



SAFETY DATA SHEET

TY—IRIS

Page: 1/9

Date/Revision:24/04/2008

Version: 4

Cancel and replaces version: 3.00

1 Product and company identification.

PRODUCT NAME :TY—IRIS
Use :Solve
Cleaning agent
SUPPLIER : Importer
Name : CHRIS FINISHED MACHINERY (SH) CO.,LTD
Address : No.3235 Shen Du Road Minhang Zone Shanghai China
Telephone number : +86-21-34660693
Telefax number : +86-21-34660683
E-mail : sales@chris-x.com

2 Hazards identification

MOST IMPORTANT HAZAROS

Adverse human health effects

:No specific risk when handled in accordance with good occupational hygiene and safety practice.

Environmental effects

:Harmful to aquatic organisms.

Physical and chemical hazards

-Fire or explosion

:Combustible liquid.

-Further hazards

:Hazardous reaction may occur on contact with certain chemicals. {Refer to the list of incompatible materials section 10: “Stability -Reactivity” }.

Specific hazards

:According to EC criteris,this product is classified as a “hazardous substance” .

3 Composition/information on ingredients

>>SUBSTANCE

Common chemical name

:Dimethyl -2-methylpentanedioate {}

Synonyms

:Dimethyl-2-methyl glutarate {}

CAS number

:14035-94-0 {}

Hazardous impurities

:Methanol {CAS:67-56-1}: ≤500 PPM EC N° :200-659-6 -EC
Classification: F:R11-T;R23/24/25-39/23/24/25 {25R} §



SAFETY DATA SHEET

TY--IRIS

page:2/9

Data/Revision:24/04/2008

Version:4

Cancels and replaces version:3.00

>>Further information : § {R}:Revision of the entry in the Adaptation to Technical Progress of Annexe I of Directive 67/548/EEC

4 First-aid measures

Inhalation :Move the person away from the contaminated area.
Make the affected person rest.

Skin contact :Remove all contaminated clothing and footwear.
Wash with water.

Eye contact :Rinse with running water whilst keeping the eyes wide open. {at least 15 minutes}

Ingestion :NEVER attempt to induce vomiting.
Rinse mouth out with water.

Further information :Use appropriate protective equipment when treating a contaminated person.
Place contaminated clothing in a sealed bag for disposal.

5 Fire-fighting measures

Extinguishing media

-Suitable :Water spray
Foam
Multi-purpose powders
Carbon dioxide {CO2}

-Not suitable :Strong water jet.

Specific hazards :Combustible.
On heating or during combustion :Toxic gases or vapours are released.

Specific fire fighting methods :Do not dispose of fire-fighting water in the environment.

Protection of fire-fighters :Self-contained breathing apparatus.
Boots, gloves, goggles.



SAFETY DATA SHEET

TY—IRIS

page:3/9

Date/Revision:24/04/2008

Version:4

Cancels and replaces version:3.00

6 Accidental release measures

Personal precautions	:Do not breathe vapours. Avcid contact with skin and eyes. Protective equipment. -appropriate gloves. -safety glasses. -suitable protective clothing. Stop the leak.Turn leaking containers leak-side up to prevent the escape of liquid.
Environmental precautions	:Prevent the product form spreading the environment. For a large spillage,contain the spillage by bunding.
Methods for cleaning up	
-Prchibited	:Do NOT spray water into packaging which has been damaged or overturned. Do NOT put the spilled material back the original container for re-use.
-Recovery	:Absorb the product onto porous material. Recover the product by vacuuming/shoveling or sweeping. Collect up the product and place it in a spare container. -suitably labeled. Keep the recovered product for subsequent disposal.
-Cleaning /Decontamination	:Wash non-recoverable remainder with large amounts of water. Recover the cleaning water for subsequent disposal.
-Disposal	:Dispose of all contaminated materials in accordance with current regulations.

7 Handing and storage

HANDLING

Technical measures	:Ventilation.
Measures	:Dose not require any particular or specific measures. Respect the general rules for occupational hygiene.

STORAGE

Technical measures	:Take all necessary measures to avoid accidental discharge of products into drains and waterways due to the ruptureofcontainers or transfer systems.
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SAFETY DATA SHEET

TY—IRIS

page:4/9

Date/Revision:24/04/2008

Version:4

Cancels and replaces version:3.00

Storage conditions

-Recommended	:Store: -in a cool, well-ventilated area
-To be avoided	:Store away from incompatible materials.
Incompatible products	:Strong oxidizing agents.
Packaging	:Product must only be kept in the original packaging.
Packaging materials	
-Recommended	:Plastic materials {polyethylene, polypropylene}. Coated steels.

8 Exposure controls/personal protection

Engineering measures	:Ensure good ventilation of the work station.
Control parameters	
Occupational exposure limits	
-Limits {France}	:Methanol :VME:260 mg/m ³ {200ppm} :VLE:1300mg/m ³ {1000ppm}
-Limits {U.S.A./A.C.G.I.H. }	:Methanol TLV {TWA}:200ppm TLV {STEL}:250ppm Risk of percutaneous absorption.
-Limints {EU}	:Methanol Exposure limit {8 hour}:260mg/m ³ {200ppm} Risk of percutaneous absorption.
Surveillance procedures	:Keep the atmospheric concentration below the occupational exposure limits.
Personal protective equipment	
-Respiratory protection	:If exposure is likely to exceed the occupational exposure limit: Wear suitable respiratory protective equipment
-Hand protection	:The selection of gloves must take into account the extent and duration of use at the workstation. Use suitable chemical –resistant protective gloves {compliant with Standard EN374-1} Permeation,thickness and protection class according to Standard EN 374-1: Glove material:butul Thickness: 0.5mm Breakthrough time:>480minutes Protection class: 6



SAFETY DATA SHEET

TY—IRIS

page:5/9

Date/Revision:24/04/2008

Version:4

Cancels and replaces version:3.00

-Eye protection	: Goggles.
-Skin and body protection	:Protective clothing with elasticated cuffs and closed neck.
-Selection criteria	:No specific/particular action required for this product.Comply with good occupational hygiene practice.
Collective emergency	:Safety shower.
Equipment	:Eye fountain.
Hygiene measures	:Wash as often as necessary. Do NOT eat or drink in the workplace.

9.physical and chemical properties

APPEARANCE

-Physical state	:Liquid.
-Colour	:colourless.
Odour	:characteristic.
pH	:5 {Product as is}.
Specific temperatures	
-Freezing	:<-75°C.
-Boiling	:215.6°C.
Flammability characteristics	
-Flash point	:98°C {Closed cup}
-Auto-ignition	:430°C
Oxidizing properties	:Not considered as oxidizing. { evaluation by structure-activity relationship}
Explosion properties	
	Shock test: Negative. Koenen tube apparatus test:Negative.
Vapour pressure	:6.3Pa at 20°C
Relative density {water=1	: 1.0553
Solubility	
-in water	:25g/20°C. {*}
-in organic solvents	:Soluble in: -organic polar solvents. Miscible {in all proportions}with: -aromatic hydrocarbons.
Octanol/water partition coefficient	:0.89 {logPOW} at 25°C. {*}
Surface tension	:64mN/m at 20.7°C.

10.Stability and reactivity



SAFETY DATA SHEET

TY—IRIS

page:6/9

Date/Revision:24/04/2008

Version:4

Cancels and replaces version:3.00

Stability :Stable under normal conditions of use.
Hazardous reactions
-Conditions to avoid :No dangerous reactions known under condition of use.
-Materials to avoid :-strong oxidizing agents.
-Hazardous decomposition products :On combustion or on thermal decomposition {pyrolysis} releases: {Carbon oxides {CO+CO2}}

11 Toxicological information

Acute toxicity : LD 50 skin {Rat} >2000mg/kg {no mortality was observed at this dose} .
{Unpublished internal reports}
LD 50 oral {Rat} >2000mg/kg {no deaths were observed at this dose}. {Unpublished internal reports}

Local effects : not irritating to skin {Rabbit}
{Unpublished internal reports }
Not irritating for the eyes {Rabbit}
{Unpublished internal reports }

Sensitization : Local lymph node assay {LLNA} {Mouse}
Not sensitizing
{Unpublished internal reports }

Repeated dose toxicity : According to OECD method 422:
Repeated dose toxicity {28 days} {for males}
Repeated dose toxicity {40-45 days} {for females}
On ingestion {Rat}
No systemic toxicity observed.
No observed adverse effect level {NOAEL} :300 mg/kg/day
{Unpublished internal reports }

Specific effects
-Mutagenicity : Ames test:Negative.
{with or without metabolic activation}.
{Unpublished internal reports }
Chromosomal aberrations:
Human lymphocytes-in vitro
{with or without metabolic activation}.Negative.
{Unpublished internal reports }
In vivo micronucleus test:ambiguous. intraperitoneal route {Mouse}



SAFETY DATA SHEET

TY—IRIS

page:7/9

Date/Revision:24/04/2008

Version:4

Cancels and replaces version:3.00

{Unpublished intemal reports}
In vivo micronucleous test: Negative.
Intraperitoneal route {Mouse}
{Unpublished intemal reports} {*}
-Reproductive toxicity : Reproduction/developmental toxicity screening test on
ingestion {Rat} No impairment of fertilty has been
observed {Unpublished intemal reports}

12 Ecological information

MOBILITY

Adsorption/description : log Koc:<1.25
Highly mobite in soils
{Unpublished intemal reports}
Expected behaviour of the product : Ultimate destination of the product:WATER.

BIODEGRADABILITY

-Ultimate aerobic biodegradability : According to OECD method 301B:74% biodegradation after
28 days.
Readily blodegradable.
{Unpublished intemal reports}

BIOACCUMULATION

Octanol/water partition coefficient : Refer to §9 for actual figures.
Not potentially bioaccumulable.
{Unpublished intemal reports}

ECOTOXICITY

Effects on the aquatic environment : LC 50 {Fish:Oncothynchus mykiss}/96h:56mg/l. EC
50 {Daphnia: Daphnia magna}/48h:>100mg/l.
EC 50 {Fresh water algae:Pseudokirchneriella
subcapitata }/72
h:>60mg/l.
Harmful to aquatic organisms.
{Unpublished intemal reports}

13 Disposal considerations

RESIDUES FROM PRODUCT

Destruction/Disposal :Dispose of in accordance with relevant local regulayions.

CONTAMINATED PACKAGING

Decontamination/cleaning :Completely empty the packaging prior to decontamination.
Clean using steam.



SAFETY DATA SHEET

TY—IRIS

page:8/9

Date/Revision:24/04/2008

Version:4

Cancels and replaces version:3.00

Destruction/Disposal : Recycle following cleaning or dispose of at an authorized site.
NOTE : The user's attention is drawn to the possible existence of local regulations regarding disposal.

14 Transport information

INTERNATIONAL REGULATIONS

Land

-Rail/road {RID/ADR} : NOT restricted.

Sea {IMO/IMDG} : NOT restricted.

Marine pollutant:NO

Air {ICAO-IATA} : NOT restricted.

NOTE : The above regulatory prescriptions are those valid on the date of publication of this sheet. Given the possible evolution of transport regulations for hazardous materials. It would be advisable to check their validity with your sales office.

15 Regulatory information

IABELLING

EC regulations : Mandatory labeling {swlf-classification} of hazardous substances
: NOT APPLICABLE

-R phrases :No R phrases.

-S phrases :No S phrases.

NOTE :The regulation information given above only indicates .

The

principal regulations specifically applicable to the product described in the Safety Data Sheet. The user's attention is drawn to the possible existence of additional provisions which complete these regulations. Refer to all applicable national. International and local regulations or provisions.

16 Other information

Registration numbers : Registered in the ELINCS inventory. {*}

R Phrases of § 2 £ 3 : R 11:Highly flammable.

R23/24/25:Toxic by inhalation, in contact with skin and if swallowed.



SAFETY DATA SHEET

TY—IRIS

page:9/9

Date/Revision:24/04/2008

Version:4

Cancels and replaces version:3.00

*Update

R39/23/24/25: Toxic: Danger of very serious irreversible effects
Through inhalation. In contact with skin and if swallowed.

: This sheet was updated {refer to the date at the top of this page} .
Subheadings and text which have been modified since the
previous version are indicated with an asterisk{*}

This safety data sheet should be used in conjunction with
technical sheets. It does not replace them. The information given
is based on our knowledge of this product at the time of
publication. It is given in good faith. The attention of the user
is drawn to the possible risks incurred by using the product for
any other purpose other than that for which it was
intended. This does not in any way excuse the user from knowing
and applying all the regulations governing his activity. It is
the sole responsibility of the user to take all precaution
required in handling the product. The aim of the mandatory
regulations mentioned is to help the user to fulfil his obligations
regarding the use of hazardous products. This information is not
exhaustive. This does not exonerate the user from ensuring that
legal obligations.

Other than those mentioned, relating to the use and storage of
the product, do not exist. This is solely his responsibility.