acids, petroleum, sodium salts | Varies 68608-26-4 90-30-2 | ≥50 - <75 ≥5 - <10 ≥1 - <3 |

Any concentration shown as a range is to protect confidentiality or is due to batch variation.

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment and hence require reporting in this section.

Occupational exposure limits, if available, are listed in Section 8.

Section 4. First aid measures

Description of necessary first aid measures

| Eye contact | In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Eyelids should be held away from the eyeball to ensure thorough rinsing. Check for and remove any contact lenses. Chemical burns must be treated promptly by a physician. Get medical attention immediately. |
|----------------------------|--|
| Skin contact | In case of contact, immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Wash skin thoroughly with soap and water or use recognized skin cleanser. Wash contaminated clothing thoroughly with water before removing it, or wear gloves. Chemical burns must be treated promptly by a physician. Wash clothing before reuse. Clean shoes thoroughly before reuse. Get medical attention immediately. |
| Inhalation | In case of inhalation of decomposition products in a fire, symptoms may be delayed. If inhaled, remove to fresh air. The exposed person may need to be kept under medical surveillance for 48 hours. Get medical attention immediately. |
| Ingestion | Do not induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Chemical burns must be treated promptly by a physician. Get medical attention immediately. |
| Protection of first-aiders | No action shall be taken involving any personal risk or without suitable training. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Wash contaminated clothing thoroughly with water before removing it, or wear gloves. |

Most important symptoms/effects, acute and delayed

See Section 11 for more detailed information on health effects and symptoms.

| Notes to physi | cian | In case of inhalation of decomposition products in The exposed person may need to be kept under Treatment should in general be symptomatic and Note: High Pressure Applications Injections through the skin resulting from contact constitute a major medical emergency. Injuries n a few hours tissue becomes swollen, discolored a subcutaneous necrosis. | medical surveillance for 48 hours. d directed to relieving any effects. with the product at high pressure may not appear serious at first but within and extremely painful with extensive |
|----------------|--------------|--|---|
| | | Surgical exploration should be undertaken withou | ut delay. Thorough and extensive |
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Section 4. First aid measures

debridement of the wound and underlying tissue is necessary to minimize tissue loss and prevent or limit permanent damage. Note that high pressure may force the product considerable distances along tissue planes.

Specific treatments

No specific treatment.

Section 5. Fire-fighting measures

| on dioxide |
|-----------------------------|
| |
| burst. |
| |
| incident if out suitable |
| atus (SCBA) |
| inciden but suita |

Section 6. Accidental release measures

| Personal precautions, protectiv | ve equipment and emergency procedures |
|---------------------------------|---|
| For non-emergency personnel | No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Do not breathe vapor or mist. Provide adequate ventilation. Put on appropriate personal protective equipment. Floors may be slippery; use care to avoid falling. Contact emergency personnel. |
| For emergency responders | Entry into a confined space or poorly ventilated area contaminated with vapor, mist or fume is extremely hazardous without the correct respiratory protective equipment and a safe system of work. Wear self-contained breathing apparatus. Wear a suitable chemical protective suit. Chemical resistant boots. See also the information in "For non-emergency personnel". |
| Environmental precautions | Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air). |
| Methods and materials for con | tainment and cleaning up |
| Small spill | Stop leak if without risk. Move containers from spill area. Absorb with an inert material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor. |
| Large spill | Stop leak if without risk. Move containers from spill area. Approach release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations. Contaminated absorbent material may pose the same hazard as the spilled product. If emergency personnel are unavailable, contain spilled material. Suction or scoop the spill into appropriate disposal or recycling vessels, then cover spill area with oil absorbent. Dispose of via a licensed waste disposal contractor. |

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Section 7. Handling and storage

| Precautions for safe handling | |
|--|--|
| Protective measures | Put on appropriate personal protective equipment (see Section 8). Do not get in eyes or on skin or clothing. Do not ingest. Empty containers retain product residue and can be hazardous. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Do not reuse container. Do not breathe vapor or mist. If during normal use the material presents a respiratory hazard, use only with adequate ventilation or wear appropriate respirator. |
| Advice on general occupational hygiene | Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Wash thoroughly after handling. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures. |
| Conditions for safe storage, including any incompatibilities | Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Store locked up. Keep container tightly closed and sealed until ready for use. Store and use only in equipment/containers designed for use with this product. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination. |

Section 8. Exposure controls/personal protection

Control parameters

Occupational exposure limits

| Ingredient name | Exposure limits |
|---------------------------|---|
| Base oil - highly refined | ACGIH TLV (United States). TWA: 5 mg/m ³ 8 hours. Issued/Revised: 11/2009 Form: Inhalable fraction OSHA PEL (United States). TWA: 5 mg/m ³ 8 hours. Issued/Revised: 6/1993 |

While specific OELs for certain components may be shown in this section, other components may be present in any mist, vapor or dust produced. Therefore, the specific OELs may not be applicable to the product as a whole and are provided for guidance only.

| Appropriate engineering controls | All activities involving chemicals should be assessed for their risks to health, to ensure exposures are adequately controlled. Personal protective equipment should only be considered after other forms of control measures (e.g. engineering controls) have been suitably evaluated. Personal protective equipment should conform to appropriate standards, be suitable for use, be kept in good condition and properly maintained. Your supplier of personal protective equipment should be consulted for advice on selection and appropriate standards. For further information contact your national organisation for standards. Provide exhaust ventilation or other engineering controls to keep the relevant airborne concentrations below their respective occupational exposure limits. The final choice of protective equipment will depend upon a risk assessment. It is important to ensure that all items of personal protective equipment are compatible. |
|-------------------------------------|---|
| Environmental exposure controls | Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels. |
| Individual protection measures | |

| Hygiene measures | Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. |
|---------------------|---|
| | Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location. |
| Eye/face protection | Chemical splash goggles. |

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Section 8. Exposure controls/personal protection

| Skin protection | |
|------------------------|--|
| Hand protection | Wear protective gloves if prolonged or repeated contact is likely. Wear chemical resistant gloves. Recommended: Nitrile gloves. The correct choice of protective gloves depends upon the chemicals being handled, the conditions of work and use, and the condition of the gloves (even the best chemically resistant glove will break down after repeated chemical exposures). Most gloves provide only a short time of protection before they must be discarded and replaced. Because specific work environments and material handling practices vary, safety procedures should be developed for each intended application. Gloves should therefore be chosen in consultation with the supplier/manufacturer and with a full assessment of the working conditions. |
| | Consult your supervisor or Standard Operating Procedure (S.O.P) for special handling instructions. |
| Body protection | Use of protective clothing is good industrial practice. Cotton or polyester/cotton overalls will only provide protection against light superficial contamination that will not soak through to the skin. Overalls should be laundered on a regular basis. When the risk of skin exposure is high (e.g. when cleaning up spillages or if there is a risk of splashing) then chemical resistant aprons and/or impervious chemical suits and boots will be required. Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product. |
| Other skin protection | Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product. |
| Respiratory protection | In case of insufficient ventilation, wear suitable respiratory equipment. The correct choice of respiratory protection depends upon the chemicals being handled, the conditions of work and use, and the condition of the respiratory equipment. Safety procedures should be developed for each intended application. Respiratory protection equipment should therefore be chosen in consultation with the supplier/manufacturer and with a full assessment of the working conditions. |

Section 9. Physical and chemical properties

| <u>Appearance</u> | |
|--|---|
| Physical state | Grease Waxy solid. |
| Color | Amber. [Dark] |
| Odor | Petroleum [Slight] |
| Odor threshold | Not available. |
| рН | Not available. |
| Melting point | Not available. |
| Boiling point | Not available. |
| Flash point | Open cup: >150°C (>302°F) [Cleveland.] |
| Evaporation rate | Not available. |
| Flammability (solid, gas) | Not applicable. Based on - Physical state |
| Lower and upper explosive (flammable) limits | Not available. |
| Vapor pressure | Not available. |
| Vapor density | Not available. |
| Density | <1000 kg/m³ (<1 g/cm³) at 15°C |
| Relative density | 0.9 |
| Solubility | insoluble in water. |
| Partition coefficient: n- octanol/water | Not available. |
| Auto-ignition temperature | Not available. |
| Decomposition temperature | Not available. |
| Viscosity | Not available. |
| | |

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Section 10. Stability and reactivity

| Reactivity | No specific test data available for this product. Refer to Conditions to avoid and Incompatible materials for additional information. |
|------------------------------------|---|
| Chemical stability | The product is stable. |
| Possibility of hazardous reactions | Under normal conditions of storage and use, hazardous reactions will not occur. Under normal conditions of storage and use, hazardous polymerization will not occur. |
| Conditions to avoid | No specific data. |
| Incompatible materials | Reactive or incompatible with the following materials: oxidizing materials and acids. |
| Hazardous decomposition products | Under normal conditions of storage and use, hazardous decomposition products should not be produced. |

Section 11. Toxicological information

Information on toxicological effects Specific target organ toxicity (single exposure) Name Category **Route of Target organs** exposure n-phenyl-1-naphthylamine Category 2 Oral blood system Information on the likely Routes of entry anticipated: Dermal, Inhalation. routes of exposure Potential acute health effects **Eve contact** Causes serious eve damage.

| Skin contact | No known significant effects or critical hazards. |
|--------------|--|
| Inhalation | May give off gas, vapor or dust that is very irritating or corrosive to the respiratory system. Exposure to decomposition products may cause a health hazard. Serious effects may be delayed following exposure. |
| Ingestion | May cause burns to mouth, throat and stomach. |

Symptoms related to the physical, chemical and toxicological characteristics

| Eye contact | Adverse symptoms may include the following: pain watering redness |
|--------------|--|
| Skin contact | Adverse symptoms may include the following: irritation dryness cracking |
| Inhalation | No specific data. |
| Ingestion | Adverse symptoms may include the following: stomach pains |

Delayed and immediate effects and also chronic effects from short and long term exposure

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|--|----------------|--------------|-------------|----|
| Long term exposure Potential immediate effects | Not available. | | | |
| Potential delayed effects | Not available. | | | |
| Potential immediate effects | Not available. | | | |
| Short term exposure | | | | |

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Section 11. Toxicological information

| Potential delayed effects | Not available. |
|-------------------------------|---|
| Potential chronic health effe | <u>cts</u> |
| General | No known significant effects or critical hazards. |
| Carcinogenicity | No known significant effects or critical hazards. |
| Mutagenicity | No known significant effects or critical hazards. |
| Teratogenicity | No known significant effects or critical hazards. |
| Developmental effects | No known significant effects or critical hazards. |
| Fertility effects | No known significant effects or critical hazards. |
| | |

Numerical measures of toxicity

|--|

Route Oral ATE value 55950 mg/kg

Section 12. Ecological information

Toxicity

No testing has been performed by the manufacturer.

Persistence and degradability

Not expected to be rapidly degradable.

Bioaccumulative potential

Not available.

| <u>Mobility in soil</u> | |
|--|---|
| Soil/water partition coefficient (K _{oc}) | Not available. |
| Mobility | Non-volatile.Liquid.insoluble in water. |
| Other adverse effects | No known significant effects or critical hazards. |

Section 13. Disposal considerations

Disposal methods

The generation of waste should be avoided or minimized wherever possible. Significant quantities of waste product residues should not be disposed of via the foul sewer but processed in a suitable effluent treatment plant. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. This material and its container must be disposed of in a safe way. Care should be taken when handling emptied containers that have not been cleaned or rinsed out. Empty containers or liners may retain some product residues. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

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Section 14. Transport information

| | DOT Classification | TDG Classification | IMDG | ΙΑΤΑ |
|-------------------------------|-----------------------|-----------------------|----------------|----------------|
| UN number | Not regulated. | Not regulated. | Not regulated. | Not regulated. |
| UN proper shipping name | | - | - | - |
| Transport hazard class(es) | - | - | - | - |
| Packing group | - | - | - | - |
| Environmental hazards | No. | No. | No. | No. |
| Additional information | - | - | - | - |

Special precautions for user Not available.

Transport in bulk accordingNot available.to Annex II of MARPOL73/78 and the IBC Code

Section 15. Regulatory information

U.S. Federal regulations

United States inventory (TSCA 8b) All components are listed or exempted.

SARA 302/304

Composition/information on ingredients

No products were found.

SARA 311/312

| Classification | Immediate (acute) health hazard |
|----------------------------------|---|
| <u>SARA 313</u> | |
| Form R - Reporting requirements | This product does not contain any hazardous ingredients at or above regulated thresholds. |
| Supplier notification | This product does not contain any hazardous ingredients at or above regulated thresholds. |
| State regulations | |
| Massachusetts | None of the components are listed. |
| New Jersey | The following components are listed: MINERAL OIL (UNTREATED and MILDLY TREATED) |
| Pennsylvania | None of the components are listed. |
| California Prop. 65 | No products were found. |
| Other regulations | |
| Australia inventory (AICS) | All components are listed or exempted. |
| Canada inventory | All components are listed or exempted. |
| China inventory (IECSC) | All components are listed or exempted. |
| Japan inventory (ENCS) | All components are listed or exempted. |
| Korea inventory (KECI) | All components are listed or exempted. |
| Philippines inventory (PICCS) | All components are listed or exempted. |

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Section 15. Regulatory information

Taiwan inventory (CSNN) REACH Status All components are listed or exempted.

The company, as identified in Section 1, sells this product in the EU in compliance with the current requirements of REACH.

Section 16. Other information

Hazardous Material Information System (U.S.A.)

| Health | * | 3 |
|---------------------|---|---|
| Flammability | | 1 |
| Physical hazards | | 0 |
| Personal protection | | Х |

Caution: HMIS® ratings are based on a 0-4 rating scale, with 0 representing minimal hazards or risks, and 4 representing significant hazards or risks Although HMIS® ratings are not required on SDSs under 29 CFR 1910. 1200, the preparer may choose to provide them. HMIS® ratings are to be used with a fully implemented HMIS® program. HMIS® is a registered mark of the National Paint & Coatings Association (NPCA). HMIS® materials may be purchased exclusively from J. J. Keller (800) 327-6868.

National Fire Protection Association (U.S.A.)



| <u>History</u> | |
|--------------------------------|---|
| Date of issue/Date of revision | 12/18/2014. |
| Date of previous issue | No previous validation. |
| Key to abbreviations | ACGIH = American Conference of Industrial Hygienists ATE = Acute Toxicity Estimate BCF = Bioconcentration Factor CAS Number = Chemical Abstracts Service Registry Number GHS = Globally Harmonized System of Classification and Labelling of Chemicals IATA = International Air Transport Association IBC = Intermediate Bulk Container IMDG = International Maritime Dangerous Goods LogPow = logarithm of the octanol/water partition coefficient MARPOL 73/78 = International Convention for the Prevention of Pollution From Ships, 1973 as modified by the Protocol of 1978. ("Marpol" = marine pollution) OEL = Occupational Exposure Limit SDS = Safety Data Sheet STEL = Short term exposure limit TWA = Time weighted average UN = United Nations UN Number = United Nations Number, a four digit number assigned by the United Nations Committee of Experts on the Transport of Dangerous Goods. |

Indicates information that has changed from previously issued version.

Notice to reader

All reasonably practicable steps have been taken to ensure this data sheet and the health, safety and environmental information contained in it is accurate as of the date specified below. No warranty or representation, express or implied is made as to the accuracy or completeness of the data and information in this data sheet.

The data and advice given apply when the product is sold for the stated application or applications. You should not use the product other than for the stated application or applications without seeking advice from BP Group.

It is the user's obligation to evaluate and use this product safely and to comply with all applicable laws and regulations. The BP Group shall not be responsible for any damage or injury resulting from use, other than the stated product use of the material, from any failure to adhere to recommendations, or from any hazards inherent in the nature of the material. Purchasers of the product for supply to a third party for use at work, have a duty to take all necessary steps to ensure that any person handling or using the product is provided with the information in this sheet. Employers have a duty to tell

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Section 16. Other information

employees and others who may be affected of any hazards described in this sheet and of any precautions that should be taken. You can contact the BP Group to ensure that this document is the most current available. Alteration of this document is strictly prohibited.

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