



# Material Safety Data Sheet

TN 020

V1.0

## 1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND COMPANY/UNDERTAKING

PRODUCT NAME : TN 020  
UTILIZATION : SOLVENT FOR INDUSTRIAL APPLICATIONS. ONLY FOR USE IN CAREER  
SUPPLY : CARCO CHEMICAL CO., LTD.  
79/1-2 Moo4 Thepphrarat Banpho Chachengsao 24140  
TELEPHON : +6638-595-508 – 9  
FAX : +6638-525-351

## 2. COMPOSITION/INFORMATION ON INGREDIENTS

CAS No. : 64742-89-8  
UN No. : 1268  
INDEX No. : 649-267-00-0  
EINECS No. : 265-192-2

### HAZARDOUS COMPONENTS

Chemical name	CAS	EINECS	Symbol (s)	R-phase (s)
n-Hexane	110-54-3	203-777-6	F, Xn, N	R11; R38; R48/20; R26; R65; R67; R51/53
Benzene	71-43-2	200-753-7	F, T	R45; R46; R11; R36/38; R48/23/24/25; R65
Ethylbenzene	100-41-4	202-849-4	F, Xn	R11; R20
Isopropyl Alcohol	67-63-0	200-661-7	F, Xi	R11; R36; R67

## 3. HAZARDS IDENTIFICATION

HEALTH HAZARDS : Vapours may cause drowsiness and dizziness. Slightly irritating to respiratory system. Skin irritation Causes moderate eye irritation Harmful: may cause lung damage if swallowed. May damage organs Organ or system of the body Contact / get a long time. See details in Chapter 11 organs means moonlight. Neural hearing Central nervous system (CNS). Harmful effect on health is severely damaged by contact / get a long time and inhalation. Make lose the feeling nervous. May have lost its ability to have children.



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**SIGNS AND SYMPTOMS** :Dermatitis due to lack of fat Symptoms may include Burning sensation and / or dry skin / broken. Skin irritation signs and symptoms may include a burning sensation, redness, swelling, and/or blisters. Breathing of high vapour concentrations may cause central nervous system (CNS) depression resulting in dizziness, light-headedness, headache, nausea and loss of coordination. If you inhale it may result in coma, and death. To destroy the outer senses may observe faults in the operation of the system of motion (lack of coordination within a muscle or patient in the end and/or loss of sensation in arms and legs). Continued inhalation may result in unconsciousness and death. Auditory system effects may include temporary hearing loss and/or ringing in the ears. Eye irritation signs and symptoms may include a burning sensation, redness, swelling, and/or blurred vision. The respiratory system irritations may include burning pain in the nose and throat, it is temporary and/or breathing difficulties.

**ENVIRONMENTAL HAZARDS:** Expected to be toxic to aquatic organisms, may cause long-term effects in the aquatic environment.

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#### 4. FIRST AID MEASURES

**GENERAL INFORMATION :** Keep victim calm. Obtain medical treatment immediately. DO NOT DELAY.

**INHALATION** Remove to fresh air. If rapid recovery do not occur, transport to nearest medical facility for additional treatment.

**SKIN CONTECT** : Remove contaminated clothing. Immediately flush skin with large amounts of water for at least 15 minutes, and follow by washing with soap and water if available. If redness, swelling, paint and/or blisters occur, transport the nearest medical facility for additional treatment.

**EYE CONTECT** : Flush eyes with large quantities of clean water, if there is still irritation, consult a doctor.



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INGESTION : If swallowed, do not induce vomiting: transport to nearest medical facility for additional treatment. If vomiting occurs spontaneously, keep head below hips to prevent aspiration.

ADVICE TO PHYSICIAN : Potential for chemical. Consider: gastric lavage with protected airway, administration of activated charcoal. Potential for cardiac sensitisation, particularly in abuse situations. Hypoxia or negative inotropes may enhance these effects. Consider: oxygen therapy. Call a doctor or poison control center for guidance.

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## 5. FIRE FIGHTING MEASURES

Clear fire area of all non-emergency personnel.

SPECIFIC HAZARDS : The vapour is heavier than air, spreads along the ground and distant ignition is possible. Will float and can be reignited on surface water. Carbon monoxide may be evolve if incomplete combustion occurs.

EXTINGGULSHING MEDIA: Foam, water spray or fog. Dry chemical powder, carbon dioxide, sand or earth may be used for small fires only.

UNSUITABLE USED TO EXTINGUISH FIRE : Do not use water as directed.

PROTECTIVE EQUIPMENT: Wear full protective clothing and self-contained breathing apparatus.

FOR FIREFGHTERS

ADDITIONAL ADVICE : Keep adjacent containers cool by spraying with water

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## 6. ACCIDENTAL RELEASE MEASURES

PROTECTIVE MEASURES : Observe all relevant local and international regulations. Avoid contact with spilled or released material. For guidance on selection of personal protective equipment see Chapter 8 of this Material Safety Data Sheet. See Chapter 13 for information on disposal. Use appropriate containment (of product and firefighting water) to avoid environmental contamination. Prevent from spreading or entering drains, ditches or rivers by using sand, earth, or other appropriate



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barriers. Attempt to disperse the vapour or to direct its flow to a safe location for example by using fog sprays. Take precautionary measures against static discharge. Ensure electrical continuity by bonding and grounding (earthing) all equipment. Ventilate contaminated area thoroughly.

**CLEAN UP METHODS** : For large liquid spills (> 1 drum), transfer by mechanical means such as vacuum truck to a salvage tank for recovery or safe disposal. Do not flush away residues with water. Retain as contaminated waste. Allow residues to evaporate or soak up with an appropriate absorbent material and dispose of safely. Remove contaminated soil and dispose of safely.

For small liquid spills (> 1 drum), transfer by mechanical means to a labelled, sealable container for product recovery or safe disposal. Allow residues to evaporate or soak up with an appropriate absorbent material and dispose of safely. Remove contaminated soil and dispose of safely.

**ADDITIONAL ADVICE** : Notify authorities if any exposure to the general public or the environment occurs or is likely to occur. Local authorities should be advised if significant spillages cannot be contained. The vapour is heavier than air, spreads along the ground and distant ignition is possible. Vapour may form an explosive mixture with air. See Chapter 13 for information on disposal.

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## 7. HANDLING AND STORAGE

**GENERAL PRECAUTIONS** : Avoid breathing vapour or contact with material. Only use in well ventilated areas. Wash thoroughly after handling. For guidance on selection of personal protective equipment see Chapter 8 of this Material Safety Data Sheet. Use the information in this data sheet as input to a risk assessment of local circumstances to help determine appropriate controls for safe handling, storage and disposal of this material.

**HANDLING** : Avoid inhaling vapour and/or mists. Avoid contact with skin, eyes, and clothing. Extinguish any naked flames. Do not smoke. Remove ignition



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sources. Avoid sparks. Electrostatic charges may be generated during pumping. Electrostatic discharge may cause fire. Ensure electrical continuity by bonding and grounding (earthing) all equipment. Restrict line velocity during pumping in order to avoid generation of electrostatic discharge ( $\leq 1$  m/sec until fill pipe submerged to twice its diameter, then  $\leq 7$  m/sec). Avoid splash filling. Do not use compressed air for filling, discharging, or handling operations. Handling Temperature: Ambient. Handle and open the tank very carefully in the light air. Ventilation workplace in such a way that does not touch the career exceeds the limit that is defined in [Occupational Exposure Limit (OEL)].

**STORAGE** : Bulk storage tanks should be diked (bunded). Vapours from tanks should not be released to atmosphere. Breathing losses during storage should be controlled by a suitable vapour treatment system. Must be stored in a diked (bunded) well-ventilated area, away from sunlight, ignition sources and other sources and other sources of heat. Keep away from aerosols, flammables, oxidizing agents, corrosives and from other flammable product which are not harmful or toxic to man or to the environment.

**TRANSPOSITION PRODUCT** : During the pump may have a spark of static electricity occurs. Blue static sparks can cause fire. Close the lid of the container at all times when not in use. Do not use compressed air to fill the pump discharge or dump if the piston pump.

**RECOMMENDED MATERIALS** : For containers, or container linings use mild steel, stainless steel. For the color of the container, use the coat. Color zinc silicate

**UNSUITABLE MATERIALS**: Natural, butyl, neoprene or nitrile rubbers.

**CONTAINER ADVICE** : Containers, even those that have been emptied, can contain explosive vapours. Do not cut, drill, grind, weld or perform similar operations on or near containers.

**ADDITIONAL INFORMATION** : Ensure that all local regulations regarding handling and storage facilities are followed



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## 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

### Occupational Exposure Limits

In the absence of occupational exposure standards for this product. It is recommended that the following are adopted.

Material	Source	Type	ppm	mg/m <sup>3</sup>	Notation
RCP-X55	HSPA OELs	TWA(8h)		450	
Benzene	ACGIH	TWA	0.5		
	ACGIH	STEL	2.5		
	NIOSH	SKIN_DES			can be absorbed into the skin.
n-Hexane	ACGIH	TWA	50		
	ACGIH	SKIN_DES			can be absorbed into the skin.
Ethylbenzene	ACGIH	TWA	100		
	ACGIH	STEL	125		
Isopropyl Alcohol	ACGIH	TWA	400		

ADDITIONAL INFORMATION : Ventilation system good enough for control of airborne concentrations under the limit.

Material	Source	ประเภทของอันตราย
Benzene	ACGIH	Confirm that the carcinogens in the people
Ethylbenzene	ACGIH	Confirmed animal carcinogen with unknown relevance to humans.

RESPIRATORY PROTECTION : If engineering controls do not maintain airborne concentrations to a level which is adequate to protect worker health, select respiratory protection equipment suitable for the specific conditions of use and meeting relevant legislation. Check with respiratory protective equipment suppliers. Where air-filtering respirators are suitable, select an appropriate combination of mask and filter. Select a filter suitable for organic gases and vapour [boiling point>65 C (149



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F)] meeting EN141. Where respiratory protective equipment is required, use a full-face mask. Where air-filtering respirators are unsuitable (e.g., airborne concentrations are high, risk of oxygen deficiency, confined space) use appropriate positive pressure

AND PROTECTION : protection: Longer term protection: Viton. Incidental contact/Splash protection: Nitrile rubber. Suitability and durability of a glove is dependent on usage, e.g. frequency and duration of contact, chemical resistance of glove material, glove thickness, dexterity. Always seek advice from glove suppliers. Contaminated gloves should be replaced. Personal hygiene is a key element of effective hand care. Gloves must only be worn on clean hands. After using gloves, hands should be washed and dried thoroughly. Application of a non-perfumed moisturizer is recommended.

EYE PROTECTION : Safety glasses (EN166)

PROTECTIVE CLOTHING : Chemical resistant gloves/gauntlets, boots, and apron. Where risk of splashing or in spillage clean up chemical resistant one-piece overall with integral hood.

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## 9. PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE : Colorless liquid.

ODOUR : Has sweetened paraffin is an important.

pH : Irrelevant

BOILING POINT : Typical 50 – 135°C / 122 – 275 F

FLASH POINT : Typical -30°C / -22 F (IP 170)

RATIO IN THE AIR DUE TO EXPLOSION/FIRE : 1 – 7.5 %(V)

DENSITY : Typical 670 – 755 kg/m<sup>3</sup> at 15°C / 59 F (ASTM D-4052)

SOLUBILITY IN WATER : Insoluble

SOLUBILITY IN OTHER SOLUVENTS : Hydrocarbon solvent can mix.



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## 10. STABILITY AND REACTIVITY

- STABILITY** : Stable under normal conditions of use. Reacts violently with strong oxidizing agents.
- CONDITIONS TO AVOID** : Avoid heat, spark, open flames and other ignition sources. Prevent vapour accumulation.
- MATERIALS TO AVOID** : Avoid heat, spark, open flames and other ignition sources.
- HAZARDOUS DECOMPOSITION PRODUCT** : Thermal decomposition is highly dependent on conditions. A complex mixture of airborne solids, liquids and gases, including carbon monoxide, carbon dioxide and other organic compounds will be evolved when this material undergoes combustion or thermal or oxidative degradation.

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## 11. TOXICOLOGICAL INFORMATION

- BASIC FOR ASSIGNMENT** : Information given is based on product criteria. And information about the components And knowledge of the toxins on similar products.
- ACUTE ORAL TOXICITY** : Low toxicity : LD50 >2000 mg/kg , mice To breathe into the lungs during swallowing or vomiting may cause lung inflammation due to chemicals that may be harmful to life.
- ACUTE SKIN TOXICITY** : Low toxicity : LD50 >2000 mg/kg, rabbit
- ACUTE INHALATION TOXICITY** : Low toxicity : LC50 >20 mg/l / 4 hours, mice Breathing of high vapour concentrations may cause central nervous system (CNS) depression resulting in dizziness, light-headedness, headache, nausea and loss of coordination. Continued inhalation may result in unconsciousness and death.
- IRRITANT TO THE SKIN** : Not skin irritation frequent exposure Long periods of time can cause loss of skin fat. And turned into skin disease.
- IRRITANT TO EYE** : Not expected to cause eye irritation . Vapors may cause eye irritation. Insufficient information to classify .
- RESPIRATORYQ** : Inhalation of vapors or mists may cause irritation to the respiratory system. Insufficient information to classify .
- MAKE A VENOM ALLERGY** : Not a substance that causes an allergic reaction of the skin.





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TOXICITY OF CONTINUOUS EXPOSURE : central nervous system: the touch or contact exposure often affects the nervous system , kidney, kidney effects in male rats . Which are not considered relevant to humans. Cause peripheral neuropathy which may be severe. Organic compounds (n-Hexane) by serial.

GENETIC TOXICITY : No evidence that there was a genetic change .

TOXICITY CARCINOGENICTY : Tumors that occur in animals are not considered to be associated with people (Solvent Naphtha (Petroleum), Light Aliphatic) there is limited evidence about the effect causes cancer (Ethylbenzene).

TOXINS THAT CAUSE EMBRYO ABNORMALITIES OR AFFECT SUCCESSION INTERBREEDING : Cause toxic to the fetus in toxic to animals Effect on the reproductive system of animals in pulmonary toxic (other n-Hexane).

ADDITIONAL INFORMATION : Contact/get the substance in high concentrations in the same substance groups contribute to abnormal heart beat and stop dancing in people's heart disease.

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### 12. ECOLOGICAL INFORMATION

#### ACUTE TOXICITY

FISH : Expected to be toxic :  $1 < LC/EC/IC50 \leq 10$  mg/l

AQUATIC INVERTEBRATES : Expected to be toxic :  $1 < LC/EC/IC50 \leq 10$  mg/l

ALGAE : Expected to be toxic :  $1 < LC/EC/IC50 \leq 10$  mg/l

MICROORGANISMS : Expected to be toxic :  $1 < LC/EC/IC50 \leq 10$  mg/l

MOBILITY : Floats on the surface of the soil to absorb and leak less .

#### PERSISTENCE/DEGRADABILITY OF THE SUBSTANCE

: Degradable in Caused by rapid oxidation. The chemical reaction that occurs with the stimulation of light in the air.

#### ACCUMULATION OF SUBSTANCE IN THE ORGANISM

: Tend to accumulate in living organisms.



## 13. DISPOSAL CONSIDERATIONS

**MATERIAL DISPOSAL** : Recover or recycle if possible. It is the responsibility of the waste generator to determine the toxicity and physical properties of the material generated to determine the proper waste classification and disposal methods in compliance with applicable regulations. Do not dispose into the environment, in drains or in water courses. Waste product should not be allowed to contaminate soil or water.

**CONTAINER DISPOSAL** : Drain container thoroughly. After draining, vent in a safe place away from sparks and fire. Residues may cause an explosion hazard. Do not, puncture, cut, or weld uncleaned drums. Send to drum recover or metal reclaimer.

**LOCAL LEGISLATION** : Disposal should be in accordance with applicable regional, national, and local laws and regulations.

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## 14. TRANSPORT INFORMATION

### IMDG

Identification number : UN 1268  
Proper shipping name : Petroleum distillates, n.o.s.  
Class / Division : 3  
Packing group : II  
Marine pollutant : No

### IATA (Country variations may apply)

UN No. : 1268  
Proper shipping name : Petroleum distillates, n.o.s.  
Class / Division : 3  
Packing group : II

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## 15. REGULATORY INFORMATION

EC Label Name : Naphtha a solvent (petroleum) Aliphatic light

EC label/EC Number : 265-192-2

EC Classification : Highly flammable, toxic, harmful to the environment

EC Annex I Number : 649-267-00-0

EC Symbols : F Highly flammable  
T Toxic  
N Harmful to the environment

EC Risk Phrases : R11 Highly Flammable.  
R20 Harmful by inhalation  
R36/38 Irritating to eyes and skin  
R38 Irritating to skin.  
R45 May cause cancer  
R46 May have a negative effect on the genes that can be transmitted genetically.  
R48/20 Harmful effect on health is severely damaged by contact / get a long time. And by inhalation  
R48/23/24/25 Toxic danger to have destroyed the severe health from exposure / gain for a long period of time by inhalation exposure to skin and if swallowed  
R51/53 Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.  
R62 May adversely affect the ability to have children.  
R65 Harmful may be result in lung damage if swallowed.  
R67 Vapours may cause drowsiness and dizziness. And dizziness

EC Safety Phrases : S9 Keep container in well-ventilated place  
S16 Keep away from source of ignition  
S23(PPR007E) Do not breathe vapor  
S24/25 Avoid contact with skin and eyes. Explosion proof ventilation system good enough for control airborne concentrations.



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S61 Try not to spill out into the surrounding environment. See special instructions / safety.

S62 Swallowing Do not try to induce vomiting Seek medical advice immediately And containers Or label to show

INV (CN) : Listed  
TSCA : Listed  
EINECS : Listed 265-199-2  
KECI(KR) : Listed KE-31661  
PICCS(PH) : Listed

## 16. OTHER INFORMATION

NATIONAL FIRE PROTECTION :  
ASSOCIATION (USA)



■ Health  
■ Fire Hazard  
■ Reactivity  
□ Specific Hazard

MSDS DISTRIBUTION : The information in the this document should be made available to all who may handle the product

DISCLAIMER : This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environment requirements only. It should not therefore be construed as guaranteeing any specific property of the product.