MSDS of HDPE Pipe

Dtd: 25.05.2024
Rev.:0

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

COMPANY IDENTIFICATION

EMERGENCY TELEPHONE NUMBERS

Reliance Industries Limited
Village-Mora, Post- Bhatha,Surat-Hazira Road, Dist. Surat (Gujarat), Pin : 394510
Tel. : 0261-2835999. Telefax : 0261-2835099

2. COMPOSITION/INFORMATION ON INGREDIENTS

100% HDPE Pipe contains

Components	Amount	Limit /Qty	Agency /Type
High Density Polyethylene Chemical Name : Ethylene, Homopolymer CAS9002884	94 – 95 %	None	NA
Carbon Black master batch Chemical Name : Carbon Black CAS1333864	5 – 6 %	None	NA

3. HAZARDS IDENTIFICATION

HDPE Pipe – is non –hazardous Product.

********** EMERGENCY OVERVIEW **********

Colored plastic (red, white, blue, grey, black, orange)

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IMMEDIATE HEALTH EFFECTS

EYE:

Not expected to cause prolonged or significant eye irritation. If this material is heated, thermal burns may result from eye contact.

SKIN:

Contact with the skin is not expected to cause prolonged or significant irritation. Not expected to be harmful to internal organs if absorbed through the skin. If this material is heated, thermal burns may result from skin contact.

INGESTION:

Not expected to be harmful if swallowed.

INHALATION:

Not expected to be harmful if inhaled. If this material is heated, fumes may be unpleasant and produce nausea and irritation of the upper respiratory tract.

SIGNS AND SYMPTOMS OF EXPOSURE:

Thermal burns to the eye: may include pain, tearing, reddening, swelling, and impaired vision. Thermal burns to the skin: may include pain or feeling of heat, discoloration, swelling, and blistering. Respiratory irritation: may include coughing and difficulty breathing.

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4. FIRST AID MEASURES

If heated material should splash into eyes, flush eyes immediately with fresh water for 15 minutes while holding the eyelids open. Remove contact lenses, if worn. Get immediate medical attention.

SKIN:

If the hot material gets on skin, quickly cool in water. See a doctor for extensive burns. Do not try to peel the solidified material from the skin or use solvents or thinners to dissolve it. The use of vegetable oil or mineral oil is recommended for removal of this material from the skin.

INGESTION:

No specific first aid measures are required because this material is not expected to be harmful if swallowed.

INHALATION:

Move the exposed person to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention if breathing difficulties continue.

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5. FIRE FIGHTING MEASURES

FIRE CLASSIFICATION:
Classification (29 CFR 1910.1200): Not classified by OSHA as flammable or combustible.
FLAMMABLE PROPERTIES:
FLASH POINT: NA
AUTOIGNITION: NA
FLAMMABILITY LIMITS (% by volume in air): Lower: NA Upper: NA
EXTINGUISHING MEDIA:
C02, dry chemical, foam and water fog
NFPA RATINGS: Health 0; Flammability 1; Reactivity 0.
FIRE FIGHTING INSTRUCTIONS:
This material will burn although it is not easily ignited. For fires involving this material, do not enter any enclosed or confined fire space without proper protective equipment, including self-contained breathing apparatus.

If possible, water should be applied as a spray from a fogging nozzle since this is a surface burning material. The application of high velocity water will spread the burning surface layer.
COMBUSTION PRODUCTS:
Normal combustion forms carbon dioxide, water vapor and may produce carbon monoxide, original monomer, other hydrocarbons and hydrocarbon oxidation products, depending on temperature and air availability.

6. ACCIDENTAL RELEASE MEASURES

Not applicable.

7. HANDLING AND STORAGE

Avoid contact of heated material with eyes, skin, and clothing. Avoid breathing vapor or fumes from heated material.

Improper or careless handling of these products can result in serious personal injury or possibly death, especially during loading, unloading, movement or installation. Please take all necessary precautions and follow manufacturer's published procedures f0r safely handling these products,

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

GENERAL CONSIDERATIONS:
Consider the potential hazards of this material (see Section 3), applicable exposure limits, job activities, and other substances in the work place when designing engineering controls and selecting personal protective equipment. If engineering controls or work practices are not adequate to prevent exposure to harmful levels of this material, the personal protective equipment listed below is recommended. The user should read and understand all instructions and limitations supplied with the equipment since protection is usually provided for a limited time or under certain circumstances.

ENGINEERING CONTROLS
Use in a well-ventilated area. If heated material generates vapor, or fumes, use process enclosures, local exhaust ventilation, or other engineering controls to control exposure. Ventilation requirements must be locally determined. If handling results in dust generation, special ventilation may be needed to ensure that dust exposure does not exceed the OSHA PEL for nuisance dust.

PERSONAL PROTECTIVE EQUIPMENT
EYE/FACE PROTECTION:
No special eye protection is normally required. If this material is heated, wear chemical goggles and a face shield if engineering controls or work practices are not adequate to prevent eye contact.
SKIN PROTECTION:
No special protective clothing is normally necessary. If this material is heated, wear insulated clothing to prevent skin contact if engineering controls or work practices are not adequate to prevent skin contact.
RESPIRATORY PROTECTION:
No respiratory protection is normally required. If heated material generates vapor or fumes that are not adequately controlled by ventilation, wear a NIOSH approved respirator. Use the following

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9. PHYSICAL AND CHEMICAL PROPERTIES

PHYSICAL DESCRIPTION:
Colored plastic (red, white, blue, grey, black, orange)

pH:	NA
VAPOR PRESSURE:	NA
VAPOR DENSITY (AIR=1):	NA
BOILING POINT:	NA
MELTING POINT:	122C (252F)
SOLUBILITY:	Insoluble in water
SPECIFIC GRAVITY:	0.95
DENSITY:	0.95 g/cm3
EVAPORATION RATE:	0
PERCENT VOLATILE (VOL):	0%

CHEMICAL RESISTANCE OF HDPE PIPE

HDPE Pipe has superb chemical resistance and is the material of choice for many harsh chemical environments. Although unaffected by chemically aggressive native soil, installation of PE pipe (as with any piping material) through areas where soils are contaminated with organic solvents (oil, gasoline) may require installation methods that protect the PE pipe against contact with organic solvents.

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10. STABILITY AND REACTIVITY

HAZARDOUS DECOMPOSITION PRODUCTS:
Low molecular weight hydrocarbons, alcohols, aldehydes, acids and ketones can be formed during thermal processing.
CHEMICAL STABILITY:
Stable.
CONDITIONS TO AVOID:
Do not heat without adequate ventilation.
INCOMPATIBILITY WITH OTHER MATERIALS:
May react with strong oxidizing agents, such as chlorates, nitrates, peroxides, etc. Avoid contact with organic solvents. May react with free halogens.
HAZARDOUS POLYMERIZATION:
Polymerization will not occur.

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11. TOXICOLOGICAL INFORMATION

EYE EFFECTS:
The eye irritation hazard is based on data for a similar material.
SKIN EFFECTS:
The skin irritation hazard is based on data for a similar material. The acute dermal toxicity is based on data for a similar material.
ACUTE ORAL EFFECTS:

The acute oral toxicity is based on data for a similar material.
ACUTE INHALATION EFFECTS:
The acute respiratory toxicity is based on data for a similar material.
ADDITIONAL TOXICOLOGY INFORMATION:
This product contains polymerized ethylene. During thermal processing, this polymer can degrade. The three variables which control its degradation are the temperature, the length of time at that temperature, and the amount of oxygen available. Depending on the local processing conditions, a variety of low molecular weight hydrocarbons, alcohols, aldehydes, acids, and ketones can be formed. These materials are respiratory irritants. Prolonged and repeated breathing of fume

components has been shown to cause other adverse health effects. Exposure to processing emissions should be minimized by following all recommendations in this MSDS.

Pigments containing carbon black, lead chromate, nickel, antimony, or titanium compounds may have been incorporated into this product. The International Agency for Research on Cancer (IARC) has classified carbon black as a Group 2B carcinogen (possibly carcinogenic to humans) based on "sufficient evidence" in animals and "inadequate evidence" in humans. However, the pigments in this product are bound in a polymer matrix which severely limits its extractability, bioavailability and toxicity. The lead chromate pigment is also silica-encapsulated as well as bound in the polymer matrix. None of these pigments is likely to cause adverse health effects under recommended conditions of use.

12. ECOLOGICAL INFORMATION

ECOTOXICITY:
This material is not expected to be harmful to aquatic organisms.
ENVIRONMENTAL FATE:
This material is not expected to be readily biodegradable.

13. DISPOSAL CONSIDERATIONS

Contact local environmental or health authorities for approved disposal of this material.

14. TRANSPORT INFORMATION

The description shown may not apply to all shipping situations. Consult 49CFR, or appropriate Dangerous Goods Regulations, for additional description requirements (e.g., technical name) and mode-specific or quantity-specific shipping requirements.

DOT SHIPPING NAME: NOT DESIGNATED AS A HAZARDOUS MATERIAL BY THE FEDERAL DOT
DOT HAZARD CLASS: NOT APPLICABLE

DOT IDENTIFICATION NUMBER: NOT APPLICABLE
DOT PACKING GROUP: NOT APPLICABLE

PE pipes are transported in Trucks or containers as per the length requirement. PE pipe is tough, lightweight, and flexible. Installation does not usually require high capacity lifting equipment. Pipe up to about 8” (200 mm) diameter and weighing roughly 9 kg per m or less can frequently be handled manually. Heavier, larger diameter pipe will require appropriate handling equipment to lift, move and lower the pipe. Pipe must not be dumped, dropped, pushed, or rolled into a trench.

Normal Bending radius in case of PE pipes is 25 times of Pipe dia.
The pipes in coil form available from 20mm to 125mm outer diameter as per customer requirement of varying length looking at restriction as per transportation rules.

Considerable force may be required to field bend larger pipe, and the pipe may spring back forcibly if holding devices slip or are inadvertently released while bending. Observe appropriate safety precautions during field bending.

Handling Equipment

Unloading and handling equipment must be appropriate for the type of packaging, must be in safe operating condition, and must have suffi cient capacity (load rating) to safely lift and move the product as packaged. Equipment operators should be trained and preferably, certifi ed to operate the equipment. Safe handling and operating procedures must be observed.

Although PE piping components are lightweight compared to similar components made of metal, concrete, clay, or other materials, larger components can be heavy. Lifting and handling equipment must have adequate rated capacity to safely lift and move components. Equipment that lifts from the bottom of the load such as a forklift, or from above the load such as a crane, a side boom tractor, or an extension boom crane is used for unloading. Above the load lifting equipment may employ slings or slings and spreader bars to lift the load. When using a forklift, or forklift attachments on equipment such as articulated loaders or bucket loaders, lifting capacity must be adequate at the load center on the forks. Forklift equipment is rated for a maximum lifting capacity at a distance from the back of the forks. If the weight-center of the load is farther out on the forks, lifting capacity is reduced.

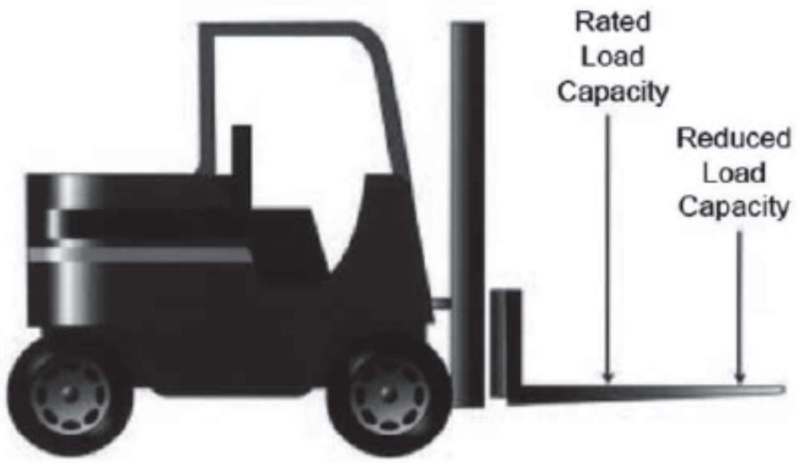

Figure 4 Forklift Load Capacity

Before lifting or transporting the load, forks should be spread as wide apart as practical, forks should extend completely under the load using fork extensions if necessary, and the load should be as far back on the forks as possible. During transport, a load on forks that are too short or too close together, or a load too far out on the forks, may become unstable and pitch forward or to the side, and result in damage to the load or property, or hazards to persons. Above the load lifting equipment such as cranes, extension boom cranes, and side boom tractors, should be hooked to wide fabric choker slings that are secured around the load or to lifting lugs on the component. Wire rope slings and chains can damage components, can slip, and should not be used. Spreader bars should be used when lifting pipe or components longer than 20'. *Before use, inspect slings and lifting equipment. Equipment with wear or damage that impairs function or load capacity should not be used.*

Coil Loading in trucks:

950 PIPES LOADED "6MTR. 75MM-IS CLASS 1"

15. REGULATORY INFORMATION

SARA 311 CATEGORIES:	1. Immediate (Acute) Health Effects:	NO
	2. Delayed (Chronic) Health Effects:	NO
	3. Fire Hazard:	NO
	4. Sudden Release of Pressure Hazard:	NO
	5. Reactivity Hazard:	NO

16. OTHER INFORMATION

NFPA RATINGS: Health 0; Flammability 1; Reactivity 0;
HMIS RATINGS: Health 0; Flammability 1; Reactivity 0;
(0-Least, 1-Slight, 2-Moderate, 3-High, 4-Extreme, PPE:- Personal Protection Equipment Index recommendation, *- Chronic Effect Indicator). These values are obtained using the guidelines or published evaluations prepared by the National Fire Protection Association (NFPA) or the National Paint and Coating Association (for HMIS ratings).