



SAFETY DATA SHEET

SECTION 1. Identification of the hazardous chemical substance or mixture and of the supplier or manufacturer

Name of the hazardous chemical substance or mixture	T-Force Degreaser - 3.78 L	
Other means of identification		
Product Code	Item# 1751402	
Recommended use of the hazardous chemical substance or mixture, and restrictions of use		
Recommended use	General purpose degreaser	
Recommended restrictions	None known.	
Suppliers details		
Company name	CRC Industrias de Mexico S. de R. L. de C.V.	
Address	Cerrada Canadá 201-H Fraccionamiento Industrial Martel Santa Catarina, NL 66367 Mexico	
Telephone	General Information	81-2139-0572
Website	crc-mexico.com	
E-mail	SoporteTecnico@crcind.com	
Emergency phone number	24-Hour Emergency	800-681-9531

SECTION 2. Hazard identification

Classification of the substance or mixture

Physical hazards	Not classified.	
Health hazards	Acute toxicity, oral	Category 4
	Skin corrosion/irritation	Category 2
	Serious eye damage/eye irritation	Category 2
	Specific target organ toxicity, single exposure	Category 3 narcotic effects
	Aspiration hazard	Category 1
Environmental hazards	Hazardous to the aquatic environment, long-term hazard	Category 3

Elements of labeling, including precautionary statements and warning pictograms



Signal word	Danger	
Hazard statement		
H302	Harmful if swallowed.	
H304	May be fatal if swallowed and enters airways.	
H315	Causes skin irritation.	
H319	Causes serious eye irritation.	
H336	May cause drowsiness or dizziness.	
H412	Harmful to aquatic life with long lasting effects.	
Precautionary statement		
Prevention		
P264	Wash thoroughly after handling.	
P270	Do not eat, drink or smoke when using this product.	
P261	Avoid breathing mist/vapors.	
P271	Use only outdoors or in a well-ventilated area.	

P273 Avoid release to the environment.
P280 Wear eye protection/face protection.
P280 Wear protective gloves.

Response

P301 + P310 IF SWALLOWED: Immediately call a POISON CENTER/doctor.
P330 Rinse mouth.
P331 Do NOT induce vomiting.
P302 + P352 IF ON SKIN: Wash with plenty of water.
P332 + P313 If skin irritation occurs: Get medical advice/attention.
P362 + P364 Take off contaminated clothing and wash it before reuse.
P304 + P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P312 Call a POISON CENTER/doctor if you feel unwell.
P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P337 + P313 If eye irritation persists: Get medical advice/attention.

Storage

P403 + P233 Store in a well-ventilated place. Keep container tightly closed.
P405 Store locked up.

Disposal

P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

Other hazards which do not result in classification None known.

Supplemental information When exposed to extreme heat or hot surfaces, vapors may decompose to toxic gases such as hydrogen fluoride, hydrogen chloride, and possibly phosgene.

SECTION 3. Composition/information on ingredients

Mixtures

Chemical identity	Common name(s), synonym(s)	CAS number and other unique identifiers	Concentration
trans-1,2-dichloroethylene		156-60-5	80 - 90
1,1,2,2-tetrafluoro-1-(2,2,2-trifluoroethoxy) ethane	HFE-347PCF2	406-78-0	10 - 20
isopropyl alcohol		67-63-0	0.5 - 1.5

Composition comments Specific chemical identity and/or percentage of composition has been withheld as a trade secret.

SECTION 4. First-aid measures

Description of necessary first-aid measures

Inhalation Remove victim to fresh air and keep at rest in a position comfortable for breathing. Call a poison center or doctor/physician if you feel unwell.

Skin contact Remove contaminated clothing. Wash with plenty of soap and water. If skin irritation occurs: Get medical advice/attention. Wash contaminated clothing before reuse.

Eye contact Immediately flush eyes with plenty of water for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Get medical attention if irritation develops and persists.

Ingestion Call a physician or poison control center immediately. Rinse mouth. Do not induce vomiting. If vomiting occurs, keep head low so that stomach content doesn't get into the lungs.

Most important symptoms/effects, acute and delayed Aspiration may cause pulmonary edema and pneumonitis. May cause drowsiness or dizziness. Headache. Nausea, vomiting. Severe eye irritation. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. Skin irritation. May cause redness and pain.

Indication of immediate medical attention and special treatment needed Provide general supportive measures and treat symptomatically. Keep victim warm. Keep victim under observation. Symptoms may be delayed.

General information Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves. Show this safety data sheet to the doctor in attendance.

SECTION 5. Fire-fighting measures

Suitable extinguishing media Foam. Powder. Carbon dioxide (CO₂).

Unsuitable extinguishing media	Do not use water jet as an extinguisher, as this will spread the fire.
Specific hazards arising from the chemical	During fire, gases hazardous to health may be formed. When exposed to extreme heat or hot surfaces, vapors may decompose to toxic gases such as hydrogen fluoride, hydrogen chloride, and possibly phosgene.
Special protective actions for firefighters	Self-contained breathing apparatus and full protective clothing must be worn in case of fire.
Fire fighting equipment/instructions	Move containers from fire area if you can do so without risk.
Specific methods	Use standard firefighting procedures and consider the hazards of other involved materials.
General fire hazards	No unusual fire or explosion hazards noted.

SECTION 6. Measures that must be taken in the event of accidental spillage or an accidental leak

Personal precautionary measures, protective equipment and emergency procedure

For non-emergency personnel Keep people away from and upwind of spill/leak. Avoid breathing mist/vapors. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Do not touch or walk through spilled material.

For emergency responders Keep unnecessary personnel away. Ensure adequate ventilation. Avoid breathing mist/vapors. Local authorities should be advised if significant spillages cannot be contained. Use personal protection recommended in Section 8 of the SDS.

Environmental precautions Avoid release to the environment. Inform appropriate managerial or supervisory personnel of all environmental releases. Prevent further leakage or spillage if safe to do so. Avoid discharge into drains, water courses or onto the ground.

Methods and materials for containing and cleaning up spills or releases Prevent product from entering drains.

Large Spills: Stop the flow of material, if this is without risk. Dike the spilled material, where this is possible. Absorb in vermiculite, dry sand or earth and place into containers. Following product recovery, flush area with water.

Small Spills: Wipe up with absorbent material (e.g. cloth, fleece). Clean surface thoroughly to remove residual contamination.

Never return spills to original containers for re-use. For waste disposal, see section 13 of the SDS.

SECTION 7. Handling and storage

Precautions for safe handling Use only outdoors or in a well-ventilated area. Open doors and windows or use other means to ensure a fresh air supply during use and while product is drying. If you experience any symptoms listed on this label, increase ventilation or leave the area. Do not taste or swallow. Avoid breathing mist/vapors. Avoid contact with eyes, skin, and clothing. Avoid prolonged exposure. When using, do not eat, drink or smoke. Provide adequate ventilation. Wear appropriate personal protective equipment. Wash hands thoroughly after handling. Avoid release to the environment. Observe good industrial hygiene practices.

Conditions for safe storage, including any incompatibilities Store in tightly closed container. Store away from incompatible materials (see Section 10 of the SDS).

SECTION 8. Exposure controls/personal protection

Control parameters

Occupational exposure limits

Mexico. Occupational Exposure Limit Values

Components	Type	Value
isopropyl alcohol (CAS 67-63-0)	STEL	400 ppm
	TWA	200 ppm
trans-1,2-dichloroethylene (CAS 156-60-5)	TWA	200 ppm

US. ACGIH Threshold Limit Values

Components	Type	Value
isopropyl alcohol (CAS 67-63-0)	STEL	400 ppm

US. ACGIH Threshold Limit Values Components

Components	Type	Value
	TWA	200 ppm
trans-1,2-dichloroethylene (CAS 156-60-5)	TWA	200 ppm

Manufacturer OEL Components

Components	Type	Value
1,1,2,2-tetrafluoro-1-(2,2,2-trifluoroethoxy) ethane (CAS 406-78-0)	TWA	50 ppm

Biological limit values

Mexico. Biological Exposure Indices

Components	Value	Determinant	Specimen	Sampling Time
isopropyl alcohol (CAS 67-63-0)	40 mg/l	Acetona	Urine	*

* - For sampling details, please see the source document.

ACGIH Biological Exposure Indices

Components	Value	Determinant	Specimen	Sampling Time
isopropyl alcohol (CAS 67-63-0)	40 mg/l	Acetone	Urine	*

* - For sampling details, please see the source document.

Control banding approach

Not available.

Appropriate engineering controls

Good general ventilation should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level. Provide eyewash station and safety shower.

Hazardous Chemicals (NOM-028-STPS-2012, System for administration of workplace safety in the process and critical equipment for handling hazardous chemicals, Appendix A, Table A.I, 9/6/2012)

isopropyl alcohol (CAS 67-63-0) 4600 KG

Individual protection measures, such as personal protective equipment (PPE)

Eye/face protection Wear safety glasses with side shields (or goggles).

Skin protection

Hand protection Wear protective gloves such as: Fluoroelastomer. Nitrile. Polyvinyl alcohol (PVA).

Other Wear appropriate chemical resistant clothing. Use of an impervious apron is recommended.

Respiratory protection

If engineering controls are not feasible or if exposure exceeds the applicable exposure limits, use a NIOSH-approved cartridge respirator with an organic vapor cartridge. Use a self-contained breathing apparatus in confined spaces and for emergencies. Air monitoring is needed to determine actual employee exposure levels.

Thermal hazards

Wear appropriate thermal protective clothing, when necessary.

General hygiene considerations

Keep away from food and drink. Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants.

SECTION 9. Physical and chemical properties

Appearance

Physical state Liquid.

Form Liquid.

Color Colorless.

Odor Ethereal.

Odor threshold Not available.

pH Not available.

Melting point/freezing point -137.2 °F (-94 °C) estimated

Initial boiling point and boiling range	118.4 °F (48 °C) estimated
Flash point	None (Setaflash)
Evaporation rate	Fast.
Flammability (solid, gas)	Not available.
Upper/lower flammability or explosive limits	
Explosive limit - lower (%)	2 % estimated
Explosive limit - upper (%)	19 % estimated
Vapor pressure	469.3 hPa estimated
Vapor density	Not available.
Relative density	1.26
Solubility(ies)	
Solubility (water)	Slight.
Partition coefficient (n-octanol/water)	Not available.
Auto-ignition temperature	860 °F (460 °C) estimated
Decomposition temperature	Not available.
Viscosity	Not available.
Molecular weight	Not available.
Other information	
Percent volatile	100 % estimated

SECTION 10. Stability and reactivity

Reactivity	The product is stable and non-reactive under normal conditions of use, storage and transport.
Chemical stability	Material is stable under normal conditions.
Possibility of hazardous reactions	No dangerous reaction known under conditions of normal use.
Conditions that must be avoided	Heat. Contact with incompatible materials. When exposed to extreme heat or hot surfaces, vapors may decompose to toxic gases such as hydrogen fluoride, hydrogen chloride, and possibly phosgene.
Incompatible materials	Strong oxidizing agents. Strong acids. Strong bases.
Hazardous decomposition products	Halogenated materials. Hydrogen chloride. Carbon oxides. Hydrogen fluoride. Phosgene. Sulfur oxides.

SECTION 11. Toxicological information

Information about likely routes of entry

Inhalation	May cause drowsiness or dizziness. Headache. Nausea, vomiting. Prolonged inhalation may be harmful.
Skin contact	Causes skin irritation.
Eye contact	Causes serious eye irritation.
Ingestion	Harmful if swallowed. Droplets of the product aspirated into the lungs through ingestion or vomiting may cause a serious chemical pneumonia.

Symptoms related to the physical, chemical and toxicological characteristics Aspiration may cause pulmonary edema and pneumonitis. May cause drowsiness or dizziness. Headache. Nausea, vomiting. Severe eye irritation. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. Skin irritation. May cause redness and pain.

Delayed and immediate effects and also chronic effects from short and long term exposure

Numerical measures of toxicity (such as acute toxicity estimates)

Acute toxicity May be fatal if swallowed and enters airways. In high concentrations, vapors are anesthetic and may cause headache, fatigue, dizziness and central nervous system effects.

Product	Species	Test Results
T-Force Degreaser - 3.78 L		
Acute		
Oral		
ATE	Rat	1075.28 mg/kg
Skin corrosion/irritation	Causes skin irritation.	
Serious eye damage/eye irritation	Causes serious eye irritation.	
Respiratory or skin sensitization		
Respiratory sensitization	Not a respiratory sensitizer.	
Skin sensitization	This product is not expected to cause skin sensitization.	
Germ cell mutagenicity	No data available to indicate product or any components present at greater than 0.1% are mutagenic or genotoxic.	
Carcinogenicity	Not classifiable as to carcinogenicity to humans.	
Reproductive toxicity	This product is not expected to cause reproductive or developmental effects.	
Specific target organ toxicity - single exposure	May cause drowsiness or dizziness.	
Specific target organ toxicity - repeated exposure	Not classified.	
Aspiration hazard	May be fatal if swallowed and enters airways.	
Other information	Not available.	

SECTION 12. Ecotoxicological information

Toxicity	Harmful to aquatic life with long lasting effects.
Persistence and degradability	No data is available on the degradability of any ingredients in the mixture.
Bioaccumulative potential	No data available.
Partition coefficient n-octanol / water (log Kow)	
1,1,2,2-tetrafluoro-1-(2,2,2-trifluoroethoxy) ethane	2.18
isopropyl alcohol	0.05
trans-1,2-dichloroethylene	2.06
Mobility in soil	No data available.
Other adverse effects	Not established.

SECTION 13. Disposal considerations

Disposal methods	
Disposal instructions	Collect and reclaim or dispose in sealed containers at licensed waste disposal site. Do not allow this material to drain into sewers/water supplies. Do not contaminate ponds, waterways or ditches with chemical or used container. Dispose of contents/container in accordance with local/regional/national/international regulations.
Local disposal regulations	Dispose in accordance with all applicable regulations.
Waste from residues / unused products	Dispose of in accordance with local regulations. Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe manner (see: Disposal instructions).
Contaminated packaging	Since emptied containers may retain product residue, follow label warnings even after container is emptied. Empty containers should be taken to an approved waste handling site for recycling or disposal.

SECTION 14. Transport information

SCT	Not regulated as dangerous goods.
DOT	Not regulated as dangerous goods.
IATA	Not regulated as dangerous goods.
IMDG	Not regulated as dangerous goods.

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code Not established.

SECTION 15. Regulatory information

Safety, health and environmental regulations specific for the hazard chemical substance or mixture in question This safety data sheet was prepared in accordance with the Official Mexican Standard (NOM-018-STPS-2015).

Mexico. Substances subject to reporting for the pollutant release and transfer registry (PRTR)

Not listed.

International regulations

Montreal Protocol

Not applicable.

Stockholm Convention

Not applicable.

Rotterdam Convention

Not applicable.

Kyoto protocol

Not applicable.

Basel Convention

Not applicable.

International Inventories

Country(s) or region	Inventory name	On inventory (yes/no)*
Australia	Australian Inventory of Industrial Chemicals (AICIS)	No
Canada	Domestic Substances List (DSL)	No
Canada	Non-Domestic Substances List (NDSL)	Yes
China	Inventory of Existing Chemical Substances in China (IECSC)	Yes
Europe	European Inventory of Existing Commercial Chemical Substances (EINECS)	No
Europe	European List of Notified Chemical Substances (ELINCS)	No
Japan	Inventory of Existing and New Chemical Substances (ENCS)	No
Korea	Existing Chemicals List (ECL)	Yes
New Zealand	New Zealand Inventory	No
Philippines	Philippine Inventory of Chemicals and Chemical Substances (PICCS)	No
Taiwan	Taiwan Chemical Substance Inventory (TCSI)	Yes
United States & Puerto Rico	Toxic Substances Control Act (TSCA) Inventory	Yes

*A "Yes" indicates that all components of this product comply with the inventory requirements administered by the governing country(s)

A "No" indicates that one or more components of the product are not listed or exempt from listing on the inventory administered by the governing country(s).

SECTION 16. Other included information relevant to the preparation and updating of safety data sheets

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Version # 02

List of abbreviations

ACGIH: American Conference of Governmental Industrial Hygienists.
ADN: European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways.
ADR: European Agreement Concerning the International Carriage of Dangerous Goods by Road.
ANTT: National Agency of Land Transport.
CAS: Chemical Abstract Service.
DOT: Department of Transportation.

GHS: Globally Harmonized System of Classification and Labeling of Chemicals.
IARC: International Agency for Research on Cancer.
IATA: International Air Transport Association.
IBC Code: International Code for the Construction and Equipment of Ships Carrying Dangerous Chemicals in Bulk.
IMDG: International Maritime Dangerous Goods.
MARPOL: International Convention for the Prevention of Pollution from Ships.
NFPA: National Fire Protection Association.
RID: Regulations concerning the International Carriage of Dangerous Goods by Rail.
SCT: Secretariat of Communications and Transportation (NOM-002-SCT/2011).
STEL: Short term exposure limit.
TWA: Time Weighted Average.

References

NMX-R-019-SCFI-2011 - Harmonized system of classification and communication of dangers of chemical products
NOM-010-STPS-2014 (second revision) – Occupational Exposure Limits – becomes effective on April 28, 2016
NOM-018-STPS-2015 - Harmonized system for the identification and communication of hazards and risks for hazardous chemicals in the workplace
NOM-026-STPS-2008 - Colors and signals of safety and hygiene, and risk identification through fluids in pipes
NOM-028-STPS-2012 – Work-Safety Management System for Processes and Critical Equipment Handling Hazardous Chemical Substances
NOM-047-SSA1-2011 – Workplace Biological Exposure Indices (BEIs) to Chemical Substances Workplace Threshold Quantities of Hazardous Chemicals

Further information

CRC # 1753498

Disclaimer

This information is considered accurate but is not exhaustive and shall only be used as a guideline based on current knowledge of the chemical substance or mixture. Safety precautions suitable for the product must be applied.

CRC Industrias de Mexico S. de R. L. de C.V. cannot anticipate all conditions under which this information and its product, or the products of other manufacturers in combination with its product, may be used. It is the user's responsibility to ensure safe conditions for handling, storage and disposal of the product, and to assume liability for loss, injury, damage or expense due to improper use. The information in the sheet was written based on the best knowledge and experience currently available.

Revision information

This document has undergone significant changes and should be reviewed in its entirety.