



Safety Data Sheet (SDS)

North American

Revision date: 2016-11-30

SECTION 1: Identification

Product identifiers:

Product trade name:	Burnt Umber
Company product number:	24A631
Other means of identification:	Not Available

Recommended use of the chemical and restrictions on use:

Uses:	Pigment dispersion
Restrictions on use:	None identified

Details of the supplier:

Manufacturer/Supplier:	Dystar L.P. Pine Brook III 9844 Southern Pine Blvd Charlotte, NC 28273, USA Telephone: (800) 439-7827 FAX: (704) 561-3098
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Emergency telephone number:

Chemtrec (24 hours): USA: 1-800-424-9300; International: +001-703-527-3887.

SECTION 2: Hazard(s) identification

Information in accordance with U.S. 29 CFR 1910.1200 (Hazcom 2012) and Canada Hazardous Products Regulations (WHMIS 2015):

Classification of the product:

Flammable Liquid, category 3
Skin Irritation, category 2
Skin Sensitizer, category 1
Eye Irritation, category 2
STOT, single exposure, category 3, NE
Carcinogenicity, category 1A
STOT, single exposure, category 1
STOT, repeated exposure, category 1

Label elements:

Hazard pictogram(s):



Signal word:

Danger

Hazard statements:

H226 Flammable liquid and vapour.
H315 Causes skin irritation.
H317 May cause an allergic skin reaction.
H319 Causes serious eye irritation.
H336 May cause drowsiness or dizziness.
H350 May cause cancer.
H370 Causes damage to organs.
H372 Causes damage to organs through prolonged or repeated exposure.

Precautionary statements:

P201 Obtain special instructions before use.
P202 Do not handle until all safety precautions have been read and understood.
P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P240 Ground/bond container and receiving equipment.
P241 Use explosion-proof electrical/ventilating/lighting/equipment.
P242 Use only non-sparking tools.
P243 Take precautionary measures against static discharge.
P260 Do not breathe dust/fume/gas/mist/vapours/spray.
P264 Wash thoroughly after handling.
P270 Do not eat, drink or smoke when using this product.
P271 Use only outdoors or in a well-ventilated area.
P272 Contaminated work clothing should not be allowed out of the workplace.
P280 Wear protective gloves/protective clothing/eye protection/face protection.
P303+P361+P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.
P304+P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P308+P311 IF exposed or concerned: Call a POISON CENTER or doctor/physician.
P312 Call a POISON CENTER or doctor/physician if you feel unwell.
P333+P313 If skin irritation or rash occurs: Get medical advice/attention.
P337+P313 If eye irritation persists: Get medical advice/attention.
P362+P364 Take off contaminated clothing and wash it before reuse.
P370+P378 In case of fire: Use carbon dioxide, dry chemical, foam to extinguish.
P403+P233 Store in a well-ventilated place. Keep container tightly closed.
P403+P235 Store in a well-ventilated place. Keep cool.
P405 Store locked up.
P501 Dispose of contents/container in accordance with local, regional and international regulations.

Supplemental information: Hazardous to the aquatic environment - Chronic Category 3, Harmful to aquatic life with long lasting effects. Skin may discolor due to contact with pigment.

Precautionary statements are listed according to the United Nations Globally Harmonized System of Classification and Labelling of Chemicals (GHS) - Annex III. Regulations in individual countries/regions may determine which statements are required on the product label. See product label for specifics.

Hazards not otherwise classified:

Physical hazards not otherwise classified: No Additional Information

Health hazards not otherwise classified: No Additional Information

See Section 11 for toxicological information.

SECTION 3: Composition/information on ingredients

Mixture:

<u>CAS-No.</u>	<u>Chemical Name</u>
0012713-03-0	Umber
Proprietary	Naphtha (petroleum)
0001309-37-1	Iron oxide
0001317-34-6	Manganese Oxide
0001317-65-3	Limestone
0014808-60-7	Silica-crystalline (quartz)
0001333-86-4	Carbon black
0000096-29-7	2-Butanone oxime (MEKO)

Notes: Umber is a mixture of iron oxide, silica, manganese oxide and aluminum oxide.

Amounts specified are typical and do not represent a specification. Remaining components are proprietary, non-hazardous, and/or present at amounts below reportable limits. Exact percentage values for components are proprietary in accordance with 29 CFR 1910.1200(i).

SECTION 4: First-aid measures

Description of first aid measures:

General: If irritation or other symptoms occur or persist from any route of exposure, remove the affected individual from the area: see a physician/get medical attention.

Eye contact: Immediately flush eyes with plenty of clean water for an extended time, not less than fifteen (15) minutes. Flush longer if there is any indication of residual chemical in the eye. Ensure adequate flushing of the eyes by separating the eyelids with fingers and roll eyes in a circular motion. If eye irritation persists: Get medical advice/attention.

Skin contact: Immediately remove contaminated clothing and shoes. Wash the affected area with plenty of soap and water until no evidence of the chemical remains (at least 15-20 minutes). Launder clothing before reuse. If skin irritation occurs: Get medical advice/attention.

Inhalation: If affected, remove to fresh air. If breathing is difficult, give oxygen. If not breathing, give artificial respiration. Call a POISON CENTER or doctor/physician if you feel unwell.

Ingestion: Do not induce vomiting. Extreme care must be taken to prevent aspiration. If victim is unconscious and breathing, position the person on their side to prevent aspiration. Never give anything by mouth to an unconscious person. Rinse out the mouth with water. Get medical attention immediately.

Protection of first aid responders: Wear proper personal protective clothing and equipment.

Most important symptoms and effects, both acute and delayed: Dizziness, Drowsiness, Headache, Irritation, Nausea, Skin contact may discolor skin due to pigment. Pre-existing skin problems may be aggravated by prolonged or repeated contact. See section 11 for additional information.

Indication of any immediate medical attention and special treatment needed, if necessary: Treat symptomatically.

SECTION 5: Fire-fighting measures

NFPA flammability class: II

Extinguishing media:

Suitable: NFPA Class II (Combustible Liquid): Use water spray, ABC dry chemical, "alcohol" foam or CO₂. Use water to keep fire-exposed containers cool. If a leak or spill has not ignited, use water spray to disperse the vapors and to protect emergency responders attempting to stop a leak. Water spray may be used to flush spills away from exposures and to dilute spills to nonflammable mixtures.

Unsuitable: Do not use direct water stream. May spread fire.

Special hazards arising From the chemical:

Unusual fire/explosion hazards: Issue warning: combustible liquid. Eliminate all ignition sources. Ventilate the area. If spill is large, be prepared to isolate the hazard area. Deny access to the spill area to persons who are not involved in the cleanup and/or who have not been properly trained in spill management of hazardous/flammable liquids. Vapors may explode if ignited in an enclosed area. Run off to sewer may cause a fire or explosion hazard. Protect product from flames of any kind; maintain proper clearance when using heat devices, etc. Closed container may rupture (due to build up in pressure) when exposed to extreme heat. Product may burn if an ignition source is present. Gives off volatile vapors that are heavier than air and may travel along the ground or may be moved by ventilation and ignited by flame, sparks, heaters, or other ignition sources at distant locations (flashback potential).

Hazardous combustion products: Irritating or toxic substances will be emitted upon burning, combustion or decomposition. See section 10 (Hazardous decomposition products) for additional information.

Special protective equipment and precautions for fire-fighters: Use water/water spray to keep fire-exposed containers cool. Water spray may be used to flush spills away from exposures and to dilute spills to non-combustible mixtures. Do not flush combustible liquids into sewer as a fire or vapor explosion hazard may result. Never direct a hose stream directly onto a burning flammable/combustible liquid. Solid or straight hose stream will cause fire to spread if directed onto a burning spill or into an open container of burning liquid. Wear self-contained breathing apparatus (SCBA) equipped with a full facepiece and operated in a pressure-demand mode (or other positive pressure mode) and approved protective clothing. Personnel without suitable respiratory protection must leave the area to prevent significant exposure to hazardous gases from combustion, burning or decomposition. In an enclosed or poorly ventilated area, wear SCBA during cleanup immediately after a fire as well as during the attack phase of

SDS Name: Burnt Umber

firefighting operations.

See section 9 for additional information.

SECTION 6: Accidental release measures

Personal precautions, protective equipment and emergency procedures: See Section 8 for recommendations on the use of personal protective equipment. Eliminate ignition sources. Ventilate areas of spill. Personal Protective Equipment must be worn.

Environmental precautions: Do not flush liquid into public sewer, water systems or surface waters.

Methods and materials for containment and cleaning up: Contain by diking with sand, earth or other non-combustible material. Wear proper personal protective clothing and equipment. Absorb spill with an inert material. Place into labeled, closed container; store in safe location to await disposal. Change contaminated clothing and laundry before reuse.

SECTION 7: Handling and storage

Precautions for safe handling: As with any chemical product, use good laboratory/workplace procedures. Do not cut, puncture, or weld on or near the container. Do not get in eyes, on skin or clothing. Do not breathe dust, vapor, aerosol, mist or gas. Do not ingest, taste, or swallow. Wash thoroughly after handling this product. Always wash up before eating, smoking or using the facilities. Use under well-ventilated conditions. Wash contaminated clothing before reuse. Provide eyewash fountains and safety showers in the work area. Bond and ground all containers when transferring chemical. Eliminate ignition sources (e.g., sparks, static buildup, excessive heat, etc.). Use spark-proof tools and equipment. Vapors may travel to distant ignition sources.

Conditions for safe storage, including any incompatibilities: Store in combustible storage area and away from heat and open flame. Keep away from heat, sparks and open flames. Store under well-ventilated conditions. Keep container upright, when not in use, to prevent leakage. Avoid storing containers in direct sunlight as vapors may accumulate in the head space creating pressure. Store this material away from incompatible substances (see section 10). Do not store in open, unlabeled or mislabeled containers. Keep container closed when not in use. Emptied container may contain residual vapors or liquid which may ignite or explode. Do not reuse empty container without commercial cleaning or reconditioning. Bond and ground all containers when transferring chemical.

SECTION 8: Exposure controls / personal protection

Control parameters:

Occupational exposure limits (OEL):

<u>Chemical Name</u>	<u>ACGIH - TWA/Ceiling</u>	<u>ACGIH - STEL</u>		
Umber	0.02 mg/m3 TWA (respirable particulate matter)(as Mn); 0.1 mg/m3 TWA (inhalable particulate matter) (as Mn)	N/E		
Naphtha (petroleum)	5 mg/m3 TWA (inhalable particulate matter)	N/E		
Iron oxide	5 mg/m3 TWA (respirable particulate matter)	N/E		
Manganese Oxide	0.02 mg/m3 TWA (respirable particulate matter)(as Mn); 0.1 mg/m3 TWA (inhalable particulate matter) (as Mn)	N/E		
Limestone	N/E	N/E		
Silica-crystalline (quartz)	0.025 mg/m3 TWA (respirable particulate matter)	N/E		
Carbon black	3 mg/m3 TWA (inhalable particulate matter)	N/E		
2-Butanone oxime (MEKO)	N/E	N/E		
<u>Chemical Name</u>	<u>OSHA - PEL</u>	<u>OSHA - STEL</u>	<u>OSHA - Ceiling</u>	<u>Mexico</u>
Umber	N/E	N/E	5 mg/m3 Ceiling (as Mn)	0.2 mg/m3 TWA (as Mn)
Naphtha (petroleum)	5 mg/m3 TWA (oil mist)	N/E	N/E	5 mg/m3 TWA, 10 mg/m3 STEL (oil mist, mineral)
Iron oxide	10 mg/m3 TWA (fume) (Rouge), 15 mg/m3 TWA (total dust)	N/E	N/E	5 mg/m3 TWA, 10 mg/m3 STEL (as Fe)
Manganese Oxide	N/E	N/E	5 mg/m3 Ceiling (as Mn)	0.2 mg/m3 TWA (as Mn)
Limestone	15 mg/m3 TWA (total dust), 5 mg/m3 TWA (respirable fraction)	N/E	N/E	10 mg/m3 TWA, 20 mg/m3 STEL
Silica-crystalline (quartz)	50 µg/m3 TWA	N/E	25 µg/m3 TWA (respirable, action level)	0.1 mg/m3 TWA (respirable fraction)
Carbon black	3.5 mg/m3 TWA	N/E	N/E	3.5 mg/m3 TWA, 7 mg/m3 STEL
2-Butanone oxime (MEKO)	N/E	N/E	N/E	N/E
<u>Chemical Name</u>	<u>AIHA - WEEL</u>			

SDS Name: Burnt Umber

2-Butanone oxime (MEKO)

10 ppm TWA (Skin
sensitizer)

N/E=Not established (no exposure limits established for the listed substances for listed country/region/organization).

MANGANESE INORGANIC COMPOUNDS: ACGIH TLV values - 0.02 mg/m³ TWA (as Mn, listed under respirable fraction); 0.1 mg/m³ TWA (as Mn). Contains mineral oil. Under conditions which may generate mists, observe the ACGIH 5 mg/m³ TWA (inhalable fraction). The exposure limits listed above for Umber are for the manganese oxide component. Crystalline silica, as quartz, is regulated as a mineral dust by OSHA: (250)/(%SiO₂+5) mppcf (million particles per cubic foot) TWA (respirable); (10)/(%SiO₂+2) mg/m³ TWA (respirable). **RESPIRABLE CRYSTALLINE SILICA:** Workplace exposure to respirable crystalline silica is regulated by a substance-specific OSHA standard (29 CFR1910.1053) that includes an "action level" of 25 µg/m³ (8-hours time weighted average) and a permissible exposure limit of 50 µg/m³ (8-hour time weighted average). Refer to the OSHA standard for specific monitoring, medical surveillance, training and communication requirements.

Exposure controls:

Appropriate engineering controls: Always provide effective general and, when necessary, local exhaust ventilation to draw spray, aerosol, fume, mist and vapor away from workers to prevent routine inhalation. Ventilation must be adequate to maintain the ambient workplace atmosphere below the exposure limit(s) outlined in the SDS. Eliminate ignition sources (e.g., sparks, static buildup, excessive heat, etc.). (Ventilation guidelines/techniques may be found in publications such as Industrial Ventilation: American Conference of Governmental Industrial Hygienists, 1330 Kemper Meadow Drive, Cincinnati, OH, 45240-1634, USA.) (<http://www.acgih.org/home.htm>).

Individual protection measures, such as personal protective equipment (PPE):

Eye/face protection: Safety glasses or goggles required.

Skin and body protection: Wear chemical resistant (impervious) gloves. Use good laboratory/workplace procedures including personal protective clothing: labcoat, safety glasses and protective gloves.

Respiratory protection: In case of insufficient ventilation, wear suitable respiratory equipment. Wear an approved respirator (e.g., an organic vapor respirator, a full face air purifying respirator for organic vapors, or a self-contained breathing apparatus) whenever exposure to aerosol, mist, spray, or particulate matter exceed the exposure limit(s) of any chemical substance listed in this MSDS. If respirable dust exposures exceed 8-hour PEL (TWA), wear a NIOSH-approved respirator equipped with a high efficiency particulate (HEPA) filters. Use respirator in accordance with manufacturer's use limitations and OSHA standard 1910.134 (29CFR).

Further information: Eyewash fountains and safety showers are recommended in the work area.

SECTION 9: Physical and chemical properties

Form:	Dispersion	pH:	Not Available
Appearance:	Brown	Relative density:	1.38
Odor:	Not Available	Partition coefficient (n-octanol/water):	Not Available
Odor threshold:	Not Available	% Volatile by weight:	Not Available
Solubility in water:	Insoluble	VOC:	Not Available
Evaporation rate:	Slower than n-butyl acetate	Boiling point °C:	171 °C
Vapor pressure:	2 mmHg @ 20 °C (Solvent)	Boiling point °F:	340 °F
Vapor density:	Heavier than air	Flash point:	>52 °C (>126 °F) Estimated
Viscosity:	Not Available	Auto-ignition temperature:	Not Available
Melting point/Freezing point:	Not Available	Flammability (solid, gas):	Not Applicable (liquid)
Oxidizing properties:	Not oxidizing	Flammability or explosive limits:	LFL/LEL 0.6% (Solvent)
Explosive properties:	Not explosive		UFL/UEL 7% (Solvent)
Decomposition temperature:	Not Available		

Other information: Amounts specified are typical and do not represent a specification.

SECTION 10: Stability and reactivity

Reactivity: None known.

SDS Name: Burnt Umber

Chemical stability: This product is stable.

Possibility of hazardous reactions: Hazardous polymerization will not occur.

Conditions to avoid: Excessive heat and ignition sources.

Incompatible materials: Avoid strong acids, bases, and oxidizing agents. IRON OXIDES: Avoid contact with hydrazine, calcium hypochlorite, carbon monoxide, powdered aluminum, peroxides.

Hazardous decomposition products: Carbon dioxide, carbon monoxide, hydrocarbons, oxides of nitrogen, and oxides of sulfur. Manganese compounds. Oxides of iron. Oxides of silicon. Aluminum oxides.

SECTION 11: Toxicological information

Information on likely routes of exposure:

General: Caution must be exercised through the prudent use of protective equipment and handling procedures to minimize exposure. Repeated and prolonged inhalation of iron oxide fumes or dust may cause a benign pneumoconiosis called siderosis. SILICA-CRYSTALLINE: Chronic inhalation of crystalline silica can cause cancer or silicosis (a disabling, nonreversible and sometimes fatal lung disease). Overexposure may cause central nervous system depression. UMBER: Prolonged overexposure can cause pneumonitis and pulmonary edema.

Eyes: Causes serious eye irritation.

Skin: May cause allergic skin reaction. Causes skin irritation. Repeated or prolonged contact may cause irritation, dermatitis, defatting and drying or cracking of the skin.

Inhalation: Inhalation of high vapor concentration may cause headache, drowsiness and irritation of the eyes and respiratory tract. May cause drowsiness or dizziness.

Ingestion: Ingestion may cause abdominal discomfort, nausea, and diarrhea.

Symptoms/effects, acute and delayed: Dizziness, Drowsiness, Headache, Irritation, Nausea, Skin contact may discolor skin due to pigment

Acute toxicity information: Not classified (based on available data, the classification criteria are not met). No toxicity studies have been conducted on this product. ATEmix (oral): >5000 mg/kg. ATEmix (dermal): >2000 mg/kg. ATEmix (inhal.): >5 mg/L, 4 hours.

<u>Chemical Name</u>	<u>Inhalation LC50</u>	<u>Species</u>	<u>Oral LD50</u>	<u>Species</u>	<u>Dermal LD50</u>	<u>Species</u>
Umber	N/E	N/E	>5000 mg/kg	Rat/ adult	N/E	N/E
Naphtha (petroleum)	N/E	N/E	>2000 mg/kg	Rat/ adult	>2000 mg/kg	Rabbit/ adult
Iron oxide	N/E	N/E	>10000 mg/kg	Rat/ adult	N/E	N/E
Manganese Oxide	N/E	N/E	N/E	N/E	N/E	N/E
Limestone	N/E	N/E	6450 mg/kg	Rat/ adult	N/E	N/E
Silica-crystalline (quartz)	N/E	N/E	120 g/kg	Rat/ adult	N/E	N/E
Carbon black	N/E	N/E	>8000 mg/kg	Rat/ adult	> 3 g/kg	Rabbit/ adult
2-Butanone oxime (MEKO)	>4.83 mg/L (4 hours, vapor)	Rat/ adult	2326 mg/kg	Rat/ adult male	>1000 mg/kg	Rabbit/ adult

Skin corrosion/irritation: Causes skin irritation (Category 2). CARBON BLACK: Skin irritation, rabbit: Primary irritation score=0.6 / 8.0. Slight Irritant (based on vendor data).

<u>Chemical Name</u>	<u>Skin Irritation</u>	<u>Species</u>
Umber	N/E	N/E
Naphtha (petroleum)	Irritant	Rabbit/ adult
Iron oxide	Non-irritant	Rabbit/ adult
Manganese Oxide	N/E	N/E
Limestone	N/E	N/E
Silica-crystalline (quartz)	N/E	N/E
Carbon black	Slight irritant	Rabbit/ adult
2-Butanone oxime (MEKO)	Slight to moderate irritant	Rabbit/ adult

Serious eye damage/irritation: Causes serious eye irritation (Category 2A). CARBON BLACK: Eye irritation, rabbit: Draize score= 10-17 / 110 at 24 hours. Non-irritating (based on vendor data).

<u>Chemical Name</u>	<u>Eye irritation</u>	<u>Species</u>
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SDS Name: Burnt Umber

<u>Chemical Name</u>	<u>Eye irritation</u>	<u>Species</u>
Umber	N/E	N/E
Naphtha (petroleum)	Irritant	Rabbit/ adult
Iron oxide	Non-irritant	Rabbit/ adult
Manganese Oxide	N/E	N/E
Limestone	N/E	N/E
Silica-crystalline (quartz)	N/E	N/E
Carbon black	Non-irritant	Rabbit/ adult
2-Butanone oxime (MEKO)	Severe irritant	Rabbit/ adult

Respiratory or skin sensitization: Skin sensitization (Category 1).

<u>Chemical Name</u>	<u>Skin sensitisation</u>	<u>Species</u>
Umber	N/E	N/E
Naphtha (petroleum)	Non-sensitizer	Guinea Pig/ adult
Iron oxide	Non-sensitizer	Guinea Pig/ adult
Manganese Oxide	N/E	N/E
Limestone	N/E	N/E
Silica-crystalline (quartz)	N/E	N/E
Carbon black	Non-sensitizer	N/E
2-Butanone oxime (MEKO)	Sensitizer	Guinea Pig/ adult

Carcinogenicity: May cause cancer (Category 1A). SILICA-CRYSTALLINE: IARC and NTP have determined that crystalline silica inhaled from occupational sources can cause lung cancer in humans. CARBON BLACK: No serious health effects have been established in man. Inflammation, lung fibrosis, and lung tumors have been observed in animals at levels which overload lung clearance mechanisms. Carbon black contains varying amounts of polynuclear aromatic compounds (PNAs) which have been found to cause cancer in animals. Solvent extracts of carbon black are carcinogenic to the skin of mice. It is classified by IARC to be a known animal carcinogen and a possible human carcinogen (Group 2B). 2-BUTANONE OXIME (MEKO): Liver carcinomas were observed in a lifetime inhalation study in which mice and rats were exposed to MEKO 6 hrs/day, 5 days/week for 18 months and 26 months, respectively. These carcinomas were statistically increased in males at a MEKO concentration of 375 ppm. In addition, degenerative effects on the olfactory epithelium of the nasal passages occurred in a concentration related manner in males and females of both species at MEKO concentrations of 15, 75, and 375 ppm.

Carcinogenic status: 2-BUTANONE OXIME (MEKO): European CLP GHS categorization of Carcinogenicity 2-Suspected of causing cancer; not listed or regulated by IARC, NTP or ACGIH.

<u>Chemical Name</u>	<u>IARC</u>	<u>NTP</u>	<u>ACGIH</u>	<u>OSHA</u>
Silica-crystalline (quartz)	Group 1 (Carcinogenic to humans)	Known Human Carcinogen (Silica, crystalline (respirable size))	Group A2 - Suspected Human Carcinogen	Regulated as a carcinogen- see 29 CFR1910.1053
Carbon black	Group 2B (Possibly carcinogenic to humans)	N/A	Group A3 - Confirmed Animal Carcinogen with Unknown Relevance to Humans	N/A

Germ cell mutagenicity: Not classified. 2-BUTANONE OXIME (MEKO): MEKO is not considered mutagenic based on several in vitro and in vivo studies.

Reproductive toxicity: Not classified.

Specific target organ toxicity (STOT) - single exposure: Causes damage to organs (Category 1). May cause drowsiness or dizziness (Category 3).

Specific target organ toxicity (STOT) - repeated exposure: Causes damage to organs through prolonged or repeated exposure (Category 1). MANGANESE COMPOUNDS: Overexposure to dust may cause chronic manganese poisoning. Symptoms range from sleepiness and weakness in the legs to difficulty in walking and uncontrolled laughter. CALCIUM CARBONATE: Chronic exposure to respirable limestone dust in excess of exposure limits may cause pneumoconiosis (lung disease). CARBON BLACK: Subchronic Toxicity: Inhalation, rat (90 days): NOAEL = 1.0 mg/m3 (target organ=lungs: effects, inflammation, hyperplasia, fibrosis) (based on vendor data). 2-BUTANONE OXIME (MEKO): In a subchronic oral toxicity animal study, MEKO produced an adverse effect upon red blood cells (anemia). This was found for all dose levels tested. In an acute dermal animal study, 200 mg/kg caused mild hematologic (blood) effects. No effects were seen at 20 mg/kg. SILICA-CRYSTALLINE: Chronic exposure to crystalline silica dust may cause cancer or other health effects, including but not limited to cardiopulmonary impairment and silicosis (a disabling, nonreversible and sometimes fatal lung disease). There is evidence that exposure to respirable crystalline silica or that the disease silicosis is associated with the increased incidence of several autoimmune disorders (scleroderma, systemic lupus erythematosus, rheumatoid arthritis) and diseases affecting the kidneys. Individuals with silicosis are at increased risk to develop pulmonary tuberculosis if exposed to persons with tuberculosis.

Aspiration hazard: Not classified (based on available data, the classification criteria are not met).

Other toxicity information: 2-BUTANONE OXIME (MEKO) absorption through the skin, inhalation or ingestion may produce blood effects, reducing the blood's ability to transport oxygen (methemoglobinemia and anemia). Male rats and mice exposed to MEKO throughout their lifetimes developed liver tumors.

SECTION 12: Ecological information

Ecotoxicity: No ecological testing has been conducted on this product. CARBON BLACK: Microorganism Toxicity (activated sludge): The acute EC50 is ≥ 800 mg/L, 3 hrs (based on vendor data).

<u>Chemical Name</u>	<u>Fish 96 hour LC50</u>	<u>Fish 96 hour LC50</u>	<u>Fish Chronic NOEC</u>
Umber	N/E	N/E	N/E
Naphtha (petroleum)	10 mg/L (LL50)	N/E	N/E
Iron oxide	>1000 mg/L	N/E	N/E
Manganese Oxide	N/E	N/E	N/E
Limestone	N/E	N/E	N/E
Silica-crystalline (quartz)	N/E	N/E	N/E
Carbon black	>1000 mg/L (vendor data)	N/E	N/E
2-Butanone oxime (MEKO)	>100 mg/L	760 mg/L	100 mg/L (14 days, mortality)
<u>Chemical Name</u>	<u>Invertebrates 48 hour EC50</u>	<u>Invertebrates 24 hour EC50</u>	<u>Invertebrates Chronic NOEC</u>
Umber	N/E	N/E	N/E
Naphtha (petroleum)	4.5 mg/L (EL50)	N/E	N/E
Iron oxide	N/E	N/E	N/E
Manganese Oxide	N/E	N/E	N/E
Limestone	N/E	N/E	N/E
Silica-crystalline (quartz)	N/E	N/E	N/E
Carbon black	N/E	>5600 mg/L (vendor data)	N/E
2-Butanone oxime (MEKO)	201 mg/L	N/E	≥ 100 mg/L (21 days, reproduction)
<u>Chemical Name</u>	<u>Algae 96 hour EC50</u>	<u>Algae 72 hour EC50</u>	<u>Algae Chronic NOEC</u>
Umber	N/E	N/E	N/E
Naphtha (petroleum)	N/E	3.1 mg/L (EL50)	N/E
Iron oxide	N/E	N/E	N/E
Manganese Oxide	N/E	N/E	N/E
Limestone	N/E	N/E	N/E
Silica-crystalline (quartz)	N/E	N/E	N/E
Carbon black	N/E	>10000 mg/L (vendor data)	N/E
2-Butanone oxime (MEKO)	83 mg/L	11.8 mg/L	2.56 mg/L (72 hours, growth rate)

Persistence and degradability: IRON OXIDE: Will not be photolyzed or hydrolyzed to any great extent.

<u>Chemical Name</u>	<u>Biodegradation</u>
Umber	N/E
Naphtha (petroleum)	Readily biodegradable
Iron oxide	Not applicable (inorganic)
Manganese Oxide	N/E
Limestone	N/E
Silica-crystalline (quartz)	N/E
Carbon black	Not expected to be readily biodegradable
2-Butanone oxime (MEKO)	Inherently biodegradable (OECD 302B)

Bioaccumulative potential: CARBON BLACK: Bioaccumulation: Not expected due to physiochemical properties of the material.
IRON OXIDE: No appreciable bioconcentration is expected in the environment.

<u>Chemical Name</u>	<u>Bioconcentration Factor (BCF)</u>	<u>Log Kow</u>
Umber	N/E	N/E
Naphtha (petroleum)	N/E	3.3-5.3
Iron oxide	N/E	N/E
Manganese Oxide	N/E	N/E
Limestone	N/E	N/E
Silica-crystalline (quartz)	N/E	N/E
Carbon black	N/E	Not expected
2-Butanone oxime (MEKO)	0.5-0.6 (OECD305C)	0.63

Mobility in soil: IRON OXIDE: Is not expected to be mobile in soil, as it is insoluble in water.

<u>Chemical Name</u>	<u>Mobility in soil (Koc/Kow)</u>
Umber	N/E
Naphtha (petroleum)	N/E
Iron oxide	N/E
Manganese Oxide	N/E
Limestone	N/E
Silica-crystalline (quartz)	N/E

SDS Name: Burnt Umber

Chemical Name

Carbon black
2-Butanone oxime (MEKO)

Mobility in soil (Koc/Kow)

N/E
N/E

Other adverse effects: IRON OXIDE: May be harmful to plant and animal life if large quantities are released: plant leaves may become discolored.

SECTION 13: Disposal considerations

HAZARDOUS WASTE: Dispose of waste (incinerate) in a RCRA permitted hazardous waste disposal facility. Flash point below 140°F (60°C) - EPA Hazardous Waste No.: D001. Federal Resource Conservation and Recovery Act (RCRA), 40CFR261.21.

See Section 8 for recommendations on the use of personal protective equipment.

SECTION 14: Transport information

The information below is provided to assist in documentation. It may supplement the information on the package. The package in your possession may carry a different version of the label depending on the date of manufacture. Depending on inner packaging quantities and packaging instructions, it may be subject to specific regulatory exceptions.

UN number: UN1268

UN proper shipping name:

Petroleum Distillates, N.O.S.

Transport hazard class(es):

U.S. DOT hazard class: 3

Canada TDG hazard class: 3

Europe ADR/RID hazard class: 3

IMDG Code (ocean) hazard class: 3

ICAO/IATA (air) hazard class: 3

A "N/A" listing for the hazard class indicates the product is not regulated for transport by that regulation.

Packing group: III

Environmental hazards:

Marine pollutant: Not Applicable

Hazardous substance (USA): Not Applicable

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC code:

Not Applicable

Special precautions for user: Not Applicable

Notes: For surface shipment within the United States, flammable liquids with a flash point of 100-141 F (38-60 C) may be reclassified: In containers of 119 gallons capacity or less: NOT REGULATED. In containers of more than 119 gallons capacity: COMBUSTIBLE LIQUID.

SECTION 15: Regulatory information

Safety, health and environmental regulations specific for the product in question:

U.S. federal and state regulations/legislation:

This SDS has been prepared in accordance with the hazard criteria of the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

U.S. Comprehensive Environmental Response, Compensation and Liability Act (CERCLA) Reportable Quantity (RQ):

Not Applicable

U.S. Superfund Amendments and Reauthorization Act (SARA) - SARA Section 313:

This product contains the following toxic chemicals subject to the reporting requirements of Section 313 of the Emergency Planning and Community Right-to-Know Act of 1986 and 40 CFR 372:

Umber

Manganese Oxide

U.S. TSCA Section 12(b) Export Notification:

This product is not subject to TSCA 12(b) reporting requirements.

California Proposition 65:

Warning: The following ingredients present in the product are known to the state of California to cause Cancer:

Silica-crystalline (quartz)

Carbon black

Warning: The following ingredients present in the product are known to the state of California to cause birth defects, or other reproductive hazards:

None known to be present or none in reportable amounts for occupational exposure as per OSHA's approval of the California Hazard Communication Standard, Federal Register, page 31159 ff, 6 June 1997.

Notes: CARBON BLACK: California Proposition 65 carcinogen listed as "Carbon black (airborne, unbound particles of respirable size)". If the product containing carbon black is in solid form, such as a powder, California Proposition 65 may apply. If the product is a carbon black dispersion where the carbon black is bound in the product matrix, it is not likely to result in a significant airborne exposure unless the product itself is sprayed or otherwise dispersed in air. SILICA, CRYSTALLINE: California Proposition 65 carcinogen listed as "Silica, crystalline (airborne particles of respirable size)".

Canada regulations/legislation:

This product has been classified in accordance with the hazard criteria of the Hazardous Products Regulations and the SDS contains all the information required by the Hazardous Products Regulations.

Notes: CANADIAN DSL: One or more components are listed on the NDSL. 2-BUTANONE OXIME (MEKO): Listed on Canadian Environmental Protection Act - Schedule 1 - List of Toxic Substances.

Mexico regulations/legislation:

This SDS contains the information required by NOM-018-STPS-2000 Workplace Hazardous Chemical Substances Communication and Identification Standard.

Notes: No additional information

Chemical inventories:

<u>Regulation</u>	<u>Status</u>
Australian Inventory of Chemical Substances (AICS):	Y
Canadian Domestic Substances List (DSL):	N
Canadian Non-Domestic Substances List (NDSL):	Y
China Inventory of Existing Chemical Substances (IECSC):	Y
European Inventory of Existing Chemical Substances (EINECS):	Y
European List of Notified Chemical Substances (ELINCS):	N
Japan Existing and New Chemical Substances (ENCS):	N
Japan Industrial Safety and Health Law (ISHL):	N
Korean Existing and Evaluated Chemical Substances (KECL):	Y
New Zealand Inventory of Chemicals (NZIoC):	Y
Philippines Inventory of Chemicals and Chemical Substances (PICCS):	Y
Taiwan Inventory of Existing Chemicals:	N
U.S. Toxic Substances Control Act (TSCA):	Y

A "Y" listing indicates all intentionally added components are either listed or are otherwise compliant with the regulation. A "N" listing indicates that for one or more components: 1) there is no listing on the public inventory; 2) no information is available; or 3) the component has not been reviewed. A "Y" for New Zealand may mean that a qualified group standard may exist for the components in this product.

Europe REACH (EC) 1907/2006: Not all applicable components are pre-registered or registered. REACH is only relevant to substances either manufactured or imported into the EU. REACH information regarding this product is provided for informational purposes only. Each Legal Entity may have differing REACH obligations, depending on their place in the supply chain. For material manufactured outside of the EU, the importer of record must understand and meet their specific obligations under the regulation.

SECTION 16: Other information

SDS Revision date: 2016-11-30

HMIS (Hazardous Materials Identification System) Ratings:

SDS Name: Burnt Umber

Health: 2* **Flammability:** 2 **Physical hazard:** 0 **Personal Protection:** X

NFPA (National Fire Protection Association) Ratings:

Health: 2 **Flammability:** 2 **Instability:** 0

Key: 0=Insignificant; 1=Slight; 2=Moderate; 3=High; 4=Extreme. An asterisk appearing after the HMIS Health numerical rating denotes a chronic hazard.

Hazardous Materials Identification System (HMIS), National Paint and Coating Association, rating applies to product "as packaged" (i.e., ambient temperature). Ratings are based upon HMIS® III and NFPA 704 (2007). An asterisk appearing after the HMIS Health® III numerical rating denotes a chronic hazard. National Fire Protection Association (NFPA) rating identifies the severity of hazards of material during a fire emergency (i.e., "on fire").

Legend:

* : Trademark owned by Dystar L.P.

ACGIH: American Conference of Governmental Industrial Hygienists

AIHA WEEL: American Industrial Hygiene Association (AIHA) Workplace Environmental Exposure Level (WEEL)

N/A: Not Applicable

N/E: None Established

STEL: Short Term Exposure Limit

TWA: Time Weighted Average (exposure for 8-hour workday)

Users Responsibility/Disclaimer of Liability:

As the conditions or methods of use are beyond our control, we do not assume any responsibility and expressly disclaim any liability for any use of this product. Information contained herein is believed to be true and accurate but all statements or suggestions are made without warranty, expressed or implied, regarding accuracy of the information, the hazards connected with the use of the material or the results to be obtained from the use thereof. Compliance with all applicable federal, state, and local laws and local regulations remains the responsibility of the user.

This bulletin cannot cover all possible situations which the user may experience during processing. Each aspect of your operation should be examined to determine if, or where, additional precautions may be necessary. All health and safety information contained in this bulletin should be provided to your employees or customers. It is your responsibility to develop appropriate work practice guidelines and employee instructional programs for your operation.

Safety Data Sheet Preparer:

Product Compliance Department