Safety Data Sheet

OSHA Hazard Communication Standard 29 CFR 1910.1200. Prepared to GHS Rev 3.

Revision date: Initial version

Date of issue: April 24, 2015

Product name:

Calibration Fluid

SECTION 1: Identification

| Product identifier: | Calibration Fluid. |
|----------------------------------|-----------------------|
| Synonyms: | None. |
| Product Code: | Calibration Fluid. |
| SDS number: | CGF002 |
| Recommended use: | Hydraulic Lubrication |
| Recommended restrictions: | None known. |
| | |

Manufacturer/Importer/Supplier/Distributor information:

SECTION 2: Hazard(s) identification

Classification of the chemical in accordance with paragraph (d) of §1910.1200:

Physical hazards

No physical hazards for this product.

Health hazards

Skin Corrosion/irritation, Category 2. Aspiration Hazard, Category 1.

Environmental hazards

No environmental hazards for this product.

| GHS Signal word: | DANGER. |
|--------------------------|--|
| GHS Hazard statement(s): | May be fatal if swallowed and enters airways. Causes skin irritation. |

GHS Hazard symbol(s):



GHS Precautionary statement(s):

| Prevention: | Wash hands thoroughly after handling. Wear protective gloves. |
|---|--|
| Response: | If swallowed: Immediately call a poison center/doctor/physician. IF ON SKIN: Wash with plenty of soap and water. If skin irritation occurs: Get medical advice/attention. Do NOT induce vomiting. Take off contaminated clothing and wash before reuse. |
| Storage: | Store locked up. |
| Disposal: | Dispose of contents/containers to an appropriate treatment and disposal facility in accordance with applicable laws and regulations. |
| Hazard(s) not otherwise Classified (HNOC): | Causes necrosis if injected into/under the skin. Defatting to the skin. Prolonged or repeated contact may dry skin and cause irritation. |

Percentage of ingredient(s) of unknown acute toxicity: Not applicable.

SECTION 3: Composition/information on ingredients

Substance

| Chemical name | Concentration (weight %) | CAS# |
|-------------------------------|-----------------------------|-----------|
| White mineral oil (petroleum) | 99 - 100 | 8042-47-5 |

SECTION 4: First-aid Measures

Description of necessary measures:

Inhalation: Remove victim to fresh air and keep at rest in a position comfortable for breathing. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Get medical attention if adverse health effects persist or are severe. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.

Skin contact: Wash skin thoroughly with soap and water or use recognized skin cleanser. Remove contaminated clothing and shoes. Get medical attention if symptoms occur. Wash clothing before reuse. Clean shoes thoroughly before reuse.

Eye contact: Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Continue to rinse for at least 10 minutes. Get medical attention.

Ingestion: Get medical attention immediately. Call a poison center or physician. Wash out mouth with water. Remove dentures if any. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Stop if the exposed person feels sick as vomiting may be dangerous. Aspiration hazard if swallowed. Can enter lungs and cause damage. Do not induce vomiting. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.

Most important symptoms/effects, acute and delayed: If material enters lungs, signs and symptoms may include coughing, choking, wheezing, difficulty in breathing, chest congestion, shortness of breath, and/or fever. The onset of respiratory symptoms may be delayed for several hours after exposure. Ingestion may result in nausea, vomiting and/or diarrhea.

Indication of immediate medical attention and special treatment needed: Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled. No special treatments required. No action shall be taken involving any personal risk or without suitable training. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation.

SECTION 5: Fire-fighting measures

Suitable extinguishing media: Use dry chemical, CO₂, alcohol-resistant foam or water spray (fog).

Unsuitable extinguishing media: Do not use water jet.

Specific hazards arising from the chemical: In a fire or if heated, a pressure increase will occur and the container may burst. Decomposition products may include carbon dioxide and carbon monoxide.

Special protective equipment and precautions for fire-fighters: Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training.

Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

SECTION 6: Accidental release measures

Personal precautions, protective 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. Avoid breathing vapor or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.

For emergency responders:

If specialized clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".

Methods and materials for containment and cleaning up:

Small spill:

Stop leak if without risk. Move containers from spill area. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry 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. Wash spillages into an effluent treatment plant or proceed as follows. Contain and collect spillage with noncombustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations (see Section 13). Dispose of via a licensed waste disposal contractor. Contaminated absorbent material may pose the same hazard as the spilled product. Note: see Section 1 for emergency contact information and Section 13 for waste disposal.

SECTION 7: Handling and Storage

Precautions for safe handling: Put on appropriate personal protective equipment (see Section 8). Do not swallow. Avoid contact with eyes, skin and clothing. Avoid breathing vapor or mist. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Empty containers retain product residue and can be hazardous. Do not reuse container.

Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and

smoking. 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 incompatibles: 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. 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:

| US OSHA HAZARDOUS COMPONENTS (29 CFR 1910.1200): | | | |
|--|--------------------|-------------------|--|
| Permissible Exposure Limits | | | |
| Substance PEL-TWA PEL-STEL | | | |
| | (8 hour) | (15 min) | |
| Mineral oil mist | 5 mg/m^3 | No data available | |

| US ACGIH Threshold Limit Values | | |
|---------------------------------|--------------------------------|-------------------|
| Substance | TLV-TWA TLV-STEL | |
| | (8 hour) | (15 min) |
| White mineral oil | 5 mg/m ³ (Inhalable | No data available |
| (petroleum) | fraction) | |

| US NIOSH Guidelines | | |
|------------------------|--------------------|---------------------|
| Substance | REL - TWA | STEL |
| White mineral oil mist | 5 mg/m^3 | 10 mg/m^3 |

Appropriate engineering controls: No special ventilation requirements. Good general ventilation should be sufficient to control worker exposure to airborne contaminants. If this product contains ingredients with exposure limits, use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure below any recommended or statutory limits.

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, such as personal protective equipment:

Eye/face protection: Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: safety glasses with side shields.

Skin and Hand protection: Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary. Considering the parameters specified by the glove manufacturer, check during use that the gloves are still retaining their protective properties. It should be noted that the time to breakthrough for any glove material may be different for different glove manufacturers. In the case of mixtures, consisting of several substances, the protection time of the gloves cannot be accurately estimated.

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.

Respiratory protection: Use a properly fitted, air-purifying or air-fed respirator complying with the requirements of OSHA Standards 29 CFR 1910.134 and 29 CFR 1926.103 if a risk assessment indicates this is necessary. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator.

Other: 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.

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.

Thermal hazards: No data available.

SECTION 9: Physical and chemical properties

| Appearance | |
|-------------------------------|--|
| Physical state: | Liquid. (Viscous liquid). |
| Form: | Liquid. (Viscous liquid). |
| Color: | Clear, Colorless. |
| Odor: | Mild, Hydrocarbon. |
| Odor threshold: | Not available |
| pH: | Not available |
| Melting point/freezing point: | Not available |
| Initial boiling point and | |
| boiling range: | 252.22 to 278.33°C (486 to 533°F) |
| Flash point: | Closed cup: 117.22°C (243°F) [Pensky-Martens.] |
| - | Open cup: >115°C (>239°F) |

| Evaporation rate: | Not available |
|---|---|
| Flammability (solid, gas): | Not available |
| Upper/lower flammability or explosive | e limits |
| Flammability limit – lower %): | Not available |
| Flammability limit – upper (%): | Not available |
| Explosive limit – lower (%): | Not available |
| Explosive limit – upper (%): | Not available |
| Vapor pressure: | Not available |
| Vapor density: | Not available |
| Relative density: | 0.818 |
| Solubility(ies): | Insoluble in cold water and hot water. |
| Partition coefficient (n-octanol/water) | :>6. |
| Auto-ignition temperature: | 260 to 371°C (500 to 699.8°F) |
| Decomposition temperature: | Not available |
| Viscosity: | Kinematic (40° C (104° F)): 0.0289 cm |
| | 2/s (2.89 cSt) |

Other informationAPI Gravity @60°F:41.3

| SECTION | 10: | Stability | and | Reactivit | y |
|----------------|-----|------------------|-----|-----------|---|
|----------------|-----|------------------|-----|-----------|---|

| Reactivity: | No specific test data related to reactivity available for this product or its ingredients |
|-------------------------------------|--|
| Chemical stability: | Stable |
| Possibility of hazardous reactions: | Under normal conditions of storage and use, |
| | hazardous reactions will not occur. |
| Conditions to avoid: | No specific data. |
| Incompatible materials: | No specific data. |
| Hazardous decomposition Products: | Under normal conditions of storage and use, |
| | hazardous decomposition products should not be produced. |

SECTION 11: Toxicological information

Information on likely routes of exposure:

| Inhalation: | Inhalation is a likely route of exposure. |
|-------------|---|
| Ingestion: | Ingestion is a likely route of exposure. |
| Skin: | Skin contact is a likely route of exposure. |
| Eye: | Eye contact is a likely route of exposure. |

Symptoms related to the physical, chemical, and toxicological characteristics:

Adverse symptoms may include the following: skin irritation, dryness and cracking, nausea or vomiting.

Delayed and immediate effects and chronic effects from short or long-term exposure: None known.

Acute toxicity:

Product/Ingredient Information:

| Substance | Test Type (species) | Value |
|-------------------------------|-----------------------------------|-------------------|
| White mineral oil (petroleum) | LD ₅₀ Oral (Rat) | >5000 mg/kg |
| | LD ₅₀ Dermal (Rabbit) | >2000 mg/kg |
| | LC ₅₀ Inhalation (Rat) | No data available |

| Skin corrosion/irritation: | Based upon information available on the known components, the product is expected to cause skin irritation. |
|---|--|
| Serious eye damage/eye irritation: | Based upon information available on the known components, the product is not expected to cause eye damage or eye irritation. |
| Respiratory sensitization: | Based upon information available on the known components, the product is not expected to cause respiratory sensitization. |
| Skin sensitization: | Based upon information available on the known components, the product is not expected to cause skin sensitization. |
| Germ cell mutagenicity: | Based upon information available on the known components, the product is not anticipated to be a mutagen. |
| Carcinogenicity: | No information available on the mixture, however none of the components are listed in the National Toxicology Program (NTP) Report on Carcinogens (latest edition) or has been found to be a potential carcinogen in the International Agency for Research on Cancer (IARC) Monographs (latest edition), or by OSHA. |
| Reproductive toxicity: | Based upon information available on the known components, the product is not anticipated to cause reproductive toxicity. |
| Specific target organ toxicity- Single exposure: | Based upon information available on the known components, the product is not anticipated to cause specific target organ toxicity after single exposure. |

| Specific target organ toxicity- | |
|---------------------------------|---|
| Repeat exposure: | Based upon information available on the known components, the product is not anticipated to cause specific target organ toxicity after repeated or prolonged exposure. |
| Aspiration hazard: | Based upon information available, White mineral oil (petroleum) causes aspiration into the lungs when swallowed or vomited may cause pneumonitis which can be fatal. Therefore the product is anticipated to be an aspiration hazard. |
| Further information: | No data available |

SECTION 12: Ecological information

Ecotoxicity:

Ingredient Information:

| Substance | Test Type | Species | Value |
|----------------------------------|-----------|--------------|----------------------------------|
| White mineral oil (petroleum) | NOEL | Fish | Long-term NOEL >= 1000 |
| | | | mg/L (28d) |
| | | | Short-term NOEL >= 100 mg/L |
| | | | (96h) |
| | NOEL | Invertebrate | Long-term NOEL >= 1000 |
| | | | mg/L (21d) |
| | | | Short-term NOEL >= 100 mg/L |
| | | | (48h) |
| | NOEL | Algae | NOEL >= $100 \text{ mg/L} (72h)$ |

| Persistence and degradability: | Not available. |
|--------------------------------|--|
| Bioaccumulative potential: | $Log P_{OW} > 6$. Potential = high. |
| Mobility in soil: | Soil/water partition coefficient (K _{OC}) – Not available. |
| Mobility in general: | Not available. |
| Other adverse effects: | Not available. |
| | |

SECTION 13: Disposal considerations

Disposal instructions:

The generation of waste should be avoided or minimized wherever possible. 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. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction.

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. Not regulated under RCRA.

SECTION 14: Transport Information

| Land Transport DOT: Air Transport IATA: Sea Transport IMDG: | Not regulated. Not regulated. Not regulated. |
|---|---|
| Environmental Hazards: | No. |
| : North-America NAERG: Special precautions for user: | Not available. Transport within user's premises: always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or spillage. |

SECTION 15: Regulatory Information

USA:

United States Federal Regulations: This SDS complies with the OSHA, 29 CFR 1910.1200. The product is hazardous under OSHA.

Toxic Substances Control Act (TSCA) – This material is listed or exempted.

SARA Superfund and Reauthorization Act of 1986 Title III sections 302, 311,312 and 313:

Section 302 – No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.

CERCLA Hazardous Substance List, 40 CFR 302.4: This product contains chemicals listed on CERCLA. Zinc Compounds (<1 %)

Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130): Not listed.

Clean Water Act Section 311 Hazardous Substances (40 CFR 117.3): Not listed.

SARA Title III

Section 302 Extremely Hazardous Substance (40 CFR 355, Appendix A): Not listed.

Section 311/312 (40 CFR 370):

Immediate Hazard: Yes **Delayed Hazard:** No **Fire Hazard:** No **Pressure Hazard:** No **Reactivity Hazard:** No

Section 313 Toxic Release Inventory (40 CFR 372): Not listed.

STATE REGULATIONS:

This SDS contains specific health and safety data is applicable for state requirements. For details on your regulatory requirements you should contact the appropriate agency in your state.

California Proposition 65 (California Safe Drinking Water and Toxic Enforcement Act of 1986: This product contains no currently listed substances known to the State of California to cause cancer, birth defects or other reproductive harm, above any known significant risk level, which would require a warning under the statute.

Massachusetts Oil and Hazardous Materials List: Mineral oil is listed on the Massachusetts Oil and Hazardous Materials List.

Minnesota Hazardous Substance List: Mineral oil mist is listed on the Minnesota HSL.

New Jersey Environmental Hazardous Substances List: Petroleum oil is listed on the New Jersey HSL.

Pennsylvania Hazardous Substance List: Mineral oil mist is listed on the Pennsylvania HSL.

International regulations

Europe inventory (EINECS): This material is listed or exempted.
Australia inventory (AICS): This material is listed or exempted.
China inventory (IECSC): This material is listed or exempted.
Japan inventory: Not determined.
Korea inventory: This material is listed or exempted.
Malaysia Inventory (EHS Register): Not determined.
New Zealand Inventory of Chemicals (NZIoC): This material is listed or exempted.
Philippines inventory (PICCS): This material is listed or exempted.

Chemical Weapons Convention List Schedule I Chemicals: Not listed **Chemical Weapons Convention List Schedule II Chemicals**: Not listed **Chemical Weapons Convention List Schedule III Chemicals**: Not listed

<u>Canada</u>

WHMIS (Canada) Not controlled under WHMIS (Canada).

<u>Canadian lists</u> Canadian NPRI: This material is listed. CEPA Toxic substances: This material is not listed. CANADA INVENTORY (DSL): This material is listed or exempted.

SECTION 16: Other Information

Revision Date: April 24, 2015

Key to abbreviations:

 $\begin{array}{l} \text{ATE} = \text{Acute Toxicity Estimate} \\ \text{BCF} = \text{Bioconcentration Factor} \\ \text{GHS} = \text{Globally Harmonized System of Classification and Labelling of Chemicals} \\ \text{IATA} = \text{International Air Transport Association} \\ \text{IBC} = \text{Intermediate Bulk Container} \\ \text{IMDG} = \text{International Maritime Dangerous Goods} \\ \text{LogP}_{ow} = \text{logarithm of the octanol/water partition coefficient} \\ \text{MARPOL 73/78} = \text{International Convention for the Prevention of Pollution From Ships,1973} \\ \text{as modified by the Protocol of 1978. ("Marpol" = marine pollution)} \\ \text{UN} = \text{United Nations} \end{array}$

DISCLAIMER

To the best of our knowledge, the information contained herein is accurate. However SPX Hydraulic Technologies does not assume any liability whatsoever for the accuracy or completeness of the information contained herein.

Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards which exist.