

Material Safety Data Sheet

Revision Date: 01/21/11



Restek Corporation
110 Benner Circle
Bellefonte, PA 16823-8812
(814) 353-1300
(800) 356-1688 Fax: (814) 353-1309

I. PRODUCT IDENTIFICATION

Catalog Number / Product Name: 32288, 32288-5XX, & 32388 / 2,2',3,4,4',5,5'-Heptachlorobiphenyl (BZ #180)
Revision Number: 5
Intended use: For Laboratory use only

II. HAZARD IDENTIFICATION

Emergency Overview:

Physical Hazards: F - Highly flammable
Health Hazards: Xi - Irritant

Routes of Entry: Ingestion Contact Inhalation
Target Organs Potentially Affected By Exposure: Liver, kidney, heart, CNS
Chemical Interactions That Change Toxicity: None Known

Immediate (Acute) Health Effects by Route of Exposure:

Inhalation Irritation: Can cause moderate respiratory irritation, dizziness, weakness, fatigue, nausea and headache.
Inhalation Toxicity: Harmful! Can cause systemic damage (see "Target Organs") Inhalation may cause severe central nervous system depression (including unconsciousness).
Skin Contact: Can cause moderate skin irritation, defatting, and dermatitis. Not likely to cause permanent damage.
Eye Contact: Can cause moderate irritation, tearing and reddening, but not likely to permanently injure eye tissue.
Ingestion Irritation: Irritating to mouth, throat, and stomach. Can cause abdominal discomfort, nausea, vomiting and diarrhea. Ingestion of this product may result in central nervous system effects including headache, sleepiness, dizziness, slurred speech and blurred vision.
Ingestion Toxicity: Harmful if swallowed. May cause systemic poisoning.

Long-Term (Chronic) Health Effects:

Carcinogenicity: No data.
Reproductive and Developmental Toxicity: No data available to indicate product or any components present at greater than 0.1% may cause birth defects.
Inhalation: Upon prolonged and/or repeated exposure, can cause moderate respiratory irritation, dizziness, weakness, fatigue, nausea and headache. Harmful! Can cause systemic damage upon prolonged and/or repeated exposure (see "Target Organs")
Skin Contact: Upon prolonged or repeated contact, can cause moderate skin irritation, defatting, and dermatitis. Not likely to cause permanent damage.

Material Safety Data Sheet

Revision Date: 01/21/11

III. COMPOSITION / INFORMATION ON INGREDIENTS

Chemical Name	CAS #	EINEC #	% Composition
isooctane	540-84-1	203-892-1 208-759-1 209-207-2 209-243-9 209-266-4 209-292-6 209-504-7 209-547-1 209-649-6 209-650-1 209-660-6 209-689-4 209-745-8 209-747-9 209-855-6 210-187-2 210-621-0 213-923-0 247-861-0	99.999000

IV. FIRST-AID MEASURES

Inhalation:	Remove to fresh air. If breathing is difficult, have a trained individual administer oxygen.
Eyes:	Flush eyes with plenty of water for at least 20 minutes retracting eyelids often. Tilt the head to prevent chemical from transferring to the uncontaminated eye. Get immediate medical attention.
Skin Contact:	Wash with soap and water. Remove contaminated clothing and launder. Get medical attention if irritation develops or persists.
Ingestion:	Do not induce vomiting and seek medical attention immediately. Drink two glasses of water or milk to dilute. Provide medical care provider with this MSDS.

V. FIRE FIGHTING MEASURES

Extinguishing Media:	Use alcohol resistant foam, carbon dioxide, or dry chemical extinguishing agents. Water spray or fog may also be effective for extinguishing if swept across the base of the fire. Water can also be used to absorb heat and keep exposed material from being damaged by fire.
Fire and/or Explosion Hazards:	Vapors may be ignited by heat, sparks, flames or other sources of ignition at or above the low flash point giving rise to a Class B fire. Vapors are heavier than air and may travel to a source of ignition and flash back.
Fire Fighting Methods and Protection:	Do not enter fire area without proper protection including self-contained toxic breathing apparatus and full protective equipment. Fight fire from a safe distance and a protected location due to the potential of hazardous vapors and decomposition products. Flammable component(s) of this material may be lighter than water and burn while floating on the surface. Use water spray/fog for cooling.
Hazardous Combustion Products:	Carbon dioxide, Carbon monoxide

Material Safety Data Sheet

Revision Date: 01/21/11

VI. ACCIDENTAL RELEASE MEASURES

Personal Precautions and Equipment: Exposure to the spilled material may be irritating or harmful. Follow personal protective equipment recommendations found in Section VIII of this MSDS. Additional precautions may be necessary based on special circumstances created by the spill including; the material spilled, the quantity of the spill, the area in which the spill occurred. Also consider the expertise of employees in the area responding to the spill.

Methods for Clean-up: Prevent the spread of any spill to minimize harm to human health and the environment if safe to do so. Wear complete and proper personal protective equipment following the recommendation of Section VIII at a minimum. Dike with suitable absorbent material like granulated clay. Gather and store in a sealed container pending a waste disposal evaluation.

VII. HANDLING AND STORAGE

Handling Technical Measures and Precautions: Harmful or irritating material. Avoid contacting and avoid breathing the material. Use only in a well ventilated area. Use spark-proof tools and explosion-proof equipment

Storage Technical Measures and Conditions: Store in a cool dry ventilated location. Isolate from incompatible materials and conditions. Keep container(s) closed. Keep away from sources of ignition

VIII. EXPOSURE CONTROLS / PERSONAL PROTECTION

United States:

Chemical Name	CAS No.	IDLH	ACGIH STEL	ACGIH TLV-TWA	OSHA Exposure Limit
isooctane	540-84-1	ND		300 ppm; 1401 mg/m3	No PEL established

United Kingdom:

Chemical Name	CAS No.	EINEC No.	WEL-STEL	WEL-TWA
isooctane	540-84-1	203-892-1 208-759-1 209-207-2 209-243-9 209-266-4 209-292-6 209-504-7 209-547-1 209-649-6 209-650-1 209-660-6 209-689-4 209-745-8 209-747-9 209-855-6 210-187-2 210-621-0 213-923-0 247-861-0	No data.	No data.

France:

Chemical Name	CAS No.	EINEC No.	VLCTs-STEL	VME-TWA
---------------	---------	-----------	------------	---------

Material Safety Data Sheet

Revision Date: 01/21/11

isooctane	540-84-1	203-892-1 208-759-1 209-207-2 209-243-9 209-266-4 209-292-6 209-504-7 209-547-1 209-649-6 209-650-1 209-660-6 209-689-4 209-745-8 209-747-9 209-855-6 210-187-2 210-621-0 213-923-0 247-861-0	No data.	No data.
-----------	----------	---	----------	----------

Germany:

Chemical Name	CAS No.	EINEC No.	VELs
isooctane	540-84-1	203-892-1 208-759-1 209-207-2 209-243-9 209-266-4 209-292-6 209-504-7 209-547-1 209-649-6 209-650-1 209-660-6 209-689-4 209-745-8 209-747-9 209-855-6 210-187-2 210-621-0 213-923-0 247-861-0	No data.

Personal Protection:

Engineering Measures: Local exhaust ventilation is recommended when generating excessive levels of vapors from handling or thermal processing.

Respiratory Protection: Respiratory protection may be required to avoid overexposure when handling this product. General or local exhaust ventilation is the preferred means of protection. Use a respirator if general room ventilation is not available or sufficient to eliminate symptoms.

Eye Protection: Wear chemically resistant safety glasses with side shields when handling this product. Do not wear contact lenses.

Skin Protection: Wear protective gloves. Inspect gloves for chemical break-through and replace at regular intervals. Clean protective equipment regularly. Wash hands and other exposed areas with mild soap and water before eating, drinking, and when leaving work

IX. PHYSICAL AND CHEMICAL PROPERTIES

Odor:	Mild
pH:	No data available.
Vapor Density:	3.94 (air = 1)
Melting Point:	-107 °C
Flash Point:	No data available.
Flammability:	Highly Flammable
Specific Gravity:	0.69 g/cm ³ at 20 °C
Evaporation Rate:	No data available.

Material Safety Data Sheet

Revision Date: 01/21/11

Odor Threshold: No data available.
Solubility: Negligible; 0-1%
VOC % by weight: No data available.
Molecular Weight: No data available.

X. STABILITY AND REACTIVITY:

Stability: Stable under normal conditions.
Materials to Avoid / Chemical Incompatibility: Strong oxidizing agents

XI. TOXICOLOGICAL INFORMATION:

Component Toxicological Data:

NIOSH:

Chemical Name	CAS No.	LD50/LC50
Isooctane	540-84-1	Inhalation LC50 Rat 34.7 mg/L 4 h; Inhalation LC50 Rat 47.4 mg/L 1 h; Oral LD50 Rat >2500 mg/kg

Component Carcinogenic Data:

OSHA:

Chemical Name	CAS No.
No data available	

ACGIH:

Chemical Name	CAS No.
No data available.	

NIOSH:

Chemical Name	CAS No.
No data available.	

NTP:

Chemical Name	CAS No.
No data available.	

IARC:

Chemical Name	CAS No.	Group No.
No data.		Group 1
2,2',3,4,4',5,5'-Heptachlorobiphenyl	35065-29-3	Group 2A
No data.		Group 2B

XII. ECOLOGICAL INFORMATION:

Overview: No ecological information available
Mobility: No data
Persistence: No data
Bioaccumulation: No data
Degradability: No data
Ecological Toxicity Data: 0

XIII. DISPOSAL CONSIDERATIONS:

Waste Description of Spent Product: Spent or discarded material is a hazardous waste.
Disposal Methods: Dispose of by incineration following Federal, State, Local, or Provincial regulations.
Waste Disposal of Packaging: Comply with all Local, State, Federal, and Provincial Environmental Regulations.

XIV. TRANSPORTATION INFORMATION:

United States:

32288, 32288-5XX, & 32388 / 2,2',3,4,4',5,5'-Heptachlorobiphenyl (BZ #180)

Material Safety Data Sheet

Revision Date: 01/21/11

DOT Proper Shipping Name: Octanes
UN Number: UN1262
Hazard Class: 3
Packing Group: II

International:
IATA Proper Shipping Name: Octanes
UN Number: UN1262
Hazard Class: 3
Packing Group: II

Marine Pollutant: No

XV. REGULATORY INFORMATION:

United States:

Chemical Name	CAS#	CERCLA	SARA 313	SARA EHS 313	TSCA
isooctane	540-84-1	X	-	-	X

The following chemicals are listed on CA Prop 65:

Chemical Name	CAS #	Regulation
---------------	-------	------------

State Right To Know Listing:

Chemical Name	CAS#	New Jersey	Massachusetts	Pennsylvania	California
isooctane	540-84-1	X	X	X	-

EU Directives Classification:

Hazard Symbols



Risk Phrases: R38:Irritating to the skin
R11:Highly Flammable

Safety Phrases: S36/37/39:Wear suitable protective clothing, gloves and eye/face protection
S16:Keep away from sources of ignition - No smoking

XVI: ADDITIONAL INFORMATION

Prior Version Date: 05/29/08

Material Safety Data Sheet

Revision Date: 01/21/11

Disclaimer

RESTEK CORPORATION PROVIDES THE DESCRIPTIONS, DATA AND INFORMATION CONTAINED HEREIN IN GOOD FAITH BUT MAKES NO REPRESENTATION AS TO ITS COMPREHENSIVENESS OR ACCURACY. IT IS PROVIDED FOR YOUR GUIDANCE ONLY. BECAUSE MANY FACTORS MAY AFFECT PROCESSING OR APPLICATION/USE, RESTEK CORPORATION RECOMMENDS YOU PERFORM AN ASSESSMENT TO DETERMINE THE SUITABILITY OF A PRODUCT FOR YOUR PARTICULAR PURPOSE PRIOR TO USE. NO WARRANTIES OF ANY KIND, EITHER EXPRESSED OR IMPLIED, INCLUDING FITNESS FOR A PARTICULAR PURPOSE, ARE MADE REGARDING PRODUCTS DESCRIBED, DATA OR INFORMATION SET FORTH. IN NO CASE SHALL THE DESCRIPTIONS, INFORMATION, OR DATA PROVIDED BE CONSIDERED A PART OF OUR TERMS AND CONDITIONS OF SALE. FURTHER, THE DESCRIPTIONS, DATA AND INFORMATION FURNISHED HEREUNDER ARE GIVEN GRATIS. NO OBLIGATION OR LIABILITY FOR THE DESCRIPTION, DATA AND INFORMATION GIVEN ARE ASSUMED. ALL SUCH BEING GIVEN AND ACCEPTED AT YOUR RISK.