


SAFTY DATA SHEET

I .CHEMICAL PRODUCT AND COMPANY IDENTIFACTION

Product name : Isobutyraldehyde
Other name : -
Suggested application and limitation : Anti-oxidant of rubber
Manufacturer/Supplier/address : FORMOSA PLASTIC CORPORATION/ Formosa Industrial Park Mailiao Township, Yunlin Country 23-1
Emergency Telephone/FAX : 05-6811095 / 05-6811530

II . IDENTIFACATION OF MATERIAL

Hazards Classification : flammable liquid class 2 、acute toxin class 4 (swallow) 、skin irritation material class 2 、sever eye irritation material class 2A 、inhalation hazards class 2 、Specific organ system toxin : Single exposure class 3
Label mark : Warning mark : flame 、exclamation mark 、health hazar 
Warning description : DANGEROUS Hazard warning description Highly Flammable liquid and vapor May be harmful if swallowed Causes skin irritation Severe eye irritation May be harmful if inhaled Causes respiratory tract irritation
Hazard preventing measure : Storage the container in well-ventilate place Avoid any inhalation Wear personal protective equipment
Other hazard : -

III . IDETIFACTION OF MATERIAL

Product Name : Isobutyraldehyde
Synonym : 2-Methyl-1-propanal 、 Isobutylaldehyde 、 Valine aldehyde
CAS No. : 78-84-2
Weight (%) : >99

IV . FIRST AID

With different exposure ways :

Inhalation : **1.**Place unconscious person on the side in recovery position ◦ **2.**If respiratory problems ,artificial respiration/oxygen **3.**Get medical attention immediately ◦

Skin contact : **1.**Moderate remove the chemical immediately **2.**ash contaminated skin with water and soap over 15 minutes **3.** Remove contaminated clothing during the washing ◦ **4.** Get medical attention immediately **5.** Completely clean contaminated clothes before reusing them

Eye contact : **1.**Make sure to remove any eye contact lenses from eyes before rinsing ◦ **2.**Promptly wash eyes with plenty of water while lifting the eye lids **3.** Get medical attention promptly if symptoms occur after washing

Ingestion : **1.** Drink 1-2 cup of water and induce vomiting.

Symptom and health effect : —

Protection of first-aid personnel : Wear protection equipment class C.

Hint for doctor : If ingestion, consider gastric lavage

V . Fire extinguish measures

Suitable fire-extinguishing chemical :

Water spray 、Carbon dioxide 、Chemical powder 、Anti- alcohol foam

Potential hazard :

1. Extremely flammable liquid and vapor ◦ **2.** The vapor density is higher then air and may travel considerable distance to source of ignition and flash back.

Specific fire extinguishing step

1. Stay way from the container **2.** Conflagration in storage area, use unmanned water spray or auto-fire aim ◦ **3.** If it is not possible to extinguish the fire, evacuate the area and allow the fire burned out. ◦ **4.** Do not try to extinguish the fire before the leaking stopped **5.** Cool down the container with water spray

Specific protective equipment for firefighter : Wear self-contained breathing apparatus and protective clothing

VI . Accidental release measures

Personal precautions : **1.** Isolate hazard area. Keep unnecessary and unprotected personnel from entering.

Environmental precautions : **1.** Provide ventilation ◦

Method of cleaning up : **1.**Remove all sources of ignition. **2.** Dilute vapor with water spray **3.** Cover with sand, dry lime, or soda ash then place in proper container

VII 、 Handling and storage

Handling :

1. Avoid heat 、 flame 、 spark and other source of ignition **2.** Handle with personal protective equipment ◦ **3.**Avoid any physical damage on the container

Storage :

1. Storage in cool, dry and in well-ventilate place. 2. Ground all equipment containing this material.

VIII、Exposure controls

Engineering controls : 1. Provide ventilation ◦			
Control parameter			
TWA	STEL	CEILING	BEIs
—	—	—	—
Personal protective equipment :			
Respiratory protection : 1. Government approved respirator.			
Hand protection : 1. Chemical protection gloves ◦			
Eye protection : 1. Chemical Safety goggles ◦ 2. Do not wear contact lenses			
Eye protection : 1. Chemical Safety goggles ◦ ◦			

IX、Physical and chemical property

Appearance : Clear and colorless liquid	Odor : pungent odor - stench
Olfactory threshold : 0.14-0.3ppm	Melting point : -65.9℃
pH : -	Boiling point / range : 64℃
inflammability : -	Flash point : -18℃
Decompose temperature : -	Test method : -
Auto ignition temp : 196℃	explosion limit : 1.6 ~ 10.6 %
Vapor pressure : 22.7 Kpa (170mmHg @20℃)	Vapor density : 2.48(air=1)
Density : 0.7938 @20℃(water=1)	Solubility : 11g/100ml @20℃(water)
Log octanol-water partition (log Kow) : -	Evaporate speed : -

X、Stability and reactivity

Stability : Stable under normal temperatures and pressures. Slowly oxidized by atmospheric oxygen.
Hazard under specific situation : : -
Conditions to Avoid: Ignition sources, confined spaces.
Incompatibilities with Other Materials: Strong oxidizing agents.
Hazardous Decomposition Products: Carbon monoxide

XI、Toxicological information

Route of exposure : Skin contact、inhalation、ingestion、eye contact
Toxicology :
Skin contact : 1. irritation ◦
Eye contact : 1. irritation ◦
LD50 (animal、process) : 960 mg/Kg (Oral rat、ingestion)
LC50 (animal、process) : -
20mg/open (Rabbit、eye) : sever irritation
2mg/24H (Rabbit、skin) : sever irritation
Chronic effect : 1. Lung effect 2. Repeat or prolonged contact may cause dermatitis. ◦

XII、Ecological information

Environmental toxicity : LC50 (fish) : - EC50 (aquatic invertebrate) : - BCF : -
Environmental fate : 1. Release into soil, this material is expected evaporate from the surface of soil. 2. Release into water: Expected to readily biodegrade 3. hen releases into air, this material exist in vapor phase, and expected to be degraded by reacting with photochemically produced hydroxyl radicals and the half-life is about 14.6 days Half-life time (air) : 2.4-24 hour Half-life time (surface water) : 24-168 hour Half-life time (under ground water) : 48-336 hour Half-life time (soil) : 24-168 hour
Bio-accumulate : -
Mobility in soil : -
Other effect : -

XIII、Disposal considerations

Substance disposal : 1. Dispose according to suitable legislation 2. Burn the waste in proper place 3. Contact a licensed professional waste disposal service to dispose this material
--

XIV、Transport information

UN# : 2045
UN shipping name : Isobutyraldehyde
Transportation hazard classification : flammable liquid, Class 3
Packing Group : II
Severe marine pollution (Yes/No) : No
Special transportation method : -

XV、Legislation Information

Suitable legislation : 1. Regulation of Labelling and Hazard Communication of Dangerous and Harmful Materials 2. Methods and Facilities Standards for the Storage, Clearance and Disposal of Industrial Waste 3. Public Hazardous Substances & Flammable Pressurized Gases Establishment Standards & Safety Control Regulations 4. Other ROC relative laws
--

XVI、Other Information

REFERENCE	1. CHEMINFO DATA BASE , CCINFO DISC , 2000-4 2. RTECS DATA BASE , TOMES PLUS DISC , Vol.45 , 2000 3. HSDB DATA BASE , TOMES PLUS DISC , Vol.45 , 2000	
Department of compiler	Name : FORMOSA PLASTIC CORPORATION NBA Department	
	Address /telephone : Formosa Industrial Park Mailiao Township, Yunlin Country 23-1 / 05-6811095 / 05-681153	
Compiler	Title : Engineer	Name (Signature) : LAI CHUN CHOU
Date	103. 12. 10	
Note	" - " means nodata , " / " means not proper for this material .	