

# SAFETY DATA SHEET



## 1. Identification

**Product identifier** FUCHS TIM GREASE 412

**Other means of identification** None.

**Recommended use** Thermal Grease

**Recommended restrictions** None known.

**Manufacturer/Importer/Supplier/Distributor information**

**Company name** Nye Lubricants, Inc.  
A Member of the FUCHS Group

**Address** 12 Howland Road  
Fairhaven, MA 02719  
USA

**Telephone** +1 508 996 6721

**E-mail** sds@fuchs.com

**Emergency telephone number** +1 866 519 4752

**Access code** 334212

**Website** www.nyelubricants.com

## 2. Hazard(s) identification

**Physical hazards** Not classified.

**Health hazards** Not classified.

**OSHA defined hazards** Not classified.

**Label elements**

**Hazard symbol** None.

**Signal word** None.

**Hazard statement** The mixture does not meet the criteria for classification.

**Precautionary statement**

**Prevention** Observe good industrial hygiene practices.

**Response** Wash hands after handling.

**Storage** Store away from incompatible materials.

**Disposal** Dispose of waste and residues in accordance with local authority requirements.

**Hazard(s) not otherwise classified (HNOC)** None known.

**Supplemental information** None.

## 3. Composition/information on ingredients

### Mixtures

| Chemical name                            | Common name and synonyms | CAS number | %         |
|--|--------------------------|------------|-----------|
| ALUMINIUM OXIDE                          |                          | 1344-28-1  | 60 - < 70 |
| ZINC OXIDE                               |                          | 1314-13-2  | 20 - < 30 |
| Other components below reportable levels |                          |            | 10 - < 20 |

## 4. First-aid measures

**Inhalation** Move to fresh air. Call a physician if symptoms develop or persist.

**Skin contact** Wash off with soap and water. Get medical attention if irritation develops and persists.

**Eye contact** Rinse with water. Get medical attention if irritation develops and persists.

|   |  |
|---|--|
| <b>Ingestion</b>  | Rinse mouth. Get medical attention if symptoms occur.  |
| <b>Most important symptoms/effects, acute and delayed</b>                     | Direct contact with eyes may cause temporary irritation.   |
| <b>Indication of immediate medical attention and special treatment needed</b> | Treat symptomatically.   |
| <b>General information</b>  | Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves. |

## 5. Fire-fighting measures

|  |   |
|--|---|
| <b>Suitable extinguishing media</b>                                  | Water fog. Foam. Dry chemical powder. Carbon dioxide (CO2).                                   |
| <b>Unsuitable extinguishing media</b>                                | Do not use water jet as an extinguisher, as this will spread the fire.                        |
| <b>Specific hazards arising from the chemical</b>                    | During fire, gases hazardous to health may be formed.   |
| <b>Special protective equipment and precautions for firefighters</b> | Self-contained breathing apparatus and full protective clothing must be worn in case of fire. |
| <b>Fire fighting equipment/instructions</b>                          | Use water spray to cool unopened containers.  |
| <b>Specific methods</b>  | Use standard firefighting procedures and consider the hazards of other involved materials.    |
| <b>General fire hazards</b>  | No unusual fire or explosion hazards noted.   |

## 6. Accidental release measures

|  |   |
|--|---|
| <b>Personal precautions, protective equipment and emergency procedures</b> | Keep unnecessary personnel away. For personal protection, see section 8 of the SDS.   |
| <b>Methods and materials for containment and cleaning up</b>               | Prevent entry into waterways, sewer, basements or confined areas. Following product recovery, flush area with water. For waste disposal, see section 13 of the SDS. |
| <b>Environmental precautions</b>   | Avoid discharge into drains, water courses or onto the ground.  |

## 7. Handling and storage

|   |   |
|---|---|
| <b>Precautions for safe handling</b>                                | Avoid prolonged exposure. Observe good industrial hygiene practices.  |
| <b>Conditions for safe storage, including any incompatibilities</b> | Store in tightly closed container. Store away from incompatible materials (see Section 10 of the SDS).<br>Storage class (TRGS 510): 11 (Combustible solids that cannot be assigned to any of the above storage classes) |

## 8. Exposure controls/personal protection

### Occupational exposure limits

The following constituents are the only constituents of the product which have a PEL, TLV or other recommended exposure limit. At this time, the other constituents have no known exposure limits.

#### US. OSHA Table Z-1 Permissible Exposure Limits (PEL) for Air Contaminants (29 CFR 1910.1000)

| Components                      | Type | Value    | Form                 |
|---------------------------------|------|----------|----------------------|
| ALUMINIUM OXIDE (CAS 1344-28-1) | PEL  | 5 mg/m3  | Respirable fraction. |
|                                 |      | 15 mg/m3 | Total dust.          |
| ZINC OXIDE (CAS 1314-13-2)      | PEL  | 5 mg/m3  | Respirable fraction. |
|                                 |      | 5 mg/m3  | Fume.                |
|                                 |      | 15 mg/m3 | Total dust.          |

#### US. OSHA Table Z-3 Permissible Exposure Limits (PEL) for Mineral Dusts (29 CFR 1910.1000)

| Components                      | Type | Value    | Form                 |
|---------------------------------|------|----------|----------------------|
| ALUMINIUM OXIDE (CAS 1344-28-1) | TWA  | 5 mg/m3  | Respirable fraction. |
|                                 |      | 15 mg/m3 | Total dust.          |
|                                 |      | 50 mppcf | Total dust.          |

**US. OSHA Table Z-3 Permissible Exposure Limits (PEL) for Mineral Dusts (29 CFR 1910.1000)**

| Components                 | Type | Value    | Form                 |
|----------------------------|------|----------|----------------------|
| ZINC OXIDE (CAS 1314-13-2) | TWA  | 15 mppcf | Respirable fraction. |
|                            |      | 5 mg/m3  | Respirable fraction. |
|                            |      | 15 mg/m3 | Total dust.          |
|                            |      | 50 mppcf | Total dust.          |
|                            |      | 15 mppcf | Respirable fraction. |

**US. ACGIH Threshold Limit Values (TLV)**

| Components                 | Type | Value    | Form                 |
|----------------------------|------|----------|----------------------|
| ZINC OXIDE (CAS 1314-13-2) | STEL | 10 mg/m3 | Respirable fraction. |
|                            | TWA  | 2 mg/m3  | Respirable fraction. |

**NIOSH. Immediately Dangerous to Life or Health (IDLH) Values, as amended**

| Components                 | Type | Value     |
|----------------------------|------|-----------|
| ZINC OXIDE (CAS 1314-13-2) | IDLH | 500 mg/m3 |

**US. NIOSH: Pocket Guide to Chemical Hazards Recommended Exposure Limits (REL)**

| Components                 | Type    | Value    | Form  |
|----------------------------|---------|----------|-------|
| ZINC OXIDE (CAS 1314-13-2) | Ceiling | 15 mg/m3 | Dust. |
|                            | STEL    | 10 mg/m3 | Fume. |
|                            | TWA     | 5 mg/m3  | Fume. |
|                            |         | 5 mg/m3  | Dust. |

**Biological limit values**

No biological exposure limits noted for the ingredient(s).

**Appropriate engineering controls**

Good general ventilation should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level.

**Individual protection measures, such as personal protective equipment**

**Eye/face protection**

Wear safety glasses with side shields (or goggles).

**Skin protection**

**Hand protection**

Wear appropriate chemical resistant gloves.

**Other**

Wear suitable protective clothing.

**Respiratory protection**

In case of insufficient ventilation, wear suitable respiratory equipment.

**Thermal hazards**

Wear appropriate thermal protective clothing, when necessary.



**General hygiene considerations**

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.

## 9. Physical and chemical properties

**Appearance**

**Physical state**

Solid.

**Form**

Solid. Semi-solid

**Color**

White.

**Odor**

Not available.

**Odor threshold**

Not available.

**pH**

Not available.

|   |                |
|---|----------------|
| <b>Melting point/freezing point</b>                 | Not available. |
| <b>Initial boiling point and boiling range</b>      | Not available. |
| <b>Flash point</b>                                  | Not available. |
| <b>Evaporation rate</b>                             | Not available. |
| <b>Flammability (solid, gas)</b>                    | Not available. |
| <b>Upper/lower flammability or explosive limits</b> |                |
| <b>Explosive limit - lower (%)</b>                  | Not available. |
| <b>Explosive limit - upper (%)</b>                  | Not available. |
| <b>Vapor pressure</b>                               | Not available. |
| <b>Vapor density</b>                                | Not available. |
| <b>Relative density</b>                             | Not available. |
| <b>Solubility(ies)</b>                              |                |
| <b>Solubility (water)</b>                           | Not available. |
| <b>Partition coefficient (n-octanol/water)</b>      | Not available. |
| <b>Auto-ignition temperature</b>                    | Not available. |
| <b>Decomposition temperature</b>                    | Not available. |
| <b>Viscosity</b>                                    | Not available. |
| <b>Other information</b>                            |                |
| <b>Explosive properties</b>                         | Not explosive. |
| <b>Oxidizing properties</b>                         | Not oxidizing. |
| <b>Shelf life</b>                                   | 5 years        |
| <b>Specific gravity</b>                             | 2.7            |

## 10. Stability and reactivity

|   |   |
|---|---|
| <b>Reactivity</b>                         | The product is stable and non-reactive under normal conditions of use, storage and transport. |
| <b>Chemical stability</b>                 | Material is stable under normal conditions.   |
| <b>Possibility of hazardous reactions</b> | No dangerous reaction known under conditions of normal use.                                   |
| <b>Conditions to avoid</b>                | Contact with incompatible materials.  |
| <b>Incompatible materials</b>             | Acids. Chlorine.  |
| <b>Hazardous decomposition products</b>   | No hazardous decomposition products are known.  |

## 11. Toxicological information

### Information on likely routes of exposure

|                     |  |
|---------------------|--|
| <b>Inhalation</b>   | Prolonged inhalation may be harmful.                     |
| <b>Skin contact</b> | No adverse effects due to skin contact are expected.     |
| <b>Eye contact</b>  | Direct contact with eyes may cause temporary irritation. |
| <b>Ingestion</b>    | Expected to be a low ingestion hazard.                   |

|   |  |
|---|--|
| <b>Symptoms related to the physical, chemical and toxicological characteristics</b> | Direct contact with eyes may cause temporary irritation. |
|---|--|

### Information on toxicological effects

|  |   |
|--|---|
| <b>Acute toxicity</b>                    | Not available.  |
| <b>Skin corrosion/irritation</b>         | Prolonged skin contact may cause temporary irritation.    |
| <b>Serious eye damage/eye irritation</b> | Direct contact with eyes may cause temporary irritation.  |
| <b>Respiratory or skin sensitization</b> |   |
| <b>Respiratory sensitization</b>         | Not a respiratory sensitizer.                             |
| <b>Skin sensitization</b>                | This product is not expected to cause skin sensitization. |

|   |  |
|---|--|
| <b>Germ cell mutagenicity</b>   | No data available to indicate product or any components present at greater than 0.1% are mutagenic or genotoxic. |
| <b>Carcinogenicity</b>  | Not classifiable as to carcinogenicity to humans.  |
| <b>IARC Monographs. Overall Evaluation of Carcinogenicity</b>         |  |
| Not listed.   |  |
| <b>OSHA Specifically Regulated Substances (29 CFR 1910.1001-1053)</b> |  |
| Not listed.   |  |
| <b>US. National Toxicology Program (NTP) Report on Carcinogens</b>    |  |
| Not listed.   |  |
| <b>Reproductive toxicity</b>  | This product is not expected to cause reproductive or developmental effects.                                     |
| <b>Specific target organ toxicity - single exposure</b>               | Not classified.  |
| <b>Specific target organ toxicity - repeated exposure</b>             | Not classified.  |
| <b>Aspiration hazard</b>  | Not an aspiration hazard.  |
| <b>Chronic effects</b>  | Prolonged inhalation may be harmful.   |

## 12. Ecological information

|                                      |  |
|--------------------------------------|--|
| <b>Ecotoxicity</b>                   | 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. |
| <b>Persistence and degradability</b> | No data is available on the degradability of any ingredients in the mixture.   |
| <b>Bioaccumulative potential</b>     |  |
| <b>Mobility in soil</b>              | No data available.   |
| <b>Other adverse effects</b>         | No other adverse environmental effects (e.g. ozone depletion, photochemical ozone creation potential, endocrine disruption, global warming potential) are expected from this component.            |

## 13. Disposal considerations

|  |  |
|--|--|
| <b>Disposal instructions</b>                 | Collect and reclaim or dispose in sealed containers at licensed waste disposal site.   |
| <b>Local disposal regulations</b>            | Dispose in accordance with all applicable regulations.   |
| <b>Hazardous waste code</b>                  | The waste code should be assigned in discussion between the user, the producer and the waste disposal company.   |
| <b>Waste from residues / unused products</b> | Dispose of in accordance with local regulations. Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe manner (see: Disposal instructions). |
| <b>Contaminated packaging</b>                | Since emptied containers may retain product residue, follow label warnings even after container is emptied. Empty containers should be taken to an approved waste handling site for recycling or disposal.       |

## 14. Transport information

### DOT

Not regulated as dangerous goods.

### IATA

|                                     |   |
|-------------------------------------|---|
| <b>UN number</b>                    | UN3077  |
| <b>UN proper shipping name</b>      | Environmentally hazardous substance, solid, n.o.s. (ZINC OXIDE)         |
| <b>Transport hazard class(es)</b>   |   |
| <b>Class</b>                        | 9   |
| <b>Subsidiary hazard</b>            | -   |
| <b>Packing group</b>                | III   |
| <b>Environmental hazards</b>        | Yes   |
| <b>ERG Code</b>                     | 9L  |
| <b>Special precautions for user</b> | Read safety instructions, SDS and emergency procedures before handling. |
| <b>Other information</b>            |   |
| <b>Passenger and cargo aircraft</b> | Allowed with restrictions.  |
| <b>Cargo aircraft only</b>          | Allowed with restrictions.  |

### IMDG

|                  |        |
|------------------|--------|
| <b>UN number</b> | UN3077 |
|------------------|--------|

**UN proper shipping name** ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (ZINC OXIDE), MARINE POLLUTANT (ZINC OXIDE, Glycine, N-methyl-N-[(9Z)-1-oxo-9-octadecenyl]-)

**Transport hazard class(es)**

**Class** 9

**Subsidiary hazard** -

**Packing group** III

**Environmental hazards**

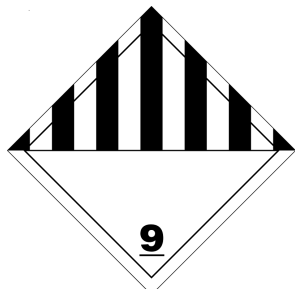
**Marine pollutant** Yes

**EmS** F-A, S-F

**Special precautions for user** Read safety instructions, SDS and emergency procedures before handling.

**Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code** Not applicable.

**IATA; IMDG**



**Marine pollutant**



**General information** IMDG Regulated Marine Pollutant.

## 15. Regulatory information

**US federal regulations** This product is not known to be a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

### Toxic Substances Control Act (TSCA)

#### TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)

Not regulated.

### CERCLA Hazardous Substance List (40 CFR 302.4)

ZINC OXIDE (CAS 1314-13-2) Listed.

### SARA 304 Emergency release notification

Not regulated.

### OSHA Specifically Regulated Substances (29 CFR 1910.1001-1053)

Not listed.

### Superfund Amendments and Reauthorization Act of 1986 (SARA)

#### SARA 302 Extremely hazardous substance

Not listed.

**SARA 311/312 Hazardous chemical** No

### SARA 313 (TRI reporting)

| Chemical name                            | CAS number | % by wt.  |
|--|------------|-----------|
| Aluminum oxide (fibrous forms) (Alumina) | 1344-28-1  | 60 - < 70 |

**SARA 313 (TRI reporting)**

| Chemical name  | CAS number | % by wt.  |
|----------------|------------|-----------|
| Zinc Compounds | 1314-13-2  | 20 - < 30 |

**Other federal regulations****Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs) List**

Not regulated.

**Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130)**

Not regulated.

**Safe Drinking Water Act (SDWA)** Not regulated.

**US state regulations****California Proposition 65**

**WARNING:** This product can expose you to chemicals including CADMIUM, which is known to the State of California to cause cancer and birth defects or other reproductive harm. For more information go to [www.P65Warnings.ca.gov](http://www.P65Warnings.ca.gov).

**California Proposition 65 - CRT: Listed date/Carcinogenic substance**

CADMIUM (CAS ---) Listed: October 1, 1987

LEAD (CAS ---) Listed: October 1, 1992

**California Proposition 65 - CRT: Listed date/Developmental toxin**

CADMIUM (CAS ---) Listed: May 1, 1997

**California Proposition 65 - CRT: Listed date/Male reproductive toxin**

CADMIUM (CAS ---) Listed: May 1, 1997

**International Inventories**

| Country(s) or region        | Inventory name   | On inventory (yes/no)* |
|-----------------------------|--|------------------------|
| Australia                   | Australian Inventory of Industrial Chemicals (AICIS)                   | Yes                    |
| Canada                      | Domestic Substances List (DSL)   | Yes                    |
| Canada                      | Non-Domestic Substances List (NDSL)                                    | No                     |
| China                       | Inventory of Existing Chemical Substances in China (IECSC)             | Yes                    |
| Europe                      | European Inventory of Existing Commercial Chemical Substances (EINECS) | Yes                    |
| Europe                      | European List of Notified Chemical Substances (ELINCS)                 | No                     |
| Japan                       | Inventory of Existing and New Chemical Substances (ENCS)               | Yes                    |
| Korea                       | Existing Chemicals List (ECL)  | Yes                    |
| New Zealand                 | New Zealand Inventory  | Yes                    |
| Philippines                 | Philippine Inventory of Chemicals and Chemical Substances (PICCS)      | Yes                    |
| Taiwan                      | Taiwan Chemical Substance Inventory (TCSI)                             | Yes                    |
| United States & Puerto Rico | Toxic Substances Control Act (TSCA) Inventory                          | Yes                    |

\*A "Yes" indicates that all components of this product comply with the inventory requirements administered by the governing country(s)

A "No" indicates that one or more components of the product are not listed or exempt from listing on the inventory administered by the governing country(s).

**16. Other information, including date of preparation or last revision**

|                             |   |
|-----------------------------|---|
| <b>Issue date</b>           | March-24-2025   |
| <b>Revision date</b>        | May-23-2025   |
| <b>Version #</b>            | 02  |
| <b>Disclaimer</b>           | Nye Lubricants, Inc. A Member of the FUCHS Group cannot anticipate all conditions under which this information and its product, or the products of other manufacturers in combination with its product, may be used. It is the user's responsibility to ensure safe conditions for handling, storage and disposal of the product, and to assume liability for loss, injury, damage or expense due to improper use. The information in the sheet was written based on the best knowledge and experience currently available. |
| <b>Revision information</b> | Product and Company Identification: Product and Company Identification<br>Composition / Information on Ingredients: Ingredients   |